



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 Sustainable City and Climate Change Service of Bristol City Council with the support and agreement of the following officers and departments:

Strategic City Transport

Public Health

Regulatory Services

Highways and Traffic

This ASR has been signed off by a Director of Public Health.

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Executive Summary: Air Quality in Our Area

Air Quality in Bristol

Health Effects

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. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year¹.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution². The pattern in Bristol between areas of deprivation and air pollution levels is complex. Whilst some less affluent areas are in locations with some of the highest levels of pollution, others are on the outskirts of the city, where air pollution levels are better than some more central, relatively affluent areas.

Analysis of the latest health evidence shows that there is no safe level of air pollution. This evidence has been reflected by the updated World Health Organisation's (WHO) Global Air Quality Guidelines published in 2021. The WHO's annual average air quality guidelines were reduced from 10µg/m³ to 5µg/m³ for fine particulate matter (PM_{2.5}) and from 40µg/m³ to 10µg/m³ for nitrogen dioxide (NO₂).

There is evidence that short-term exposure to particulate matter (PM) is associated with hospital admissions for respiratory conditions. The US Environmental Protection Agency (US EPA) has an Integrated Science assessment for particulate matter (PM)³ which concluded that short-term exposures to PM_{2.5} are likely to be causally associated with respiratory effects, particularly exacerbations of asthma and chronic obstructive pulmonary

¹ UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022

² Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ [Integrated Science Assessments \(ISAs\) | US EPA](#)

disease (COPD) and respiratory-related diseases. Short-term exposure to PM_{2.5} causes cardiovascular effects, with the strongest evidence from epidemiological studies for ischaemic heart disease, stroke and heart failure emergency department and hospital admissions, along with cardiovascular-related mortality⁴.

People in lower socio-economic groups are more likely to have pre-existing health conditions earlier in life, and the higher exposures to air pollution may add to the greater burden of poor health. Studies of hospital admissions and mortality show increased health risks associated with exposure to air pollution among those living in areas of higher socio-economic deprivation⁴.

Air pollution has negative effects on health throughout the life course, from pre-birth to old age, summarised in Table ES 1.

Table ES 1 - Health Effects of Air Pollution Throughout Life⁴

| Pregnancy | Children | Adults | Elderly |
|------------------|--|--|--------------------------------------|
| Low birth weight | Asthma | Asthma | Asthma |
| | Slower lung function development | Coronary heart disease | Accelerated decline in lung function |
| | Development problems | Stroke | Lung cancer |
| | More wheezing and coughs | Lung cancer | Diabetes |
| | Start of atherosclerosis (narrowing of arteries) | Chronic obstructive pulmonary disease (COPD) | Dementia |
| Diabetes | | Heart attack, heart failure and stroke | |

Table ES 2 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

⁴ Chief Medical Officer’s annual report 2022: Air Pollution [Chief Medical Officer’s annual report 2022: air pollution - GOV.UK](#)

Table ES 2 - 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}) | <p>Particulate matter is everything in the air that is not a gas.</p> <p>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.</p> <p>PM₁₀ refers to particles under 10 micrometres in size. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres in size.</p> |

Monitoring

Pollutants such as sulphur dioxide, carbon monoxide and some heavy metals used to be monitored in Bristol. However, this has ceased as compliance with health-based air quality objectives for these pollutants has been demonstrated. Extensive monitoring of nitrogen dioxide continues throughout the city.

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. Further information related to declared AQMAs can be found on the Defra website, including [maps of AQMA boundaries](#).

Due to exceedance of the annual and hourly objectives for NO₂ and possible exceedance of PM₁₀ objectives, Bristol City Council declared an AQMA in 2001. It covers the whole of the city centre and most of the main arterial routes into the city. Due to ongoing exceedances of national pollution objectives, the AQMA is still in place in 2024. Approximately 100,000 people live within Bristol's AQMA. It includes the central employment, leisure and shopping districts, major hospitals, and dozens of schools and therefore many more people are exposed to air pollution in the AQMA in their daily lives than just those living in the AQMA. There are also two small AQMAs in South Gloucestershire, in Kingswood/Warmley and Staple Hill.

Bristol's monitoring network is focused on nitrogen dioxide (NO₂), as the concentrations of this pollutant near some busy roads exceed the health-based UK objectives and EU limit values.

The Bristol City Council (BCC) and Defra monitoring network in 2024 consisted of:

- 8 real time NO₂ monitors, 7 of which are BCC operated. The site at St Pauls is part of the national Automatic Urban and Rural Network (AURN) operated by Defra. Data from all of these sites is uploaded automatically to a BCC [Open Data Portal](#).
- 4 real time particulate monitors (2 x PM_{2.5} and 2 x PM₁₀). The PM₁₀ and PM_{2.5} monitors operated at St Pauls and Temple Way are part of the Defra operated AURN network.
- 1 real time Ozone (O₃) monitor, operated by Defra as part of the AURN network.
- 202 NO₂ diffusion tube sites which provide a monthly and annual concentration for this pollutant.

Defra operate the Bristol St Pauls monitoring site which measures NO₂, particulate matter (PM₁₀ and PM_{2.5}) and O₃. This site is in St Pauls at an “urban background” location away from busy roads. This Defra site is representative of general pollution levels over central Bristol but not of pollution levels at busy roadside locations in the city. Defra operate the PM₁₀ particulate monitor at the Temple Way site which, as of October 2024, was replaced with a monitor which can monitor both PM_{2.5} and PM₁₀ concurrently. The Temple Way site also houses a BCC operated NO₂ analyser and is known as an affiliate site where Defra and the local authority share infrastructure that houses monitoring equipment. All other sites are owned and operated by Bristol City Council.

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 national Environmental Improvement Plan⁵ sets out actions that will drive continued improvements to air quality to meet the new national interim and long-term PM_{2.5} targets. The National Air Quality Strategy, published in 2023, provided more information on Local Authorities' responsibilities to work towards these new targets and reduce PM_{2.5} in their

⁵ Defra. Environmental Improvement Plan 2023, January 2023

areas. The Road to Zero⁶ details the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated pollutant concentrations heavily influenced by transport emissions.

Air pollution in those locations exceeding the health-based limits for nitrogen dioxide originates predominantly from motor vehicles. The approach to reducing NO₂ concentrations is focused on measures to reduce the number of vehicles on our roads, clean up the emissions from those vehicles and to reduce congestion.

Bristol's Clean Air Zone

Bristol City Council has been directed by the UK Government to achieve compliance with air quality objectives in the shortest possible time. A Class D Clean Air Zone (CAZ) came into operation in November 2022 in order to achieve compliance. The CAZ charges older vehicles based on the vehicle Euro category classification. Real world vehicle emissions monitoring data has shown that older vehicles are more polluting in terms of emissions of nitrogen oxides (NO_x). High NO_x emissions can lead to higher harmful nitrogen dioxide (NO₂) concentrations and in Bristol the legal standard for this pollutant is still being exceeded in a small number of locations. Charging the most polluting vehicles to enter the CAZ is intended to encourage the use of cleaner vehicles and to achieve the legally required air quality standards more quickly than if BCC waited for the natural changes in vehicle fleet that occur as people gradually change their cars to newer, cleaner, models. The pollution levels that are still not met in Bristol were supposed to be achieved under UK law by 2005 and under EU regulations by 2010. This Annual Status Report provides commentary of the air pollution data in the second full calendar year in which the CAZ was in operation. Details of the CAZ can be found on the [Clean Air for Bristol website](#).

Bristol Transport Strategy

The [Bristol Transport Strategy](#) was adopted in July 2019 and sets out a vision on how the city will:

- create an inclusive transport system that provides realistic transport options for

⁶ DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

everyone;

- create healthy places that promote active transport, improve air quality, and improve road safety;
- make better use of our streets to enable more efficient journeys;
- enable more reliable journeys by minimising the negative impact of congestion; and
- support sustainable growth by enabling efficient movement of people and goods, reducing carbon emissions.

In August and September 2024 BCC carried out a consultation exercise on proposed Bristol City Centre Transport Changes, as summary of which can be found on the [Travelwest website](#). These changes are proposed to ensure that Bristol can accommodate a potential additional 5,000 residents in the city centre by making the city more welcoming and people friendly.

Transport Corridor Improvements

Over the next 10 years Bristol City Council and West of England Combined Authority are proposing to introduce significant improvements to key transport routes across the city.

This is an ambitious project to improve how people travel across the city along key transport routes, making it easier to connect people to jobs and leisure opportunities, anticipating a growing population and supporting the city's health and economic growth.

The aim is to make it easier and more convenient to use the bus, walk and cycle wherever possible, rather than use private cars. This project aims to make walking and cycling more attractive and to give priority to buses through infrastructure improvements. This would reduce air pollution to improve the health of everyone.

The scheme will support other transport initiatives such as the Local Cycling and Walking Infrastructure Plan. Details of the plans for the transport corridors can be found on the [Travelwest website](#).

Liveable Neighbourhood Projects

Liveable neighbourhoods are areas of a city that are improved to be people-centred and more 'liveable'. They are safe, healthy, inclusive, and attractive places where everyone can breathe clean air, have access to better quality green spaces and safe spaces to play, and feel a part of a community. The improvements in a liveable neighbourhood aim to

make it easier to catch a bus and to walk or cycle, with improved infrastructure and less through traffic.

An [East Bristol Pilot Liveable Neighbourhood](#) has been developed in an area including Barton Hill and parts of Redfield and St George, south of Church Road and north of the river Avon. Measures for the trial scheme were implemented between October 2024 and early 2025. Further public consultation will take place following a period of data collection and analysis on the impacts of the trial scheme.

Initial stakeholder engagement took place in 2024 for a second liveable neighbourhood area in south Bristol. More information on the project can be found at the [South Bristol Liveable Neighbourhood](#) website.

School Streets

Bristol City Council is committed to making Bristol's streets safer for everyone living, working, and visiting the city. An area of priority are the streets outside our schools. One of the ways we are doing this is through the introduction of [School Streets](#), whereby the street or streets immediately outside the school entrance are closed to non-essential vehicles at school opening and closing times. Only people walking, wheeling, cycling, and scooting are permitted access to the School Street zone while the restriction is in place, with exemptions given to emergency vehicles and Blue Badge holders. In some cases, permits will be given to residents and businesses living or working within the zone – this varies from scheme to scheme and is decided on an individual basis.

School Streets are now being rolled out by local authorities across the country. In February 2020 BCC launched a pilot scheme at two schools: St Peter's CofE Primary School and Wansdyke Primary School. In 2025 there are now thirteen permanent school streets in place, with a further three being proposed.

Climate Action

In November 2018 the Mayor declared a Climate Emergency and initiated the development of the One City Climate Strategy. This Strategy provides more detail on the approach for Bristol to become carbon neutral. Within the [One City Climate Strategy](#) transport is an area where it has been identified that action is needed with a focus on:

switching to significantly more walking, cycling and zero carbon public transport modes; converting the remaining vehicles to zero carbon fuels; transforming freight,

aviation, and shipping.

Whilst the [Climate Emergency Action Plan](#) focuses on reducing emissions of CO₂ pollution, many sources of CO₂ emissions are the same as those that emit pollutants that are directly harmful to health locally such as NO₂, particulate matter and SO₂. Many measures to reduce emissions of CO₂ from combustion sources will reduce emissions of these other pollutants that are harmful when breathed in. As a result, action to address the climate emergency are acknowledged here as important in reducing concentrations of local air pollution.

Travelwest and West of England Combined Authority (WECA)

There is long-established collaboration between the three former Avon authorities (now referred to as the West of England authorities). Travelwest is part of the West of England Combined authority (WECA) and brings together partners to improve transport across the region, to provide sustainable, long-term solutions to help people move around the region more easily.

The [Travelwest website](#) includes sections to help people plan journeys and to learn about the resources available to residents in the area to help them travel more sustainably.

The Joint Local Transport Plan, [JLTP 4](#), was published in March 2020 and sets the West of England Combined Authority ([WECA](#)) regions transport vision through to 2036. A greater emphasis than previously is placed on air pollution compared to the superseded JLTP (3). The JLTP 4 document *“shows how we will aim to achieve a well-connected sustainable transport network that works for residents across the region; a network that offers greater, realistic travel choices and makes walking, cycling and public transport the natural way to travel”*.

Local Cycling and Walking Infrastructure Plan (LCWIP)

[The West of England Local Cycling and Walking Infrastructure Plan 2020-2036](#) is a detailed plan which identifies that over £400m of investment is needed and will be sought and channelled through the West of England Combined Authority. Working with Bath & North East Somerset, Bristol, North Somerset and South Gloucestershire councils, the aim is to provide high quality infrastructure to ensure the West of England is a region where cycling and walking are the preferred choice for shorter trips.

E-Bike and E-Scooter Hire/E-Cargo Bike Trials

Hop-on hop-off e-bikes and e-scooters are available in Bristol, Bath and in parts of South Gloucestershire to help residents and visitors to get around central areas. Since October 2023 the scheme, known as [WESTscoot and WESTbike](#), has been operated by TIER-Dott (previously known as TIER). In Bristol businesses can now [trial e-cargo bikes for 1-3 months](#).

Electric Buses

By the end of 2025, 98 fully electric buses will be starting operation in Bristol and the West of England region. This will include 91 double-deckers and 7 single-deckers. The first of these new buses began operation in March 2025.

In April 2025 an additional 160 electric buses were announced for the region, including 154 double-deckers and 6 single-deckers. Twenty-seven of these will be repowered vehicles, whereby mid-life diesel buses are converted into electric vehicles. The project includes additional electric charging infrastructure at bus depots and Bristol Bus Station and is expected to be completed by mid-2026.

MetroWest

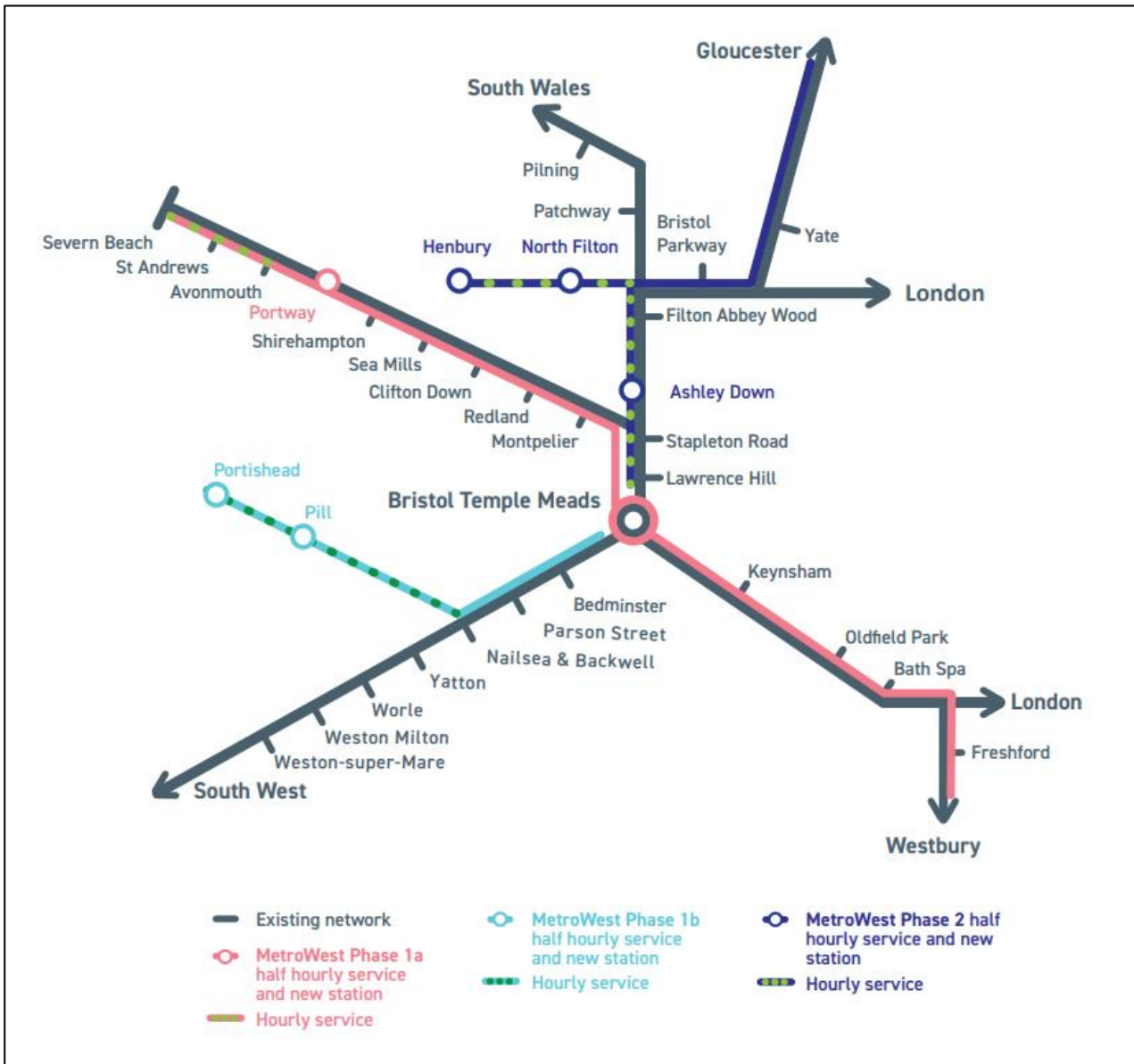
[MetroWest](#) will transform rail travel in the region, generating over a million new rail journeys and give 80,000 more people access to train services.

The first of the new stations in the programme, Portway Park and Ride, opened in August 2023. The second station, Ashley Down, opened in September 2024. Trains to Bristol Temple Meads operate every half-hour from Portway Park and Ride station and every hour from Ashley Down station.

A Full Business Case was submitted to the Department for Transport in December 2024 for the re-opening of the Portishead line, with new stations at Pill and Portishead. The project will provide an hourly direct link from Portishead to Bristol Temple Meads in 25 minutes.

Planning applications for new MetroWest rail stations at Charfield and North Filton have been approved. Detailed design works are being progressed ahead of Full Business Case submissions in 2025. The target is for these stations to be open by 2027.

Figure ES 1 – MetroWest Map



Conclusions and Priorities

Nitrogen Dioxide

In November 2022 Bristol City Council introduced a Clean Air Zone (CAZ), under direction from Government, to achieve compliance with air quality limit values in the shortest time possible. Whilst annual air pollution concentrations can be impacted significantly year on year by factors such as the prevailing meteorological conditions, the data suggests that in the first year after the introduction of the CAZ, that it contributed to a significant fall in annual NO₂ concentrations. Out of the 191 NO₂ monitoring locations with data for both 2022 and 2023, 176 showed a reduction in annual NO₂ levels in 2023 when compared to 2022. On average, annual NO₂ concentrations fell by 13.2% between 2022 and 2023.

2024 monitoring data shows that NO₂ concentrations have continued to fall when compared to 2023, however, five monitoring sites were still above the legal objective for nitrogen dioxide in 2024. There were 191 locations across Bristol where NO₂ concentrations were measured in 2023 and 2024. At these locations, on average, NO₂ concentrations fell by 4.7%. Three locations that were above the annual objective for NO₂ in 2023 became compliant in 2024; these were Site 3 (Blackboy Hill), Site 12 (The Galleries) and Site 239 (Parsons Street, A38). Sites 3 and 12 were impacted by non-road emission sources in 2023, however, the exceedance at Site 239 is related to vehicle emissions with concentrations at Site 239 falling from 40.5µg/m³ in 2023 to 38.1µg/m³ in 2024. Two locations that were above the annual objective for NO₂ in 2023 saw a fall in NO₂ concentrations in 2024 when compared to 2023 but still do not meet the objective in 2024. Site 667 (College Green/Anchor Road) fell by 1.0µg/m³ to 41.0µg/m³ and Site 638 (Old Market Roundabout) fell by 3.2µg/m³ to 41.6µg/m³ in 2024.

