# North Somerset Council

## 2025 Annual Status Report

June 2025

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# 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

| Information | North Somerset Council Details |
|---|---|
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| **Report Reference Number** | ASR/2025 |
| **Date** | June 2025 |

## Local Responsibilities and Commitment

This ASR was prepared by Bureau Veritas in conjunction with the Environmental Protection Department of North Somerset Council with the support and agreement of the following officers and departments:

Dee Mawn – Environmental Protection Service Leader, Environmental Protection Team, North Somerset Council

Lindsay Howe – Senior Environmental Health Officer, Environmental Protection Team, North Somerset Council

This ASR has been approved by:

Andrew Cross

Consultant in Public Health

Healthy and Sustainable Communities Directorate

This ASR has been signed off by Matt Lenny, Director of Public Health.

If you have any comments on this ASR please send them to Dee Mawn at:

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# Executive Summary: Air Quality in Our Area

North Somerset is a unitary authority in the county of Somerset, England, with a recorded population during the 2021 census of approximately 216,700[1]. North Somerset is classified as 'urban with significant rural' with up to 40% of residents living in rural communities or 'rural hub towns'. The largest town is Weston-super-Mare followed by a number of other highly populated areas including Portishead, Clevedon and Nailsea. North Somerset also contains Bristol Airport, the Royal Portbury Dock and the M5 motorway which represent potentially significant sources of air pollution.

## Air Quality in North Somerset Council

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. |

[1] www.ons.gov.uk/visualisations/censusareachanges/E06000024/

| | |
|---|---|
| Particulate Matter ($PM_{10}$ and $PM_{2.5}$) | Particulate matter is everything in the air that is not a gas.<br>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.<br>$PM_{10}$ refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres. |

In 2024, North Somerset Council undertook monitoring of $NO_2$ at 24 locations throughout their area of jurisdiction. Concentrations of annual mean $NO_2$ were below the Air Quality Strategy Objective (AQSO) of 40µg/m$^3$ at all monitoring positions during 2024. Following bias adjustment, the maximum concentration recorded during 2024 was 19.5µg/m$^3$ at DT20 – A370 Lulsgate Bottom. The concentrations at this location are considerably below the annual mean AQSO.

During 2024, 12 diffusion tube sites reported a decrease and nine reported an increase in annual mean $NO_2$ concentrations when compared to 2023 levels. It should be noted that although nine positions reported an increase in concentrations, levels in 2024 are still lower than those recorded in 2020 at the majority of monitoring sites.

There have been no reported exceedances of any AQSO in North Somerset within the last seven years. As such, there are no Air Quality Management Areas (AQMAs) declared within district. The main pollutant of concern for North Somerset Council continues to be $NO_2$ associated with road vehicle exhaust emissions, particularly from the M5, A370, A38 and A369.

For the 2024 monitoring sites, the following pollutant sources were considered, as detailed in the Department for Environment, Food and Rural Affairs (Defra) Local Air Quality Management (LAQM) Technical Guidance (LAQM.TG22):

- Road Traffic Sources;
- Non-road Traffic Sources;
- Industrial Sources;
- Commercial and Domestic Sources; and,
- Fugitive and Uncontrolled Sources.

These locations are constantly reviewed with respect to any hotspot area(s) of pollution being identified. The current monitoring network will remain in place and will be updated where necessary.

In March 2023, planning permission was granted for the road bypass of Banwell Village. The bypass will run to the north of Banwell Village and will aim to remove congestion from

a key route between the A38 and Weston-super-Mare. The new bypass represents a new source of pollution within North Somerset although it is considered that it will improve air quality throughout Banwell. This measure is currently under implementation. By May 2025, construction of haul road has been completed and earthworks for mainline of bypass have begun.

Previous Annual Air Quality Status Reports can be viewed here.

## 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 Environmental Improvement Plan[2] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[3] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[4] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel and the majority of AQMAs are designated due to elevated concentrations heavily influenced by transport emissions.

There are currently no designated AQMAs within the District and as such an Air Quality Action Plan (AQAP) is not required. A local Air Quality Strategy has been adopted to prevent and reduce polluting activities in line with LAQM Policy Guidance (22). The authority implements a number of measures and is part of various initiatives to ensure that levels of nitrogen dioxide remain below the air quality objectives. Some examples of these are included below:

[2] Defra. Environmental Improvement Plan 2023, January 2023

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

[4] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

**Supporting Carbon Reduction**

North Somerset Council have declared a climate change emergency and produced an associated Climate Emergency Strategy which outlines seven key principles for how the council will address the causes and consequences of climate change, with the aim of becoming carbon neutral by 2030.

North Somerset have also produced a Climate Emergency Action Plan which underpins a number of strategies and measures in North Somerset to address climate change and deliver improvements in air quality across the district.

**Green Infrastructure Strategy**

Plants and trees can be used effectively in all settings to reduce emissions of particulates and minimise erosion. Shelter belts are one or more rows of trees or shrubs planted in positions where they maximise shelter from prevailing winds and reduce runoff. They help to reduce soil erosion by slowing down the flow of water and encouraging infiltration through leaf litter. Lower wind speeds created by shelter belts prevent wind whipping of soil helping to reduce fugitive particulate emissions particularly during dusty operations such as ploughing.

Some species of plants (mainly those with broad leaves) can be effective at capturing fugitive dust emissions and help to contain fugitive dust emissions within the localised area. Other advantages of shelter belts include protection of newly planted seeds and young plants, creation of habitats and improved soil nutrition.

North Somerset Council has developed the following Green Infrastructure Strategy.

**Active Travel Strategy 2020 -2030**

In 2021, North Somerset Council adopted an Active Travel Strategy. This outlined the policy approach to active travel within the district. Since adaptation, North Somerset has been developing a more detailed approach through the Place and Movement Framework resulting in Active Travel Action Plans (ATAPs). This will help North Somerset make active travel strategy commitments and interventions a reality.

**Walking and Cycling**

As part of North Somerset's Active Travel Strategy, the council aspires to ensure that high-quality walking and cycling networks are delivered, enabling residents and visitors to make active journeys more frequently alongside improved public realm with access to local shops, facilities and green spaces.

Initiatives to promote cycling can be found here.

Initiatives to promote walking can be found here.

North Somerset Council have also produced a Joint Health & Wellbeing Strategy which sets out a vision, shared ambitions, principles and actions to improve health and wellbeing.

**Borrow a Bike Scheme**

The borrow a bike scheme, allows those within North Somerset to trial a bike (electric, hybrid or folding bike) for a two-week period, free of charge.

**Go Ultra Low West**

North Somerset Council participates in the Go Ultra Low West project, to encourage the widespread use of electric vehicles across the west of England's Local Authorities.

**Electric Vehicle Strategy**

The North Somerset Electric Vehicle Strategy sets out council's ambition to create a network of Electric Vehicle (EV) charging points capable of supporting the demands of the area's communities as the transition to zero emission vehicles continues. The strategy outlines the forecast requirements up until 2030, in line with EV uptake so far. This will make sure that North Somerset is aware of the likely demand for EVs and charging infrastructure. It will also help set out how North Somerset will integrate EVs within the wider transport hierarchy, the commercial features of the EV network and how and where EV charging should be delivered in North Somerset. Having an EV strategy is crucial in securing future funding for North Somerset for the development of the network.

North Somerset Council recently invited residents to take part in a consultation to have their say on the Electric Vehicle Strategy.

The council also encourages and promotes the drivers of licensed private hire taxis and Hackney Carriages to convert to electric vehicles. At present there is no formal requirement within the taxi policy for the use of electric vehicles, however collaboration with the licensing team aims to encourage the use of electric vehicles through the taxi policy.

**Electric Vehicle Charging**

North Somerset Council's first EV rapid charging hub opened at Portishead's Parish Wharf Leisure Centre in 2021. The site, near Portishead Marina, has two rapid chargers (50kW) and four charging bays, allowing drivers to charge their EVs in just 30 to 60 minutes.

Portishead's hub comes complete with a solar canopy and is part of the West of England's Revive network of charging points. The location was chosen as it is close to the leisure centre, to shops and to other local amenities. More information can be found here.

**Joint Local Transport Plan**

North Somerset is part of The Joint Local Transport Plan 4, led by the West of England Combined Authority (WECA), which sets out aims for a sustainable transport network and addresses poor air quality. The current plan runs up to the year 2036.

**Council Fleet**

North Somerset Council owns and operates a wide range of vehicles and equipment to support building and highways maintenance, waste management as well as delivery of other services. The council has effective vehicle procurement policies which help to ensure that the energy, carbon and air quality impacts of vehicles purchased or leased by North Somerset Council are considered as part of the fleet replacement programme or contract renewal process.

**Parking Management Strategy**

North Somerset Council is reviewing and developing its approach to parking management. When this is complete, the council will consult on the proposed strategy to see how it could be strengthened further.

**Car Sharing**

North Somerset promotes Travelwest's range of car sharing websites to help people find a suitable person to share journeys with across the West of England.

**Bus Improvement Plan**

Public transport is set to be transformed over the next two years in North Somerset. The Bus Service Improvement Plan (BSIP) outlines a major investment programme by North Somerset Council in partnership with the WECA. The ambition is to improve the quality and provision of bus services to a level that creates an attractive alternative to the use of private vehicles. It will also accelerate the decarbonisation of transport which is a key priority for the council as part of its commitment to tackle the climate emergency.

**Quality Bus Partnership**

North Somerset has launched an enhanced partnership with the WECA to improve bus services across the region, Bus Strategy.

The West of England Enhanced Partnership Plan centres around a legally binding agreement with bus operators in the region to provide:

- Better ticketing and passenger information;
- Lower fares;
- Investment in bus priority measures; and,
- New and improved services.

The region has secured £105.5m from the Government by creating an enhanced partnership. This will allow North Somerset to improve bus services across the area and improve key bus corridors in North Somerset, on top of the £48m already secured to improve bus travel in the region.

The funding means that North Somerset, along with the WECA, will:

- Make changes to help buses get through traffic, so they run more reliably;
- Improve the frequency of buses on well-used routes; and,
- Develop demand responsive transport to meet the needs of more rural communities.

**Weston Bus Hub**

North Somerset Council and First Bus worked together to open Weston-super-Mare's new town centre Bus Hub in February 2022. Providing dedicated coach and bus pickup facilities to help alleviate traffic-related issues, reduce emissions and improve local air quality. Anti-idling signage has also helped to further reduce emissions from stationary coaches and buses.

**WESTlink**

Westlink is an on-demand minibus service that allows residents to book their bus journeys through an app, website, or phone. It forms part of the largest on-demand bus scheme in the UK. It aims to reconnect communities by offering people currently without a local service the opportunity to get back on the bus. More information about the bus services can be found here.

**WESTlink Virtual Bus Stops**

Individuals may want to be picked up or dropped off in an area that does not currently have a physical bus stop. This could be a doctor’s surgery, pharmacy or a local shop. If there is a public need for an additional bus stop, the council can create a virtual one that people can choose when booking via WESTlink.

**Park & Ride**

The Long Ashton Park & Ride is a form of integrated transport that allows private car users to park their vehicles at a large car park in Long Ashton and travel into Bristol using public transport. The Long Ashton Park & Ride is designed to relieve road congestion and improve air quality in the city and along key approach roads by redirecting car journeys away from the centre of Bristol. Once the user pays for the relevant bus services, they can park their car free of charge. The dedicated bus services consist of modern low floor, wheelchair accessible buses that offer a high service frequency throughout the day, particularly during peak periods.

Prioritised traffic lights and dedicated bus lanes along key routes allow Park and Ride buses to get to these destinations quickly. Generally, the Park and Ride services are much faster and cheaper than driving into the city at peak times.

Park and Ride services are also encouraged for travel to and from the city centre for events as sports and music, to aid in continuously reducing congestion along the existing road network.

**Park & Rail**

A Park and Rail scheme (Metrowest Phase 1) is planned for Portishead in North Somerset. It will allow private car users to park their vehicles close to a new rail station at Portishead and use a refurbished rail track connection to travel into Bristol using a new rail service connection. The Park and Rail scheme will allow the consolidation of multiple individual car journeys into one single rail journey resulting in less congestion, lower emissions and improved air quality.

**Energy and Heating**

North Somerset Council provides information to residents on how best to conserve energy and heat their homes. The Council will continue to promote, educate and provide advice about home energy efficiency and carbon reduction, working in partnership with organisations such as the Centre for Sustainable Energy. The council has commissioned a stock condition survey of properties in North Somerset to guide next steps for improving thermal efficiency among lower-income households. The council will support and expand the Warmer Homes, Advice and Money (WHAM) project helping the most vulnerable residents in cold homes to access advice on energy, money, benefits and carry out home repairs.

**Solar Together**

A key part of reaching carbon neutrality is access to green energy sources, such as solar photovoltaic (PV) panels and batteries.

With this in mind the council has partnered with an independent group-buying collective, iChoosr Ltd, as well as neighbouring West of England authorities, to make the purchase of solar panels more accessible.

Solar Together is an innovative scheme which uses the collective bargaining power of local households to access panels and installation at a competitive price. Registration closed in October 2023 with expected installation by the end of June 2024.

**Effective Regulation – Environmental Permitting**

North Somerset Council's Regulatory teams work with operators to secure compliance, but where necessary, enforcement tools are available ranging from enforcement notices to prohibition notices and/or prosecution.

**Smoke Control**

North Somerset Council is not in a smoke control area. However, it takes robust and effective action on reports smoke nuisance, clean air offences and breaches of domestic solid fuels regulations.

**Low Emission Farming**

The council is launching the second round of the North Somerset Rural England Prosperity Programme in May 2024. The programme aims to benefit both businesses and community organisations. One of the key objectives is to encourage productivity through enhancing, energy efficient, low carbon technologies and techniques in rural communities including agriculture.

**Procurement and Decision Making**

The council has introduced a requirement for commissioned services and decision-making processes to incorporate actions that address climate change and improve the environment.

## Conclusions and Priorities

During 2024, there were no reported exceedances of the annual mean AQSO for $NO_2$ within North Somerset Council. As a predominately rural district, pollutant levels continue

to remain low. Monitoring will ensure any changes in concentration trends are quickly identified.

Notwithstanding this, North Somerset Council will continue to promote measures to improve air quality in the district and assess new developments submitted through the planning process to ensure that any proposed developments are not detrimental to local air quality. These measures have been included in the Air Quality Strategy.

In March 2023, planning permission was granted for the road bypass of Banwell Village. The bypass will run to the north of Banwell Village and will aim to remove congestion from a key route between the A38 and Weston-super-Mare. The new bypass represents a new source of pollution within North Somerset although it is considered that it will improve air quality throughout Banwell. This measure is currently under implementation. By 2025 May, construction of haul road has been completed and earthworks for mainline of bypass have begun.

## How to get Involved

North Somerset Council continues to engage with the community on air quality. During 2024, the council posted across its social media platforms about Clean Air Day and individuals can get involved in improving air quality within their area.

Everyone can help to improve air quality on a local scale within North Somerset and beyond by making informed personal choices, particularly with regards to travel. Through these choices we can help to improve air quality, as well as health and wellbeing. The following includes a number of key actions members of the public can take:

- Substitute car use. Where possible, utilise public transport by taking a bus or train, or preferably walk or cycle. Details regarding North Somerset's active travel options are available at: https://www.n-somerset.gov.uk/my-services/parking-travel-roads/transport-travel;
- If possible, share lifts with colleagues to work. This will save you money on fuel and parking as well as reducing the number of vehicles on the road network. Information about Liftshare is available at: https://liftshare.com/uk;
- Look into travelling outside of peak hours or work from home, where practicable; and,
- When contemplating changing your vehicle, consider air pollution and opt for the cleaner vehicle you feasibly can. Low emission electric and/or hybrid vehicles are

becoming increasingly more affordable with government funding and grants often available.

Whilst most air pollution in North Somerset is produced by road traffic, predominately $NO_2$, there are other sources. Domestic heating and wood-burning are responsible for generating pollutants within North Somerset, especially of particulates ($PM_{10}$ and $PM_{2.5}$). Measures that could be considered to reduce air pollution from domestic heating include:

- Upgrading domestic boilers to fuel-efficient condensing boilers with the lowest associated oxides of nitrogen ($NO_X$) (and carbon) emissions;
- "Clean" renewable energy generation. For example, solar photovoltaics and/or Air/Ground Source Heat Pumps;

Using Defra approved appliances and smokeless fuels suitable for use in a smoke control area, whether you are in a smoke control area or not[5]. More information about wood burners/open fires can be found here: Ready to Burn.

[5] Defra. Exempt Appliances England. Available at: https://smokecontrol.defra.gov.uk/appliances.php?country=england

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## Figures



## Tables

# 1 Local Air Quality Management

This report provides an overview of air quality in North Somerset Council 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 North Somerset Council 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.

North Somerset Council currently does not have any declared AQMAs. A local Air Quality Strategy is currently under development to prevent and reduce polluting activities in line with LAQM Policy Guidance (22).

## 2.2 Progress and Impact of Measures to address Air Quality in North Somerset Council

Defra's appraisal of last year's ASR concluded that the report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. Comments from the previous year's appraisal have been included in this submission, which is commended.
2. NSC are in the process of developing their AQS, which is welcomed. The Council are encouraged to get this done as soon as possible, and an update should be provided in next year's ASR.
    - The AQS has been developed and adopted in March 2025. Update has been provided in this report.
3. In this submission, during 2023, the diffusion tubes were not deployed as per the Defra calendar for some months. The Council should aim to deploy the diffusion tubes for the next monitoring year as per the Defra calendar.
    - The 2024 diffusion tubes were deployed as per the Defra calendar.