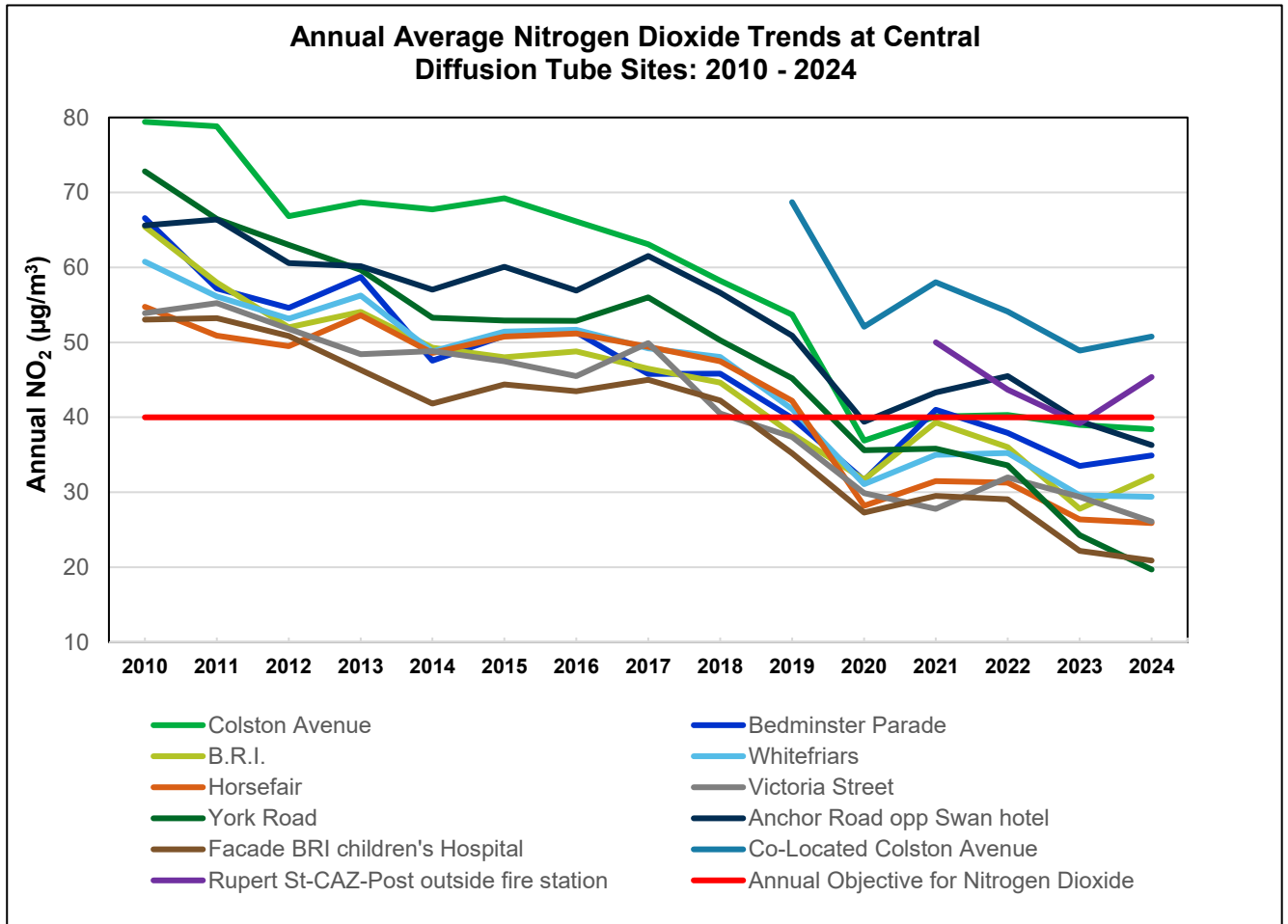
Despite there being an on average fall in NO₂ concentrations across all sites in 2024, NO₂ concentrations increase at 43 of the 191 locations. Of these 43 locations, 19 showed increases of less than 1µg/m³. All but 2 of the sites that saw increases were below the UK annual objective of 40µg/m³ for nitrogen dioxide. Site 502 (Colston Avenue) and Site 582 (Rupert Street by the Fire Station) saw increases of 1.9µg/m³ and 6.2µg/m³ respectively. Colston Avenue did not meet the objective in 2023 or 2024, however, Site 582 was compliant in 2023 with the worsening of NO₂ in 2024 taking the 2024 annual average at this site to 45.4µg/m³, from 39.2µg/m³ in 2023.

The number of vehicles on the roads, which are the main source of NO₂ pollution at our roadside monitoring locations, were significantly reduced on average during 2020 and

2021 due to Covid-19 restrictions. In 2022 vehicle movements returned to levels that were closer to those experienced pre pandemic and this has continued into 2024. There are 86 monitoring locations for which 2020 and 2024 data is available. On average, across these sites, 2024 annual NO₂ concentrations are now 10.9% lower than they were in 2020, when Covid-19 travel restricts resulted in a significant reduction in vehicle movements and air pollution during certain parts of that year. Figure ES 2 shows the long-term trends in NO₂ concentrations at a selection of city centre monitoring sites. The plot shows that NO₂ levels fell from 2010 to 2020 at all monitoring sites. Whilst many still exceeded the UK targets in 2019, all sites, with the exception of the Colston Avenue site, met the annual national target for NO₂ in 2020. The reduction in pollution in 2020 was largely due to a reduction in vehicles on city centre roads as a result of Covid-19 travel restrictions. In 2021, travel restrictions were much less significant and pollution levels increased accordingly. Comparing 2024 data with 2023, the trends in pollution levels at this selection of city centre sites is mixed, with some sites showing continued falls in NO₂ concentrations and others worsening. The most significant worsening was seen at the Rupert Street site by the Fire Station, which in 2024 exceeded UK targets when it had met them in 2023.

In those locations that exceed the nitrogen dioxide air quality targets, over 80% of this pollution has been shown to be from local traffic sources. Actions and decisions by BCC and other West of England (WoE) authorities, and the decisions that citizens in the WoE make each day with regards to how they move around the area, all directly impact upon the roadside levels of air pollution in the city.

Figure ES 2 - Trends in Annual NO₂ at City Centre Sites (2010-2024)



Details of the locations with annual average of NO₂ concentration greater than 36µg/m³ in 2024 are shown in Figure ES 3. Unlike previous years, all these locations are now within the current Air Quality Management Area. 36µg/m³ has been used to show locations at which there is a potential risk of exceedance of air pollution objectives in the future. It should be noted that these are monitoring concentrations and not the concentrations at relevant receptor locations as defined in the Local Air Quality Management (LAQM) Technical Guidance (TG22) (e.g., facades of houses, schools, elderly people’s homes, and hospitals).

Figure ES 3 - Monitoring Locations Where 2024 Annual NO₂ ≥ 36µg/m³

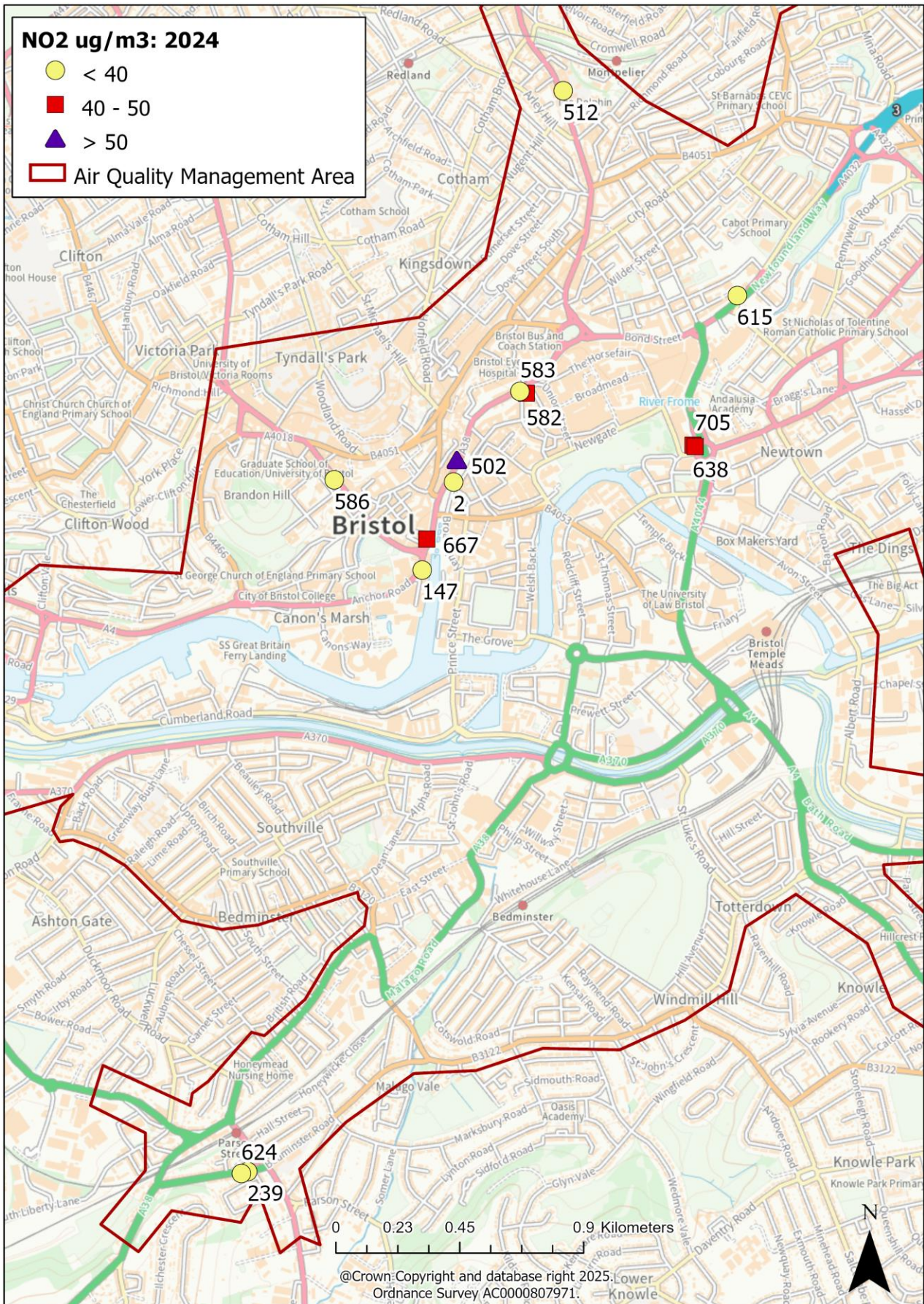
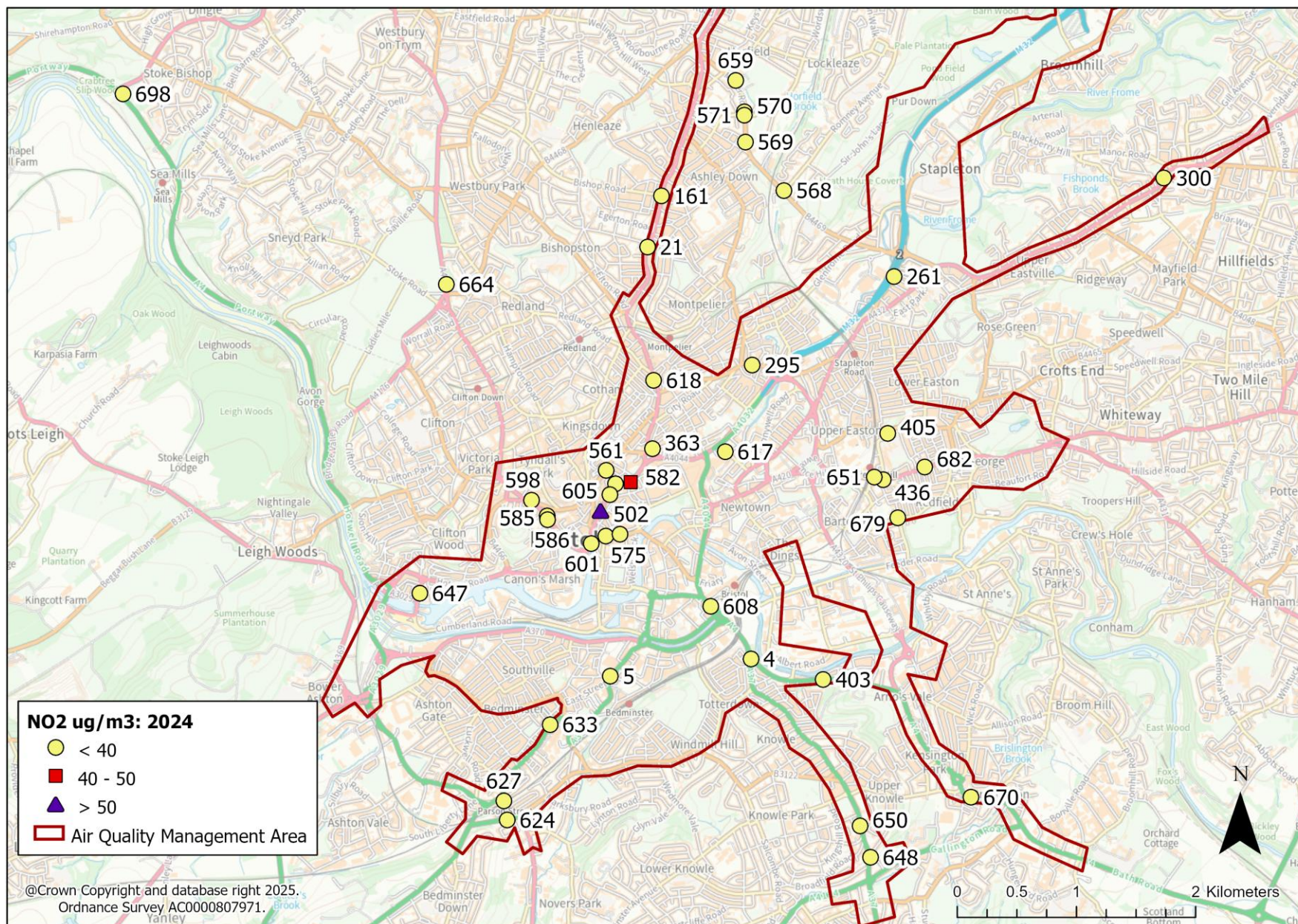


Figure ES 4 shows all locations where an increase in annual NO₂ concentrations was measured, when comparing 2024 to 2023 concentrations.

It should be remembered when comparing air pollution data from one year to the next that prevailing meteorological conditions can be one of the largest factors impacting on the measured differences annually between pollution levels. As a result, looking at longer term trends, over 5 years for example, can be useful. Other factors that impact roadside NO₂ pollution levels include overall traffic volumes, vehicle fleet composition and emissions, and local dispersion characteristics that can be influenced by structures such as buildings, walls, and trees.

Figure ES 4 – Monitoring Locations Where Annual NO₂ Concentrations Increased in 2024 Compared to 2023



Particulate Matter

The particulate matter (PM₁₀) trends for the past 5 years are available from an urban background site, Bristol St Pauls, and the Temple Way roadside site. At Bristol St Pauls annual PM₁₀ concentrations were 15µg/m³ in 2024, which is a decrease of 0.8µg/m³ when compared to 2023. 2024 annual concentrations from the roadside Temple Way site were 16.2µg/m³, this is a decrease of 1.3µg/m³ compared to 2023 levels. Both sites meet the current UK annual and 24-hour objectives for PM₁₀.

PM_{2.5} concentrations at Bristol St Pauls have seen a reduction since 2020 with a decrease from 9.7µg/m³ in 2020 to 7.1µg/m³ in 2024. 2024 annual PM_{2.5} concentrations measured at the roadside site at Parsons Street School were 8.4µg/m³. This is a decrease of 0.7µg/m³ when compared to 2023. Both sites were below the UK annual objective of 10µg/m³, which needs to be achieved by 2040, but both are above the WHO guideline value of 5µg/m³ for PM_{2.5}.

Whilst much of the action to improve air pollution in the UK and Bristol has focussed on achieving compliance with nitrogen dioxide limits, it is acknowledged that it is important to take action to reduce particulate pollution to improve public health. In most cases, the measures to reduce nitrogen dioxide pollution will also reduce particulate pollution.

Particulate pollution (PM) has a range of sources, both local and regional. Vehicles are a source of PM and therefore measures to reduce NO₂ pollution from this source can also help reduce emissions of particulate matter. Combustion processes such as domestic heating (especially domestic solid fuel burning), construction activities, commercial cooking and industry can also contribute locally. Additionally there is a contribution from sources outside of the local authority area. In the case of particulate pollution, contributions from agriculture, industry and natural sources are significant. Secondary particulate matter (PM) is formed in the atmosphere through chemical reactions between other air pollutant gases such as nitrogen oxides (NO_x), ammonia (NH₃) and sulphur dioxide (SO₂).

Appliances that burn solid fuel contribute to local air pollution and evidence is that their contribution is increasing due to the popularity of solid fuel burning for occasional heating requirements, especially in the wintertime. The Department for Environment, Food & Rural Affairs (DEFRA) 2022 national emissions estimates demonstrate that domestic combustion contributes significantly to both PM₁₀ and PM_{2.5} emissions. Domestic combustion covers households burning a variety of fuels including wood, coal, solid

smokeless fuels, and fuels derived from waste such as coffee logs. This was a major source of PM emissions in 2023, as it contributed 20% of total PM_{2.5} emissions and 10% of total PM₁₀ emissions.

Bristol City Council commissioned a study, [Impact of Solid Fuel Burning in Bristol: Policy Options for Reducing Emissions](#), to try to determine the scale of solid fuel burning in the city and the contribution that it has to particulate pollution.

How to get Involved

How Can Pollution Be Reduced? - Transport

There are many ways in which people can help contribute towards reducing air pollution in Bristol. Air pollution, at locations where we are recording high levels of nitrogen dioxide, comes predominantly from emissions from vehicles. Choosing to travel around the city by foot, by bicycle or using public transport, whenever it is possible, can reduce an individual's personal contribution to air pollution in the city. To find out more information on sustainable transport options throughout the West of England region you can visit the [Travelwest website](#) or its sister website [Better by Bike](#).

In 2022 Bristol introduced a charging Clean Air Zone. If you are thinking of replacing your vehicle you can check to see if it will be compliant, and therefore not be subject to a daily charge to drive in the zone, by using this [vehicle checker](#).

How Can Pollution Be Reduced? - Domestic Heating

From an air pollution perspective, if a property does not already have a stove or open fireplace, the best option is not to install one. Even the cleanest wood burning appliance emits significantly more particulate matter than a gas oil or gas appliance.

Within Bristol, as a minimum, a wood burning stove should be approved for use within a smoke control area, known as an 'exempt appliance'.

If you do choose to burn solid fuel it is important to ensure that you do not breach the [Smoke Control Area](#) regulations. The whole of Bristol is a smoke control area. This means that, for domestic heating purposes, wood can only be burnt in a Defra approved stove. It is not permitted to burn wood in an open fire in a domestic property in Bristol.

Whilst the type of solid fuel appliance used is an important factor in determining the level of pollution emitted, the way in which they are used is equally as important. Understanding

which fuels emit less pollution and the least polluting way to use them is explained within guidance issued by Defra: [Open fires and wood-burning stoves – A practical guide](#). The measures outlined for reducing emissions include:

- Choosing the right stove
- Considering burning less
- Buying ‘Ready to Burn’ fuel
- Season freshly chopped wood before use (wood can only be burnt in Bristol within a Defra exempt appliance. It is not permitted to burn even seasoned wood in an open fire, or an appliance not considered exempt by Defra for use in a smoke control area)
- NEVER burn treated waste wood (e.g., old furniture) or household rubbish
- Regularly service and maintain your stove (annually)
- Get your chimney swept regularly (up to twice a year)

In May 2021 the Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020 came into force. They have been introduced to reduce emissions of harmful particulate matter from residential burning of wood and other solid fuels. The regulations attempt to phase out the use of bituminous coal and unseasoned wood in residential heating appliances.

[A study](#) by The University of Sheffield and The University of Nottingham published in 2020 concluded that, even when best practice is used, solid fuels can emit significant levels of particulate matter pollution into the local atmosphere and can have a detrimental impact on indoor air pollution.

“The PM (particulate matter) that is released into the home is not an aberration from normal use but results directly from it. This is because real-world operation cannot occur without opening the stove door. It may be that with regulatory encouragement stove designs can be modified in a way that limits such instances. In the meantime, or in the event that appropriate modification cannot be achieved, it is also recommended that new residential stoves be accompanied by a health warning at the point of sale in order to indicate the normative health risks posed to users”.

In 2024, Bristol City Council became an official supporter of [Clean Air Night](#), which aims to raise awareness of the health risks associated with solid fuel use and dispel myths around wood burning.

Table of Contents

| | |
|---|-----------|
| Local Responsibilities and Commitment | i |
| Executive Summary: Air Quality in Our Area | ii |
| Air Quality in Bristol | ii |
| Actions to Improve Air Quality | v |
| Conclusions and Priorities | xii |
| How to get Involved | xix |
| 1 Local Air Quality Management | 1 |
| 2 Actions to Improve Air Quality | 2 |
| 2.1 Air Quality Management Areas | 2 |
| 2.2 Progress and Impact of Measures to address Air Quality in Bristol | 4 |
| 2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations | 10 |
| 3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance | 13 |
| 3.1 Summary of Monitoring Undertaken | 13 |
| 3.1.1 Automatic Monitoring Sites | 13 |
| 3.1.2 Non-Automatic Monitoring Sites | 13 |
| 3.2 Individual Pollutants | 13 |
| 3.2.1 Nitrogen Dioxide (NO ₂) | 14 |
| 3.2.2 Particulate Matter (PM ₁₀) | 19 |
| 3.2.3 Particulate Matter (PM _{2.5}) | 20 |
| Appendix A: Monitoring Results | 21 |
| Appendix B: Full Monthly Diffusion Tube Results for 2024 | 53 |
| Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC | 62 |
| Additional Air Quality Works Undertaken by Bristol City Council During 2024 | 62 |
| QA/QC of Diffusion Tube Monitoring | 79 |
| Diffusion Tube Annualisation | 79 |
| Diffusion Tube Bias Adjustment Factors | 80 |
| NO ₂ Fall-off with Distance from the Road | 83 |
| QA/QC of Automatic Monitoring | 84 |
| PM ₁₀ and PM _{2.5} Monitoring Adjustment | 86 |
| Automatic Monitoring Annualisation | 86 |
| NO ₂ Fall-off with Distance from the Road | 86 |
| Appendix D: Maps of Monitoring Locations and AQMA | 88 |
| Appendix E: Summary of Air Quality Objectives in England | 95 |
| Glossary of Terms | 96 |
| References | 97 |

Figures

| | |
|---|----|
| Figure 2.1 - Trend in Public Health Outcome Framework Indicator – PM _{2.5} | 11 |
| Figure 3.1 - Nitrogen Dioxide Monitoring Locations and Results 2024 – Central Area | 17 |
| Figure 3.2 - Nitrogen Dioxide Monitoring Locations and Results 2024 – Avonmouth | 18 |
| Figure A.1 – Trends in Annual Mean Nitrogen Dioxide Concentrations at Central Locations 2010 to 2024..... | 44 |
| Figure A.2 - Trends in Annual Mean Nitrogen Dioxide Concentrations at Gloucester Road/Cheltenham Road Locations 2010 to 2024 | 45 |
| Figure A.3 - Trends in Annual Mean Nitrogen Dioxide Concentrations at Parson Street Gyratory Locations 2010 to 2024..... | 46 |
| Figure A.4 – Trends in Annual Mean PM ₁₀ Concentrations | 49 |
| Figure A.5 – Trends in Annual Mean PM _{2.5} Concentrations | 52 |
| Figure C.1 - Bond Street Fleet Composition by Vehicle Type..... | 63 |
| Figure C.2 - Bond Street NO _x Emissions Source Apportionment by Vehicle Type..... | 64 |
| Figure C.3 - Colston Avenue Fleet Composition by Vehicle Type | 65 |
| Figure C.4 - Colston Avenue NO _x Emissions Source Apportionment by Vehicle Type | 66 |
| Figure C.5 - Site 3 Blackboy Hill | 68 |
| Figure C.6 - Muller Road (South) 2024 Measured Annual NO ₂ Concentrations and Change Between 2023 and 2024 | 69 |
| Figure C.7 - Fall Off with Distance Calculator for Site 705/Site 638 Prediction..... | 71 |
| Figure C.8 – Locations with Measured Annual NO ₂ Concentrations $\geq 36\mu\text{g}/\text{m}^3$ in 2024 – Central Area..... | 74 |
| Figure C.9 – All NO ₂ Monitoring Sites – Central Area | 75 |
| Figure C.10 - Locations with Measured Annual NO ₂ Concentrations $\geq 36\mu\text{g}/\text{m}^3$ in 2024 – Parson Street Gyratory | 76 |
| Figure C.11 - All NO ₂ Monitoring Sites – Parson Street Gyratory | 77 |
| Figure C.12 – All sites with Measured Annual NO ₂ Concentrations $\geq 36\mu\text{g}/\text{m}^3$ in 2024..... | 78 |
| Figure D.1 – Extent of Air Quality Management Area | 88 |
| Figure D.2 - Central Monitoring Locations: 2024 Annual NO ₂ Concentrations..... | 89 |
| Figure D.3 - Central Monitoring Locations: 2024 Annual NO ₂ Concentrations Distance Adjusted (where relevant)..... | 90 |

| | |
|--|----|
| Figure D.4 – Avonmouth Monitoring Locations: 2024 Annual NO ₂ Concentrations | 91 |
| Figure D.5 - Monitoring Locations Where Annual NO ₂ Concentrations Increased in 2024 Compared to 2023 | 92 |
| Figure D.6 – New Diffusion Tube Monitoring Locations in 2024 | 93 |
| Figure D.7 - Continuous (Real-Time) Monitoring Locations in 2024 | 94 |

Tables

| | |
|--|----|
| Table 2.1 – Declared Air Quality Management Areas | 3 |
| Table 2.2 – Progress on Measures to Improve Air Quality..... | 6 |
| Table A.1 – Details of Automatic Monitoring Sites | 21 |
| Table A.2 – Details of Non-Automatic Monitoring Sites | 22 |
| Table A.3 – Annual Mean NO ₂ Monitoring Results: Automatic Monitoring (µg/m ³)..... | 35 |
| Table A.4 – Annual Mean NO ₂ Monitoring Results: Non-Automatic Monitoring (µg/m ³) | 36 |
| Table A.5 – 1-Hour Mean NO ₂ Monitoring Results, Number of 1-Hour Means > 200µg/m ³ | 47 |
| Table A.6 – Annual Mean PM ₁₀ Monitoring Results (µg/m ³) | 48 |
| Table A.7 – 24-Hour Mean PM ₁₀ Monitoring Results, Number of PM ₁₀ 24-Hour Means > 50µg/m ³ | 50 |
| Table A.8 – Annual Mean PM _{2.5} Monitoring Results (µg/m ³)..... | 51 |
| Table B.1 – NO ₂ 2024 Diffusion Tube Results (µg/m ³) | 53 |
| Table C.1 - Tubes Outside AQMA Exceeding the Annual Air Quality Objective for NO ₂ Since 2020 | 67 |
| Table C.2 – Locations at which NO ₂ Concentrations Above 36µg/m ³ were Measured in 2024..... | 73 |
| Table C.3 – Annualisation Summary (concentrations presented in µg/m ³)..... | 80 |
| Table C.4 – Bias Adjustment Factor | 81 |
| Table C.5 – Local Bias Adjustment Calculation | 82 |
| Table C.6 – Non-Automatic NO ₂ Fall off With Distance Calculations (concentrations presented in µg/m ³) | 83 |
| Table C.7 – Automatic NO ₂ Fall off With Distance Calculations (concentrations presented in µg/m ³) | 87 |

Table E.1 – Air Quality Objectives in England95

1 Local Air Quality Management

This report provides an overview of air quality in Bristol 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 Bristol City 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 in Appendix E.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA) 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 Bristol City Council can be found in Table 2.1. The table presents a description of the AQMA that is currently designated within the Bristol City Council area. Appendix D: Maps of Monitoring Locations and AQMA provides maps of the AQMA and the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designation are as follows:

- NO₂ annual mean,
- 1 Hour Mean NO₂,
- PM₁₀ 24-hour mean.

The monitoring network in Bristol has changed considerably since the declaration of the Air Quality Management Area in 2001. There is an extensive air quality monitoring network throughout the city which provides annual NO₂ data. The monitoring locations in 2024 are not directly comparable to those in 2001 and therefore the comparison between exceedance levels at declaration in 2001 and 2024 would not provide a true reflection of trends in air pollution over that timeframe. For this reason, the column for pollution levels on declaration has not been completed in Table 2.1. Distance adjusted (where relevant) data for all 202 nitrogen dioxide diffusion tube monitoring sites has been provided in Table B.1 in Appendix B. An indication of general trends in annual NO₂ values from 2010 are shown in Figure A.1 to Figure A.3 in Appendix A. This is considered more representative of trends in recent years than would be established from looking at data from one worst case site as requested in Table 2.1.

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 |
|--------------|--|---------------------------------------|---|--|----------------------------------|---|--|-----------------------------------|---|
| Bristol AQMA | Declared 01/05/2001. Amended on 01/05/2003 and 01/05/2008 and 26/10/2011 | NO ₂ Annual Mean | An area covering the city centre and parts of the main radial roads including the M32 | YES | N/A | Highest measured 50.8µg/m ³ . 43.4µg/m ³ at location of relevant exposure | 0 | Clean Air Zone - 2022 | Clean Air for Bristol Website for CAZ Plans |
| Bristol AQMA | Declared 01/05/2001. Amended on 01/05/2003 and 01/05/2008 and 26/10/2011 | NO ₂ 1 Hour Mean | An area covering the city centre and parts of the main radial roads including the M32 | YES | N/A | No exceedance | 11 | Clean Air Zone - 2022 | Clean Air for Bristol Website for CAZ Plans |
| Bristol AQMA | Declared 01/05/2001. Amended on 01/05/2003 and 01/05/2008 and 26/10/2011 | PM ₁₀ 24 Hour Mean | An area covering the city centre and parts of the main radial roads including the M32 | YES | N/A | No exceedance measured but monitoring network is limited | None measured | Clean Air Zone - 2022 | Clean Air for Bristol Website for CAZ Plans |

- Bristol City Council confirm the information on UK-Air regarding their AQMA(s) is up to date.
- Bristol City Council confirm that all current AQAPs have been submitted to Defra.

2.2 Progress and Impact of Measures to address Air Quality in Bristol

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:*

- *BCC should revoke the AQMA declaration for PM₁₀ 24-hour annual mean concentrations in line with the LAQM TG22 technical guidance.'*

Discussions have taken place with Defra to agree an extension to keep the declaration based on concerns that there are some locations in the city, where monitoring does not currently take place, that might exceed the objective. BCC is currently exploring options to increase the number of particulate matter monitoring locations. An agreement has been reached with Defra to review the declaration at the end of March 2026 (Defra ref:010109).

- *'Following analysis of the results at the additional monitoring site near DT3, BCC should declare an AQMA if required or carry out an additional modelling assessment to determine the extent of exceedance if the results indicate this is necessary.'*

An additional monitoring site was added (DT701) to the network which was close to the roadside but away from what was thought to be a local point source of NO₂ pollution that was impacting on DT3 measurements. DT701 measured annual NO₂ concentrations of 22.7µg/m³ at the roadside. 2024 NO₂ concentrations at DT3 fell significantly in 2024, to 29.0µg/m³. Both sites were compliant in 2024, therefore, there is no need to consider changing the AQMA declaration to include this location.

- *'BCC has not included discussion of the Public Health England Public Health Outcomes Framework estimates of the fraction of adult mortality attributable to particulate air pollution each year, this could be included in Section 2.3 of the ASR.'*

This has been added to Section 2.3 of the 2025 ASR.

Bristol City 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 2.2. 30 measures are included within Table 2.2, with the type of measure and the progress Bristol City 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 2.2.

More detail on some of these measures can be found in their respective online portals, for example at the [Clean Air for Bristol website](#) or on the [Travelwest website](#) and within sections of this report.

Bristol City Council expects the following measures to be completed over the course of the next reporting year:

- Monitoring the impact and effectiveness of the [Bristol Clean Air Zone](#) in agreement with the Government's Joint Air Quality Unit (JAQU), to deliver compliance with air quality objectives in the shortest time possible.
- Continue planning and implementing a range of actions intended to improve public transport provision, and the infrastructure for walking and cycling, to make these transport modes more attractive.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, Bristol City Council anticipates that further additional measures not yet prescribed will be required in subsequent years to achieve compliance, more quickly than might otherwise be the case, and enable the revocation of the Bristol AQMA. These measures will be considered as part of the work being carried out in conjunction with the Government's Joint Air Quality Unit.

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 | Bristol Clean Air Zone | Promoting Low Emission Transport | Low Emission Zone | 2017 | 2022 | BCC | Government | Funded | > £10 million | Implementation | Reduced vehicle emissions | Achieving Compliance within the shortest timeframe possible | CAZ introduced in November 2022. For latest developments see https://www.cleanairforbristol.org/ | Compliance not yet achieved. Further measures being investigated with JAQU through their Triage Process. |
| 2 | Make improvements to the city centre through the City Centre Framework | Alternatives to private vehicle use | Other | 2020 | 2027 | BCC | WECA/BCC | Funded | >£10 million | Planning | Improving conditions for active and public transport in the city centre | Improved bus journey times and reliability. Uplift in walking, cycling and scooting | Ongoing development and review of the measures introduced | More than £15m of CAZ funding utilised to help upgrade non-CAZ compliant vehicles to compliant ones |
| 3 | City Centre Freight Consolidation | Freight and Delivery Management | Freight Consolidation Centre | 2022 | Ongoing | BCC and logistics operators | JAQU | Funded | £2m at current | Implementation | Reduction in HGV and LGV mileage in the city centre replaced by zero-emission last mile fleet | 95% of deliveries in the city centre by EVs or bikes by 2030 | Business case for range of interventions complete. Three pilot “first/last mile” consolidation hubs due for delivery in mid-2025 | |
| 4 | Prioritising purchase of electric vehicles (EVs) in public sector fleets | Promoting Low Emission Transport | Public Vehicle Procurement - Prioritising uptake of low emission vehicles | 2017 | 2028 | WoE Authorities | Govt, LA | Funded | | Implementation | Reduce emissions from LA vehicle fleet | 25% (100 vehicles) of BCC's fleet now EV with target to be fully electric by 2027/28 | 100 EV's incorporated into fleet of approx. 400 | Barrier - charging infrastructure |
| 5 | Car Clubs | Alternatives to private vehicle use | Car Clubs | | Ongoing | WoE Authorities | Private and LA, EU H2020 -Replicate | Funded | Est. £500k | Implementation | Reduced car ownership | 120 car club cars currently in use in Bristol | Ongoing | Cost & number still TBC |
| 6 | School Streets | Promoting Travel Alternatives | Other | 2020 | Ongoing | BCC | CRSTS & LA Funded | Funded | £140k per year | Implementation | Lower pollution outside schools and increased active travel | Closing streets to motor vehicles outside schools at the start and end of the school day | Pilot scheme at two schools completed in 2020. There are now 13 permanent school streets in place, with a further 3 being proposed | |
| 7 | Residential electric vehicle charge points for those without off street parking | Promoting Low Emission Transport | Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging | 2022 | Ongoing | BCC | BCC | Not funded | £3-4m | Planning | Promote low emission vehicle use | Install and operate 150 electric vehicle residential charge-points for drivers without off-street parking. 10 rapid charge points for use by taxi and private hire vehicles, and 2-3 ultra rapid charge points for commercial and public use | Planning phase, awaiting DfT funding decision. The next phase hopes to see up to 800 charging points | |

| 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 |
|-------------|---|---------------------------------------|--|---------------------------------|------------------------------------|------------------------|--------------------|----------------|---------------------------|----------------|--|--|---|---------------------------------------|
| 8 | Install Rapid Charge points | Promoting Low Emission Transport | Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging | 2022 | Ongoing | BCC | Grant Funded | Funded | | Implementation | Promote low emission vehicle use | Install 16 rapid chargers | Implementation ongoing | |
| 9 | Develop a freight strategy describing how we will help freight transported on Bristol roads to be zero carbon and efficient | Freight and Delivery Management | Freight Partnerships for city centre deliveries | 2022 | 2024 | BCC | BCC | Funded | £10k - 50k | Planning | Develop zero carbon freight delivery in Bristol | Delivery of Strategy | Development work undertaken | |
| 10 | Develop plans for a Mass Transit system together with neighbouring authorities | Transport Planning and Infrastructure | Other | 2022 | | WECA authorities/ BCC | WECA/ Network Rail | | | Planning | | Develop a viable business case for mass transit | Phase 1 A4 corridor being designed. Work ongoing | |
| 11 | Improve walking, cycling and public transport infrastructure through the A37/A4018 project | Transport Planning and Infrastructure | Other | 2019 | 2027 | BCC | WECA CRST/BCC | | > £10 million | Planning | Increase public and active transport use along this corridor | Improvements to walking, cycling and public transport infrastructure along the A37/A4018 corridors | Victoria Street/Colston Avenue West: works commenced in January '25. Southern Section: Full Business Case approved. Works due to commence in September '25 Park Street/Triangle/Queens Road: Full Business Case approved by BCC. Awaiting approval by WECA. Active Travel: Full Business Case in development North View/Blackboy Hill: Options Assessment Report in development | |
| 12 | Develop mobility hubs to offer bike hire, e-scooters, bus, and e-cargo bikes in one place | Transport Planning and Infrastructure | Other | 2022 | 2024 | BCC/ WECA Authorities | WECA | Funded | | Planning | Increase active and public transport use | Hubs developed | Procurement of hub components | |
| 13 | Build a regional cycling centre for cycle training, rehabilitation, inclusive cycling, and a sports facility | Promoting Travel Alternatives | Promotion of cycling | | 2026 | BCC | Unknown | Not Funded | £15 million | Planning | Increase accessibility to cycling | Cycling centre built and operational | Outline Business Case complete and public consultation undertaken in late 2024. Planning application submitted May 2025. Target opening date 2027. | |

| 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 |
|-------------|--|---------------------------------------|------------------------|---------------------------------|------------------------------------|--------------------------------------|----------------|--|---------------------------|----------------|---|---|---|---------------------------------------|
| 14 | Scooter, e-bike and e-cargo bike trial | Promoting Travel Alternatives | Other | 2021 | Ongoing | WECA authorities/ BCC | | Funded | | Completed | Trial e-scooters, e-bikes and e-cargo bikes in the WECA region | Reduction in vehicle trips | Trial partner is currently TIER Dott, with the inclusion of e-bike rental. E-cargo bikes no longer part of trial plan. Trial extended until May 2026. | |
| 15 | Providing continuous bus priority and better walking and cycling links along the A4 Portway Strategic Corridor and the delivery of Portway rail station and associated access improvements | Transport Planning and Infrastructure | Other | 2022 | 2027 | BCC | WECA/DfT | Funded | > £10 million | Planning | Improved active and public transport offer on A4 corridor to encourage modal shift | New, effective Infrastructure delivered | Station and expanded P&R site delivered. Portway walking, cycling and PT improvements business case approved and funding secured. Tendering of works is underway. | |
| 16 | New train station at Ashley Down | Transport Planning and Infrastructure | Other | 2023 | 2024 | BCC/ WECA/ Network Rail | WECA | Funded | | Completed | Improved access to rail network leading to modal shift away from private car use | Patronage figures | Station completed in September 2024 | |
| 17 | M32 Strategic Corridor: providing improved public transport infrastructure and delivery of a P&R | Transport Planning and Infrastructure | Bus route improvements | 2021 | 2029 | BCC/ S.Glos/ WECA/ National Highways | WECA | Part funded; full funding subject to CRSTS2 allocation | | Planning | Improved public transport offer to reduce emissions from private car use | Improved M32 corridor to encourage public transport use | Strategic Outline Business Case being developed | Barrier - funding |
| 18 | Active Travel Fund walking and cycling improvements at Park Row, Old Market and Cotham Hill | Transport Planning and Infrastructure | Other | 2021 | 2025 | BCC | DfT | Funded | £5m | Completed | Increase in active travel and reduction in private vehicle emissions | Infrastructure improvements made | Cotham Hill works completed in 2023 and Old Market in 2024. Park Row works completed in May 2025 | |
| 19 | Active Travel Fund 4, delivery of Old City - King Street pedestrianisation and Queen Charlotte Street cycle lane | Transport Planning and Infrastructure | Other | 2023 | 2024 | BCC | DfT via WECA | Funded | £1.6m | Implementation | Better enforcement of existing temporary pedestrianisation of Old City, including ban on mopeds; cycle lane on Queen Charlotte Street | Infrastructure improvements made | Scheme due to be completed in July 2025 | |
| 20 | Active Travel Fund 4, design of 4 cycling schemes. Filwood Quietway, Malago Greenway, Deanery Road and Old Market Quietway | Transport Planning and Infrastructure | Cycle network | 2023 | 2024 | BCC | DfT via WECA | Funded | £850k | Completed | Design and Outline Business Case of 4 cycling schemes to be 'shovel-ready' for future funding bids | 4 approved OBCs | Engagement and designs complete | |

| 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 |
|-------------|--|---|--|---------------------------------|------------------------------------|--|--------------------------|----------------|---------------------------|---|---|--|--|---------------------------------------|
| 21 | Delivery of up to 10-30 cycle hangars at council owned properties | Promoting Travel Alternatives | Promotion of cycling | 2022 | 2023 | BCC | WECA | Not funded | | Completed | Infrastructure leads to increase in cycling | Infrastructure delivered | Delivered | |
| 22 | Muller Road Sustainable Transport Improvements to improve walking, cycling and public transport links | Transport Planning and Infrastructure | Other | 2020 | 2026 | BCC | WECA/CIL/HIF | Funded | | Phase 1: completed Phase 2: planning | Increase use of sustainable transport options for trips | Infrastructure delivered | Phase 1 completed in 2023. Phase 2 Outline Business Case approved by BCC in December 2024 | |
| 23 | Joint Local Transport Plan 5 | Policy Guidance and Development Control | Other policy | 2023 | 2024 | WECA, BCC, BANES, South Glos, N Somerset | WECA/BCC | Not funded | Circa £800k | Planning | Increase use of active and sustainable transport | Adopted Plan | Scoping stage | |
| 24 | Bedminster Green Transport improvements – New segregated cycle route on Whitehouse Lane, new bus priority on Malago Rd and Dalby Avenue, street scene enhancements | Transport Planning and Infrastructure | Other | 2023 | 2025 | BCC | Government Funding/ WECA | Funded | £11m | Construction | Encouragement of modal shift through provision of quick reliable bus services, provision of off-carriageway cycle route, and better walking environment | Improved bus Services, quicker journey times and more reliable services, greater numbers of bus, cycle and pedestrian journeys within vicinity | In development | |
| 25 | Local Plan Review | Policy Guidance and Development Control | Air Quality Planning and Policy Guidance | Ongoing | 2023 | BCC | LA Funded | Funded | £100k - £500k | Planning | Adoption of standalone policy for Air Quality and strengthen weight given to air pollution in Local Plan policy documents | Development and Adoption of New Local Plan Documents | Local Plan submitted to the Secretary of State in April 2024. Now undergoing independent examination | |
| 26 | Liveable Neighbourhood trial in East Bristol | Promoting Travel Alternatives | Other | 2021 | 2025 | BCC | WECA | Funded | | Implementation | Prioritisation of safe and active travel by reducing impact of motor vehicles | Improved environment for active travel and increase in those modes | Trial measure implementation completed in early 2025. Trial is ongoing | |
| 27 | South Bristol Liveable Neighbourhood Trial | Promoting Travel Alternatives | Other | 2023 | 2026 | BCC | WECA | Funded | | Planning | Prioritisation of safe and active travel by reducing impact of motor vehicles | Improved environment for active travel and increase in those modes | Consultation and Trial design ongoing. Final Business Case in development. | |
| 28 | Road Safety / Vision Zero Strategy | Policy guidance, Supporting active travel | Other | 2025 | 2026 | BCC | BCC | Funded | | Planning | Improving conditions for active travel; reducing environmental impact of collisions | Delivery of strategy | In early development | |
| 29 | Cycle and bikeability training | Promoting Travel Alternatives | Promotion of cycling | 2025 | Ongoing | BCC | DfT | Funded | £148k (2023/4) | Ongoing | Increase accessibility to cycling | | Training delivered to 5613 people in 23/24 | |
| 30 | A432 road safety improvements | Supporting active travel | Other | 2025 | 2027 | BCC | Safer Roads fund (DfT) | Funded | £2.27m | Planning | Improving conditions for active travel; reducing collisions (and associated environmental impacts) | | Identification and prioritisation of interventions | |

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 Strategy⁷, 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.

Bristol City Council has identified that the recent focus on NO₂ compliance at both a national and local level through the LAQM process has resulted in there being a lack of in-depth knowledge on localised PM_{2.5} concentrations. The clear evidence on health impacts and requirement to work towards reducing PM_{2.5} emissions and/or concentrations led Bristol City Council to commission studies to develop a more in depth understanding of local emissions of this pollutant. Whilst many actions targeted at reducing emissions of NO₂ will also reduce PM_{2.5} emissions, other potentially significant sources of local primary PM_{2.5} have been identified that will not be directly addressed by actions aimed at achieving compliance with NO₂ limit values, for example, emissions from use of solid fuel.