4. NSC has not provided any justification as to why the national bias adjustment factor was used over the local one. This is recommended in future years.
    - NSC does not have co-location monitoring with continuous monitoring, therefore no local bias adjustment factor can be calculated. This has been justified in Appendix.
5. The report states it has been signed off by the Director of Public Health, but no signature is provided. This is recommended in future submissions.
6. The Council should continue with Reference to the Public Health Outcomes Framework, following the positive work made in this submission.
    - The Public Health Outcomes Framework is provided in this year's report as well.
7. NSC has included clear trend graphs, comparing the air quality data with the relevant Air Quality Objectives. This is commended.
    - Trend graphs and comparisons are provided in this year's report.
8. There are some minor formatting and typographical issues within the report which should be fixed before submission.
    - The report has been reviewed to avoid the above issues for this year's submission.
9. NSC have included clear maps of monitoring locations. This is commended.
    - Maps are provided in Appendix D.
10. The Council should continue maintaining high standards of QA/QC procedures with sufficient supporting evidence provided, and the robust analysis as shown in this submission.
    - Details regarding QA/QC procedures have been provided in Appendix C

**The comments made in the 2024 appraisal have been detailed and responded to within this 2025 ASR as outlined above.**

North Somerset Council 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 2.1. Eight measures are included within Table 2.1, with the type of measure and the progress North Somerset Council have made during the reporting year of 2024 presented. Where there have been, or continue to

be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

As discussed in Section 2.1, North Somerset Council has not declared any AQMAs. As such, an AQAP has not been produced. However, a number of strategies and plans in place, which will have a beneficial impact on air quality and are discussed further below. These have been incorporated into an Air Quality Strategy document in line with LAQM.PG(22).

North Somerset Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Placemaking and Growth; and,
- Neighbourhoods and Transport Department.

### 2.2.1 Climate Emergency

In 2018, North Somerset Council updated its Climate Local Agreement[6], and in February 2019 passed a motion to declare a climate change emergency. The overarching goal of this strategy is for North Somerset to become carbon neutral by 2030.

A new Climate Emergency Strategy and Action Plan[7] was adopted in November 2022. This action plan will be monitored every six months and updated each year.

The key principles of the Climate Emergency Strategy are to:

- Become a net zero carbon council;
- An energy efficient built environment;
- Renewable energy generation;
- Repair, reuse, reduce and recycle;
- Replenish our carbon stores;
- Reduce emissions from transport; and,
- Adapting to climate change.

[6] North Somerset Climate Local Commitment. Available at: https://www.n-somerset.gov.uk/sites/default/files/2020-03/Climate%20Local%20Commitment%202018.pdf.

[7] North Somerset plan to tackle Climate Change. Available at: https://n-somerset.gov.uk/council-democracy/priorities-strategies/climate-emergency/our-plans-tackle-climate-change.

The Climate Action Plan has additional benefits that tackle multiple issues. For example, an initiative to increase cycling in a particular community, with a primary objective of reducing carbon emissions from transport locally, will also deliver the co-benefit of improved physical and mental health for residents through increased physical activity and improved air quality. Over time, this will also result in fewer NHS interventions, saving money.

### 2.2.2 Active Travel Strategy

North Somerset Council has developed an Active Travel Strategy 2020-2030[8], which aims to harness the huge rise in walking and cycling seen during 2020 and increase walking and cycling trips by at least 300% by 2030.

The district has already delivered some flagship strategic active travel routes, for example the Festival Way commuter-route into Bristol from Nailsea and Backwell. Between March 2017 and March 2020, North Somerset saw an increase of 25% in cycling trips (pre-COVID-19, Annual Average Daily Cycle Trips), which was significantly higher than the national trend of that period.

This Strategy ties in with North Somerset's Joint Health & Wellbeing Strategy 2021-2024[9], of which a priority theme is physical activity and mental health and wellbeing. An aim of the Joint Health & Wellbeing Strategy is to promote active travel for school journeys.

North Somerset Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Placemaking and Growth;
- Neighbourhoods and Transport Department; and,
- All Local Authority Departments.

The principal challenges and barriers to implementation that North Somerset Council anticipates facing are increasing costs, revenue budget pressures, insufficient staff

[8] North Somerset Active Travel Strategy 2020-2030. Available at: https://www.n-somerset.gov.uk/sites/default/files/2021-08/30511%20ATS%20book%20ACC%200821_0.pdf.

[9] North Somerset's Joint Health & Wellbeing Strategy 2021-2024. Available at: https://n-somerset.gov.uk/council-democracy/priorities-strategies/health-wellbeing-strategy-2021-24.

capacity to take advantage of grant funding opportunities and that significant transformative, societal and behavioural changes are needed to meet targets.

Due to the challenges, the Banwell Bypass estimated completion year is now updated to year 2027.

The following key measures has been progressed:

- A local Air Quality Strategy has been developed to further prevent and reduce polluting activities.
- Banwell Bypass Project: Construction of haul road has been completed by May 2025. Earthworks for mainline of bypass began from May 2025.
- Metrowest: The Full Business Case was submitted to the Department for Transport in December 2024, and through detailed design, the business case identified an emerging gap in the scheme's funding, caused by delays, inflation and rising costs across the construction industry. To tackle this challenge, the West of England Mayoral Combined Authority are set to contribute another £27m, with North Somerset looking to provide the remaining £3m. In February 2025, the West of England Mayoral Combined Authority and North Somerset Council came together to contribute the additional funds needed to deliver the project.

## Table 2.1 – 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 | Defra AQ Grant Funding | 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 | Banwell Bypass | Transport Planning and Infrastructure | Other | 2022 | 2027 | Placemaking and Growth | Homes England | No | Fully Funded | >£10 million | Implementation | Road improvement scheme to improve congestion and reduce emissions | Deliver Banwell Bypass and associated flood mitigation, local active travel improvements to achieve a decrease in traffic through the village of Banwell | Banwell bypass project timeline is provided: https://n-somerset.gov.uk/business/regeneration-development/housing-infrastructure-fund/banwell-bypass/about-banwell-bypass | Increasing costs |
| 2 | Metrowest | Promoting Travel Alternatives | Promote use of rail and inland waterways | 2022 | 2028 | Neighbourhoods and Transport | Local Authority, Department for Transport (DfT), WECA | No | Fully Funded | >£10 million | Implementation | Reducing emissions of $NO_2$, $PM_{10}$, $PM_{2.5}$ and Carbon Dioxide ($CO_2$) | Re-opened the Portishead Rail Line with stations at Portishead and Pill and an increase in rail use | The Full Business Case was submitted to the Department for Transport in December 2024. In February 2025, the West of England Mayoral Combined Authority and North Somerset Council came together to contribute the additional funds needed to deliver the project. | Increasing costs |
| 3 | Promoting use of Alternative Methods of Travel | Promoting Travel Alternatives | Personalised Travel Planning | 2020 | 2030 | All Local Authority Departments | DfT, Active Travel Fund, Highways England, Rail Operators, Local Enterprise Partnership, Local Growth Fund | No | Partially Funded | <£10k | Implementation | Reducing emissions of $NO_2$, $PM_{10}$, $PM_{2.5}$ and $CO_2$ | Improve active and sustainable travel choices and promote use | Ongoing | Significant transformative, societal and behavioural changes are needed |
| 4 | Supporting Carbon Reduction – Climate Emergency Action Plan | Policy Guidance and Development Control | Other Policy | 2019 | 2030 | All Local Authority Departments | Local Authority and Public Sector Decarbonisation Scheme | No | Partially Funded | >£10 million | Implementation | Deliver a net zero council in terms of carbon emissions by 2030 | A decreasing tend in carbon emissions | Ongoing | Significant transformative, societal and behavioural changes are needed to meet target |
| 5 | Green Infrastructure (GI) Strategy | Policy Guidance and Development Control | Other Policy | 2021 | 2030 | All Local Authority Departments | Planning Conditions, obligations and/or Community Infrastructure Levy (CIL) placed on developers<br>Developers integrating the principles into their proposals<br>North Somerset Council including it in actions e.g. land management<br>Special projects that draw on external funding or grant schemes<br>Local community action including fundraising and use of the voluntary sector<br>Charitable Trusts | No | Partially Funded | £1 million - £10 million | Implementation | An increase in the number of trees and shrubs planted year on year to 2028 | Protect and enhance the GI Network within North Somerset by delivering the actions in the GI Strategy | Ongoing | Some planning policy evidence bases are out of date, such as the evidence base for open space standards/provision |

| Measure No. | Measure Title | Category | Classification | Year Measure Introduced in AQAP | Estimated / Actual Completion Date | Organisations Involved | Funding Source | Defra AQ Grant Funding | Funding Status | Estimated Cost of Measure | Measure Status | Reduction in Pollutant / Emission from Measure | Key Performance Indicator | Progress to Date | Comments / Barriers to Implementation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Land and landowners – where land falls within the Nature Recovery Network and/or strategic GI corridors/GI network (or other opportunity areas)<br>The Council and partners should work with landowners and promote funding opportunities | | | | | | | | |
| 6 | Active Travel Strategy | Promoting Travel Alternatives | Other Policy | 2020 | 2030 | All Local Authority Departments | DfT, Active Travel Fund, Highways England, Rail Operators, Local Enterprise Partnership, Local Growth Fund | No | Partially Funded | £1 million - £10 million | Implementation | Improved air quality from the reduction in motor vehicles in town and village areas and along our strategic cycle routes between places | Improve active and sustainable travel choices and promote use | Ongoing | Revenue budget pressures |
| 7 | Electric Vehicle Strategy | Promoting Low Emission Transport | Procuring alternative refuelling infrastructure to promote low emission vehicles, EV recharging and gas fuel recharging | 2022 | 2030 | Neighbourhoods and Transport | Local Authority, Central government funding and private sector investment | No | Partially Funded | £1 million - £10 million | Implementation | Encouraging electric vehicles helps to reduce tailpipe emissions | Ensure there are 1,989 publicly accessible charge points in North Somerset by 2030 | Ongoing | Revenue budget pressures |
| 8 | Bus Service Improvement Plan | Promoting Travel Alternatives | Other | 2022 | 2026 | Neighbourhoods and Transport | DfT | No | Fully Funded | >£10 million | Implementation | Reducing emissions (assuming bus patronage increases) | An increase in bus use | Ongoing | Significant transformative, societal and behavioural changes are needed |

## 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[10], 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 than 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Public Health Outcomes Framework data tool[11] compiled by Public Heath England quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2023 fraction of mortality attributable to particle air pollution (indicator D01) in North Somerset is 4.1%, which is below the average for the Southwest region (4.3%) and for England (5.2%). The 2023 estimates of the fraction of mortality attributable to $PM_{2.5}$ pollution range from 3.3% in the Isles of Scilly to 7.4% in the City of London.

North Somerset Council continues to recognise that local authorities are expected to work towards reducing emissions and concentrations of $PM_{2.5}$ in their area of jurisdiction. Currently, there is no $PM_{10}$ or $PM_{2.5}$ monitoring undertaken within the unitary authority of North Somerset. As such, $PM_{10}$ or $PM_{2.5}$ concentrations have not been reported.

The current Defra background maps[12] for North Somerset, which utilised the 2021 reference year, show that all 2024 background concentrations of $PM_{2.5}$ are significantly below the annual mean AQSO[13] for $PM_{2.5}$ of 20µg/m$^3$. The highest concentration predicted was 7.62µg/m$^3$ within the 1km x 1km grid square with the centroid grid reference of 347500, 162500. This is an area east of Wrington. The major source of $PM_{2.5}$ of this grid is secondary sources. For 2024, the annual average background level of $PM_{2.5}$ in North

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

[11] Public Health Outcomes Framework, Public Health England. data tool available online at https://fingertips.phe.org.uk/profile/public-health-outcomes-framework

[12] Defra UK Air. Background maps. Available at: https://uk-air.defra.gov.uk/data/laqm-background-home

[13] Defra UK Air. Air quality objectives. Available at: https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update_20230403.pdf

Somerset was 6.21µg/m$^3$. In September 2021, the WHO Air Quality Guidelines[14] set out a new recommended level annual average concentration of $PM_{2.5}$ of 5µg/m$^3$. Although the WHO guideline does not represent a standard or legally binding criterion, it is noted that the predicted annual average background level of $PM_{2.5}$ in North Somerset is higher than the WHO guideline concentration.

North Somerset Council is taking the following measures to address $PM_{2.5}$:

- The Joint Local Transport Plan and the Active Travel Strategy, will reduce emissions of particulates from transport;
- Continue work with the Director of Public Health to promote measures to improve air quality, including active transport, implementation of measures to increase healthy, active lifestyles and ensures measures are implemented through improved urban planning e.g. improved cycle highways;
- Ensuring that air quality continues to be considered as part of the Joint Strategic Needs Assessment (JSNA);
- Dust Management Plans, which are usually incorporated into Construction Environmental Management Plans (CEMPs), are routinely conditioned on major development planning permissions to control and minimise the risk of construction dust impacts, and therefore $PM_{2.5}$, to nearby receptors; and,
- Regular inspections of industrial processes permitted by the Council where combustion and non-combustion processes lead to anthropogenic emissions of $PM_{2.5}$.

[14] WHO. What are the air quality guidelines? Available at: https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines

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

This section sets out the monitoring undertaken within 2024 by North Somerset Council 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

No automatic monitoring was undertaken by North Somerset Council in 2024.

### 3.1.2 Non-Automatic Monitoring Sites

North Somerset Council undertook non- automatic (i.e. passive) monitoring of $NO_2$ at 24 sites during 2024. Three new monitoring sites have been added in 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.

In 2024, 12 diffusion tube sites reported a decrease and nine reported an increase in annual mean $NO_2$ concentrations when compared to 2023 levels. It should be noted that all 24 locations recorded concentrations below the annual mean AQSO (40µg/m$^3$).

Following bias adjustment, the maximum concentration recorded during 2024 was 19.5µg/m$^3$ at DT20 – A370 Lulsgate Bottom which is located at a roadside position in the northeast of Bristol Airport. Concentrations at this location are still considerably below the annual mean AQSO.

Figure A.1 and Figure A.2 show annual mean $NO_2$ concentration trends over the last 5 years, there is a general decreasing trend in the majority of passive monitoring locations from 2020 to 2024. The reduction in levels at 12 sites during 2024 further supports the declining trend in concentrations.

No passive monitoring sites reported an annual mean $NO_2$ concentration greater than 60µg/m$^3$ in 2024, therefore it can be assumed that there are no sites where there is likely to be a risk of exceeding the 1-hour mean $NO_2$ AQSO, in accordance with the guidance provided in LAQM.TG(22).

### 3.2.2 Particulate Matter ($PM_{10}$)

No $PM_{10}$ monitoring was undertaken by North Somerset Council in 2024.

### 3.2.3 Particulate Matter ($PM_{2.5}$)

No $PM_{2.5}$ monitoring was undertaken by North Somerset Council in 2024.

### 3.2.4 Sulphur Dioxide ($SO_2$)

No sulphur dioxide monitoring was undertaken by North Somerset Council in 2024.

### 3.2.5 Other Monitoring – Bristol Airport

Bristol Airport is located within the unitary authority of North Somerset. In 2011, the airport was granted planning permission to expand and accommodate 10 million passengers per

annum. As part of the consent, a Section 106 agreement was introduced, which amongst other things required the airport to undertake air quality monitoring in the vicinity its operational extents.

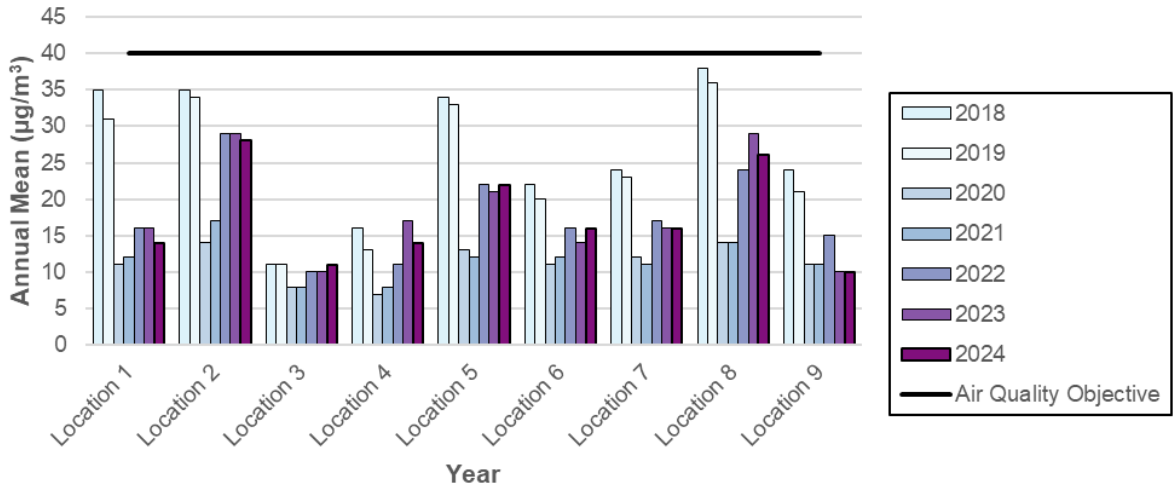
In 2012, Bristol Airport installed a continuous air quality monitoring station, recording $NO_2$ and $PM_{10}$ concentrations, as well as nine $NO_2$ diffusion tube survey sites. The concentrations recorded during 2024 have been published by Bristol Airport within their Annual Monitoring Report[15].