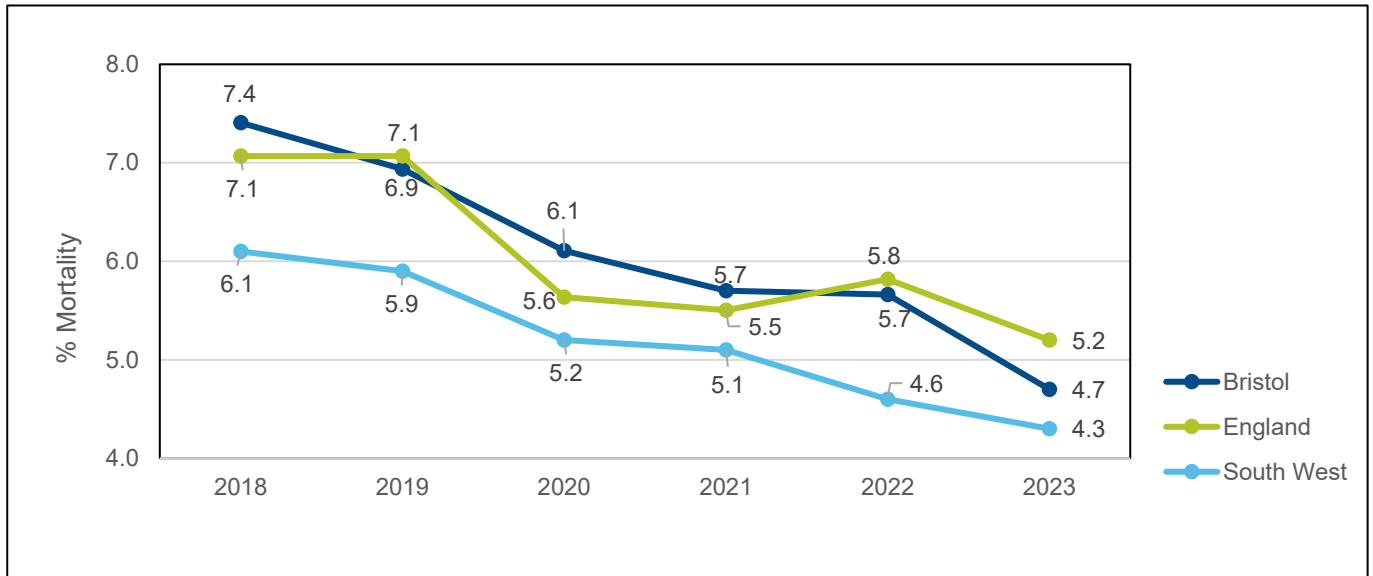
PM_{2.5} is monitored at two locations in Bristol. Concentrations at the urban background site at Bristol St Pauls were 7.1µg/m³ in 2024. PM_{2.5} concentrations measured at the roadside site at Parsons Street School were 8.4µg/m³. This compares to 8.2µg/m³ and 9.1µg/m³ in 2023 respectively. The maximum PM_{2.5} concentration for 2024 using Defra background mapping was 8.2µg/m³.

Public Health Outcomes Framework Indicator – PM_{2.5}

In 2023, 4.7% of “all-cause adult mortality” in Bristol was considered attributable to “particulate air pollution”⁸, which is 0.5% lower than the national proportion (5.2%) and is mid-ranking for English Core Cities. This is shown in Figure 2.1 Figure 2.1 - Trend in Public Health Outcome Framework Indicator – PM_{2.5}.

⁷ Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

⁸ [Public health profiles - OHID \(phe.org.uk\)](https://publichealthprofiles.org.uk/)

Figure 2.1 - Trend in Public Health Outcome Framework Indicator – PM_{2.5}

Caution is needed when considering apparent trends over time. Trend data should not be overinterpreted for a number of reasons:

- Concentrations of PM_{2.5} vary from year to year due to the weather. This variation due to weather is generally greater than the year-to-year variation from changes in emissions.
- The methods and data inputs for the pollution modelling are continually updated and improved.

Activity in Bristol to Reduce PM_{2.5}

In 2020 two studies were commissioned by BCC. These attempted to quantify pollutant emissions from [solid fuel](#) and construction [non-road mobile machinery](#) (NRMM) and identify policy measures to reduce emissions from these sources.

The lowest estimate from the study into solid fuel showed that solid fuel burning accounted for a third of all PM₁₀ emissions and half of PM_{2.5} emissions in Bristol. The report provided recommendations that could reduce emissions from this source. In 2020/21 Bristol City Council launched a ‘Slow the Smoke’ communications campaign aimed at raising awareness of the health impacts of solid fuel and options for people to reduce emissions. Additionally, a Defra air quality grant funded project ran from 2021 through to 2023 which used low-cost sensors and innovative citizen engagement to better understand the impact of solid fuel use on air pollution and to raise awareness of its impacts. A [report](#) on the Defra grant funded project was published in 2023. More information on the project, including videos and a song that were produced as part of the project are available on the

website of one of the project partners, [The Knowle West Media Centre](#).

Bristol City Council has supported the first two national [Clean Air Nights](#) organised by Global Action Plan, held on 24th January 2024 and 22nd January 2025. Clean Air Night is intended to highlight the health risk associated with burning solid fuels and to challenge some of the myths around wood burning.

Estimates of NRMM emissions using national data showed that this source accounts for approximately 3% of total PM₁₀, 5% of PM_{2.5} and 6% of NO_x emissions in Bristol. Whilst not representing a large proportion of total emissions it should be recognised that close to construction sites, NRMM could result in a significant contribution to pollution levels at a local level. This could be detrimental to health, if people are exposed to the pollution. The estimates are based on national data as local data is limited on this source.

Bristol City Council is taking the following measures to address PM_{2.5}:

- Amendments to the Clean Air Act 1993 made under Schedule 12 of the Environment Act 2021 came into force from 1 May 2022 by adding Section 19A and Schedule 1A, introducing civil financial penalties. In 2023 Bristol City Council Cabinet approved the adoption of these powers.
- Supporting [Clean Air Night](#).
- The installation of a new equivalence method PM_{2.5} monitor and meteorology station is planned to gain a better understanding of the impact that solid fuel use has on particulate pollution levels in a location where it is thought a significant level of solid fuel use takes place. Though the installation of this new monitoring site was hoped to be completed in 2024, planning activities are ongoing with a new planned completion date in 2025.
- The projects, as outlined in Table 2.2, that promote active and public transport use (if they result in reduced vehicle movements and don't just accommodate growth in transport demand), provide investment in cleaner buses and encourage use of cleaner vehicles electric vehicles, will help to reduce particulate emissions from transport.

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

This section sets out the monitoring undertaken within 2024 by Bristol City 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

Bristol City Council undertook automatic (continuous) monitoring at 7 sites during 2024. One of these sites is an affiliate site which forms part of Defra's Automatic Urban and Rural Network (AURN). Additionally, as part of this national network, Defra operate a station located in the St Pauls area of Bristol. Table A.1 in Appendix A shows the details of the automatic monitoring sites. The [Air Quality Dashboard](#) presents automatic monitoring results for Bristol with automatic monitoring results also available through the UK-Air website.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

Bristol City Council undertook non-automatic (i.e. passive) monitoring of NO₂ at 202 sites during 2024. Table A.2 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 (NO₂)

Table A.3 and

| 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 |
|---------------------------|-------------------------|--------------------------|------------------|---|--|-------------|-------------|-------------|-------------|------|
| 2 | 358628 | 173011 | Roadside | 84.9 | 84.9 | 36.9 | 40.1 | 40.3 | 39.0 | 38.4 |
| 3 | 357448 | 174650 | Roadside | 100.0 | 100.0 | 28.7 | 44.4 | 38.8 | 47.7 | 29.0 |
| 4 | 359903 | 171850 | Roadside | 100.0 | 100.0 | 36.8 | 38.9 | 38.4 | 29.3 | 30.7 |
| 5 | 358723 | 171704 | Roadside | 100.0 | 100.0 | 31.6 | 41.0 | 37.9 | 33.5 | 34.9 |
| 9 | 358729 | 173499 | Roadside | 17.0 | 0.0 | 31.7 | 39.3 | 36.0 | 27.8 | - |
| 10 | 361217 | 171429 | Roadside | 100.0 | 100.0 | 33.6 | 36.8 | 35.9 | 30.7 | 30.3 |
| 11 | 358813 | 173342 | Roadside | 100.0 | 100.0 | 31.1 | 35.0 | 35.3 | 29.6 | 29.4 |
| 12 | 359142 | 173211 | Roadside | 100.0 | 92.5 | 41.9 | 46.5 | 50.2 | 60.2 | 35.3 |
| 14 | 360877 | 170280 | Roadside | 100.0 | 100.0 | 32.4 | 32.7 | 30.3 | 27.0 | 25.8 |
| 15 | 359294 | 173485 | Roadside | 100.0 | 100.0 | 28.2 | 31.5 | 31.3 | 26.4 | 25.9 |
| 16 | 352287 | 178698 | Roadside | 100.0 | 100.0 | 23.2 | 24.9 | 25.8 | 21.5 | 21.5 |
| 21 | 359035 | 175306 | Roadside | 100.0 | 100.0 | 33.4 | 34.9 | 34.0 | 30.9 | 33.0 |
| 22 | 359109 | 173886 | Roadside | 75.0 | 75.0 | 34.3 | 37.5 | 36.7 | 35.9 | 34.4 |
| 113 | 359258 | 172696 | Roadside | 90.6 | 83.0 | 29.9 | 27.8 | 32.0 | 29.4 | 28.3 |
| 125 | 359214 | 171917 | Roadside | 100.0 | 100.0 | 35.6 | 35.8 | 33.6 | 24.3 | 19.7 |
| 147 | 358514 | 172691 | Roadside | 100.0 | 100.0 | 39.4 | 43.3 | 45.5 | 39.5 | 36.3 |
| 154 | 357601 | 172483 | Roadside | 100.0 | 100.0 | 22.1 | 25.4 | 26.1 | 17.8 | 17.5 |
| 155 | 357838 | 172713 | Roadside | 100.0 | 100.0 | 22.9 | 25.5 | 24.2 | 17.5 | 15.2 |
| 156 | 357709 | 173018 | Roadside | 100.0 | 100.0 | 20.7 | 24.9 | 25.9 | 19.1 | 17.7 |
| 157 | 359119 | 174090 | Roadside | 100.0 | 100.0 | 35.7 | 40.3 | 35.0 | 35.2 | 33.7 |
| 159 | 358891 | 174608 | Roadside | 100.0 | 100.0 | 28.5 | 31.9 | 32.1 | 28.9 | 28.2 |
| 161 | 359152 | 175733 | Roadside | 92.5 | 92.5 | 25.3 | 27.4 | 26.0 | 25.6 | 26.5 |
| 163 | 359435 | 176574 | Roadside | 100.0 | 100.0 | 24.5 | 27.4 | 27.2 | 27.2 | 25.7 |
| 175 | 362147 | 170525 | Roadside | 100.0 | 100.0 | 36.4 | 41.4 | 38.7 | 30.4 | 30.3 |
| 239 | 357880 | 170506 | Kerbside | 100.0 | 100.0 | 47.6 | 51.4 | 48.6 | 40.5 | 38.1 |
| 242 | 357510 | 170401 | Kerbside | 92.5 | 92.5 | 32.2 | 34.5 | 36.6 | 29.8 | 28.0 |
| 254 | 357118 | 172429 | Kerbside | 100.0 | 90.6 | 31.1 | 34.6 | 33.0 | 24.7 | 23.9 |
| 260 | 361140 | 175366 | Roadside | 100.0 | 100.0 | 29.5 | 33.2 | 31.6 | 26.5 | 26.0 |
| 261 | 361103 | 175059 | Roadside | 100.0 | 100.0 | 34.7 | 39.1 | 39.3 | 32.0 | 33.0 |
| 295 | 359913 | 174315 | Roadside | 100.0 | 100.0 | 37.2 | 44.5 | 41.0 | 34.0 | 34.8 |
| 300 | 363365 | 175883 | Roadside | 100.0 | 100.0 | 28.9 | 28.7 | 27.5 | 21.2 | 26.4 |
| 303 | 361368 | 175170 | Roadside | 100.0 | 100.0 | 29.2 | 31.8 | 31.2 | 24.1 | 23.3 |
| 307 | 360747 | 175328 | Roadside | 100.0 | 100.0 | 24.6 | 27.5 | 26.8 | 24.5 | 21.6 |
| 312 | 359832 | 174616 | Roadside | 100.0 | 100.0 | 26.2 | 29.5 | 29.8 | 24.8 | 23.5 |
| 320_1, 320_2, 320_3 | 361180 | 171567 | Urban background | 100.0 | 100.0 | 19.3 | 20.8 | 20.6 | 17.7 | 17.0 |
| 325 | 361667 | 175103 | Roadside | 100.0 | 100.0 | 34.1 | 37.3 | 32.6 | 29.4 | 27.6 |
| 363 | 359075 | 173613 | Roadside | 92.5 | 92.5 | 23.5 | 26.8 | 28.0 | 23.8 | 23.9 |
| 370 | 359775 | 173513 | Roadside | 90.6 | 90.6 | | 25.0 | 31.0 | 25.3 | 21.2 |
| 373 | 359747 | 173774 | Roadside | 92.5 | 92.5 | 23.9 | 27.9 | 27.4 | 22.3 | 21.5 |
| 374 | 359509 | 173595 | Roadside | 100.0 | 100.0 | 29.9 | 35.0 | 33.7 | 27.1 | 25.1 |
| 403 | 360508 | 171676 | Roadside | 100.0 | 100.0 | 23.4 | 25.5 | 25.5 | 20.2 | 20.6 |
| 405 | 361051 | 173743 | Roadside | 100.0 | 100.0 | 38.7 | 40.4 | 38.0 | 33.5 | 33.6 |
| 406 | 361576 | 173806 | Roadside | 100.0 | 100.0 | 26.6 | 29.3 | 29.6 | 24.2 | 23.2 |
| 413 | 360043 | 171508 | Roadside | 100.0 | 100.0 | 25.5 | 27.4 | 27.2 | 23.5 | 22.5 |
| 417 | 359635 | 171413 | Roadside | 100.0 | 100.0 | 26.3 | 27.9 | 27.0 | 22.7 | 20.9 |
| 418 | 357737 | 170642 | Roadside | 100.0 | 100.0 | 40.2 | 45.9 | 44.1 | 32.8 | 31.7 |
| 419 | 357832 | 170686 | Kerbside | 100.0 | 100.0 | 31.4 | 34.3 | 33.6 | 29.4 | 28.5 |
| 420 | 358277 | 171562 | Roadside | 83.0 | 83.0 | 23.2 | 25.6 | 28.8 | 23.7 | 22.3 |
| 423 | 358623 | 173386 | Roadside | 100.0 | 100.0 | 27.3 | 29.5 | 29.1 | 22.2 | 20.9 |
| 429 | 360484 | 174097 | Roadside | 100.0 | 100.0 | 38.8 | 36.4 | 35.5 | 38.0 | 35.3 |

| 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 |
|---------------------------|-------------------------|--------------------------|------------------|---|--|-------------|-------------|-------------|-------------|-------------|
| 436 | 361013 | 173352 | Roadside | 90.6 | 90.6 | 29.2 | 31.2 | 30.6 | 24.4 | 26.2 |
| 438_1, 438_2, 438_3 | 360903 | 170024 | Kerbside | 100.0 | 100.0 | 27.1 | 29.0 | 29.4 | 25.0 | 23.2 |
| 439_1, 439_2, 439_3 | 358042 | 170582 | Roadside | 100.0 | 100.0 | 25.4 | 28.6 | 27.2 | 24.0 | 22.4 |
| 455_1, 455_2, 455_3 | 359487 | 173924 | Urban background | 100.0 | 100.0 | 15.9 | 16.4 | 16.7 | 14.3 | 13.8 |
| 464_1, 464_2, 464_3 | 362927 | 175592 | Roadside | 100.0 | 100.0 | 24.2 | 23.7 | 24.0 | 20.8 | 20.8 |
| 470 | 359213 | 170997 | Roadside | 100.0 | 100.0 | 25.1 | 26.8 | 28.3 | 24.2 | 21.7 |
| 472 | 358226 | 171284 | Roadside | 92.5 | 92.5 | 26.2 | 28.7 | 29.0 | 25.8 | 25.7 |
| 473 | 358105 | 171124 | Roadside | 90.6 | 90.6 | 40.0 | 28.4 | 28.4 | 26.1 | 25.7 |
| 487 | 360243 | 174327 | Roadside | 92.5 | 92.5 | 27.7 | 29.6 | 36.8 | 27.8 | 24.1 |
| 492 | 359445 | 176627 | Roadside | 100.0 | 100.0 | 25.2 | 26.4 | 27.5 | 25.6 | 23.7 |
| 493 | 359677 | 176758 | Roadside | 100.0 | 100.0 | 29.5 | 31.8 | 31.2 | 27.4 | 25.8 |
| 494 | 359558 | 176850 | Kerbside | 100.0 | 100.0 | 25.1 | 25.0 | 26.4 | 22.5 | 21.6 |
| 496 | 362296 | 173620 | Roadside | 100.0 | 100.0 | 25.0 | 25.9 | 26.7 | 22.9 | 20.2 |
| 497 | 359268 | 174132 | Roadside | 100.0 | 100.0 | 24.6 | 27.1 | 24.7 | 24.8 | 22.5 |
| 499_1, 499_2, 499_3 | 359522 | 173381 | Roadside | 90.6 | 90.6 | 26.0 | 31.1 | 30.9 | 26.2 | 23.9 |
| 502_1, 502_2, 502_3 | 358640 | 173090 | Roadside | 90.6 | 90.6 | 52.1 | 58.0 | 54.1 | 48.9 | 50.8 |
| 512 | 359026 | 174432 | Roadside | 75.0 | 75.0 | 30.7 | 36.1 | 36.2 | 37.3 | 36.6 |
| 525 | 362455 | 173687 | Roadside | 100.0 | 100.0 | 24.1 | 28.5 | 29.8 | 24.8 | 23.2 |
| 538 | 358681 | 171478 | Roadside | 17.0 | 17.0 | 20.4 | 22.5 | 21.3 | 19.5 | - |
| 539 | 358599 | 171391 | Roadside | 75.0 | 75.0 | 27.4 | 30.9 | 23.8 | 26.6 | 22.2 |
| 545 | 356379 | 171436 | Roadside | 100.0 | 100.0 | 22.0 | 24.3 | 23.3 | 17.2 | 16.3 |
| 550 | 358353 | 172613 | Roadside | 66.0 | 66.0 | 21.1 | 29.1 | 29.4 | 24.7 | 21.9 |
| 555 | 356679 | 172589 | Roadside | 100.0 | 100.0 | 26.5 | 28.0 | 28.0 | 19.3 | 17.8 |
| 556 | 356827 | 172303 | Roadside | 100.0 | 100.0 | 31.7 | 35.0 | 31.8 | 23.9 | 20.8 |
| 559 | 356485 | 171580 | Roadside | 100.0 | 90.6 | 19.8 | 24.5 | 24.2 | 20.4 | 20.0 |
| 560_1, 560_2 | 358665 | 173439 | Roadside | 92.5 | 92.5 | 30.2 | 32.2 | 31.5 | 25.6 | 20.5 |
| 561_1, 561_2 | 358688 | 173431 | Roadside | 56.6 | 56.6 | 33.8 | 36.7 | 34.8 | 24.7 | 25.7 |
| 565 | 357227 | 179101 | Roadside | 100.0 | 100.0 | 24.5 | 26.3 | 24.4 | 22.7 | 22.8 |
| 567 | 360728 | 175345 | Roadside | 100.0 | 100.0 | 41.3 | 44.8 | 43.2 | 35.3 | 34.4 |
| 568 | 360178 | 175779 | Kerbside | 81.1 | 81.1 | 29.0 | 32.9 | 32.2 | 28.2 | 28.4 |
| 569 | 359855 | 176186 | Roadside | 100.0 | 100.0 | 22.8 | 24.1 | 24.1 | 21.3 | 21.4 |
| 570 | 359847 | 176439 | Kerbside | 100.0 | 100.0 | 28.4 | 28.2 | 29.6 | 26.2 | 26.4 |
| 571 | 359848 | 176411 | Roadside | 100.0 | 100.0 | 31.3 | 33.1 | 32.3 | 28.4 | 28.8 |
| 574 | 357678 | 174229 | Roadside | 92.5 | 92.5 | 27.3 | 28.9 | 29.6 | 25.8 | 24.4 |
| 575 | 358685 | 172881 | Kerbside | 100.0 | 100.0 | 30.9 | 29.6 | 31.5 | 33.0 | 34.0 |

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|------|-------------|-------------|------|-------------|
| 576 | 358792 | 172874 | Roadside | 100.0 | 100.0 | 23.9 | 26.8 | 29.8 | 27.9 | 27.2 |
| 577 | 358935 | 172981 | Roadside | 92.5 | 92.5 | 30.5 | 27.8 | 31.1 | 35.3 | 35.2 |
| 578 | 361892 | 173552 | Roadside | 90.6 | 90.6 | | 33.0 | 31.1 | 27.5 | 25.1 |
| 579 | 362198 | 173580 | Kerbside | 90.6 | 90.6 | | 35.4 | 32.2 | 27.2 | 25.8 |
| 580 | 358754 | 173528 | Roadside | 83.0 | 83.0 | | 47.9 | 41.8 | 33.8 | 29.4 |
| 581 | 358908 | 173574 | Kerbside | 92.5 | 92.5 | | 40.8 | 39.1 | 30.4 | 29.0 |
| 582 | 358893 | 173333 | Roadside | 84.9 | 84.9 | | 50.0 | 43.7 | 39.2 | 45.4 |
| 583 | 358870 | 173340 | Roadside | 75.0 | 75.0 | | 42.3 | 37.9 | 39.1 | 36.6 |
| 584 | 358773 | 173276 | Roadside | 90.6 | 90.6 | | 33.0 | 34.3 | 30.8 | 29.5 |
| 585 | 358192 | 173050 | Roadside | 83.0 | 83.0 | | 30.5 | 32.1 | 24.7 | 29.9 |
| 586 | 358195 | 173018 | Kerbside | 83.0 | 83.0 | | 38.6 | 41.8 | 32.6 | 36.4 |
| 587 | 358802 | 172896 | Roadside | 81.1 | 81.1 | | 26.5 | 30.9 | 28.5 | 28.7 |
| 588 | 358739 | 172869 | Roadside | 100.0 | 100.0 | | 26.5 | 31.5 | 29.2 | 28.3 |
| 589 | 358849 | 173606 | Roadside | 100.0 | 100.0 | | 26.5 | 27.2 | 21.8 | 20.0 |
| 590 | 358789 | 173589 | Roadside | 100.0 | 100.0 | | 42.3 | 40.7 | 31.0 | 29.3 |
| 591 | 358805 | 173575 | Roadside | 92.5 | 92.5 | | 34.9 | 33.1 | 25.1 | 23.4 |
| 592 | 358662 | 173409 | Kerbside | 25.0 | 25.0 | | 39.6 | 38.6 | 28.8 | 26.7 |
| 593 | 358610 | 173350 | Roadside | 100.0 | 100.0 | | 35.2 | 36.3 | 24.8 | 23.8 |
| 594 | 358540 | 173234 | Roadside | 90.6 | 90.6 | | 34.1 | 34.1 | 26.6 | 23.5 |
| 595 | 358510 | 173197 | Roadside | 67.9 | 67.9 | | 32.2 | 30.6 | 23.0 | 22.6 |
| 596 | 358431 | 173120 | Roadside | 75.0 | 75.0 | | 30.0 | 31.2 | 25.4 | 22.9 |
| 597 | 358403 | 173124 | Roadside | 100.0 | 100.0 | | 32.7 | 33.0 | 21.7 | 20.8 |
| 598 | 358061 | 173182 | Roadside | 92.5 | 92.5 | | 26.9 | 26.8 | 21.3 | 22.3 |
| 599 | 358135 | 173123 | Roadside | 100.0 | 100.0 | | 33.3 | 31.0 | 28.9 | 28.5 |
| 600 | 358322 | 172858 | Roadside | 75.0 | 75.0 | | 23.9 | 23.9 | 22.0 | 20.8 |
| 601 | 358563 | 172818 | Roadside | 90.6 | 90.6 | | 29.4 | 30.8 | 25.4 | 27.5 |
| 602 | 358469 | 172656 | Roadside | 92.5 | 83.0 | | 38.0 | 42.7 | 33.9 | 33.5 |
| 603 | 358767 | 173320 | Roadside | 100.0 | 100.0 | | 39.6 | 41.9 | 34.5 | 35.0 |
| 604 | 358817 | 173342 | Roadside | 92.5 | 92.5 | | 43.0 | 43.1 | 39.0 | 35.4 |
| 605 | 358718 | 173227 | Roadside | 100.0 | 100.0 | | 32.4 | 30.2 | 23.6 | 29.1 |
| 606 | 359124 | 172803 | Roadside | 100.0 | 100.0 | | 25.5 | 25.7 | 24.4 | 21.8 |
| 607 | 359183 | 172826 | Roadside | 100.0 | 100.0 | | 27.8 | 28.4 | 23.3 | 21.4 |
| 608 | 359563 | 172290 | Kerbside | 100.0 | 100.0 | | 39.4 | 38.4 | 31.9 | 32.0 |
| 609 | 359740 | 172116 | Roadside | 100.0 | 100.0 | | 30.2 | 30.4 | 25.2 | 24.9 |
| 610 | 359967 | 171548 | Roadside | 100.0 | 100.0 | | 32.3 | 32.4 | 25.6 | 25.3 |
| 611 | 357425 | 170769 | Roadside | 100.0 | 100.0 | | 19.5 | 20.1 | 16.5 | 15.3 |
| 612 | 359206 | 173557 | Roadside | 100.0 | 100.0 | | 29.9 | 30.9 | 25.1 | 23.6 |
| 613 | 359316 | 173554 | Kerbside | 75.0 | 75.0 | | 40.6 | 42.0 | 33.3 | 32.0 |
| 614 | 359516 | 173374 | Roadside | 90.6 | 90.6 | | 28.4 | 29.4 | 24.7 | 23.4 |
| 615 | 359659 | 173688 | Kerbside | 100.0 | 100.0 | | 53.0 | 49.4 | 38.4 | 37.1 |
| 616 | 359747 | 173717 | Kerbside | 90.6 | 90.6 | | 44.0 | 42.5 | 33.5 | 29.5 |
| 617 | 359686 | 173587 | Kerbside | 41.5 | 41.5 | | 28.4 | 25.3 | 22.4 | 27.9 |
| 618 | 359086 | 174187 | Roadside | 100.0 | 100.0 | | 33.8 | 31.5 | 30.8 | 30.9 |
| 619 | 359119 | 174149 | Roadside | 100.0 | 100.0 | | 34.7 | 38.2 | 35.2 | 32.1 |
| 621 | 359256 | 175999 | Roadside | 60.4 | 60.4 | | 24.9 | 25.4 | 26.5 | 26.0 |
| 622 | 358059 | 170597 | Roadside | 100.0 | 100.0 | | 33.7 | 34.3 | 29.7 | 27.5 |
| 623 | 358034 | 170602 | Roadside | 84.9 | 84.9 | | 30.6 | 28.4 | 25.6 | 23.3 |
| 624 | 357858 | 170499 | Roadside | 100.0 | 100.0 | | 49.7 | 48.4 | 37.6 | 39.9 |
| 625 | 357842 | 170514 | Roadside | 100.0 | 100.0 | | 45.4 | 44.7 | 37.6 | 32.9 |

| 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 |
|---------------------------|-------------------------|--------------------------|-----------|---|--|------|-------------|-------------|-------------|-------------|
| 626 | 357667 | 170466 | Roadside | 64.2 | 64.2 | | 43.0 | 43.3 | 38.7 | 33.4 |
| 627 | 357829 | 170658 | Roadside | 83.0 | 83.0 | | 34.0 | 33.3 | 27.9 | 29.2 |
| 628 | 359899 | 174335 | Roadside | 100.0 | 100.0 | | 35.9 | 33.2 | 29.5 | 28.6 |
| 629 | 359956 | 174314 | Roadside | 92.5 | 92.5 | | 38.9 | 34.8 | 34.6 | 26.7 |
| 630 | 357533 | 170410 | Roadside | 75.0 | 75.0 | | 30.3 | 35.5 | 26.7 | 24.3 |
| 632 | 358073 | 171063 | Roadside | 100.0 | 100.0 | | 23.4 | 24.6 | 22.6 | 22.1 |
| 633 | 358217 | 171299 | Roadside | 90.6 | 90.6 | | 36.5 | 34.6 | 31.4 | 33.2 |
| 634 | 358772 | 171741 | Roadside | 90.6 | 90.6 | | 34.6 | 30.1 | 28.1 | 26.1 |
| 635 | 359106 | 171962 | Kerbside | 100.0 | 100.0 | | 25.3 | 23.8 | 19.9 | 16.5 |
| 636 | 359940 | 171838 | Roadside | 92.5 | 92.5 | | 26.2 | 25.5 | 22.1 | 21.0 |
| 637 | 361206 | 171390 | Roadside | 100.0 | 100.0 | | 21.7 | 24.2 | 17.1 | 16.9 |
| 638 | 359498 | 173144 | Roadside | 100.0 | 100.0 | | 43.8 | 42.4 | 44.8 | 41.6 |
| 639 | 359318 | 172634 | Roadside | 100.0 | 100.0 | | 27.0 | 29.5 | 29.6 | 25.8 |
| 640 | 359792 | 173319 | Roadside | 90.6 | 90.6 | | 28.1 | 27.1 | 23.6 | 22.3 |
| 641 | 359114 | 174007 | Roadside | 90.6 | 90.6 | | 39.7 | 38.1 | 36.8 | 34.7 |
| 642 | 359276 | 174155 | Roadside | 100.0 | 100.0 | | 28.9 | 24.6 | 24.9 | 22.7 |
| 643 | 359817 | 174401 | Kerbside | 100.0 | 100.0 | | 39.7 | 35.6 | 28.8 | 25.4 |
| 644 | 359676 | 175102 | Roadside | 100.0 | 100.0 | | 31.8 | 31.7 | 28.2 | 25.1 |
| 645 | 359033 | 175259 | Kerbside | 90.6 | 90.6 | | 30.3 | 28.9 | 28.3 | 27.3 |
| 646 | 359038 | 174391 | Kerbside | 100.0 | 100.0 | | 31.7 | 31.7 | 31.9 | 30.3 |
| 647 | 357124 | 172400 | Roadside | 100.0 | 100.0 | | 34.3 | 30.9 | 22.9 | 23.0 |
| 648 | 360905 | 170185 | Roadside | 100.0 | 100.0 | | 29.0 | 29.2 | 25.3 | 25.8 |
| 649 | 362089 | 170606 | Roadside | 100.0 | 100.0 | | 30.1 | 30.0 | 27.1 | 24.7 |
| 650 | 360818 | 170448 | Roadside | 92.5 | 92.5 | | 22.8 | 21.6 | 19.3 | 19.6 |
| 651 | 360938 | 173376 | Roadside | 83.0 | 83.0 | | 35.2 | 33.9 | 26.6 | 28.6 |
| 652 | 361119 | 173796 | Roadside | 90.6 | 90.6 | | 41.5 | 37.0 | 33.3 | 30.4 |
| 653 | 360515 | 174134 | Roadside | 100.0 | 100.0 | | 26.0 | 30.9 | 33.5 | 26.2 |
| 654 | 360207 | 174403 | Roadside | 100.0 | 100.0 | | 22.9 | 24.0 | 20.0 | 18.9 |
| 655 | 361355 | 175203 | Roadside | 100.0 | 100.0 | | 29.2 | 28.6 | 26.9 | 26.6 |
| 656 | 361141 | 175446 | Kerbside | 100.0 | 100.0 | | 28.8 | 27.3 | 23.3 | 21.0 |
| 657 | 361676 | 175127 | Roadside | 84.9 | 84.9 | | 29.2 | 33.5 | 24.9 | 23.9 |
| 658 | 363325 | 175803 | Roadside | 100.0 | 100.0 | | 23.6 | 24.1 | 22.9 | 20.2 |
| 659 | 359773 | 176702 | Kerbside | 90.6 | 90.6 | | 26.5 | 25.1 | 22.3 | 23.8 |
| 660 | 360896 | 175312 | Kerbside | 100.0 | 100.0 | | 32.1 | 32.4 | 28.1 | 27.7 |
| 661 | 358022 | 175630 | Kerbside | 84.9 | 84.9 | | 23.3 | 22.0 | 20.2 | 18.3 |
| 662 | 357868 | 175723 | Roadside | 100.0 | 100.0 | | 21.2 | 20.7 | 19.1 | 16.5 |
| 663 | 357396 | 174761 | Roadside | 92.5 | 92.5 | | 24.7 | 25.9 | 22.4 | 20.8 |
| 664 | 357347 | 174992 | Kerbside | 100.0 | 100.0 | | 25.5 | 24.8 | 19.7 | 21.3 |
| 665 | 358675 | 173405 | Roadside | 83.0 | 83.0 | | 37.6 | 37.1 | 31.6 | 23.5 |
| 666 | 358646 | 173426 | Roadside | 67.9 | 67.9 | | 32.8 | 31.3 | 25.4 | 22.4 |
| 667 | 358531 | 172803 | Kerbside | 100.0 | 100.0 | | 43.6 | 45.3 | 42.0 | 41.0 |
| 669 | 359511 | 172754 | Roadside | 100.0 | 100.0 | | 28.6 | 33.2 | 29.7 | 22.0 |
| 670 | 361749 | 170690 | Roadside | 100.0 | 100.0 | | 39.9 | 38.8 | 32.8 | 33.1 |
| 671 | 357381 | 175781 | Kerbside | 83.0 | 83.0 | | 26.1 | 23.5 | 21.3 | 20.8 |
| 673_1, 673_2, 673_3 | 358728 | 173520 | Roadside | 92.5 | 92.5 | | 36.1 | 33.5 | 26.1 | 24.2 |
| 674 | 363157 | 173215 | Roadside | 100.0 | 100.0 | | | 15.2 | 14.2 | 13.4 |
| 675 | 361615 | 172728 | Roadside | 100.0 | 100.0 | | | 26.4 | 23.7 | 23.0 |

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|------|------|------|------|-------------|
| 676 | 361734 | 173291 | Roadside | 100.0 | 100.0 | | | 19.8 | 19.0 | 16.1 |
| 677 | 362105 | 173350 | Kerbside | 92.5 | 92.5 | | | 21.4 | 17.6 | 15.2 |
| 678 | 361279 | 173283 | Roadside | 90.6 | 90.6 | | | 17.7 | 15.6 | 14.0 |
| 679 | 361134 | 173034 | Kerbside | 83.0 | 83.0 | | | 21.0 | 20.3 | 21.4 |
| 680 | 360973 | 173193 | Roadside | 90.6 | 90.6 | | | 20.8 | 19.9 | 18.5 |
| 681 | 360985 | 173541 | Roadside | 92.5 | 92.5 | | | 24.8 | 22.4 | 21.7 |
| 682 | 361359 | 173460 | Kerbside | 83.0 | 83.0 | | | 26.7 | 22.9 | 23.5 |
| 683 | 361451 | 173617 | Roadside | 100.0 | 100.0 | | | 18.6 | 17.2 | 13.5 |
| 684 | 361597 | 173622 | Kerbside | 100.0 | 100.0 | | | 20.1 | 17.0 | 15.3 |
| 698 | 354633 | 176588 | Roadside | 90.6 | 90.6 | | | | 19.9 | 21.7 |
| 699 | 355122 | 175764 | Roadside | 100.0 | 100.0 | | | | 18.8 | 16.7 |
| 700 | 356336 | 173464 | Kerbside | 100.0 | 100.0 | | | | 25.8 | 20.2 |
| 701 | 357448 | 174634 | Kerbside | 90.6 | 90.6 | | | | | 22.7 |
| 702 | 359833 | 173376 | Roadside | 49.1 | 49.1 | | | | | 19.6 |
| 703 | 359829 | 174376 | Roadside | 100.0 | 100.0 | | | | | 26.9 |
| 704 | 357724 | 170651 | Roadside | 83.0 | 83.0 | | | | | 25.9 |
| 705 | 359506 | 173139 | Kerbside | 100.0 | 67.9 | | | | | 48.1 |
| 706 | 362449 | 174228 | Kerbside | 100.0 | 43.4 | | | | | 15.7 |
| 707 | 363424 | 174168 | Kerbside | 100.0 | 43.4 | | | | | 13.5 |
| 708 | 362882 | 173755 | Kerbside | 100.0 | 43.4 | | | | | 16.8 |
| 709 | 363234 | 173422 | Kerbside | 100.0 | 43.4 | | | | | 11.2 |
| 710 | 363548 | 172933 | Kerbside | 100.0 | 43.4 | | | | | 18.6 |
| 711 | 360877 | 172939 | Kerbside | 100.0 | 43.4 | | | | | 21.1 |

Table A.4 in Appendix A compare the ratified and adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40µg/m³. 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.

Table A.5 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past five years with the air quality objective of 200µg/m³, not to be exceeded more than 18 times per year.

Data capture rates at all of the 8 automatic NO₂ monitoring sites were above the required 85% rate. The lowest capture rate of 94.4% was recorded at the Colston Avenue site.

The continuous monitoring data in 2024 shows a reduction in NO₂ pollution levels at 6 sites and an increase at 2 sites when compared to 2023 data. Colston Avenue recorded

an average annual NO₂ concentration of 48.7 µg/m³ in 2024, an increase of 0.7 µg/m³ from 2023. Marlborough Street recorded an average annual NO₂ concentration of 24.4 µg/m³, an increase of 1.4 µg/m³ from 2023. The sites that saw increases in 2024 were the automatic sites with the two highest recorded annual averages in 2024. In March 2024, works started to make [improvements to walking and cycling infrastructure in the Park Row](#) area and these works continued into 2025. Whilst in place, these works caused disruption to traffic flows in the area and it is possible that these changes had some impact on vehicle flows and air pollution levels at both the Marlborough Street and Colston Avenue sites. Monitoring will continue at these locations to keep track of the pollution trends.

All automatic monitoring sites, with the exception of Colston Avenue, recorded annual NO₂ concentrations below air quality objectives. None of the automatic sites recorded hourly values greater than the 200 µg/m³ hourly objective in 2024.

Figure 3.1 and Figure 3.2 show nitrogen dioxide diffusion tube monitoring locations in Bristol. The data has been annualised but not distance adjusted in these maps. Those sites shown in red (squares) or purple (triangles) indicate locations where exceedance of the annual objective was measured in 2024. In 2024, 5 diffusion tube monitoring sites exceeded the annual objective, one fewer than 2023. All 5 of these sites are located within the AQMA and are discussed in more detail in Appendix D.

2024 monitoring data shows that NO₂ concentrations have continued to fall when compared to 2023. There were 191 diffusion tube monitoring locations across Bristol where NO₂ concentrations were measured in 2023 and 2024. At these locations, on average, NO₂ concentrations fell by 4.7%. Three locations that were above the annual objective for NO₂ in 2023 became compliant in 2024, these were Site 3 (Blackboy Hill), Site 12 (The Galleries) and Site 239 (Parsons Street, A38). Sites 3 and 12 were impacted by non-road emission sources in 2023, however, the exceedance at Site 239 is related to vehicle emissions with concentrations at Site 239 falling from 40.5µg/m³ in 2023 to 38.1µg/m³ in 2024. Two locations that were above the annual objective for NO₂ in 2023 saw a fall in NO₂ concentrations in 2024 when compared to 2023 but still do not meet the objective in 2024. Site 667(College Green/Anchor Road) fell by 1.0µg/m³ to 41.0µg/m³ and Site 638 (Old Market Roundabout) fell by 3.2µg/m³ to 41.6µg/m³ in 2024.

Despite there being an on average fall in NO₂ concentrations across all sites in 2024, NO₂ concentrations increase at 44 of the 191 locations. Of these 44 locations, 12 showed increases of less than 1µg/m³. All but 2 of the sites that saw increases were below the UK objective of 40µg/m³ for nitrogen dioxide. Site 502 (Colston Avenue) and Site 582 (Rupert

Street by the Fire Station) saw increases of $1.9\mu\text{g}/\text{m}^3$ and $6.2\mu\text{g}/\text{m}^3$ respectively. Colston Avenue did not meet the objective in 2023 or 2024, however, Site 582 was compliant in 2023 with the worsening of NO_2 in 2024 taking the 2024 annual average at this site to $45.4\mu\text{g}/\text{m}^3$ from $39.2\mu\text{g}/\text{m}^3$ in 2023.

All our air pollution monitoring data is available on the Bristol City Council [open data portal](#).

All exceedances of the annual air quality objective are within a central area of Bristol in 2024. In previous years, there have been measured exceedances in locations on main arterial routes, out towards the periphery of the AQMA and at some limited locations outside of the AQMA. Local Air Quality Management Guidance Document TG22 requires local authorities to review their air quality management areas to determine whether amendment or revocation of an AQMA is required. The guidance states that changes should only be made after three years of data demonstrate compliance and these years should be 'typical' years, i.e. not impacted by anomalous years if data, for example, when Covid travel restrictions were in place. Air quality data for 2020, and to a lesser extent 2021, was impacted by Covid travel restrictions. Data for 2022, 2023 and 2024, can be considered not to have been impacted by Covid travel restrictions and so 3 years of 'typical' data is now available. In 2025/6 BCC will consider the most recent years of air quality data to determine whether amendments to the AQMA boundary need to be made.