There has been a significant growth in the development of low-cost sensor systems. However, the accuracy and precision of measurements recorded utilising this form of monitoring equipment can be inconsistent. A European Certification Scheme is currently under development for gaseous and particulate sensor systems, including $NO_2$, $PM_{10}$ and $PM_{2.5}$. Additionally, for particulates, there are a number of monitors that have been certified as suitable for indicative monitoring within the UK. Further information can be found in LAQM.TG22.

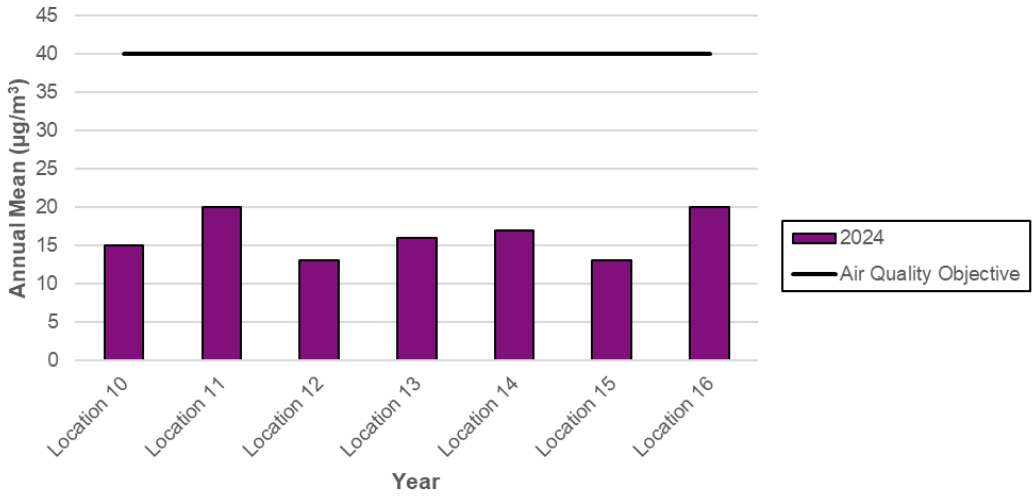
Figure 3.1 shows the diffusion tube monitoring results for Bristol Airport from 2018 to 2024. Seven new diffusion tube monitoring locations were added in 2024. Figure 3.2 shows the diffusion tube monitoring results at new locations for Bristol Airport in 2024. Figure 3.3 shows the continuous monitoring results for Bristol Airport from 2018 to 2024. The location of each monitoring position is shown in Appendix D: Maps of Monitoring Locations, Figure D.18.

[15] Bristol Airport. Annual Monitoring Report 2024. Available at: https://www.bristolairport.co.uk/media/as2j1amw/brs-annual-monitoring-report-2024v2-web-version.pdf

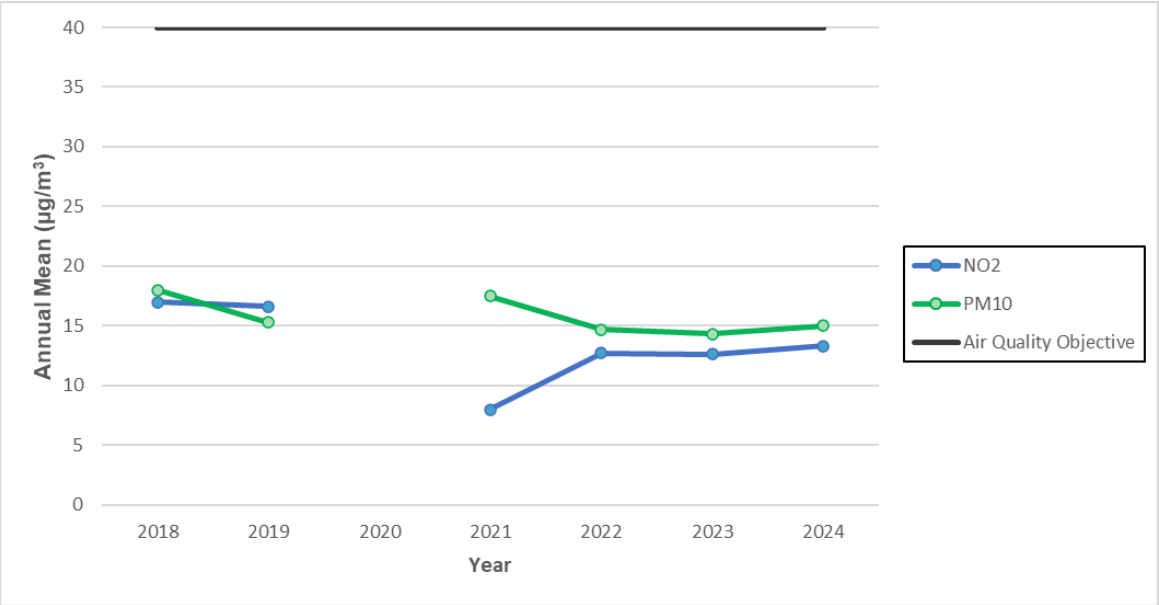
## Figure 3.1– Bristol Airport $NO_2$ Diffusion Tube Monitoring Results (1)




## Figure 3.2– Bristol Airport $NO_2$ Diffusion Tube Monitoring Results (2)



## Figure 3.3 – Bristol Airport Continuous Monitoring Results



# 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| DT1 | WSM Drove Road | Roadside | 332653 | 160737 | $NO_2$ | No | 3.0 | 1.0 | No | 2.5 |
| DT2 | WSM Winterstoke Road | Kerbside | 333515 | 160069 | $NO_2$ | No | 17.0 | 3.0 | No | 2.5 |
| DT3 | Worle Community School | Roadside | 335489 | 162434 | $NO_2$ | No | 24.0 | 1.0 | No | 2.5 |
| DT4 | St Annes A370 | Roadside | 339753 | 164204 | $NO_2$ | No | 8.0 | 1.5 | No | 2.5 |
| DT5 | Station Road, Congresbury | Kerbside | 343662 | 163860 | $NO_2$ | No | 6.0 | 1.0 | No | 2.5 |
| DT7 | Clevedon St Mary Elton | Roadside | 339878 | 170252 | $NO_2$ | No | 28.0 | 2.0 | No | 2.5 |
| DT8 | Bristol Road,Portishead | Roadside | 347054 | 175534 | $NO_2$ | No | 25.0 | 3.0 | No | 2.5 |
| DT11 | A369 Junction with Pill Road | Roadside | 353177 | 174620 | $NO_2$ | No | 15.0 | 2.0 | No | 2.5 |
| DT12 | Long Ashton Road, Long Ashton | Kerbside | 353544 | 170088 | $NO_2$ | No | 15.0 | 2.0 | No | 2.5 |
| DT13 | Flax Bourton (A370) | Kerbside | 350773 | 169334 | $NO_2$ | No | 7.0 | 1.0 | No | 2.5 |
| DT14 | Wraxhall School, Wraxhall | Kerbside | 348941 | 171877 | $NO_2$ | No | 34.0 | 4.0 | No | 2.5 |
| DT15 | Nailsea (Tesco roundabout) | Roadside | 347641 | 170943 | $NO_2$ | No | 10.0 | 5.0 | No | 2.5 |
| DT18 | Downside Road (Top 8) | Kerbside | 351054 | 165665 | $NO_2$ | No | 4.0 | 3.0 | No | 2.5 |
| DT19 | Winford Primary School | Roadside | 353978 | 165103 | $NO_2$ | No | 13.0 | 8.5 | No | 2.5 |
| DT20 | A370 Lulsgate Bottom | Kerbside | 351391 | 165698 | $NO_2$ | No | 10.0 | 2.0 | No | 2.5 |

| 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| DT21 | Sandford School | Kerbside | 342603 | 159682 | $NO_2$ | No | 18.0 | 2.0 | No | 2.5 |
| DT22 | Banwell Primary School | Roadside | 339705 | 159177 | $NO_2$ | No | 8.0 | 1.0 | No | 2.5 |
| DT23 | Centre of Banwell | Kerbside | 339802 | 159151 | $NO_2$ | No | 3.0 | 1.0 | No | 2.5 |
| DT24A, DT24B, DT24C | Banwell Bowling Club | Other | 339838 | 159166 | $NO_2$ | No | N/A | - | No | 2.5 |
| DT25 | A370 Cleeve- bus stop | Kerbside | 345592 | 165597 | $NO_2$ | No | 20.4 | 2.0 | No | 2.5 |
| DT26 | A370 Cleeve Touts | Kerbside | 345507 | 165538 | $NO_2$ | No | 17.0 | 2.0 | No | 2.5 |
| DT27 | Worle High St, Opp Woodspring pub | Roadside | 335681 | 162816 | $NO_2$ | No | 8.0 | 2.0 | No | 2.5 |
| DT28 | Worle High Street (Spring Hill) | Roadside | 335046 | 162364 | $NO_2$ | No | 16.0 | 2.0 | No | 2.5 |
| DT29 | Clevedon Road, Tickenham | Roadside | 344868 | 171860 | $NO_2$ | No | 14.0 | 2.0 | No | 2.5 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|
| DT1 | 332653 | 160737 | Roadside | 100.0 | 100.0 | 18.1 | 19.8 | 20.2 | 17.0 | 16.2 |
| DT2 | 333515 | 160069 | Kerbside | 84.9 | 84.9 | 18.8 | 19.6 | 20.6 | 18.0 | 18.3 |
| DT3 | 335489 | 162434 | Roadside | 100.0 | 100.0 | - | 15.9 | 15.5 | 14.2 | 13.6 |
| DT4 | 339753 | 164204 | Roadside | 100.0 | 100.0 | 17.2 | 18.7 | 17.6 | 15.9 | 14.2 |
| DT5 | 343662 | 163860 | Kerbside | 100.0 | 100.0 | 20.1 | 24.1 | 23.1 | 20.6 | 19.0 |
| DT7 | 339878 | 170252 | Roadside | 100.0 | 100.0 | 11.3 | 13.4 | 11.9 | 11.7 | 10.0 |
| DT8 | 347054 | 175534 | Roadside | 90.6 | 90.6 | 14.3 | 15.8 | 13.7 | 12.4 | 12.7 |
| DT11 | 353177 | 174620 | Roadside | 100.0 | 100.0 | 17.0 | 19.0 | 18.6 | 10.4 | 15.9 |
| DT12 | 353544 | 170088 | Kerbside | 100.0 | 100.0 | 15.9 | 17.9 | 16.4 | 13.7 | 12.2 |
| DT13 | 350773 | 169334 | Kerbside | 100.0 | 100.0 | 19.5 | 19.5 | 17.6 | 17.1 | 14.6 |
| DT14 | 348941 | 171877 | Kerbside | 100.0 | 100.0 | 16.1 | 18.1 | 17.0 | 13.1 | 13.3 |
| DT15 | 347641 | 170943 | Roadside | 100.0 | 100.0 | 16.5 | 16.6 | 16.2 | 16.2 | 12.7 |
| DT18 | 351054 | 165665 | Kerbside | 100.0 | 100.0 | 13.6 | 13.9 | 17.1 | 13.7 | 17.0 |
| DT19 | 353978 | 165103 | Roadside | 100.0 | 100.0 | 14.1 | 13.3 | 15.1 | 14.2 | 12.8 |
| DT20 | 351391 | 165698 | Kerbside | 100.0 | 100.0 | 19.5 | 19.3 | 20.3 | 17.1 | 19.5 |
| DT21 | 342603 | 159682 | Kerbside | 100.0 | 100.0 | 11.3 | 10.8 | 12.0 | 12.7 | 10.0 |
| DT22 | 339705 | 159177 | Roadside | 100.0 | 100.0 | 14.9 | 15.5 | 15.2 | 21.8 | 14.8 |
| DT23 | 339802 | 159151 | Kerbside | 100.0 | 100.0 | 16.8 | 18.7 | 15.3 | 10.6 | 13.4 |
| DT24A, DT24B, DT24C | 339838 | 159166 | Other | 100.0 | 100.0 | 8.5 | 10.1 | 8.3 | 12.0 | 7.5 |
| DT25 | 345592 | 165597 | Kerbside | 92.5 | 92.5 | - | - | 12.8 | 7.6 | 9.8 |
| DT26 | 345507 | 165538 | Kerbside | 92.5 | 92.5 | - | - | 14.5 | 7.7 | 11.6 |
| DT27 | 335681 | 162816 | Roadside | 100.0 | 100.0 | - | - | - | - | 17.4 |
| DT28 | 335046 | 162364 | Roadside | 100.0 | 100.0 | - | - | - | - | 16.7 |
| DT29 | 344868 | 171860 | Roadside | 92.5 | 92.5 | - | - | - | - | 10.3 |

☒ **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**.

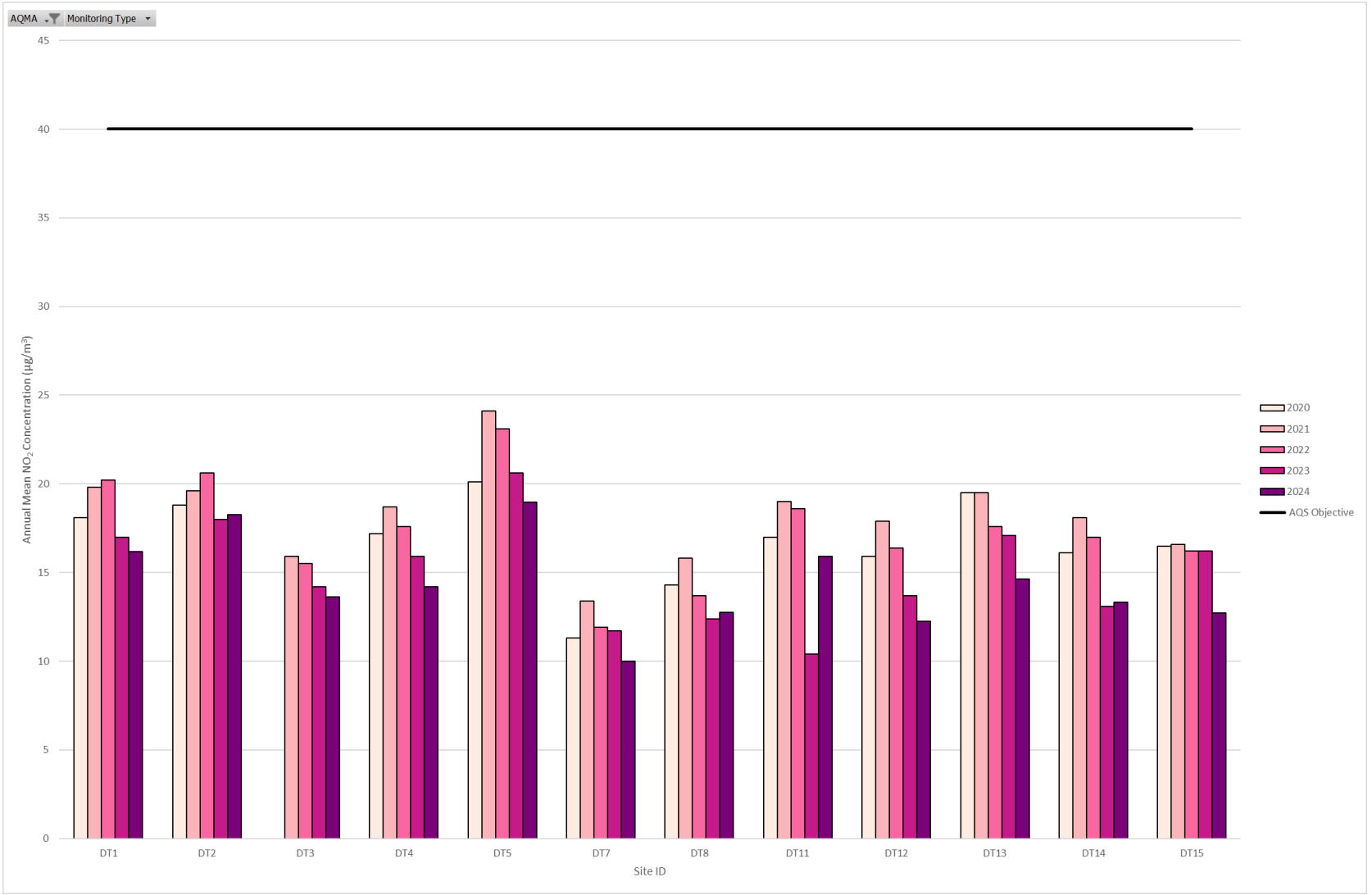
Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