Figure 3.1 - Nitrogen Dioxide Monitoring Locations and Results 2024 – Central Area

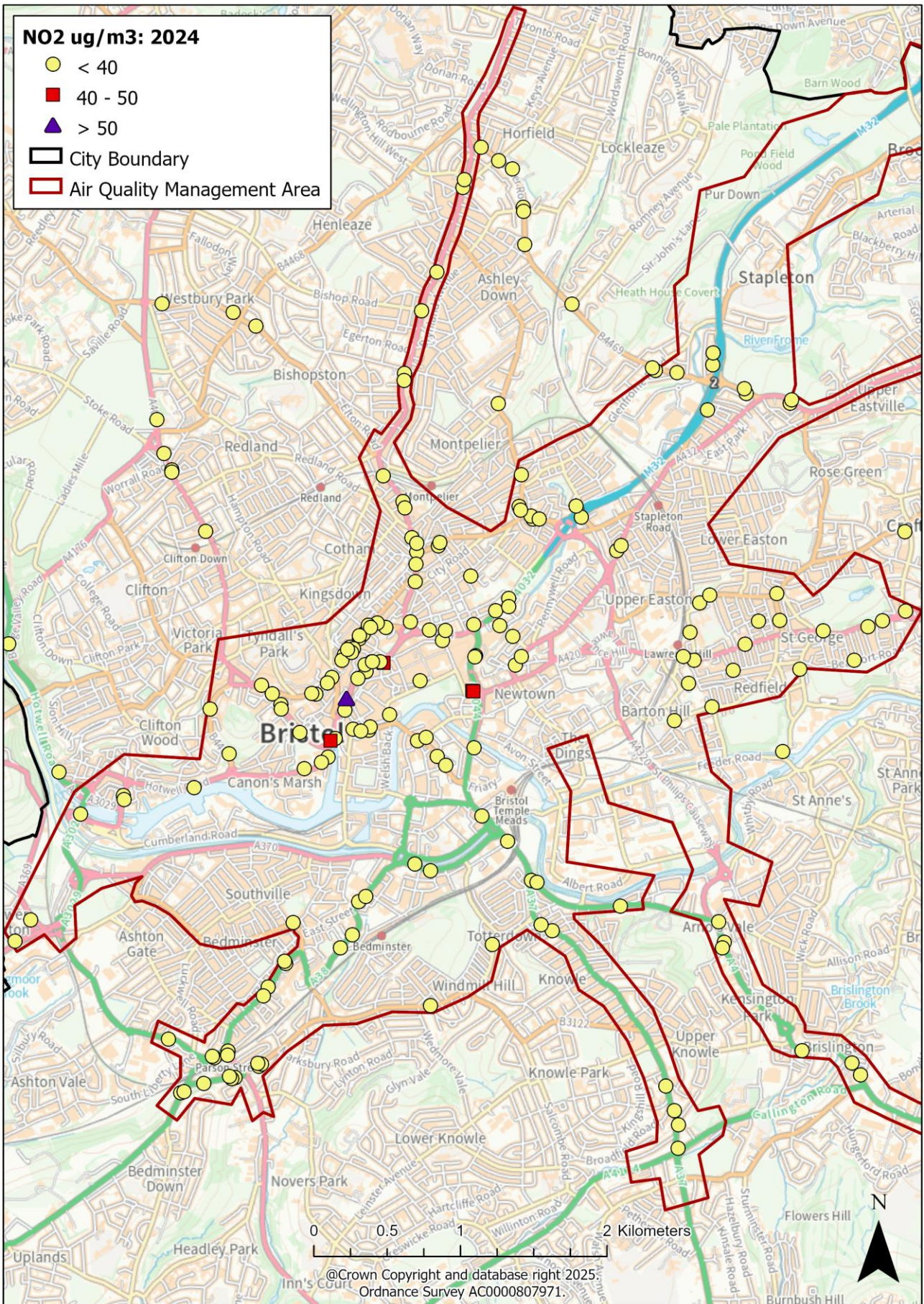
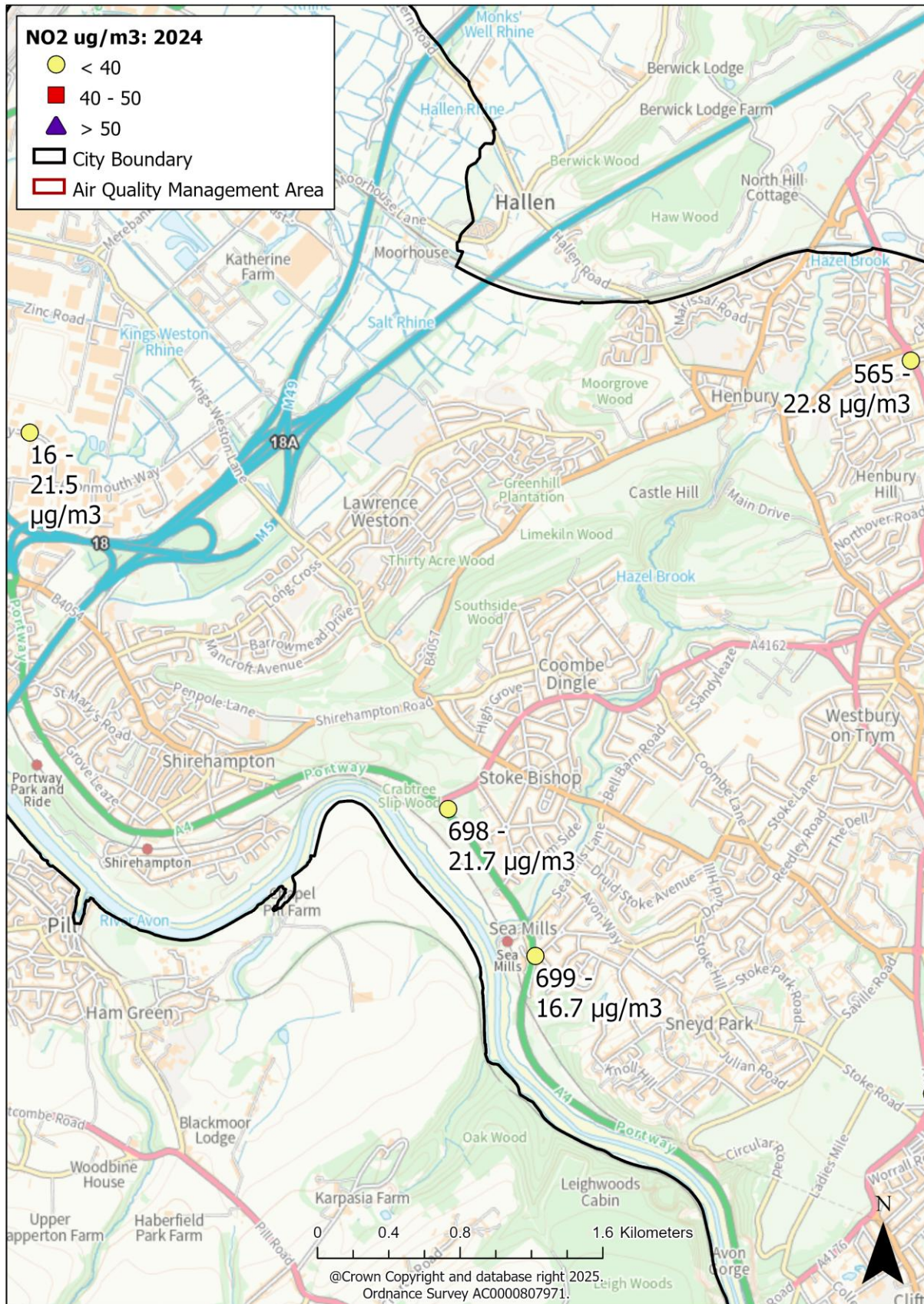


Figure 3.2 - Nitrogen Dioxide Monitoring Locations and Results 2024 – Avonmouth



3.2.2 Particulate Matter (PM₁₀)

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted PM₁₀ annual mean concentrations for the past five years with the air quality objective of 40µg/m³.

Table A.7 in Appendix A compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past five years with the air quality objective of 50µg/m³, not to be exceeded more than 35 times per year.

PM₁₀ was monitored at two locations in 2024, one urban background site and one roadside site. There are no exceedances of the annual mean or 24-hour mean objectives at either of the monitoring sites. The PM₁₀ monitor at Colston Avenue failed in July 2021 and it was not possible to fix and reinstate the data collection from this location.

Data for 2024 at the St Pauls urban background site shows a 0.8µg/m³ decrease in annual concentrations compared to 2023, resulting in a mean annual concentration of 15.0µg/m³. In 2024 there were no 24-hour periods averaging above 50µg/m³; this compares to two in 2020, 2021 and 2022, and one in 2023.

Data for 2024 from the roadside Temple Way site shows an annual PM₁₀ concentration of 16.2µg/m³. As would be expected, the measured PM₁₀ concentration is higher at this roadside site than the St Pauls urban background site. The data from Temple Way shows a decrease of 1.3µg/m³ in 2024 when compared to 2023. There were no days when the 24-hour average at Temple Way was above 50 µg/m³ in 2024. This compares to four in 2020 and 2022, three in 2021, and two in 2023. The number of days exceeding the 24-hour average of 50µg/m³ at all sites for the past 5 years have been below the 35 days per year which are allowed to exceed this average value before breach of the air quality objective occurs.

Although no exceedances are reported from the monitoring data it is proposed that the AQMA declaration for PM₁₀ is retained as a precautionary measure given the limited number of locations at which PM₁₀ is measured in the city. Agreement has been reached with Defra to review this in 2026. BCC is planning to install a PM_{2.5} monitor in a location that coincides with a relatively high prevalence of solid fuel use in the city to understand how this source impacts on PM, including PM₁₀, in this location.

3.2.3 Particulate Matter (PM_{2.5})

Table A.8 in Appendix A presents the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past five years.

PM_{2.5} is measured at the Bristol St Pauls AURN and the BCC operated Parson Street School sites. The annual average for this pollutant in 2024 was 7.1µg/m³ at St Pauls and 8.4µg/m³ at Parson Street School. For the urban background St Pauls site this is a decrease of 1.1µg/m³ when compared to the 2023 annual average of 8.2µg/m³. The roadside Parson Street School site recorded higher PM_{2.5} concentrations than the urban background site, which is to be expected. In 2024 Parson Street saw a decrease of 0.7µg/m³ when compared to 2023. Both sites are above the WHO air quality annual guideline value of 5µg/m³ for this pollutant but both sites are below the UK 2040 PM_{2.5} target of 10µg/m³.

PM_{2.5} monitoring capabilities were added to the AURN Temple Way site in October 2024. This data will be reported on in the 2026 ASR.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

| Site ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In AQMA? | Which AQMA? ⁽¹⁾ | Monitoring Technique | Distance to Relevant Exposure (m) ⁽²⁾ | Distance to kerb of nearest road (m) ⁽¹⁾ | Inlet Height (m) |
|---------|----------------------|------------------|-------------------------|--------------------------|--------------------------|----------|----------------------------|---|--|---|------------------|
| 203 | Brislington Depot | Urban background | 361178 | 171566 | NOX NO2 NO | Yes | Bristol AQMA | Chemiluminescence | N/A | 18 | 3.5 |
| 215 | Parson Street School | Roadside | 358042 | 170582 | NOX NO2 NO PM2.5 | Yes | Bristol AQMA | Chemiluminescence (NOx) and Beta Attenuation (PM) | 0 | 4 | 1.5 |
| 270 | Wells Road | Roadside | 360903 | 170024 | NOX NO2 NO | Yes | Bristol AQMA | Chemiluminescence | 9 | 1 | 1.5 |
| 452 | AURN St Pauls | Urban background | 359488 | 173924 | NOX NO2 NO PM2.5 PM10 O3 | Yes | Bristol AQMA | Chemiluminescence (NOx) and Beta Attenuation (PM) | N/A | N/A | 4 |
| 463 | Fishponds Road | Roadside | 362926 | 175590 | NOX NO2 NO | Yes | Bristol AQMA | Chemiluminescence | 0 | 3 | 1.5 |
| 500 | AURN Temple Way | Roadside | 359522 | 173381 | NOX NO2 NO PM10 PM2.5 | Yes | Bristol AQMA | Chemiluminescence (NOx) and Optical Light Scattering (changed from Beta Attenuation in October 2024) (PM) | 0 | 5 | 1.5 |
| 501 | Colston Avenue | Roadside | 358640 | 173090 | NOX NO2 NO | Yes | Bristol AQMA | Chemiluminescence | 3 | 2 | 1.5 |
| 672 | Marlborough Street | Roadside | 358728 | 173520 | NOX NO2 NO | Yes | Bristol AQMA | Chemiluminescence | 0 | 3 | 1.5 |

Notes:

(1) N/A if not applicable

(2) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

Table A.2 – Details of Non-Automatic Monitoring Sites

| Diffusion Tube ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In AQMA? Which AQMA? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to Kerb of Nearest Road (m) ⁽²⁾ | Tube Co-located with a Continuous Analyser? | Tube Height (m) |
|-------------------|------------------------------------|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 2 | Colston Avenue | Roadside | 358628 | 173011 | NO2 | Yes | 0.0 | 1.0 | No | 2.1 |
| 3 | Blackboy Hill | Roadside | 357448 | 174650 | NO2 | No | 0.0 | 3.0 | No | 2.8 |
| 4 | Three Lamps | Roadside | 359903 | 171850 | NO2 | Yes | 0.0 | 3.0 | No | 3.2 |
| 5 | Bedminster Parade | Roadside | 358723 | 171704 | NO2 | Yes | 0.0 | 1.0 | No | 3.2 |
| 9 | B.R.I. | Roadside | 358729 | 173499 | NO2 | Yes | 0.0 | 1.0 | No | 2.4 |
| 10 | Bath Road | Roadside | 361217 | 171429 | NO2 | Yes | 5.0 | 4.0 | No | 3.2 |
| 11 | Whitefriars | Roadside | 358813 | 173342 | NO2 | Yes | 0.0 | 5.0 | No | 3.2 |
| 12 | Galleries | Roadside | 359142 | 173211 | NO2 | Yes | 0.0 | 1.0 | No | 2.4 |
| 14 | Red Lion Knowle | Roadside | 360877 | 170280 | NO2 | Yes | 6.0 | 2.0 | No | 2.4 |
| 15 | Horsefair | Roadside | 359294 | 173485 | NO2 | Yes | 0.0 | 2.0 | No | 2.2 |
| 16 | Third Way | Roadside | 352287 | 178698 | NO2 | No | 0.0 | 2.0 | No | 2.7 |
| 21 | Gloucester Road | Roadside | 359035 | 175306 | NO2 | Yes | 3.0 | 2.0 | No | 1.7 |
| 22 | Stokes Croft | Roadside | 359109 | 173886 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 113 | Victoria Street | Roadside | 359258 | 172696 | NO2 | Yes | 2.0 | 3.0 | No | 2.8 |
| 125 | York Road | Roadside | 359214 | 171917 | NO2 | Yes | 3.0 | 2.0 | No | 1.8 |
| 147 | Anchor Road | Roadside | 358514 | 172691 | NO2 | Yes | 0.0 | 1.0 | No | 2.2 |
| 154 | Hotwells Road | Roadside | 357601 | 172483 | NO2 | Yes | 0.0 | 1.0 | No | 2.4 |
| 155 | Jacobs Wells Road South | Roadside | 357838 | 172713 | NO2 | Yes | 0.0 | 2.0 | No | 3.2 |
| 156 | Jacobs Wells road opp Clifton hill | Roadside | 357709 | 173018 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 157 | Stokes Croft Ashley Road | Roadside | 359119 | 174090 | NO2 | Yes | 0.0 | 2.0 | No | 2.4 |
| 159 | Cromwell Road | Roadside | 358891 | 174608 | NO2 | Yes | 0.0 | 2.0 | No | 2.7 |
| 161 | Bishop Road | Roadside | 359152 | 175733 | NO2 | Yes | 4.0 | 2.0 | No | 2.2 |
| 163 | Strathmore Road | Roadside | 359435 | 176574 | NO2 | Yes | 7.0 | 3.0 | No | 2.5 |
| 175 | top of Brislington Hill | Roadside | 362147 | 170525 | NO2 | Yes | 13.0 | 2.0 | No | 3.2 |
| 239 | Parson St. A38 East | Kerbside | 357880 | 170506 | NO2 | Yes | 8.3 | 0.7 | No | 3.2 |
| 242 | Parson Street Bedminster Down Road | Kerbside | 357510 | 170401 | NO2 | Yes | 5.0 | 0.5 | No | 3.2 |

| 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) |
|---------------------|---|------------------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 254 | Merchants Road Hotwells | Kerbside | 357118 | 172429 | NO2 | Yes | 3.7 | 0.8 | No | 2.6 |
| 260 | Stapleton Road South | Roadside | 361140 | 175366 | NO2 | Yes | 1.5 | 3.5 | No | 2.4 |
| 261 | Stapleton Road Heath Street | Roadside | 361103 | 175059 | NO2 | Yes | 5.0 | 3.0 | No | 2.1 |
| 295 | Lamppost 16 Ashley Road St. Pauls | Roadside | 359913 | 174315 | NO2 | Yes | 0.0 | 2.0 | No | 2.8 |
| 300 | Facade Haart Estate Agents 755 Fishponds Road Fishponds | Roadside | 363365 | 175883 | NO2 | Yes | 2.0 | 1.0 | No | 2.4 |
| 303 | Facade 784 Muller Road Fishponds | Roadside | 361368 | 175170 | NO2 | Yes | 0.0 | 6.0 | No | 2.2 |
| 307 | Lamppost Glenfrome Road \ Muller Road Horfield | Roadside | 360747 | 175328 | NO2 | Yes | 3.0 | 2.0 | No | 2.2 |
| 312 | Lamppost Ashley Hill St. Pauls | Roadside | 359832 | 174616 | NO2 | Yes | 4.0 | 2.0 | No | 2.7 |
| 320_1, 320_2, 320_3 | Monitor Bath Road Brislington | Urban background | 361180 | 171567 | NO2 | Yes | 0.0 | 18.0 | Yes | 6.0 |
| 325 | Facade 258 Fishponds Road Fishponds | Roadside | 361667 | 175103 | NO2 | Yes | 0.0 | 8.0 | No | 2.4 |
| 363 | 5102 façade | Roadside | 359075 | 173613 | NO2 | Yes | 0.0 | 3.0 | No | 2.7 |
| 370 | Great George Street lamppost | Roadside | 359775 | 173513 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 373 | 123 Newfoundland Street façade | Roadside | 359747 | 173774 | NO2 | Yes | 0.0 | 17.0 | No | 2.1 |
| 374 | St. Paul Street | Roadside | 359509 | 173595 | NO2 | Yes | 0.0 | 8.0 | No | 2.3 |
| 403 | Lamp post 48 230 Bath Road | Roadside | 360508 | 171676 | NO2 | Yes | 0.0 | 2.0 | No | 2.8 |
| 405 | Whitehall Rd/Easton Rd lamppost 4TZ | Roadside | 361051 | 173743 | NO2 | Yes | 1.0 | 1.0 | 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) |
|---------------------------|---|------------------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 406 | Whitehall Rd lamppost 17 nr junction with Chalks Rd | Roadside | 361576 | 173806 | NO2 | Yes | 0.0 | 2.0 | No | 2.3 |
| 413 | Wells Rd bus lane sign just below junction with Knowle Rd | Roadside | 360043 | 171508 | NO2 | Yes | 4.0 | 3.0 | No | 3.2 |
| 417 | St John's Lane No 26 lamppost 15 (just past roundabout) | Roadside | 359635 | 171413 | NO2 | Yes | 0.0 | 1.0 | No | 3.2 |
| 418 | Bedminster Down Rd lamppost between Ashton Motors & Plough PH | Roadside | 357737 | 170642 | NO2 | Yes | 0.0 | 2.0 | No | 2.8 |
| 419 | Parson St lamppost outside Bristol Scuba | Kerbside | 357832 | 170686 | NO2 | Yes | 4.0 | 0.5 | No | 2.8 |
| 420 | North St/Dean Lane on roundabout sign | Roadside | 358277 | 171562 | NO2 | Yes | 1.0 | 1.0 | No | 2.8 |
| 423 | facade BRI children's | Roadside | 358623 | 173386 | NO2 | Yes | 0.0 | 13.0 | No | 2.0 |
| 429 | facade villiers road stapleton road junction | Roadside | 360484 | 174097 | NO2 | Yes | 0.0 | 6.0 | No | 2.6 |
| 436 | Shiners Garage | Roadside | 361013 | 173352 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 438_1, 438_2, 438_3 | A37 Junction w/ Airport Road | Kerbside | 360903 | 170024 | NO2 | Yes | 9.0 | 1.0 | Yes | 2.4 |
| 439_1, 439_2, 439_3 | Parson Street School | Roadside | 358042 | 170582 | NO2 | Yes | 0.0 | 4.0 | Yes | 1.5 |
| 455_1, 455_2, 455_3 | St. Pauls Day Nursery | Urban background | 359487 | 173924 | NO2 | Yes | 0.0 | 4.0 | Yes | 2.8 |
| 464_1, 464_2, 464_3 | Fishponds Road | Roadside | 362927 | 175592 | NO2 | Yes | 0.0 | 3.0 | Yes | 3.0 |

| 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) |
|---------------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 470 | Victoria Park Primary | Roadside | 359213 | 170997 | NO2 | Yes | 10.0 | 3.0 | No | 3.2 |
| 472 | Jamiesons Autos | Roadside | 358226 | 171284 | NO2 | Yes | 0.0 | 4.0 | No | 2.4 |
| 473 | B&G Snax West St | Roadside | 358105 | 171124 | NO2 | Yes | 0.0 | 2.0 | No | 2.8 |
| 487 | Junction 3 Millpond Street | Roadside | 360243 | 174327 | NO2 | Yes | 4.0 | 5.0 | No | 2.0 |
| 492 | On 1 way sign at bottom of Wellington Hill | Roadside | 359445 | 176627 | NO2 | Yes | 10.0 | 3.0 | No | 2.5 |
| 493 | No 67 Filton Avenue on wall facing Muller Rd | Roadside | 359677 | 176758 | NO2 | No | 0.0 | 2.0 | No | 2.3 |
| 494 | Muller Road - Adjacent to Darnley Avenue | Kerbside | 359558 | 176850 | NO2 | No | 5.5 | 0.5 | No | 2.1 |
| 496 | 385 Church Road Redfield | Roadside | 362296 | 173620 | NO2 | Yes | 0.0 | 3.0 | No | 2.3 |
| 497 | 20 Ashley Road | Roadside | 359268 | 174132 | NO2 | Yes | 4.0 | 1.0 | No | 2.3 |
| 499_1, 499_2, 499_3 | Temple Way Nox site | Roadside | 359522 | 173381 | NO2 | Yes | 0.0 | 5.0 | Yes | 1.5 |
| 502_1, 502_2, 502_3 | Co-located Colston Ave | Roadside | 358640 | 173090 | NO2 | Yes | 3.0 | 2.0 | Yes | 1.5 |
| 512 | Montpelier High School | Roadside | 359026 | 174432 | NO2 | Yes | 2.0 | 3.0 | No | 2.0 |
| 525 | Summer hill a420 | Roadside | 362455 | 173687 | NO2 | Yes | 0.0 | 1.0 | No | 2.0 |
| 538 | Dalby avenue | Roadside | 358681 | 171478 | NO2 | Yes | 0.0 | 1.2 | No | 2.0 |
| 539 | Dalby avenue church lane | Roadside | 358599 | 171391 | NO2 | Yes | 2.0 | 2.0 | No | 2.0 |
| 545 | Ashton park school | Roadside | 356379 | 171436 | NO2 | Yes | 0.0 | 4.0 | No | 2.0 |
| 550 | Cathedral School | Roadside | 358353 | 172613 | NO2 | Yes | 0.0 | 9.0 | No | 2.0 |
| 555 | 420 Hotwell Road A4 | Roadside | 356679 | 172589 | NO2 | Yes | 2.0 | 3.0 | No | 2.0 |
| 556 | South Eastern stair access Plimsoll Bridge | Roadside | 356827 | 172303 | NO2 | Yes | 0.0 | 2.0 | No | 2.0 |
| 559 | Except local buses sign Blackmoors Lane | Roadside | 356485 | 171580 | NO2 | Yes | 8.0 | 2.0 | No | 2.0 |

| 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) |
|-------------------|---|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 560_1, 560_2 | Lamppost outside BRI CAZ | Roadside | 358665 | 173439 | NO2 | Yes | 2.0 | 2.5 | No | 2.0 |
| 561_1, 561_2 | Lamppost opposite BRI CAZ | Roadside | 358688 | 173431 | NO2 | Yes | 3.0 | 5.0 | No | 2.0 |
| 565 | A4018 Lamp post by layby before roundabout for Crow Ln/ Knole Ln | Roadside | 357227 | 179101 | NO2 | No | 0.0 | 1.0 | No | 2.0 |
| 567 | Muller road/ Glenfrome road junction north | Roadside | 360728 | 175345 | NO2 | No | 1.5 | 1.5 | No | 2.0 |
| 568 | Traffic light on the corner of Shaldon road | Kerbside | 360178 | 175779 | NO2 | No | 3.5 | 0.5 | No | 2.0 |
| 569 | Lamppost on North corner of Draycott road junction with Muller road | Roadside | 359855 | 176186 | NO2 | No | 2.0 | 2.5 | No | 2.0 |
| 570 | Muller road junction with Downend road lampost north of the junction | Kerbside | 359847 | 176439 | NO2 | No | 2.6 | 0.4 | No | 2.0 |
| 571 | Muller road junction with Downend road traffic light to the south of the junction | Roadside | 359848 | 176411 | NO2 | No | 5.5 | 1.0 | No | 2.0 |
| 574 | Whiteladies road, on loading sign next to Redland library | Roadside | 357678 | 174229 | NO2 | No | 0.0 | 3.0 | No | 2.0 |
| 575 | Baldwin Street traffic light outside domino's | Kerbside | 358685 | 172881 | NO2 | Yes | 4.9 | 0.1 | No | 2.0 |
| 576 | Baldwin Street lamp post by cycle way, opp St Stephens St | Roadside | 358792 | 172874 | NO2 | Yes | 5.0 | 1.0 | No | 2.0 |

| 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) |
|-------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 577 | High St lamp post outside Wards solicitors | Roadside | 358935 | 172981 | NO2 | Yes | 0.0 | 4.0 | No | 2.0 |
| 578 | Church Road-CAZ-Outside Gurdwara | Roadside | 361892 | 173552 | NO2 | Yes | 4.0 | 2.0 | No | 2.5 |
| 579 | Church Road-CAZ-Lamppost | Kerbside | 362198 | 173580 | NO2 | Yes | 1.9 | 0.1 | No | 2.5 |
| 580 | Marlborough St-CAZ-Lamppost opposite hosp | Roadside | 358754 | 173528 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 581 | Marlborough St-CAZ-Lamppost by coach station | Kerbside | 358908 | 173574 | NO2 | Yes | 0.0 | 0.1 | No | 2.5 |
| 582 | Rupert St-CAZ-Post outside fire station | Roadside | 358893 | 173333 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 583 | Rupert St-CAZ-Post outside police station | Roadside | 358870 | 173340 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 584 | Rupert St-CAZ-Post outside Fusion Tower | Roadside | 358773 | 173276 | NO2 | Yes | 13.0 | 3.0 | No | 2.5 |
| 585 | Park St-CAZ-Lamppost by Guild | Roadside | 358192 | 173050 | NO2 | Yes | 5.0 | 2.0 | No | 2.5 |
| 586 | Park St-CAZ-Lamppost by Agora | Kerbside | 358195 | 173018 | NO2 | Yes | 3.9 | 0.1 | No | 2.5 |
| 587 | Baldwin St-CAZ-Lamppost by Yelland House | Roadside | 358802 | 172896 | NO2 | Yes | 2.1 | 2.5 | No | 2.5 |
| 588 | Baldwin St-CAZ-Drainpipe on building | Roadside | 358739 | 172869 | NO2 | Yes | 0.0 | 6.4 | No | 2.5 |
| 589 | Marlborough St-CAZ-On sign leg | Roadside | 358849 | 173606 | NO2 | Yes | 6.0 | 1.0 | No | 2.5 |
| 590 | Marlborough St-CAZ-Post by bollards | Roadside | 358789 | 173589 | NO2 | Yes | 0.0 | 2.1 | No | 2.5 |
| 591 | Marlborough St-CAZ-Post | Roadside | 358805 | 173575 | NO2 | Yes | 0.0 | 0.4 | 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) |
|-------------------|---|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 592 | Upper Maudlin St-CAZ-Crossing by BRI | Kerbside | 358662 | 173409 | NO2 | Yes | 0.0 | 0.0 | No | 2.5 |
| 593 | Upper Maudlin St-CAZ-Post by BRI | Roadside | 358610 | 173350 | NO2 | Yes | 3.0 | 1.0 | No | 2.5 |
| 594 | Lower Park Row-CAZ-Post by Art shop | Roadside | 358540 | 173234 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 595 | Lower Park Row-CAZ-Post after OTR | Roadside | 358510 | 173197 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 596 | Park Row-CAZ-Lamppost by museum | Roadside | 358431 | 173120 | NO2 | Yes | 5.0 | 3.0 | No | 2.5 |
| 597 | Park Row-CAZ-Post by house | Roadside | 358403 | 173124 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 598 | Queens Road-CAZ-Lamppost by UoB | Roadside | 358061 | 173182 | NO2 | Yes | 0.0 | 2.4 | No | 2.5 |
| 599 | Park St-CAZ-Lamppost by bike stands | Roadside | 358135 | 173123 | NO2 | Yes | 4.0 | 2.0 | No | 2.5 |
| 600 | Park St-CAZ-Lamppost by City Hall | Roadside | 358322 | 172858 | NO2 | Yes | 11.0 | 5.0 | No | 2.5 |
| 601 | College Green-CAZ-Lamppost opp Denmark St | Roadside | 358563 | 172818 | NO2 | Yes | 0.0 | 2.6 | No | 2.5 |
| 602 | Anchor Road-CAZ-Lamppost | Roadside | 358469 | 172656 | NO2 | Yes | 0.3 | 2.0 | No | 2.5 |
| 603 | Lewins Mead-CAZ-Post by Evans Cycles | Roadside | 358767 | 173320 | NO2 | Yes | 16.2 | 1.5 | No | 2.5 |
| 604 | Lewins Mead-CAZ-Post by PMT | Roadside | 358817 | 173342 | NO2 | Yes | 2.0 | 1.0 | No | 2.5 |
| 605 | Rupert St-CAZ-Post by Courtrooms | Roadside | 358718 | 173227 | NO2 | Yes | 6.0 | 6.0 | No | 2.5 |
| 606 | Victoria Street-CAZ-No entry sign | Roadside | 359124 | 172803 | NO2 | Yes | 11.6 | 1.0 | No | 2.5 |
| 607 | Counterslip-CAZ-Drainpipe on building | Roadside | 359183 | 172826 | NO2 | Yes | 2.5 | 1.1 | 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) |
|-------------------|---|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 608 | Temple Gate-CAZ-Lamppost | Kerbside | 359563 | 172290 | NO2 | Yes | 2.6 | 0.4 | No | 2.5 |
| 609 | Bath Road-CAZ-Lamppost or sign | Roadside | 359740 | 172116 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 610 | Wells Road-CAZ-Lamppost | Roadside | 359967 | 171548 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 611 | Winterstoke Road-CAZ-Lamppost | Roadside | 357425 | 170769 | NO2 | Yes | 0.0 | 1.0 | No | 2.5 |
| 612 | Newfoundland St-CAZ-Lamppost by layby | Roadside | 359206 | 173557 | NO2 | Yes | 16.0 | 4.0 | No | 2.5 |
| 613 | Newfoundland St-CAZ-Lamppost by crossing | Kerbside | 359316 | 173554 | NO2 | Yes | 7.9 | 0.1 | No | 2.5 |
| 614 | Temple Way-CAZ-Sign by Champ Square | Roadside | 359516 | 173374 | NO2 | Yes | 9.0 | 1.0 | No | 2.5 |
| 615 | Newfoundland Way-CAZ-Lamppost by petrol station | Kerbside | 359659 | 173688 | NO2 | Yes | 7.2 | 0.8 | No | 2.5 |
| 616 | Newfoundland Way-CAZ-Road sign | Kerbside | 359747 | 173717 | NO2 | Yes | 0.0 | 0.7 | No | 2.5 |
| 617 | Houlton St-CAZ-30mph sign | Kerbside | 359686 | 173587 | NO2 | Yes | 0.0 | 0.5 | No | 2.5 |
| 618 | Cheltenham Rd-CAZ-Sign opp Tesco | Roadside | 359086 | 174187 | NO2 | Yes | 4.7 | 3.0 | No | 2.5 |
| 619 | Cheltenham Rd-CAZ-Lamppost by Bite | Roadside | 359119 | 174149 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 621 | Gloucester Rd-CAZ-Lamppost by bus stop | Roadside | 359256 | 175999 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 622 | Bedminster Rd-CAZ-Lamppost opp school | Roadside | 358059 | 170597 | NO2 | Yes | 2.5 | 2.0 | No | 2.5 |
| 623 | Bedminster Rd-CAZ-Lamppost by school | Roadside | 358034 | 170602 | NO2 | Yes | 4.1 | 2.2 | No | 2.5 |
| 624 | Bedminster Rd-CAZ-Post opp Van Sales | Roadside | 357858 | 170499 | NO2 | Yes | 8.0 | 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) |
|-------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 625 | Bedminster Rd-CAZ-Lamppost by Van Sales | Roadside | 357842 | 170514 | NO2 | Yes | 0.0 | 1.2 | No | 2.5 |
| 626 | Bedminster Rd-CAZ-Post | Roadside | 357667 | 170466 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 627 | Parson St-CAZ-Lamppost by Station | Roadside | 357829 | 170658 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 628 | Lower Ashley Rd-CAZ-Lamppost by Geo Jones | Roadside | 359899 | 174335 | NO2 | Yes | 0.0 | 4.0 | No | 2.2 |
| 629 | Lower Ashley Rd-CAZ-Lamppost opp London Rd | Roadside | 359956 | 174314 | NO2 | Yes | 1.0 | 2.0 | No | 2.5 |
| 630 | Bedminster Down Rd-CAZ-Lamppost by billboard | Roadside | 357533 | 170410 | NO2 | Yes | 97.0 | 3.0 | No | 2.5 |
| 632 | West St-CAZ-Lamppost by Argus Rd | Roadside | 358073 | 171063 | NO2 | Yes | 6.2 | 1.6 | No | 2.5 |
| 633 | West St-CAZ-Lamppost opp Jamiesons | Roadside | 358217 | 171299 | NO2 | Yes | 0.4 | 2.3 | No | 2.5 |
| 634 | Bedminster Parade-CAZ-Lamppost by William Hill | Roadside | 358772 | 171741 | NO2 | Yes | 0.4 | 2.3 | No | 2.5 |
| 635 | York Rd-CAZ-Sign after bridge | Kerbside | 359106 | 171962 | NO2 | Yes | 0.0 | 0.5 | No | 2.5 |
| 636 | Bath Rd-CAZ-Lamppost by Bus Lane | Roadside | 359940 | 171838 | NO2 | Yes | 0.0 | 3.0 | No | 2.5 |
| 637 | Bath Rd-CAZ-Lamppost by Kings Road | Roadside | 361206 | 171390 | NO2 | Yes | 18.5 | 1.5 | No | 2.5 |
| 638 | A4044 Roundabout-CAZ-Lamppost | Roadside | 359498 | 173144 | NO2 | Yes | 0.0 | 17.0 | No | 2.5 |
| 639 | Victoria St-CAZ-Lamppost opp Mitchell Lane | Roadside | 359318 | 172634 | NO2 | Yes | 3.0 | 1.0 | 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) |
|-------------------|---|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 640 | Lamb Street-CAZ-One way sign by Church | Roadside | 359792 | 173319 | NO2 | Yes | 1.7 | 3.0 | No | 2.5 |
| 641 | Stokes Croft-CAZ-Lamppost | Roadside | 359114 | 174007 | NO2 | Yes | 0.0 | 2.5 | No | 2.5 |
| 642 | Ashley Road-CAZ-Lamppost opp Drumd Rd | Roadside | 359276 | 174155 | NO2 | Yes | 18.0 | 2.0 | No | 2.5 |
| 643 | Sussex Place-CAZ-Lamppost | Kerbside | 359817 | 174401 | NO2 | Yes | 10.4 | 0.2 | No | 2.5 |
| 644 | Ashley Down Rd-CAZ-Lamppost | Roadside | 359676 | 175102 | NO2 | Yes | 6.0 | 2.0 | No | 2.1 |
| 645 | Gloucester Rd-CAZ-Lamppost opp Baths | Kerbside | 359033 | 175259 | NO2 | No | 5.9 | 0.1 | No | 2.0 |
| 646 | Cheltenham Rd-CAZ-Post by Papa Johns | Kerbside | 359038 | 174391 | NO2 | Yes | 2.9 | 0.1 | No | 2.5 |
| 647 | Merchants Rd-CAZ-Lamppost by house | Roadside | 357124 | 172400 | NO2 | Yes | 2.8 | 1.7 | No | 2.5 |
| 648 | Wells Rd-CAZ-Lamppost by Red Lion Carpets | Roadside | 360905 | 170185 | NO2 | Yes | 4.3 | 2.0 | No | 2.5 |
| 649 | Bath Rd-CAZ-Lamppost | Roadside | 362089 | 170606 | NO2 | Yes | 10.5 | 2.0 | No | 2.5 |
| 650 | Wells Rd-CAZ-Lamppost | Roadside | 360818 | 170448 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 651 | Church Rd-CAZ-Post by Barwaago Cafe | Roadside | 360938 | 173376 | NO2 | Yes | 0.0 | 2.0 | No | 2.5 |
| 652 | Whitehall Rd-CAZ-Lamppost by house | Roadside | 361119 | 173796 | NO2 | Yes | 3.5 | 1.0 | No | 2.5 |
| 653 | Stapleton Rd-CAZ-Lamppost by house | Roadside | 360515 | 174134 | NO2 | Yes | 2.5 | 1.5 | No | 2.5 |
| 654 | Mina Rd-CAZ-Lamppost by house | Roadside | 360207 | 174403 | NO2 | Yes | 2.1 | 3.2 | No | 2.5 |
| 655 | Muller Rd-CAZ-Lamppost opp LA DT | Roadside | 361355 | 175203 | NO2 | Yes | 98.0 | 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) |
|-------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 656 | Stapleton Rd-CAZ-Lamppost | Kerbside | 361141 | 175446 | NO2 | Yes | 7.6 | 0.5 | No | 2.5 |
| 657 | Fishponds Rd-CAZ-Lamppost | Roadside | 361676 | 175127 | NO2 | Yes | 97.0 | 3.0 | No | 2.5 |
| 658 | Fishponds Rd-CAZ-Lamppost | Roadside | 363325 | 175803 | NO2 | Yes | 3.8 | 1.5 | No | 2.5 |
| 659 | Muller Rd-CAZ-Lamppost | Kerbside | 359773 | 176702 | NO2 | No | 8.8 | 0.1 | No | 2.5 |
| 660 | Muller Rd-CAZ-Lamppost | Kerbside | 360896 | 175312 | NO2 | Yes | 5.8 | 0.2 | No | 2.5 |
| 661 | Linden Rd-CAZ-Lamppost by house | Kerbside | 358022 | 175630 | NO2 | No | 6.6 | 0.4 | No | 2.1 |
| 662 | Linden Rd-CAZ-Lamppost by house | Roadside | 357868 | 175723 | NO2 | No | 10.5 | 3.0 | No | 2.5 |
| 663 | Whiteladies Rd-CAZ-Lamppost after petrol station | Roadside | 357396 | 174761 | NO2 | No | 3.0 | 3.0 | No | 2.5 |
| 664 | Westbury Rd-CAZ-Lamppost by hospital | Kerbside | 357347 | 174992 | NO2 | No | 21.9 | 0.1 | No | 1.7 |
| 665 | Upper Maudlin St-CAZ-Lamppost opp BRI | Roadside | 358675 | 173405 | NO2 | Yes | 2.0 | 2.0 | No | 2.5 |
| 666 | Upper Maudlin St-CAZ-Lamppost by BRI | Roadside | 358646 | 173426 | NO2 | Yes | 5.0 | 5.0 | No | 2.5 |
| 667 | College Green-CAZ-Post by Toni&Guy | Kerbside | 358531 | 172803 | NO2 | Yes | 4.5 | 0.5 | No | 2.5 |
| 669 | Temple Way Bridge-CAZ-Lamppost Temple Way Bridge | Roadside | 359511 | 172754 | NO2 | Yes | 97.0 | 3.0 | No | 2.5 |
| 670 | Bristol Hill-CAZ-Lamppost Bristol Hill | Roadside | 361749 | 170690 | NO2 | Yes | 1.5 | 3.0 | No | 2.5 |
| 671 | North View Downs Park West | Kerbside | 357381 | 175781 | NO2 | No | 1.0 | 0.3 | No | 2.0 |

| 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) |
|---------------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 673_1, 673_2, 673_3 | Marlborough Street - co - located | Roadside | 358728 | 173520 | NO2 | Yes | 0.0 | 3.0 | Yes | 1.5 |
| 674 | Troopers Hill Opposite No 30 | Roadside | 363157 | 173215 | NO2 | No | 4.8 | 1.2 | No | 2.1 |
| 675 | Netham Lock Junction | Roadside | 361615 | 172728 | NO2 | No | 0.0 | 1.5 | No | 2.1 |
| 676 | Blackswarth Road Opposite St Patrick's School | Roadside | 361734 | 173291 | NO2 | Yes | 3.8 | 2.2 | No | 2.1 |
| 677 | Beaufort Road Opposite No 109 | Kerbside | 362105 | 173350 | NO2 | Yes | 1.8 | 0.0 | No | 2.1 |
| 678 | Victoria Avenue Opposite No 90 | Roadside | 361279 | 173283 | NO2 | Yes | 0.0 | 1.5 | No | 2.1 |
| 679 | Avonvale Road Opposite Bristol Futures Academy | Kerbside | 361134 | 173034 | NO2 | Yes | 2.0 | 0.3 | No | 2.1 |
| 680 | Morely Street/Bright Street Ped Crossing | Roadside | 360973 | 173193 | NO2 | Yes | 4.0 | 1.5 | No | 2.1 |
| 681 | Russel Town Avenue Opposite Pheonix Social Enterprise Club | Roadside | 360985 | 173541 | NO2 | Yes | 13.5 | 1.5 | No | 2.1 |
| 682 | Church Road Miss Millies | Kerbside | 361359 | 173460 | NO2 | Yes | 2.0 | 0.5 | No | 2.1 |
| 683 | Victoria Parade Opposite No 39 | Roadside | 361451 | 173617 | NO2 | Yes | 1.5 | 1.5 | No | 2.1 |
| 684 | Lypplatt Road Opposite No 25 | Kerbside | 361597 | 173622 | NO2 | Yes | 3.5 | 1.0 | No | 2.1 |
| 698 | Portway - Sylvan Way | Roadside | 354633 | 176588 | NO2 | No | 0.0 | 2.0 | No | 2.0 |
| 699 | Portway - Roman Way | Roadside | 355122 | 175764 | NO2 | No | 0.0 | 2.0 | No | 2.0 |
| 700 | Portway - Bridge Valley Road | Kerbside | 356336 | 173464 | NO2 | No | 0.0 | 1.0 | No | 2.0 |

| 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) |
|-------------------|--|-----------|-------------------------|--------------------------|----------------------|----------------------|--|---|---|-----------------|
| 701 | Blackboy Hill_Traffic light on pedestrian crossing | Kerbside | 357448 | 174634 | NO2 | No | 2.7 | 0.3 | No | 2.3 |
| 702 | Lamb Street_CAZ signpost by George Jones Park | Roadside | 359833 | 173376 | NO2 | Yes | 0.0 | 3.0 | No | 2.3 |
| 703 | Sussex Place_No loading signpost | Roadside | 359829 | 174376 | NO2 | Yes | 6.7 | 1.8 | No | 2.1 |
| 704 | Bedminster Down Rd junction with Winterstoke Close_CAZ | Roadside | 357724 | 170651 | NO2 | Yes | 13.4 | 1.6 | No | 2.2 |
| 705 | A4044 Roundabout_Traffic Light | Kerbside | 359506 | 173139 | NO2 | Yes | 0.0 | 0.8 | No | 2.2 |
| 706 | Speedwell Road_near Wackum Inn | Kerbside | 362449 | 174228 | NO2 | No | 9.0 | 1.0 | No | 2.3 |
| 707 | Rodney Road junction with Whiteway Road | Kerbside | 363424 | 174168 | NO2 | No | 6.8 | 0.7 | No | 2.3 |
| 708 | Whiteway Road junction with A420 | Kerbside | 362882 | 173755 | NO2 | No | 0.1 | 0.7 | No | 2.3 |
| 709 | Air Balloon Hill Primary School | Kerbside | 363234 | 173422 | NO2 | No | 2.4 | 0.6 | No | 2.3 |
| 710 | Nags Head Hill | Kerbside | 363548 | 172933 | NO2 | No | 8.3 | 0.7 | No | 2.3 |
| 711 | Barton Hill Academy | Kerbside | 360877 | 172939 | NO2 | Yes | 1.0 | 1.0 | No | 2.3 |

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.3 – Annual Mean NO₂ Monitoring Results: Automatic Monitoring (µg/m³)

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) ⁽¹⁾ | Valid Data Capture 2024 (%) ⁽²⁾ | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|-------------------------|--------------------------|------------------|---|--|-------------|-------------|-------------|------------------|--------------------|
| 203 | 361178 | 171566 | Urban background | 97.2 | 97.2 | 18.8 | 20 | 20.4 | 17.5 | 16.5 |
| 215 | 358042 | 170582 | Roadside | 97.8 | 97.8 | 28.6 | 31.4 | 28.8 | 25.3 | 22.4 |
| 270 | 360903 | 170024 | Roadside | 98.9 | 98.9 | 27.9 | 23.9 | 22.7 | 22.5 | 20.3 |
| 452 | 359488 | 173924 | Urban background | 99.3 | 99.3 | 15.2 | 17.5 | 19.2 | 17.4 | 15.7 |
| 463 | 362926 | 175590 | Roadside | 97.2 | 97.2 | 22.2 | 29.4 | 26.6 | 23.3 | 21.7 |
| 500 | 359522 | 173381 | Roadside | 98.4 | 98.4 | 28.3 | 32.1 | 31.2 | 25.6 | 23.9 |
| 501 | 358640 | 173090 | Roadside | 94.4 | 94.4 | 45.2 | 49.8 | 66.2 | 48 (41.9) | 48.7 (41.8) |
| 672 | 358728 | 173520 | Roadside | 98.6 | 98.6 | | 32.7 | 28.5 | 23 | 24.4 |

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

☒ **Where exceedances of the NO₂ annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2024.**

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

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

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%).