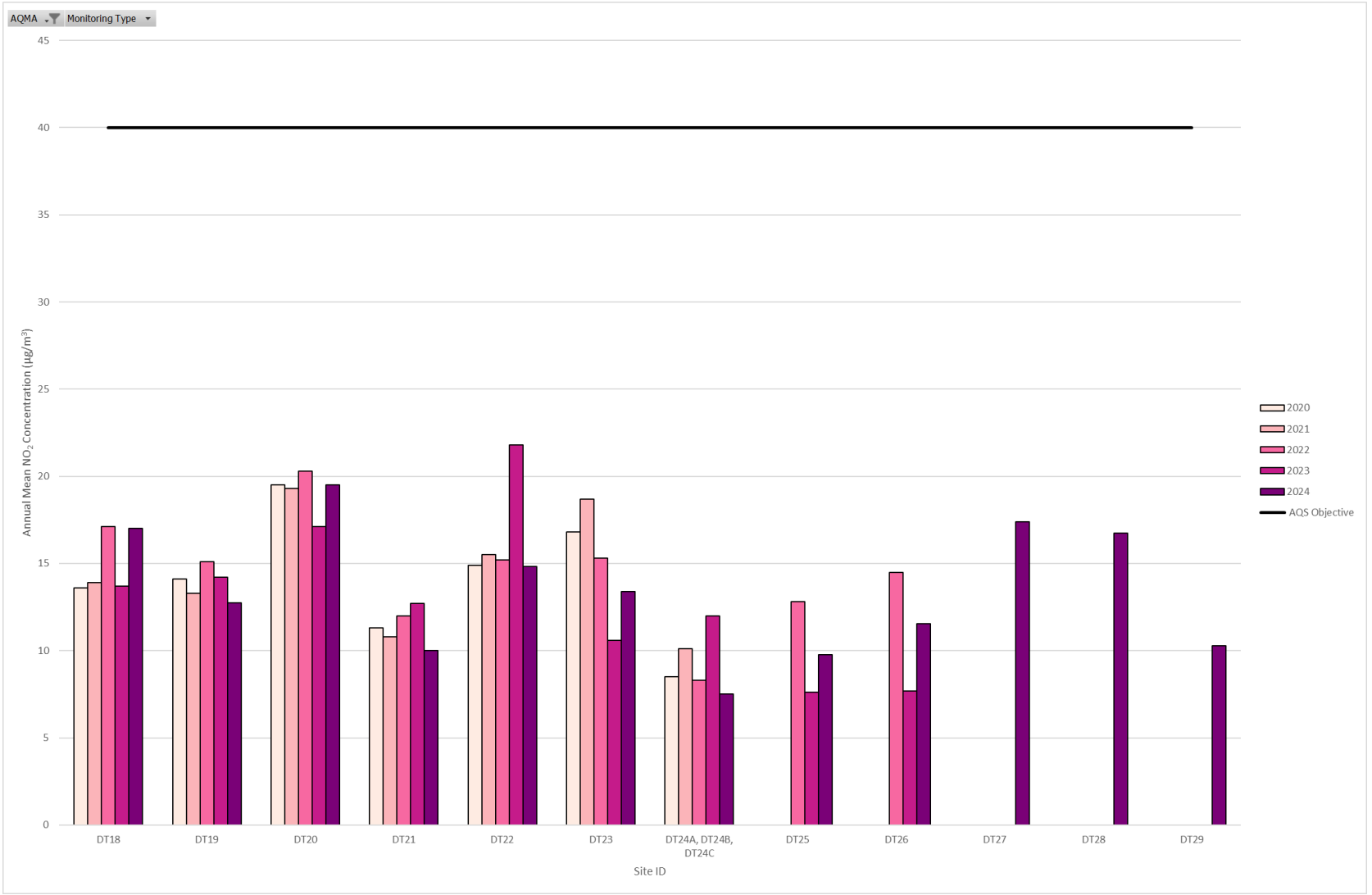
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(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 (1)



## Figure A.2 – Trends in Annual Mean $NO_2$ Concentrations (2)



# Appendix B: Full Monthly Diffusion Tube Results for 2024

## Table B.1 – $NO_2$ 2024 Diffusion Tube Results ($\mu g/m^3$)

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DT1 | 332653 | 160737 | 25.3 | 16.9 | 18.5 | 19.0 | 18.8 | 14.8 | 13.1 | 13.5 | 22.0 | 23.0 | 25.3 | 20.8 | 19.2 | 16.2 | - | |
| DT2 | 333515 | 160069 | 30.8 | 22.6 | 23.7 | 18.9 | 19.7 | | | 12.6 | 17.9 | 24.9 | 25.9 | 20.4 | 21.7 | 18.3 | - | |
| DT3 | 335489 | 162434 | 23.2 | 20.9 | 17.9 | 13.3 | 13.1 | 11.3 | 11.9 | 11.2 | 13.6 | 17.8 | 21.4 | 18.7 | 16.2 | 13.6 | - | |
| DT4 | 339753 | 164204 | 22.2 | 18.6 | 16.5 | 15.2 | 15.1 | 13.3 | 13.7 | 13.5 | 17.1 | 19.2 | 20.5 | 18.1 | 16.9 | 14.2 | - | |
| DT5 | 343662 | 163860 | 28.4 | 24.7 | 23.5 | 20.2 | 22.6 | 19.3 | 17.9 | 20.0 | 23.8 | 23.8 | 24.2 | 22.8 | 22.6 | 19.0 | - | |
| DT7 | 339878 | 170252 | 19.1 | 11.3 | 11.6 | 9.0 | 10.7 | 6.0 | 7.7 | 7.8 | 12.5 | 15.0 | 18.8 | 13.2 | 11.9 | 10.0 | - | |
| DT8 | 347054 | 175534 | 21.5 | 16.4 | 14.6 | 12.9 | | 11.3 | 12.1 | 12.0 | 16.0 | 18.4 | 15.0 | 16.7 | 15.2 | 12.7 | - | |
| DT11 | 353177 | 174620 | 20.7 | 20.2 | 21.0 | 16.9 | 18.9 | 18.3 | 17.4 | 17.8 | 18.5 | 22.2 | 19.7 | 15.5 | 18.9 | 15.9 | - | |
| DT12 | 353544 | 170088 | 20.6 | 16.5 | 15.5 | 11.9 | 13.2 | 10.9 | 11.0 | 10.7 | 13.3 | 18.8 | 20.3 | 12.4 | 14.6 | 12.2 | - | |
| DT13 | 350773 | 169334 | 23.1 | 21.9 | 18.1 | 16.1 | 15.1 | 14.7 | 15.3 | 15.6 | 14.9 | 18.2 | 20.9 | 15.4 | 17.4 | 14.6 | - | |
| DT14 | 348941 | 171877 | 22.1 | 18.1 | 15.9 | 13.7 | 9.8 | 13.7 | 13.5 | 13.0 | 14.5 | 17.8 | 21.5 | 16.6 | 15.8 | 13.3 | - | |
| DT15 | 347641 | 170943 | 23.4 | 17.8 | 13.2 | 13.6 | 13.8 | 10.1 | 10.4 | 10.0 | 12.1 | 19.5 | 22.0 | 16.0 | 15.1 | 12.7 | - | |
| DT18 | 351054 | 165665 | 24.7 | 23.1 | 22.1 | 18.8 | 18.8 | 17.0 | 17.7 | 19.8 | 16.6 | 20.6 | 23.7 | 20.1 | 20.2 | 17.0 | - | |
| DT19 | 353978 | 165103 | 19.8 | 14.1 | 14.3 | 11.0 | 15.1 | 12.8 | 12.2 | 11.3 | 26.5 | 16.4 | 17.4 | 11.4 | 15.2 | 12.8 | - | |
| DT20 | 351391 | 165698 | 26.7 | 24.8 | 21.0 | 23.3 | 23.2 | 26.4 | 23.3 | 24.1 | 12.4 | 23.4 | 26.2 | 24.1 | 23.2 | 19.5 | - | |
| DT21 | 342603 | 159682 | 16.9 | 13.1 | 12.2 | 9.4 | 8.2 | 7.4 | 8.6 | 6.8 | 18.6 | 13.6 | 15.2 | 13.0 | 11.9 | 10.0 | - | |
| DT22 | 339705 | 159177 | 22.3 | 16.1 | 18.1 | 18.3 | 17.4 | 14.7 | 13.8 | 16.0 | 17.6 | 17.8 | 20.7 | 18.9 | 17.6 | 14.8 | - | |
| DT23 | 339802 | 159151 | 21.6 | 18.4 | 17.0 | 14.1 | 15.5 | 12.6 | 13.7 | 15.0 | 8.0 | 17.1 | 20.5 | 18.0 | 16.0 | 13.4 | - | |
| DT24A | 339838 | 159166 | 14.6 | 10.1 | 8.7 | 6.8 | 6.8 | 5.1 | 4.9 | 5.9 | 7.7 | 10.6 | 13.1 | 10.3 | - | - | - | Triplicate Site with DT24A, DT24B and DT24C - Annual data provided for DT24C only |
| DT24B | 339838 | 159166 | 15.2 | 10.1 | 8.5 | 7.0 | 6.5 | 5.6 | 5.8 | 5.9 | 8.1 | 10.7 | 13.4 | 10.3 | - | - | - | Triplicate Site with DT24A, DT24B and DT24C - Annual data provided for DT24C only |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DT24C | 339838 | 159166 | 14.6 | 9.9 | 8.7 | 6.8 | 6.8 | 5.4 | 5.7 | 6.2 | 13.4 | 9.6 | 12.6 | 10.5 | 8.9 | 7.5 | - | Triplicate Site with DT24A, DT24B and DT24C - Annual data provided for DT24C only |
| DT25 | 345592 | 165597 | 17.7 | 14.1 | 13.2 | 10.9 | 9.8 | 7.8 | 8.7 | 7.4 | 11.8 | 13.2 | | 13.7 | 11.6 | 9.8 | - | |
| DT26 | 345507 | 165538 | 20.1 | 13.5 | 12.1 | 13.2 | 14.0 | 11.8 | 10.7 | 11.2 | | 15.6 | 16.3 | 12.9 | 13.8 | 11.6 | - | |
| DT27 | 335681 | 162816 | 25.7 | 20.8 | 16.1 | 18.2 | 19.1 | 16.5 | 17.8 | 16.6 | 23.5 | 25.3 | 26.7 | 22.3 | 20.7 | 17.4 | - | |
| DT28 | 335046 | 162364 | 26.7 | 23.6 | 22.7 | 18.6 | 16.5 | 13.3 | 12.7 | 13.7 | 20.0 | 24.9 | 24.3 | 22.1 | 19.9 | 16.7 | - | |
| DT29 | 344868 | 171860 | | 13.5 | 12.1 | 9.8 | 10.6 | 8.0 | 7.5 | 7.7 | 19.6 | 15.0 | 17.6 | 13.4 | 12.3 | 10.3 | - | |

☒ **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.**

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

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

☒ **North Somerset 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 North Somerset Council During 2024

Several new development applications have been registered in 2024 and 2025. Table C.1 details a list of planning applications with relevant information. If the scheme is a major development, then North Somerset Council are requesting that an Air Quality Assessment (AQA) is completed.

### Table C.1 - Planning Applications within North Somerset Council (2024 - 2025)

| Reference | Location | Details | Status | Comments |
|---|---|---|---|---|
| 24/P/2508/EA2 | Bristol Airport North Side Road Felton Wrington Bristol BS48 3DY | Request for a formal Scoping Opinion to determine the scope of an Environmental Impact Assessment for a future application for the proposed expansion of the airport to accommodate 15 million passengers per annum and associated works. | Decided: EIA scoping opinion issued | Air quality assessment is required in the EIA scoping opinion |
| 24/P/2690/OU2 | Land East Of Wolvershill Road Banwell | Outline Planning Application with Environmental Statement (main points of Access, from Banwell Bypass and Wolvershill Road not reserved) for demolition of existing buildings and phased redevelopment to provide up to 1,300 homes (Use Class C3), a mixed-use local centre including up to 5,500 sqm of community and commercial uses (Use Classes E, F1 and F2) and a Care or Extra Care facility (Use Class C2), a Primary School, green infrastructure, and associated works. Details of layout, appearance, scale and landscaping reserved for subsequent approval. | Registered | Air quality assessment has been provided in Environment Statement |
| 24/P/2446/OU2 | Land North Of Knightcott Road And West And East Of Summer Lane Banwell | Outline planning application with Environmental Statement for the erection of up to 755 residential dwellings, up to 6.3ha employment use, public open space and areas of play, sustainable drainage, planting, foot/cycle paths, noise bund, community infrastructure, ancillary uses and principal means of vehicular access from Knightcott Road and Summer Lane. All matters reserved except for means of access. | Registered | Air quality assessment has been provided in Environment Statement |
| 24/P/1586/OU2 | Land North Of Southfield Road Trading Estate Clevedon Road Nailsea | Outline permission with Environmental Statement for the erection of up to 381 dwellings, 0.68ha of land to accommodate a care home, 1.1ha of land for employment uses, 0.35ha of land to accommodate a community building and car park, improvements to existing playing pitches, public open space, woodland planting, sustainable drainage systems | Registered | Air quality assessment has been provided in Environment Statement |

| Reference | Location | Details | Status | Comments |
|---|---|---|---|---|
| | | and ancillary works, with means of access of two primary access points onto the B3130 for approval, all other matters (other access, appearance, landscaping, layout and scale) reserved for subsequent approval | | |

## Additional Air Quality Works Undertaken by North Somerset Council 2024

North Somerset Council has not completed any additional works within the monitoring year of 2024.

## QA/QC of Diffusion Tube Monitoring

In 2024, North Somerset Council's diffusion tubes were supplied and analysed by Gradko International Limited. Gradko are amongst the market leaders in the preparation, supply and analysis of $NO_2$ diffusion tubes in the UK. The diffusion tubes utilised by North Somerset Council use the 20% Triethanolamine (TEA) in water preparation method. Analysis is carried out in accordance with Gradko's documented UKAS accredited in-house laboratory method GLM7 and follows the harmonisation practical guidance for diffusion tube.

Gradko participate in AIR, an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Laboratory (HSL). AIR PT started in April 2014 and offers a number of test samples designed to test the proficiency of laboratories undertaking analysis of chemical pollutants in ambient, indoor, stack and workplace air. One such sample is the AIR $NO_2$ test sample type that is distributed to participants in a quarterly basis.

AIR $NO_2$ PT forms an integral part of the UK $NO_2$ Network's QA/QC and is a useful tool in assessing the analytical performance of those laboratories supplying diffusion tubes to Local Authorities for use in the context of LAQM. These provide strict performance criteria for participating laboratories to meet, thereby ensuring $NO_2$ concentrations reported are of a high calibre. In the latest available AIR-PT results, AIR PT January – October 2024 (AIR PT AR062, AR063, AR065 and AR066), Gradko scored 100%. Additionally, the precision of the $NO_2$ diffusion tubes (20% TEA in Water) supplied by Gradko has been classified as 'good' for all 26 observations out of total 26 observations in 2024. This precision reflects the laboratory's performance and consistency in preparing and analysing the tubes, as

well as the subsequent handling of the tubes in the field. Further information on the precision summary results can be found on the LAQM website.

All the diffusion tube changeovers in 2024 were undertaken within ±2 days of the diffusion tube monitoring calendar.

### Diffusion Tube Annualisation

All diffusion tube monitoring locations within North Somerset Council recorded data capture of 75% therefore it was not required to annualise any monitoring data.

### Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 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.

North Somerset Council did not have any triplicate co-location sites with continuous monitoring site during 2024. Therefore, North Somerset Council have applied a national bias adjustment factor of 0.84 to the 2024 monitoring data. This has been derived from the national bias adjustment calculator, as shown in Figure C.1. A summary of bias adjustment factors used by North Somerset Council over the past five years is presented in Table C.2.

### Table C.2 – 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 | 03/21 | 0.93 |

## Figure C.1 - National Diffusion Tube Bias Adjustment Factor

**National Diffusion Tube Bias Adjustment Factor Spreadsheet** — Spreadsheet Version Number: 04/25

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 June 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:** Select the Laboratory that Analyses Your Tubes from the Drop-Down List — If a laboratory is not shown, we have no data for this laboratory.

**Step 2:** Select a Preparation Method from the Drop-Down List — If a preparation method is not shown, we have no data for this method at this laboratory.

**Step 3:** Select a Year from the Drop-Down List — If a year is not shown, we have no data[2]

**Step 4:** 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 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 | 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 | | **Overall Factor[3] (27 studies)** | | | | Use | | **0.84** |

## $NO_2$ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the $NO_2$ concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/$NO_2$ fall-off with distance calculator available on the LAQM Support website.

No non-automatic monitoring sites North Somerset Council required fall-off with distance correction during the 2024 monitoring year.

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

## Figure D.1 – Map of Non-Automatic Monitoring Sites

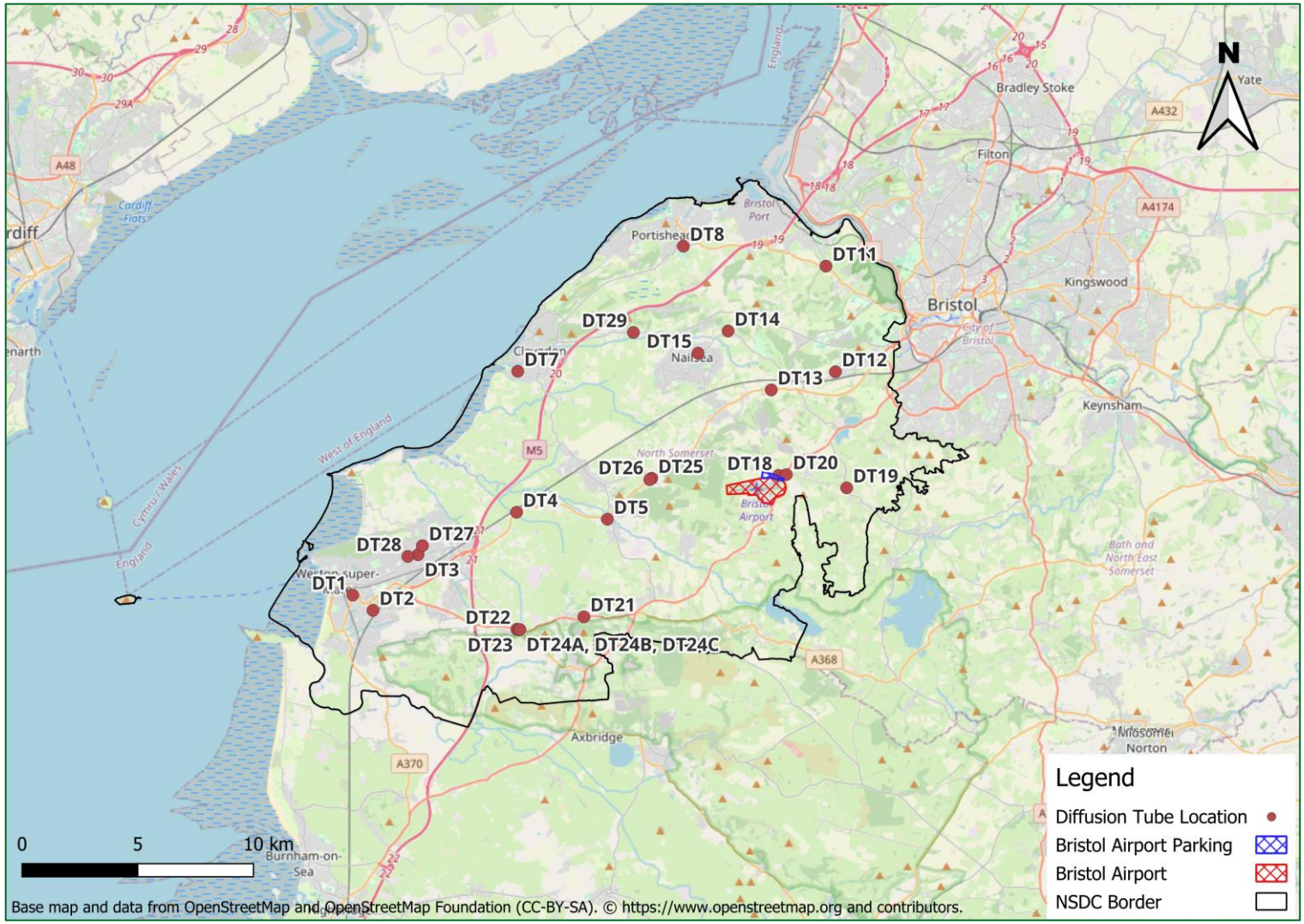


**Figure D.2 – Map of Non-Automatic Monitoring Sites: Weston-super-Mare**

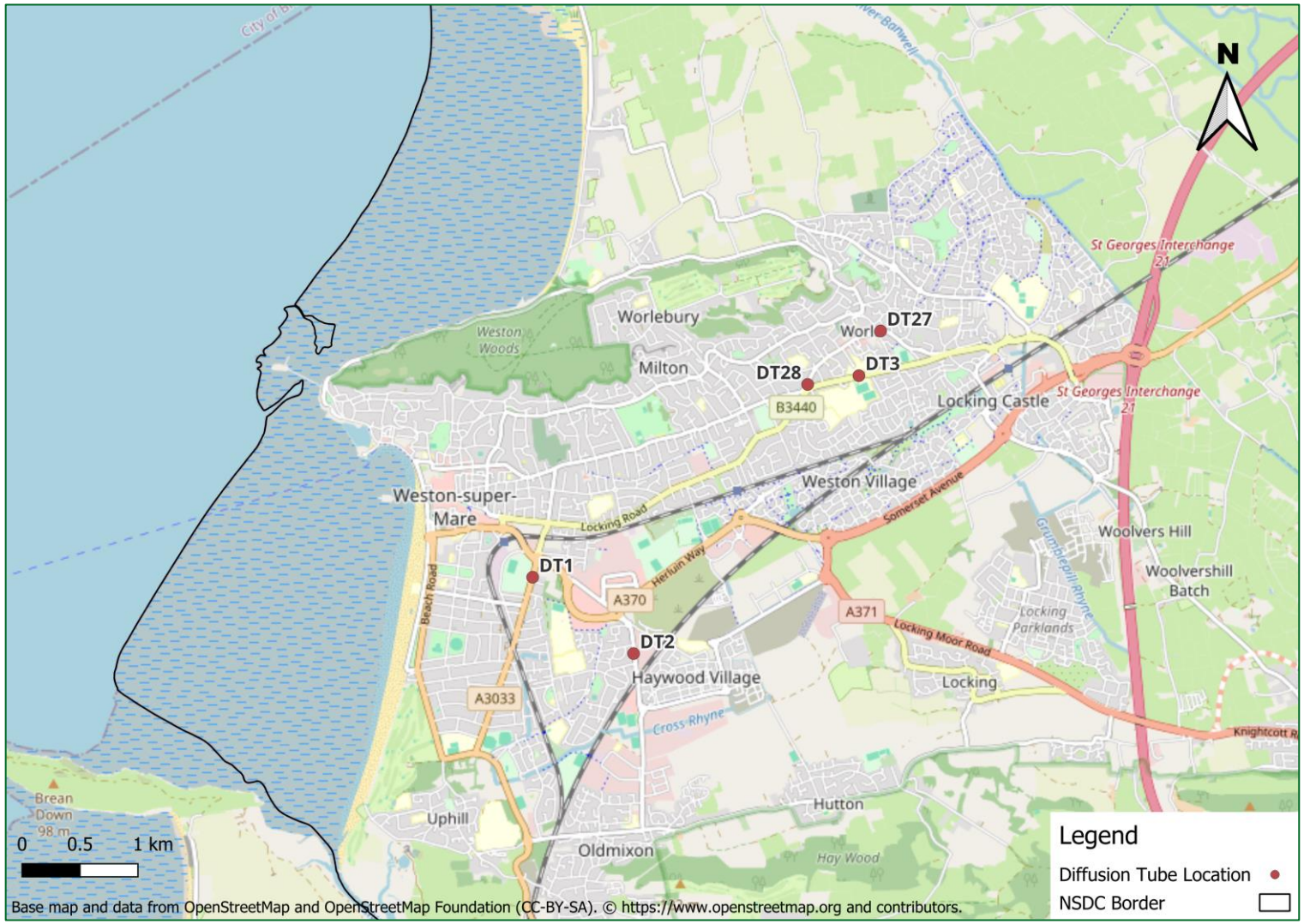
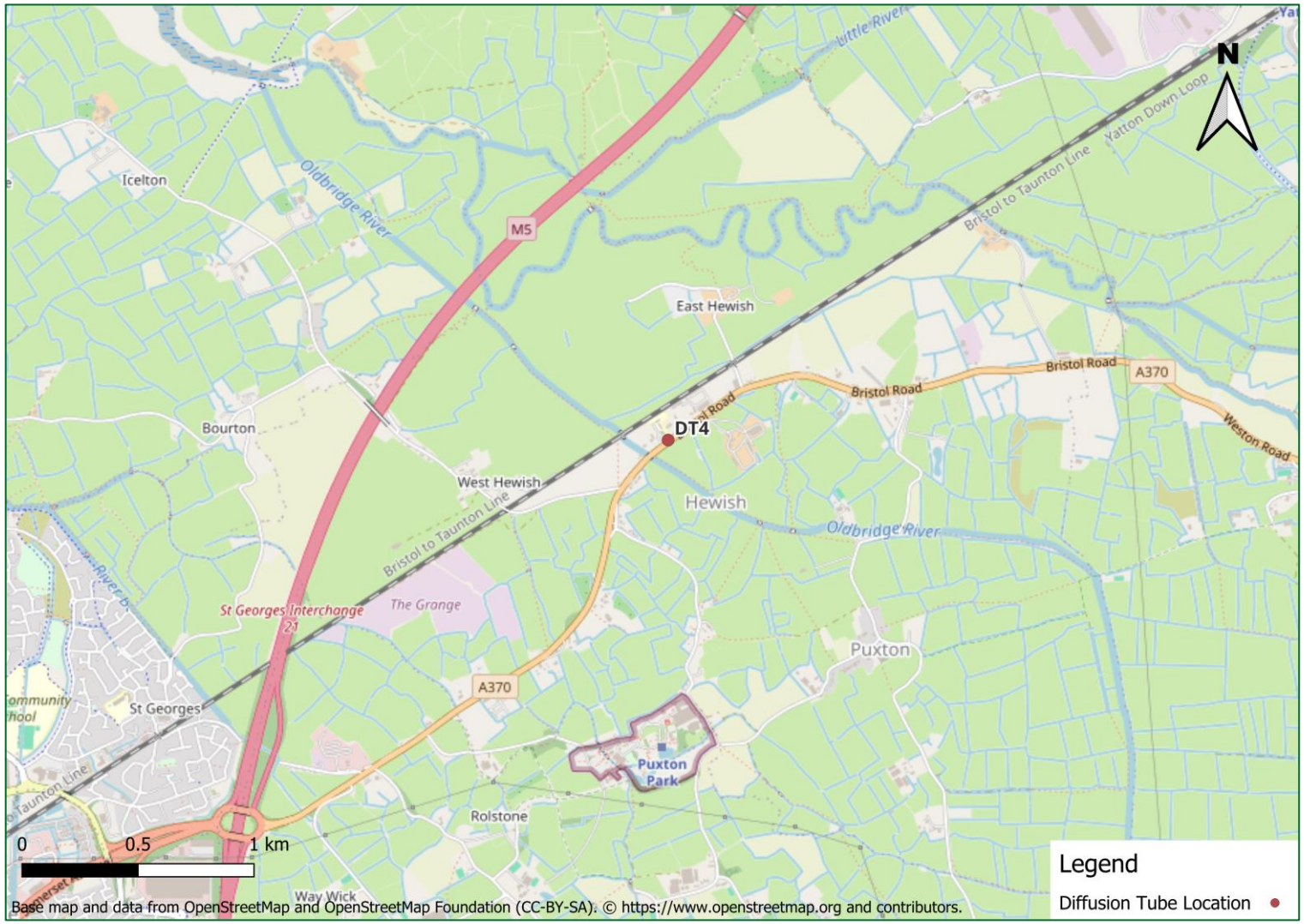
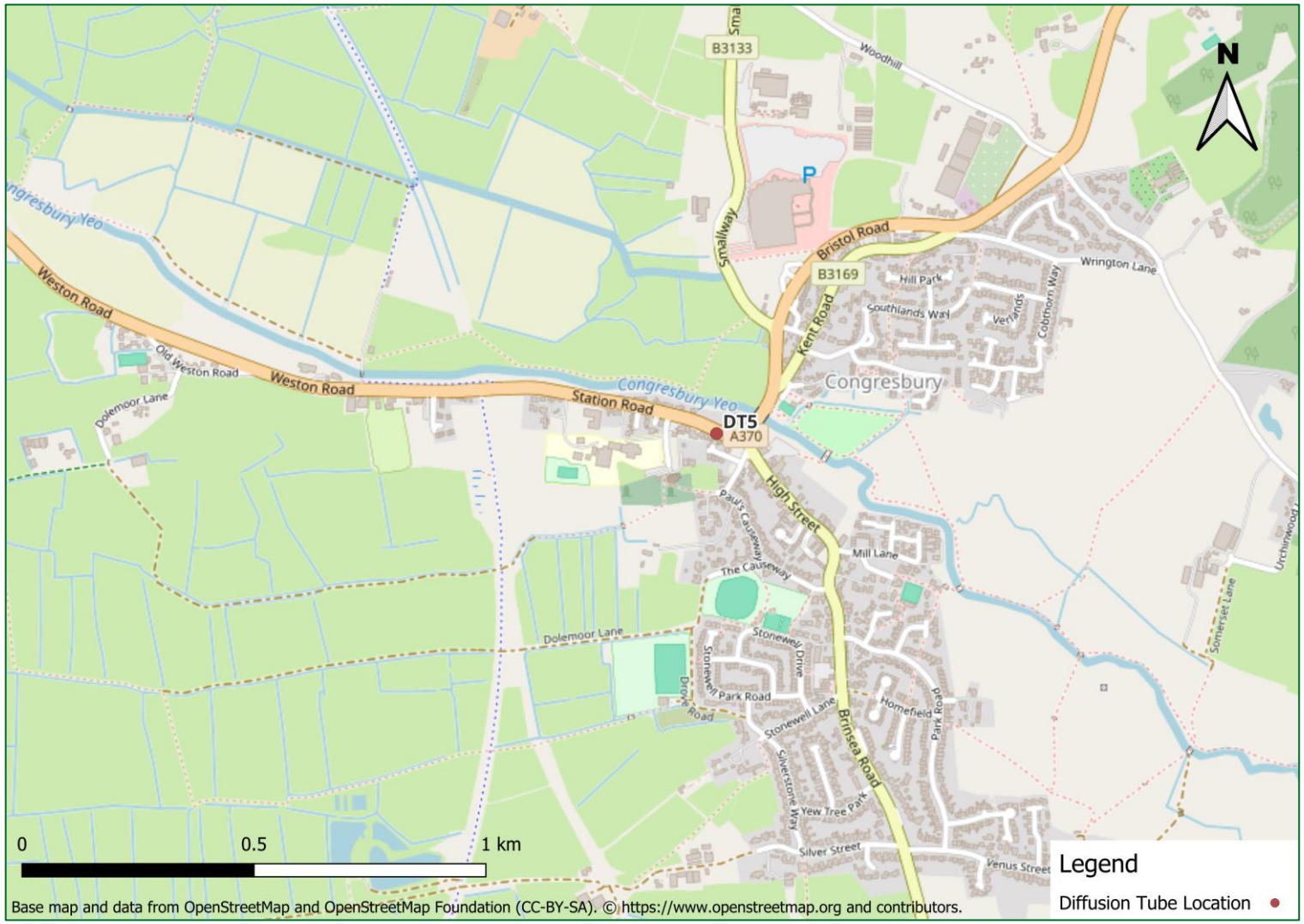


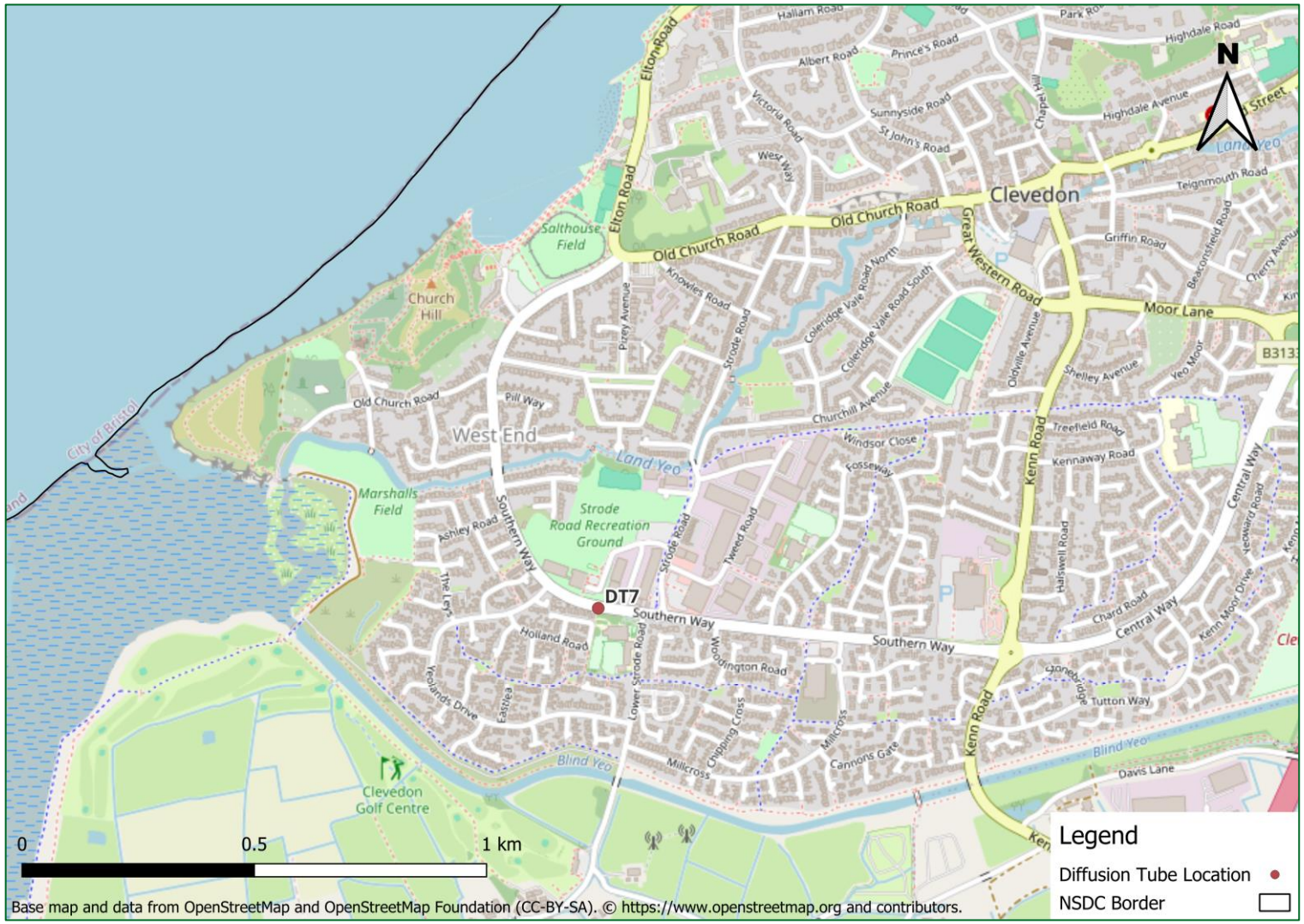
**Figure D.3 – Map of Non-Automatic Monitoring Sites: Hewish**