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|-------------|-------------|-------------|-------------|------|
| 2 | 358628 | 173011 | Roadside | 84.9 | 84.9 | 36.9 | 40.1 | 40.3 | 39.0 | 38.4 |
| 3 | 357448 | 174650 | Roadside | 100.0 | 100.0 | 28.7 | 44.4 | 38.8 | 47.7 | 29.0 |
| 4 | 359903 | 171850 | Roadside | 100.0 | 100.0 | 36.8 | 38.9 | 38.4 | 29.3 | 30.7 |
| 5 | 358723 | 171704 | Roadside | 100.0 | 100.0 | 31.6 | 41.0 | 37.9 | 33.5 | 34.9 |
| 9 | 358729 | 173499 | Roadside | 17.0 | 0.0 | 31.7 | 39.3 | 36.0 | 27.8 | - |
| 10 | 361217 | 171429 | Roadside | 100.0 | 100.0 | 33.6 | 36.8 | 35.9 | 30.7 | 30.3 |
| 11 | 358813 | 173342 | Roadside | 100.0 | 100.0 | 31.1 | 35.0 | 35.3 | 29.6 | 29.4 |
| 12 | 359142 | 173211 | Roadside | 100.0 | 92.5 | 41.9 | 46.5 | 50.2 | 60.2 | 35.3 |
| 14 | 360877 | 170280 | Roadside | 100.0 | 100.0 | 32.4 | 32.7 | 30.3 | 27.0 | 25.8 |
| 15 | 359294 | 173485 | Roadside | 100.0 | 100.0 | 28.2 | 31.5 | 31.3 | 26.4 | 25.9 |
| 16 | 352287 | 178698 | Roadside | 100.0 | 100.0 | 23.2 | 24.9 | 25.8 | 21.5 | 21.5 |
| 21 | 359035 | 175306 | Roadside | 100.0 | 100.0 | 33.4 | 34.9 | 34.0 | 30.9 | 33.0 |
| 22 | 359109 | 173886 | Roadside | 75.0 | 75.0 | 34.3 | 37.5 | 36.7 | 35.9 | 34.4 |
| 113 | 359258 | 172696 | Roadside | 90.6 | 83.0 | 29.9 | 27.8 | 32.0 | 29.4 | 28.3 |
| 125 | 359214 | 171917 | Roadside | 100.0 | 100.0 | 35.6 | 35.8 | 33.6 | 24.3 | 19.7 |
| 147 | 358514 | 172691 | Roadside | 100.0 | 100.0 | 39.4 | 43.3 | 45.5 | 39.5 | 36.3 |
| 154 | 357601 | 172483 | Roadside | 100.0 | 100.0 | 22.1 | 25.4 | 26.1 | 17.8 | 17.5 |
| 155 | 357838 | 172713 | Roadside | 100.0 | 100.0 | 22.9 | 25.5 | 24.2 | 17.5 | 15.2 |
| 156 | 357709 | 173018 | Roadside | 100.0 | 100.0 | 20.7 | 24.9 | 25.9 | 19.1 | 17.7 |
| 157 | 359119 | 174090 | Roadside | 100.0 | 100.0 | 35.7 | 40.3 | 35.0 | 35.2 | 33.7 |
| 159 | 358891 | 174608 | Roadside | 100.0 | 100.0 | 28.5 | 31.9 | 32.1 | 28.9 | 28.2 |
| 161 | 359152 | 175733 | Roadside | 92.5 | 92.5 | 25.3 | 27.4 | 26.0 | 25.6 | 26.5 |
| 163 | 359435 | 176574 | Roadside | 100.0 | 100.0 | 24.5 | 27.4 | 27.2 | 27.2 | 25.7 |
| 175 | 362147 | 170525 | Roadside | 100.0 | 100.0 | 36.4 | 41.4 | 38.7 | 30.4 | 30.3 |
| 239 | 357880 | 170506 | Kerbside | 100.0 | 100.0 | 47.6 | 51.4 | 48.6 | 40.5 | 38.1 |
| 242 | 357510 | 170401 | Kerbside | 92.5 | 92.5 | 32.2 | 34.5 | 36.6 | 29.8 | 28.0 |
| 254 | 357118 | 172429 | Kerbside | 100.0 | 90.6 | 31.1 | 34.6 | 33.0 | 24.7 | 23.9 |
| 260 | 361140 | 175366 | Roadside | 100.0 | 100.0 | 29.5 | 33.2 | 31.6 | 26.5 | 26.0 |
| 261 | 361103 | 175059 | Roadside | 100.0 | 100.0 | 34.7 | 39.1 | 39.3 | 32.0 | 33.0 |
| 295 | 359913 | 174315 | Roadside | 100.0 | 100.0 | 37.2 | 44.5 | 41.0 | 34.0 | 34.8 |
| 300 | 363365 | 175883 | Roadside | 100.0 | 100.0 | 28.9 | 28.7 | 27.5 | 21.2 | 26.4 |
| 303 | 361368 | 175170 | Roadside | 100.0 | 100.0 | 29.2 | 31.8 | 31.2 | 24.1 | 23.3 |
| 307 | 360747 | 175328 | Roadside | 100.0 | 100.0 | 24.6 | 27.5 | 26.8 | 24.5 | 21.6 |
| 312 | 359832 | 174616 | Roadside | 100.0 | 100.0 | 26.2 | 29.5 | 29.8 | 24.8 | 23.5 |

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| 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 |
|---------------------------|-------------------------|--------------------------|------------------|---|--|-------------|-------------|-------------|------|------|
| 320_1, 320_2, 320_3 | 361180 | 171567 | Urban background | 100.0 | 100.0 | 19.3 | 20.8 | 20.6 | 17.7 | 17.0 |
| 325 | 361667 | 175103 | Roadside | 100.0 | 100.0 | 34.1 | 37.3 | 32.6 | 29.4 | 27.6 |
| 363 | 359075 | 173613 | Roadside | 92.5 | 92.5 | 23.5 | 26.8 | 28.0 | 23.8 | 23.9 |
| 370 | 359775 | 173513 | Roadside | 90.6 | 90.6 | | 25.0 | 31.0 | 25.3 | 21.2 |
| 373 | 359747 | 173774 | Roadside | 92.5 | 92.5 | 23.9 | 27.9 | 27.4 | 22.3 | 21.5 |
| 374 | 359509 | 173595 | Roadside | 100.0 | 100.0 | 29.9 | 35.0 | 33.7 | 27.1 | 25.1 |
| 403 | 360508 | 171676 | Roadside | 100.0 | 100.0 | 23.4 | 25.5 | 25.5 | 20.2 | 20.6 |
| 405 | 361051 | 173743 | Roadside | 100.0 | 100.0 | 38.7 | 40.4 | 38.0 | 33.5 | 33.6 |
| 406 | 361576 | 173806 | Roadside | 100.0 | 100.0 | 26.6 | 29.3 | 29.6 | 24.2 | 23.2 |
| 413 | 360043 | 171508 | Roadside | 100.0 | 100.0 | 25.5 | 27.4 | 27.2 | 23.5 | 22.5 |
| 417 | 359635 | 171413 | Roadside | 100.0 | 100.0 | 26.3 | 27.9 | 27.0 | 22.7 | 20.9 |
| 418 | 357737 | 170642 | Roadside | 100.0 | 100.0 | 40.2 | 45.9 | 44.1 | 32.8 | 31.7 |
| 419 | 357832 | 170686 | Kerbside | 100.0 | 100.0 | 31.4 | 34.3 | 33.6 | 29.4 | 28.5 |
| 420 | 358277 | 171562 | Roadside | 83.0 | 83.0 | 23.2 | 25.6 | 28.8 | 23.7 | 22.3 |
| 423 | 358623 | 173386 | Roadside | 100.0 | 100.0 | 27.3 | 29.5 | 29.1 | 22.2 | 20.9 |
| 429 | 360484 | 174097 | Roadside | 100.0 | 100.0 | 38.8 | 36.4 | 35.5 | 38.0 | 35.3 |
| 436 | 361013 | 173352 | Roadside | 90.6 | 90.6 | 29.2 | 31.2 | 30.6 | 24.4 | 26.2 |
| 438_1, 438_2, 438_3 | 360903 | 170024 | Kerbside | 100.0 | 100.0 | 27.1 | 29.0 | 29.4 | 25.0 | 23.2 |
| 439_1, 439_2, 439_3 | 358042 | 170582 | Roadside | 100.0 | 100.0 | 25.4 | 28.6 | 27.2 | 24.0 | 22.4 |
| 455_1, 455_2, 455_3 | 359487 | 173924 | Urban background | 100.0 | 100.0 | 15.9 | 16.4 | 16.7 | 14.3 | 13.8 |
| 464_1, 464_2, 464_3 | 362927 | 175592 | Roadside | 100.0 | 100.0 | 24.2 | 23.7 | 24.0 | 20.8 | 20.8 |
| 470 | 359213 | 170997 | Roadside | 100.0 | 100.0 | 25.1 | 26.8 | 28.3 | 24.2 | 21.7 |

| 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 |
|---------------------------|-------------------------|--------------------------|-----------|---|--|-------------|-------------|-------------|-------------|-------------|
| 472 | 358226 | 171284 | Roadside | 92.5 | 92.5 | 26.2 | 28.7 | 29.0 | 25.8 | 25.7 |
| 473 | 358105 | 171124 | Roadside | 90.6 | 90.6 | 40.0 | 28.4 | 28.4 | 26.1 | 25.7 |
| 487 | 360243 | 174327 | Roadside | 92.5 | 92.5 | 27.7 | 29.6 | 36.8 | 27.8 | 24.1 |
| 492 | 359445 | 176627 | Roadside | 100.0 | 100.0 | 25.2 | 26.4 | 27.5 | 25.6 | 23.7 |
| 493 | 359677 | 176758 | Roadside | 100.0 | 100.0 | 29.5 | 31.8 | 31.2 | 27.4 | 25.8 |
| 494 | 359558 | 176850 | Kerbside | 100.0 | 100.0 | 25.1 | 25.0 | 26.4 | 22.5 | 21.6 |
| 496 | 362296 | 173620 | Roadside | 100.0 | 100.0 | 25.0 | 25.9 | 26.7 | 22.9 | 20.2 |
| 497 | 359268 | 174132 | Roadside | 100.0 | 100.0 | 24.6 | 27.1 | 24.7 | 24.8 | 22.5 |
| 499_1, 499_2, 499_3 | 359522 | 173381 | Roadside | 90.6 | 90.6 | 26.0 | 31.1 | 30.9 | 26.2 | 23.9 |
| 502_1, 502_2, 502_3 | 358640 | 173090 | Roadside | 90.6 | 90.6 | 52.1 | 58.0 | 54.1 | 48.9 | 50.8 |
| 512 | 359026 | 174432 | Roadside | 75.0 | 75.0 | 30.7 | 36.1 | 36.2 | 37.3 | 36.6 |
| 525 | 362455 | 173687 | Roadside | 100.0 | 100.0 | 24.1 | 28.5 | 29.8 | 24.8 | 23.2 |
| 538 | 358681 | 171478 | Roadside | 17.0 | 17.0 | 20.4 | 22.5 | 21.3 | 19.5 | - |
| 539 | 358599 | 171391 | Roadside | 75.0 | 75.0 | 27.4 | 30.9 | 23.8 | 26.6 | 22.2 |
| 545 | 356379 | 171436 | Roadside | 100.0 | 100.0 | 22.0 | 24.3 | 23.3 | 17.2 | 16.3 |
| 550 | 358353 | 172613 | Roadside | 66.0 | 66.0 | 21.1 | 29.1 | 29.4 | 24.7 | 21.9 |
| 555 | 356679 | 172589 | Roadside | 100.0 | 100.0 | 26.5 | 28.0 | 28.0 | 19.3 | 17.8 |
| 556 | 356827 | 172303 | Roadside | 100.0 | 100.0 | 31.7 | 35.0 | 31.8 | 23.9 | 20.8 |
| 559 | 356485 | 171580 | Roadside | 100.0 | 90.6 | 19.8 | 24.5 | 24.2 | 20.4 | 20.0 |
| 560_1, 560_2 | 358665 | 173439 | Roadside | 92.5 | 92.5 | 30.2 | 32.2 | 31.5 | 25.6 | 20.5 |
| 561_1, 561_2 | 358688 | 173431 | Roadside | 56.6 | 56.6 | 33.8 | 36.7 | 34.8 | 24.7 | 25.7 |
| 565 | 357227 | 179101 | Roadside | 100.0 | 100.0 | 24.5 | 26.3 | 24.4 | 22.7 | 22.8 |
| 567 | 360728 | 175345 | Roadside | 100.0 | 100.0 | 41.3 | 44.8 | 43.2 | 35.3 | 34.4 |
| 568 | 360178 | 175779 | Kerbside | 81.1 | 81.1 | 29.0 | 32.9 | 32.2 | 28.2 | 28.4 |
| 569 | 359855 | 176186 | Roadside | 100.0 | 100.0 | 22.8 | 24.1 | 24.1 | 21.3 | 21.4 |
| 570 | 359847 | 176439 | Kerbside | 100.0 | 100.0 | 28.4 | 28.2 | 29.6 | 26.2 | 26.4 |

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|------|-------------|-------------|------|-------------|
| 571 | 359848 | 176411 | Roadside | 100.0 | 100.0 | 31.3 | 33.1 | 32.3 | 28.4 | 28.8 |
| 574 | 357678 | 174229 | Roadside | 92.5 | 92.5 | 27.3 | 28.9 | 29.6 | 25.8 | 24.4 |
| 575 | 358685 | 172881 | Kerbside | 100.0 | 100.0 | 30.9 | 29.6 | 31.5 | 33.0 | 34.0 |
| 576 | 358792 | 172874 | Roadside | 100.0 | 100.0 | 23.9 | 26.8 | 29.8 | 27.9 | 27.2 |
| 577 | 358935 | 172981 | Roadside | 92.5 | 92.5 | 30.5 | 27.8 | 31.1 | 35.3 | 35.2 |
| 578 | 361892 | 173552 | Roadside | 90.6 | 90.6 | | 33.0 | 31.1 | 27.5 | 25.1 |
| 579 | 362198 | 173580 | Kerbside | 90.6 | 90.6 | | 35.4 | 32.2 | 27.2 | 25.8 |
| 580 | 358754 | 173528 | Roadside | 83.0 | 83.0 | | 47.9 | 41.8 | 33.8 | 29.4 |
| 581 | 358908 | 173574 | Kerbside | 92.5 | 92.5 | | 40.8 | 39.1 | 30.4 | 29.0 |
| 582 | 358893 | 173333 | Roadside | 84.9 | 84.9 | | 50.0 | 43.7 | 39.2 | 45.4 |
| 583 | 358870 | 173340 | Roadside | 75.0 | 75.0 | | 42.3 | 37.9 | 39.1 | 36.6 |
| 584 | 358773 | 173276 | Roadside | 90.6 | 90.6 | | 33.0 | 34.3 | 30.8 | 29.5 |
| 585 | 358192 | 173050 | Roadside | 83.0 | 83.0 | | 30.5 | 32.1 | 24.7 | 29.9 |
| 586 | 358195 | 173018 | Kerbside | 83.0 | 83.0 | | 38.6 | 41.8 | 32.6 | 36.4 |
| 587 | 358802 | 172896 | Roadside | 81.1 | 81.1 | | 26.5 | 30.9 | 28.5 | 28.7 |
| 588 | 358739 | 172869 | Roadside | 100.0 | 100.0 | | 26.5 | 31.5 | 29.2 | 28.3 |
| 589 | 358849 | 173606 | Roadside | 100.0 | 100.0 | | 26.5 | 27.2 | 21.8 | 20.0 |
| 590 | 358789 | 173589 | Roadside | 100.0 | 100.0 | | 42.3 | 40.7 | 31.0 | 29.3 |
| 591 | 358805 | 173575 | Roadside | 92.5 | 92.5 | | 34.9 | 33.1 | 25.1 | 23.4 |
| 592 | 358662 | 173409 | Kerbside | 25.0 | 25.0 | | 39.6 | 38.6 | 28.8 | 26.7 |
| 593 | 358610 | 173350 | Roadside | 100.0 | 100.0 | | 35.2 | 36.3 | 24.8 | 23.8 |
| 594 | 358540 | 173234 | Roadside | 90.6 | 90.6 | | 34.1 | 34.1 | 26.6 | 23.5 |
| 595 | 358510 | 173197 | Roadside | 67.9 | 67.9 | | 32.2 | 30.6 | 23.0 | 22.6 |
| 596 | 358431 | 173120 | Roadside | 75.0 | 75.0 | | 30.0 | 31.2 | 25.4 | 22.9 |
| 597 | 358403 | 173124 | Roadside | 100.0 | 100.0 | | 32.7 | 33.0 | 21.7 | 20.8 |
| 598 | 358061 | 173182 | Roadside | 92.5 | 92.5 | | 26.9 | 26.8 | 21.3 | 22.3 |
| 599 | 358135 | 173123 | Roadside | 100.0 | 100.0 | | 33.3 | 31.0 | 28.9 | 28.5 |
| 600 | 358322 | 172858 | Roadside | 75.0 | 75.0 | | 23.9 | 23.9 | 22.0 | 20.8 |
| 601 | 358563 | 172818 | Roadside | 90.6 | 90.6 | | 29.4 | 30.8 | 25.4 | 27.5 |
| 602 | 358469 | 172656 | Roadside | 92.5 | 83.0 | | 38.0 | 42.7 | 33.9 | 33.5 |
| 603 | 358767 | 173320 | Roadside | 100.0 | 100.0 | | 39.6 | 41.9 | 34.5 | 35.0 |
| 604 | 358817 | 173342 | Roadside | 92.5 | 92.5 | | 43.0 | 43.1 | 39.0 | 35.4 |
| 605 | 358718 | 173227 | Roadside | 100.0 | 100.0 | | 32.4 | 30.2 | 23.6 | 29.1 |

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|------|-------------|-------------|-------------|-------------|
| 606 | 359124 | 172803 | Roadside | 100.0 | 100.0 | | 25.5 | 25.7 | 24.4 | 21.8 |
| 607 | 359183 | 172826 | Roadside | 100.0 | 100.0 | | 27.8 | 28.4 | 23.3 | 21.4 |
| 608 | 359563 | 172290 | Kerbside | 100.0 | 100.0 | | 39.4 | 38.4 | 31.9 | 32.0 |
| 609 | 359740 | 172116 | Roadside | 100.0 | 100.0 | | 30.2 | 30.4 | 25.2 | 24.9 |
| 610 | 359967 | 171548 | Roadside | 100.0 | 100.0 | | 32.3 | 32.4 | 25.6 | 25.3 |
| 611 | 357425 | 170769 | Roadside | 100.0 | 100.0 | | 19.5 | 20.1 | 16.5 | 15.3 |
| 612 | 359206 | 173557 | Roadside | 100.0 | 100.0 | | 29.9 | 30.9 | 25.1 | 23.6 |
| 613 | 359316 | 173554 | Kerbside | 75.0 | 75.0 | | 40.6 | 42.0 | 33.3 | 32.0 |
| 614 | 359516 | 173374 | Roadside | 90.6 | 90.6 | | 28.4 | 29.4 | 24.7 | 23.4 |
| 615 | 359659 | 173688 | Kerbside | 100.0 | 100.0 | | 53.0 | 49.4 | 38.4 | 37.1 |
| 616 | 359747 | 173717 | Kerbside | 90.6 | 90.6 | | 44.0 | 42.5 | 33.5 | 29.5 |
| 617 | 359686 | 173587 | Kerbside | 41.5 | 41.5 | | 28.4 | 25.3 | 22.4 | 27.9 |
| 618 | 359086 | 174187 | Roadside | 100.0 | 100.0 | | 33.8 | 31.5 | 30.8 | 30.9 |
| 619 | 359119 | 174149 | Roadside | 100.0 | 100.0 | | 34.7 | 38.2 | 35.2 | 32.1 |
| 621 | 359256 | 175999 | Roadside | 60.4 | 60.4 | | 24.9 | 25.4 | 26.5 | 26.0 |
| 622 | 358059 | 170597 | Roadside | 100.0 | 100.0 | | 33.7 | 34.3 | 29.7 | 27.5 |
| 623 | 358034 | 170602 | Roadside | 84.9 | 84.9 | | 30.6 | 28.4 | 25.6 | 23.3 |
| 624 | 357858 | 170499 | Roadside | 100.0 | 100.0 | | 49.7 | 48.4 