## Figure D.4 – Map of Non-Automatic Monitoring Sites: Congresbury



## Figure D.5 – Map of Non-Automatic Monitoring Sites: Clevedon



## Figure D.6 – Map of Non-Automatic Monitoring Sites: Portishead

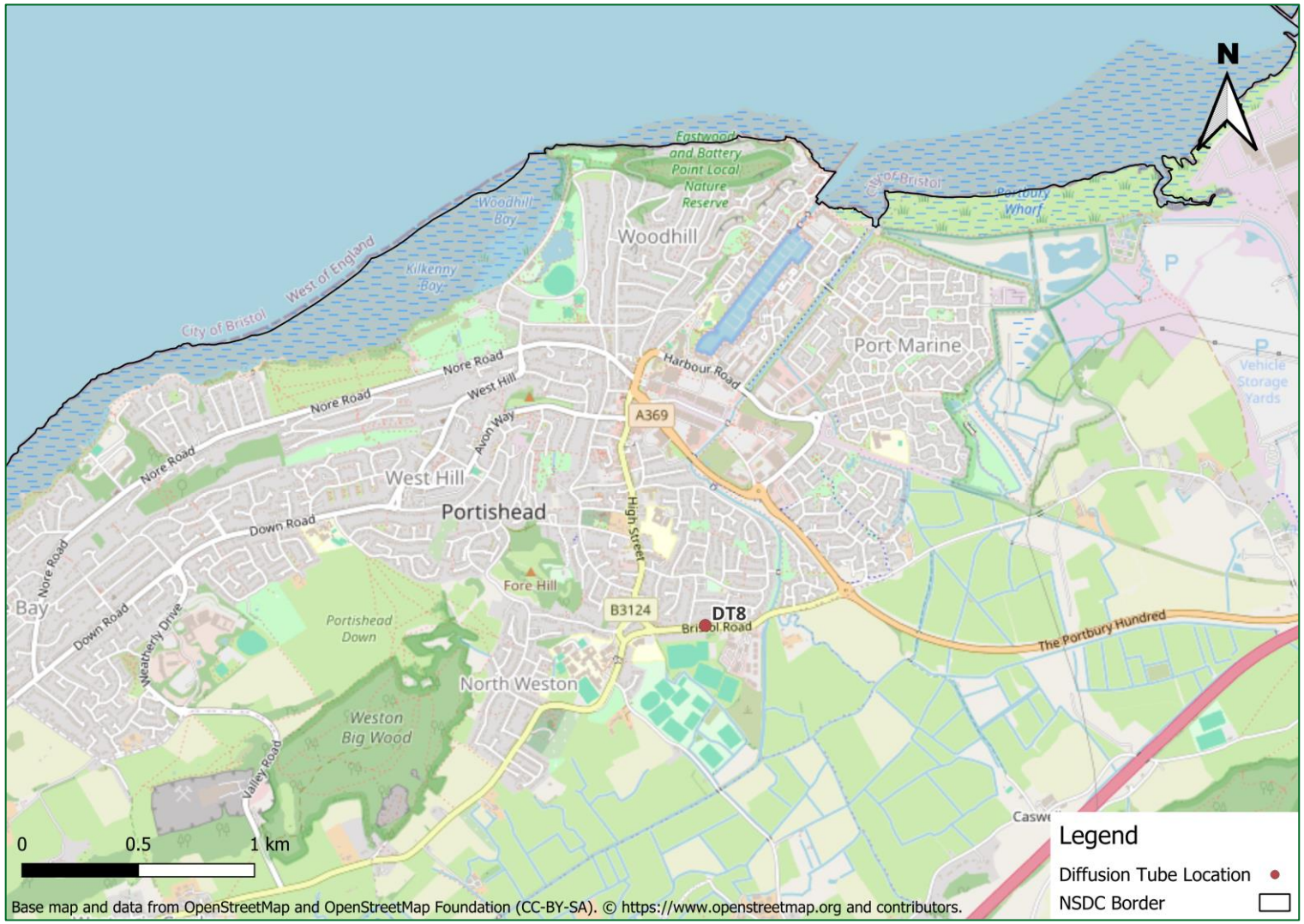
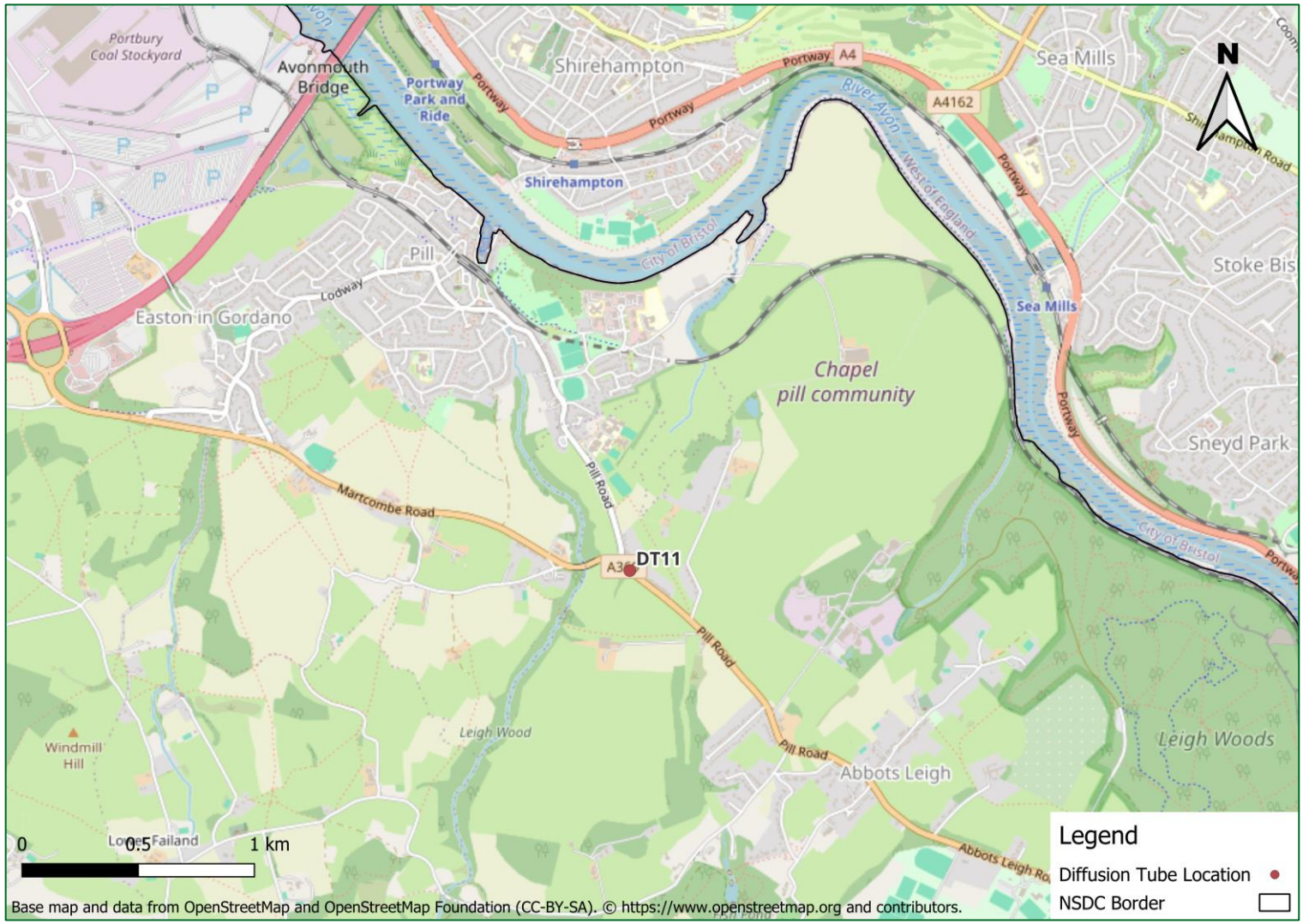


**Figure D.7 – Map of Non-Automatic Monitoring Sites: Pill**



## Figure D.8 – Map of Non-Automatic Monitoring Sites: Long Ashton

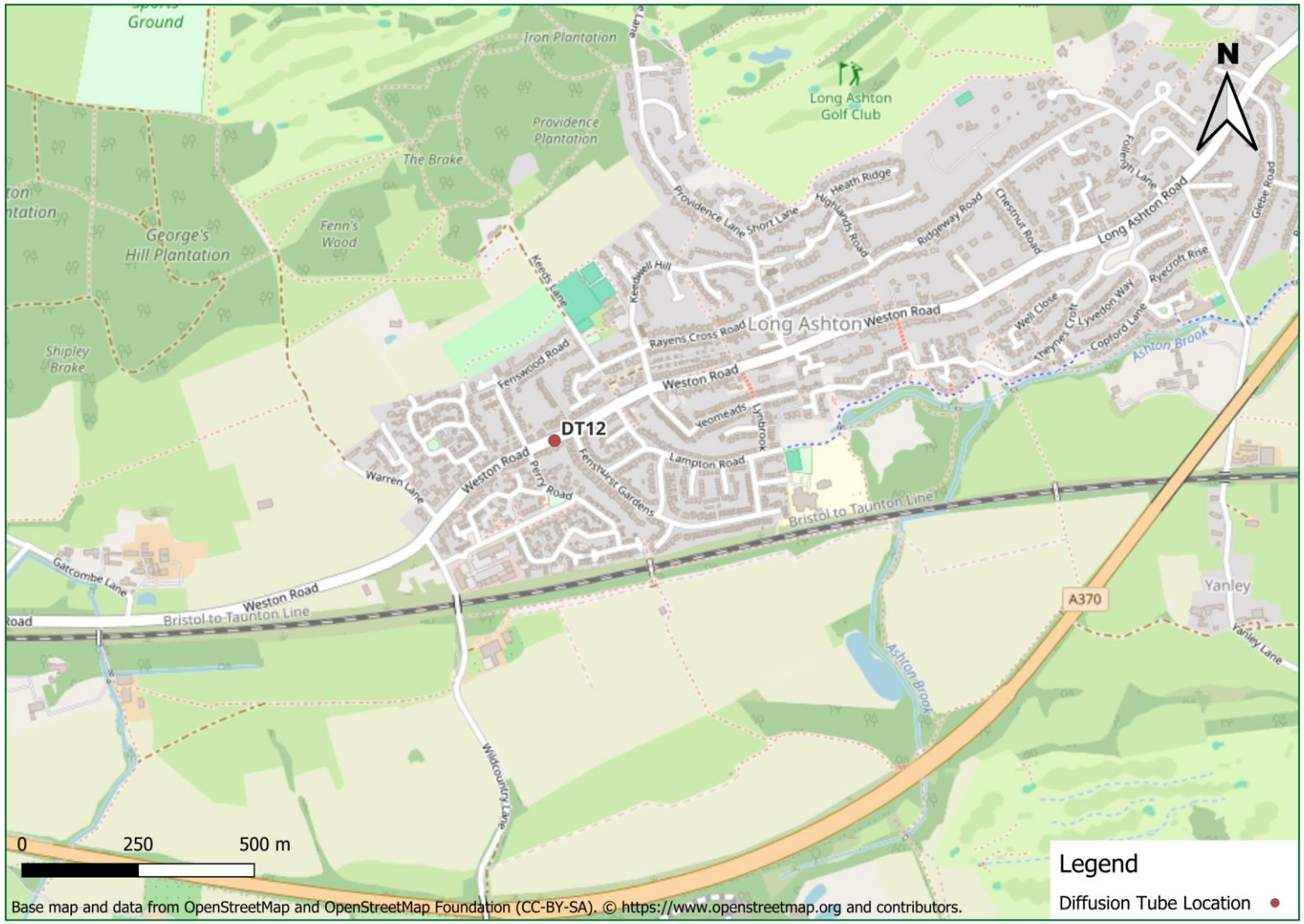


**Figure D.9 – Map of Non-Automatic Monitoring Sites: Flax Bourton**

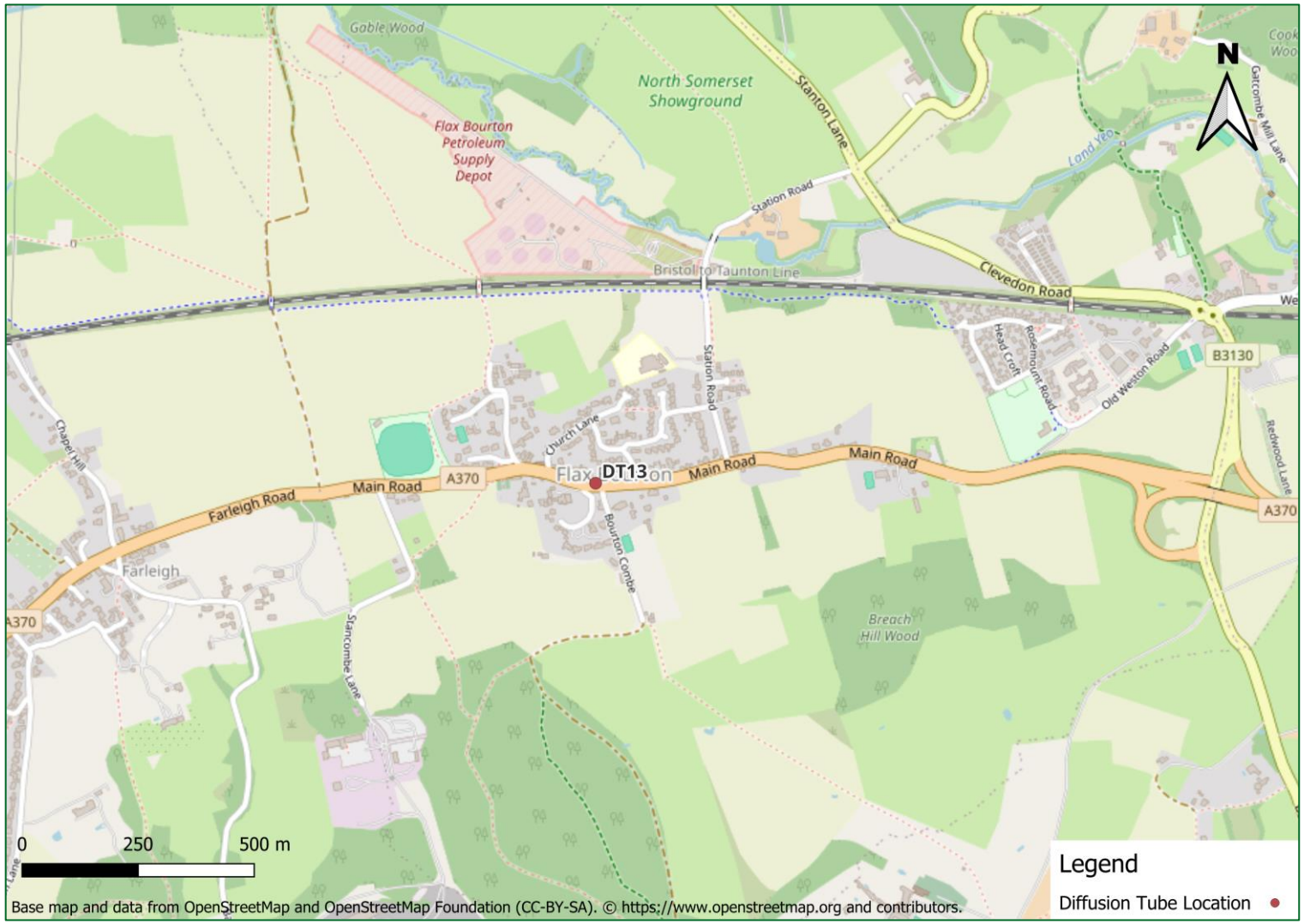


**Figure D.10 – Map of Non-Automatic Monitoring Sites: Wraxall**

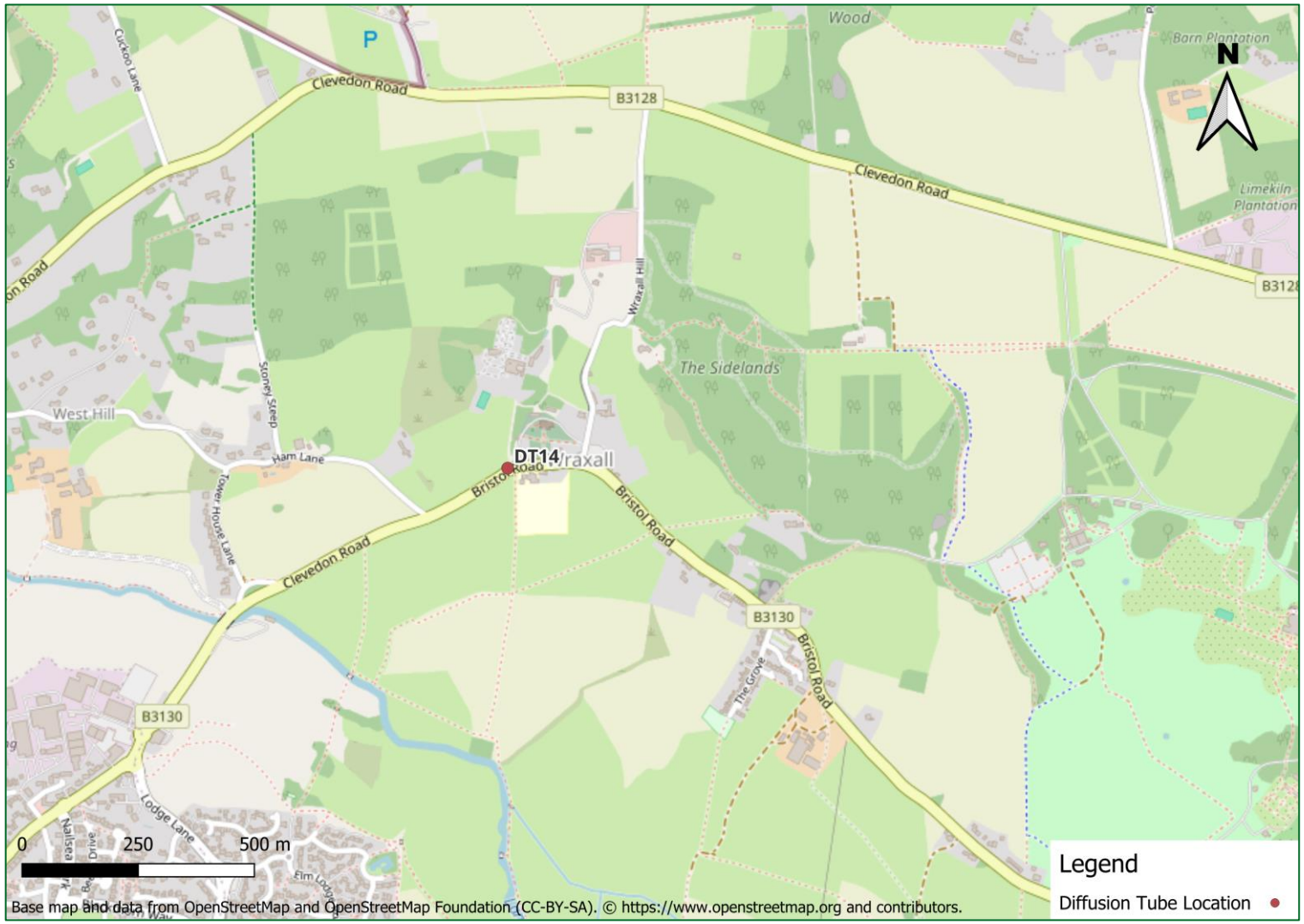


**Figure D.11 – Map of Non-Automatic Monitoring Sites: Nailsea**

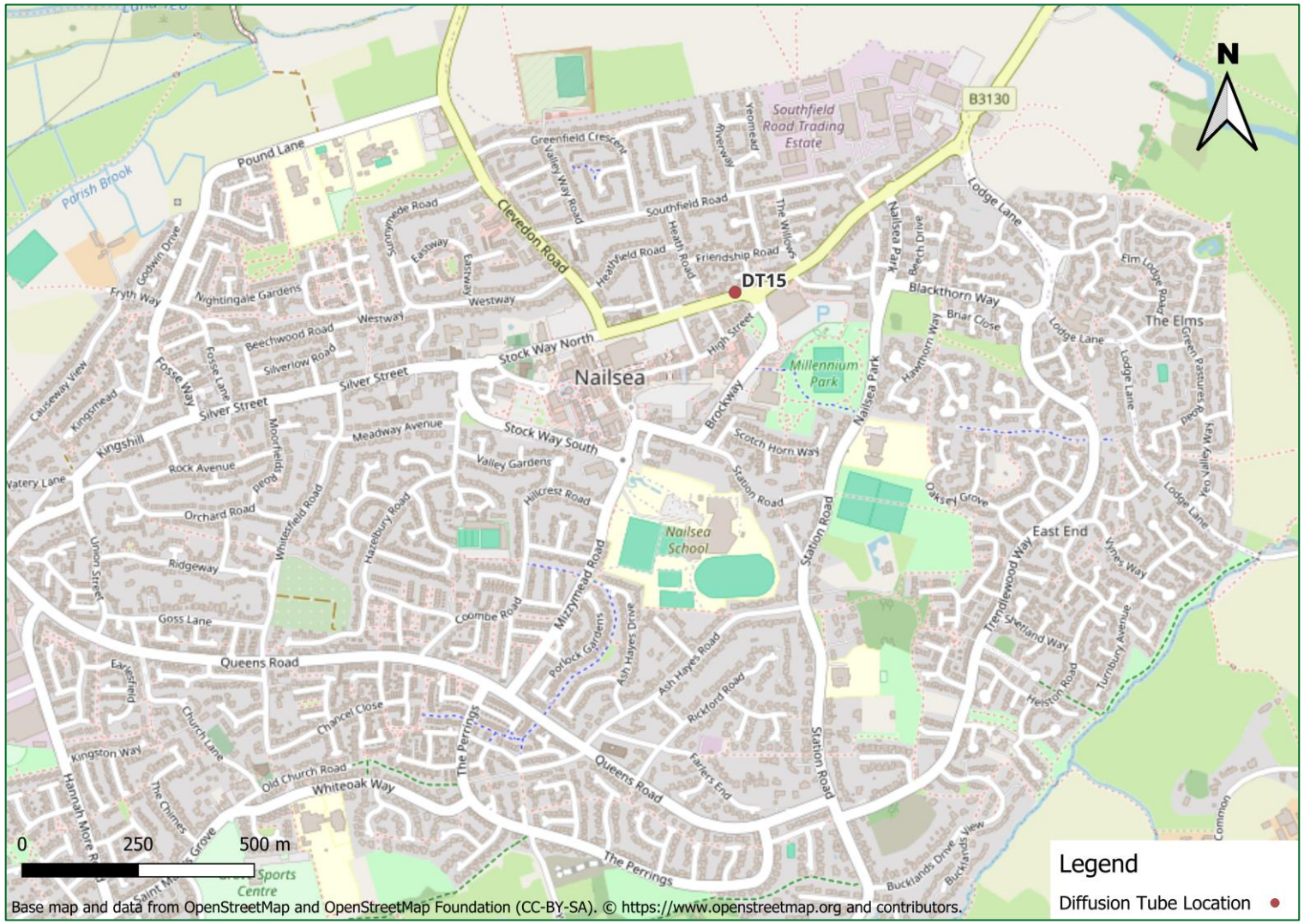


**Figure D.12 – Map of Non-Automatic Monitoring Sites: Vicinity of Bristol Airport**

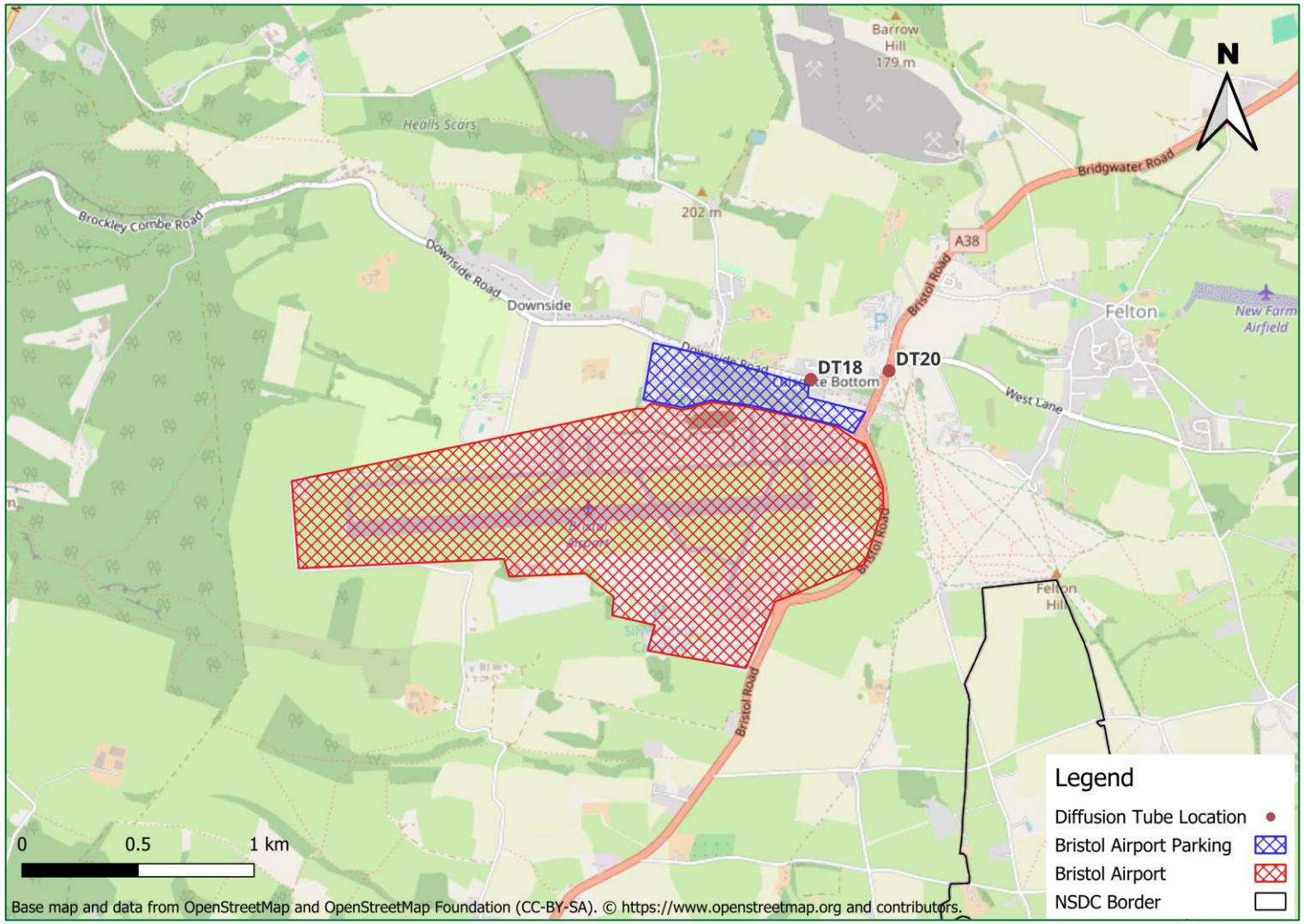


**Figure D.13 – Map of Non-Automatic Monitoring Sites: Winford**

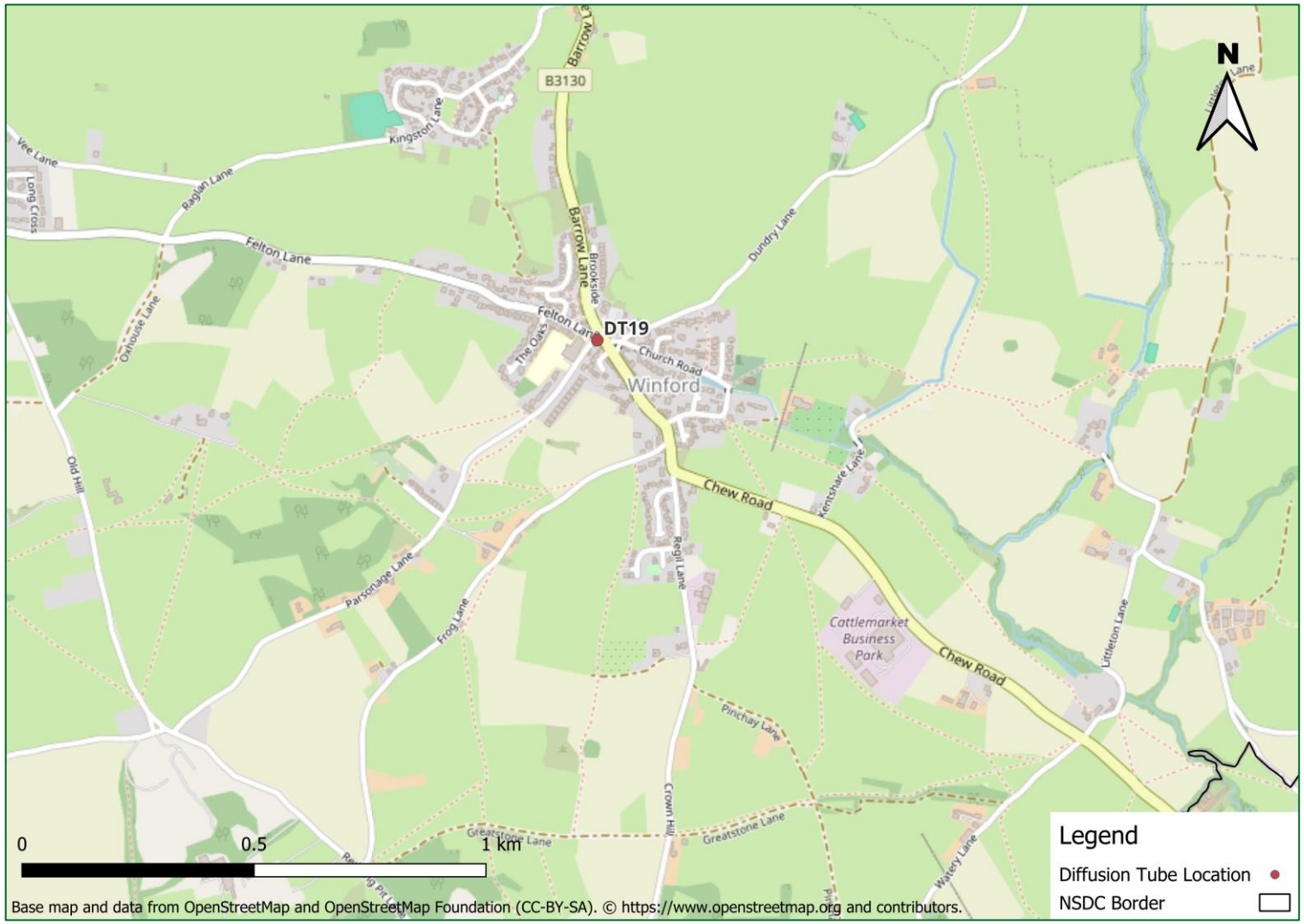
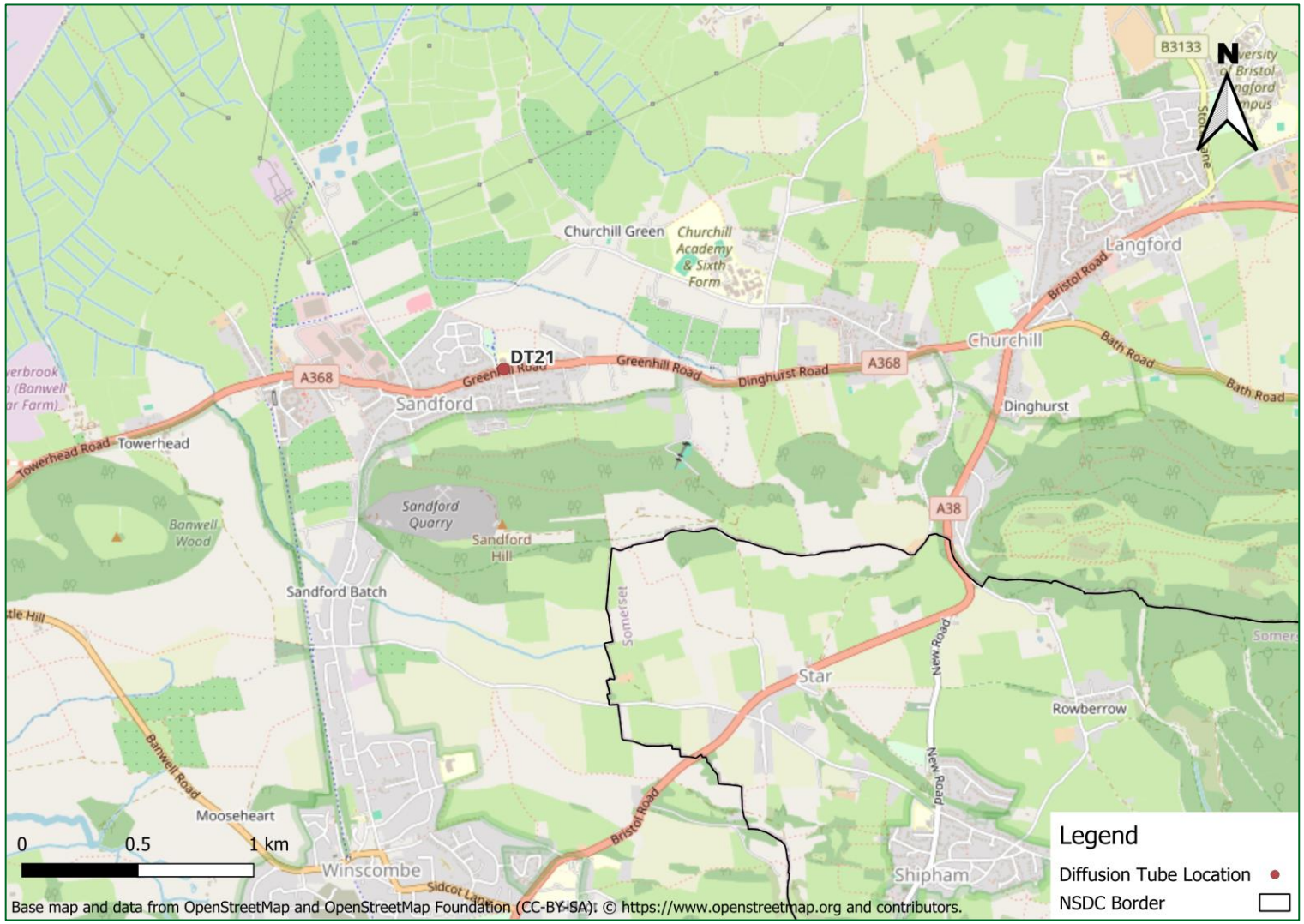


**Figure D.14 – Map of Non-Automatic Monitoring Sites: Sandford**



## Figure D.15 – Map of Non-Automatic Monitoring Sites: Banwell

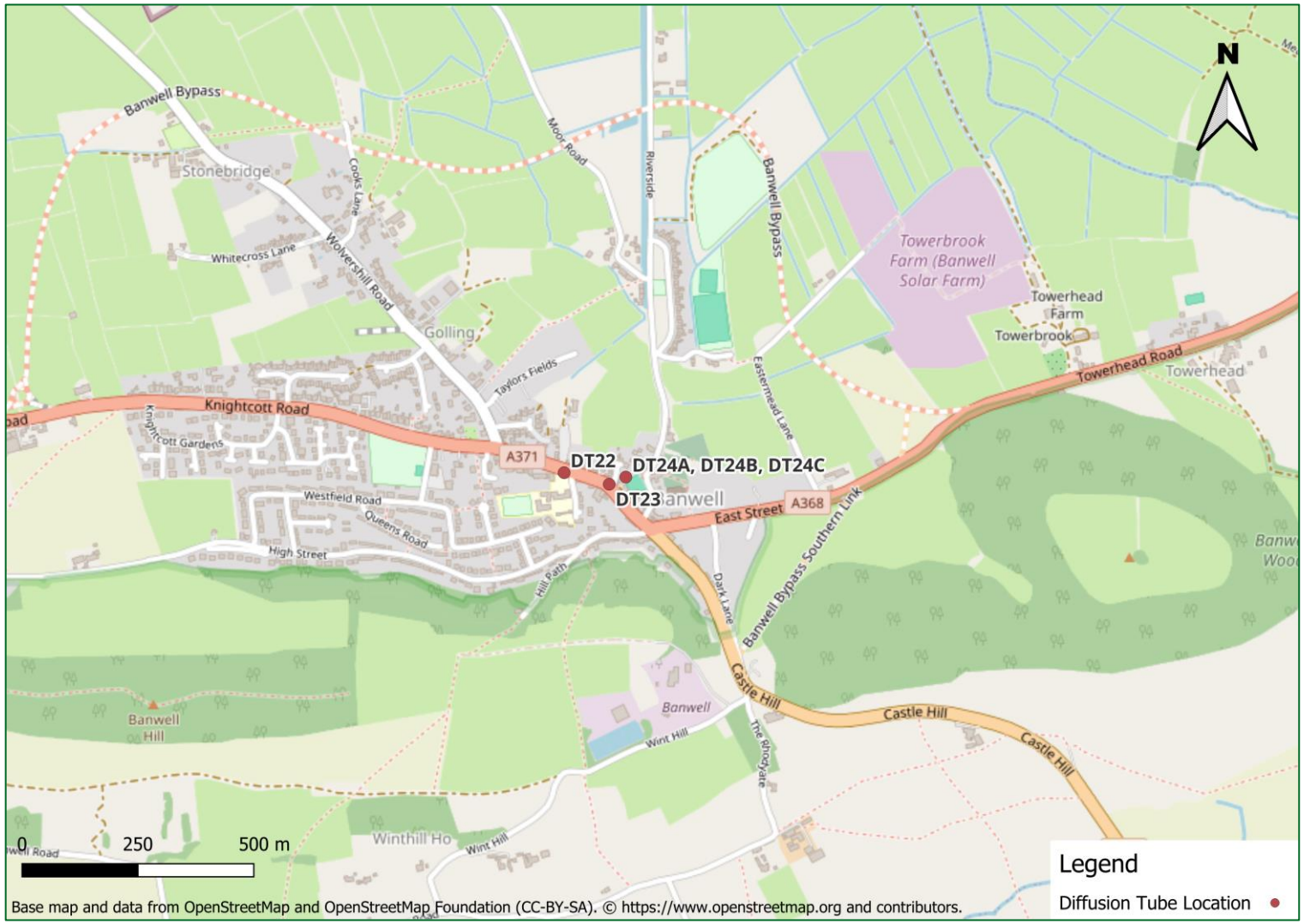


**Figure D.16 – Map of Non-Automatic Monitoring Sites: Cleeve**

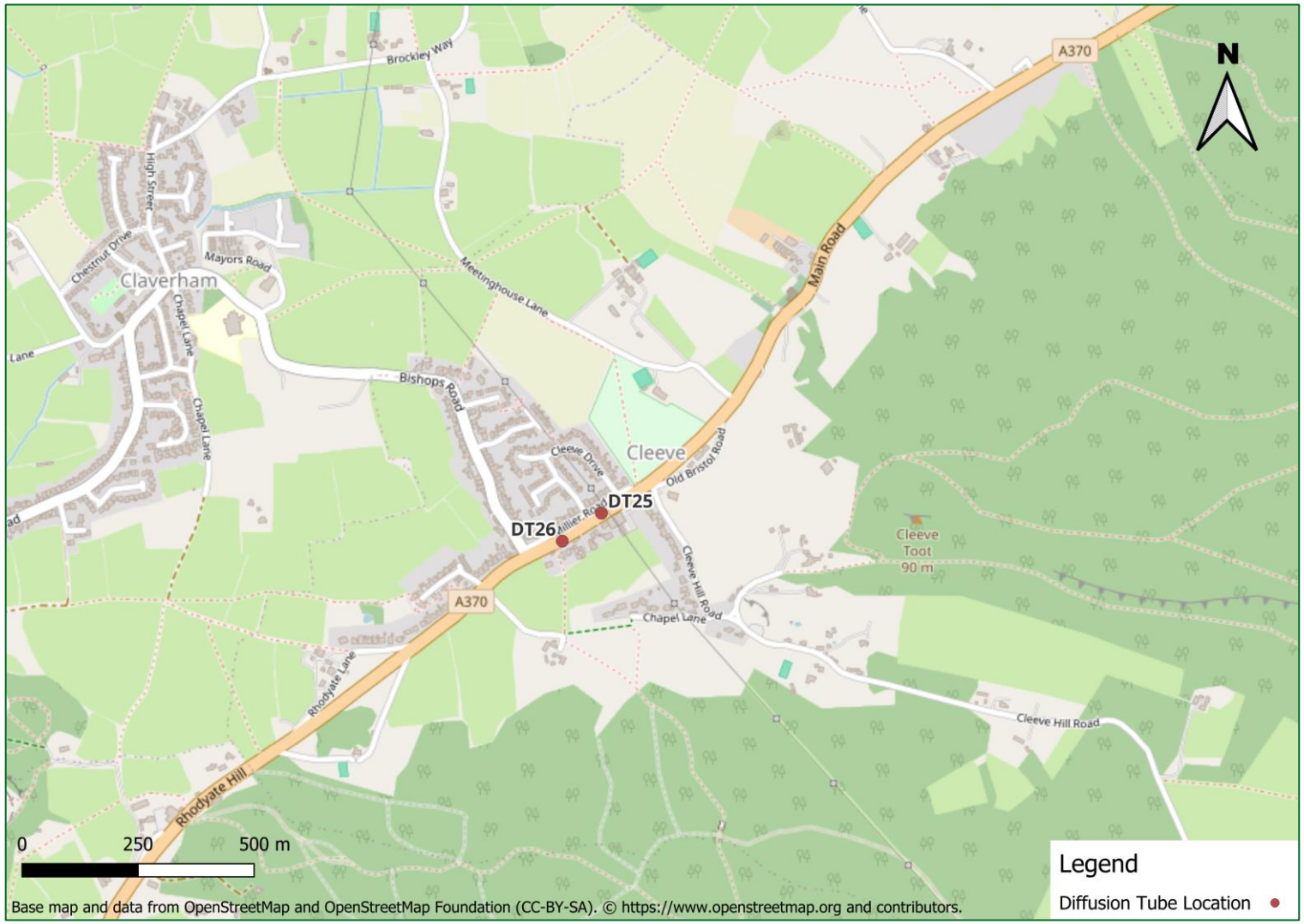


**Figure D.17 – Map of Non-Automatic Monitoring Sites: Tickenham**

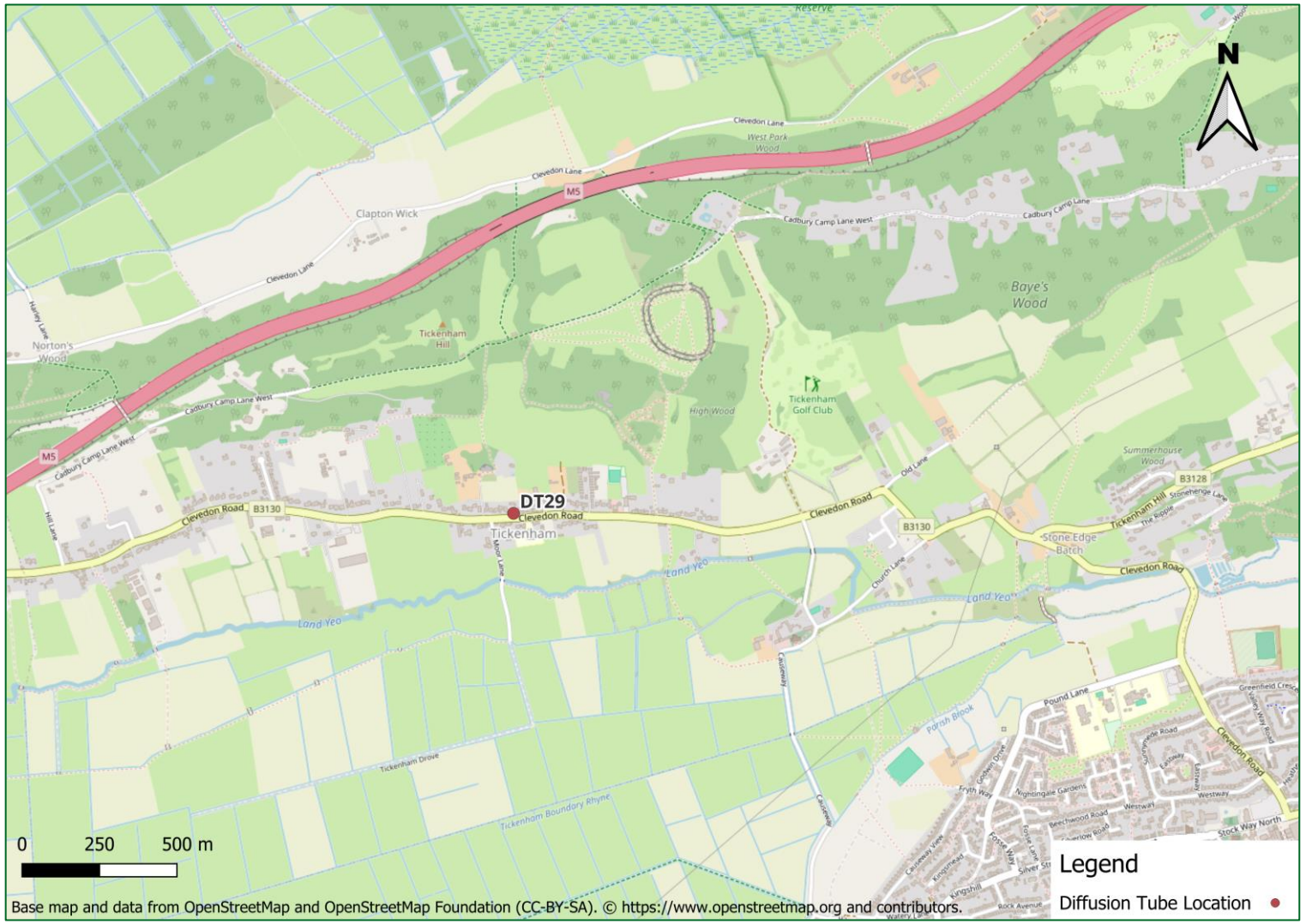
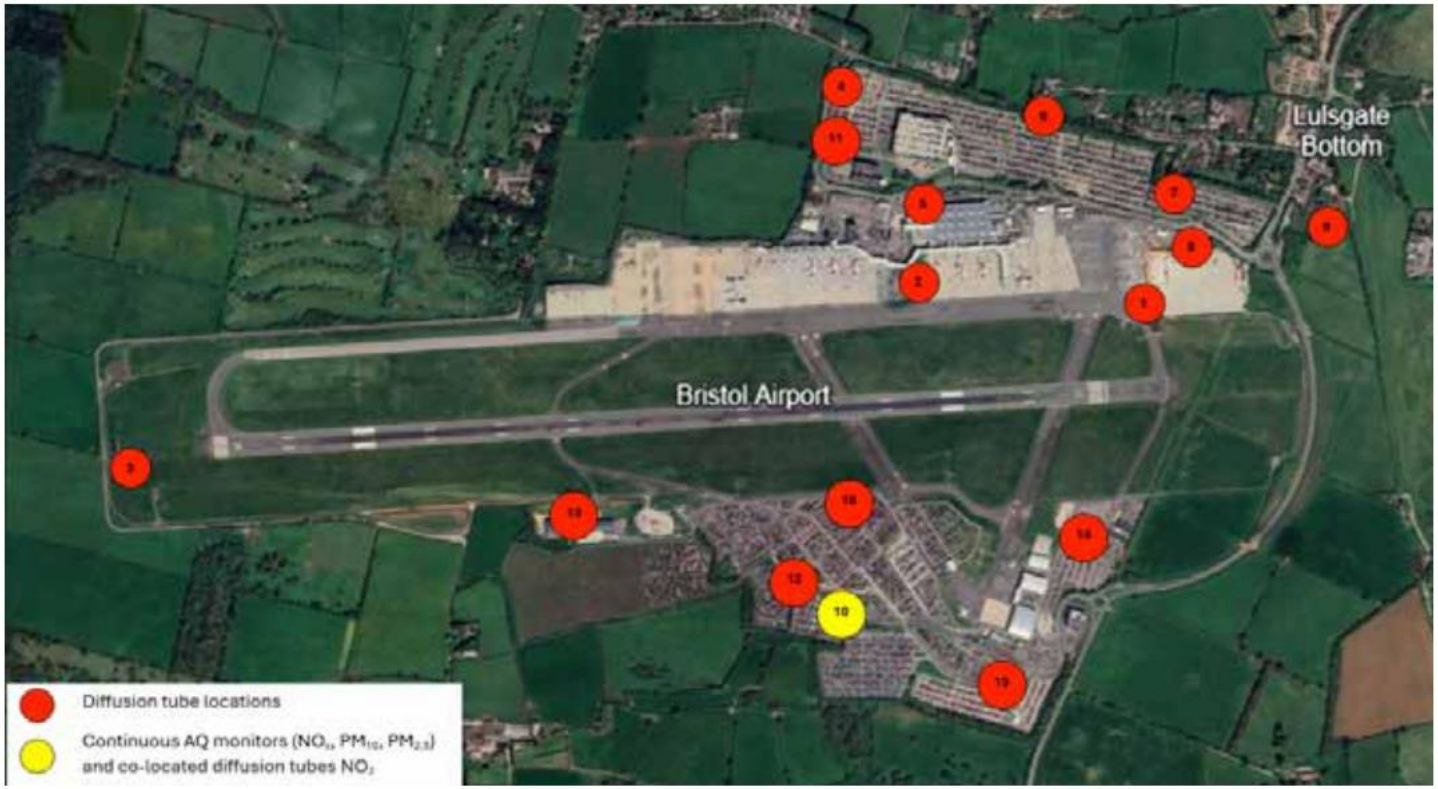


**Figure D.18 – Bristol Airport Monitoring Locations**



# Appendix E: Summary of Air Quality Objectives in England

## Table E.1 – Air Quality Objectives in England[16]

| 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 |

[16] The units are in microgrammes of pollutant per cubic metre of air (µg/$m^3$).

# 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 |
| AQSO | Air Quality Standard Objective |
| ASR | Annual Status Report |
| ATAP | Active Travel Action Plans |
| BSIP | Bus Service Improvement Plan |
| CEMP | Construction Environmental Management Plans |
| CIL | Community Infrastructure Levy |
| $CO_2$ | Carbon Dioxide |
| Defra | Department for Environment, Food and Rural Affairs |
| DfT | Department for Transport |
| EV | Electric Vehicle |
| GI | Green Infrastructure |
| JSNA | Joint Strategic Needs Assessment |
| 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 |
| WECA | West of England Combined Authority |
| WHAM | Warmer Homes, Advice and Money |

# 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.
- Environmental Improvement Plan 2023. January 2023. Published by Defra.
- The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy. July 2018. Published by DfT.
- Defra Exempt Appliances England. Available at: https://smokecontrol.defra.gov.uk/appliances.php?country=england
- North Somerset Climate Local Commitment. Available at: https://www.n-somerset.gov.uk/sites/default/files/2020-03/Climate%20Local%20Commitment%202018.pdf.
- North Somerset plan to tackle Climate Change. Available at: https://n-somerset.gov.uk/council-democracy/priorities-strategies/climate-emergency/our-plans-tackle-climate-change.
- North Somerset Active Travel Strategy 2020-2030. Available at: https://www.n-somerset.gov.uk/sites/default/files/2021-08/30511%20ATS%20book%20ACC%200821_0.pdf.
- North Somerset's Joint Health & Wellbeing Strategy 2021-2024. Available at: https://n-somerset.gov.uk/council-democracy/priorities-strategies/health-wellbeing-strategy-2021-24.
- North Somerset Council Annual Status Report 2024. Published by North Somerset Council.
- North Somerset Council Annual Status Report 2023. Published by North Somerset Council.

- North Somerset Council Annual Status Report 2022. Published by North Somerset Council.
- North Somerset Council Annual Status Report 2021. Published by North Somerset Council.
- North Somerset Council Annual Status Report 2020. Published by North Somerset Council.
- North Somerset Council Air Quality Strategy.
- PHE. Public Health Outcomes Framework. Available at: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data.
- Defra UK Air. Background maps. Available at: https://uk-air.defra.gov.uk/data/laqm-background-home.
- Defra UK Air. Air quality objectives. Available at: https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update_20230403.pdf
- WHO. What are the air quality guidelines? Available at: https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines.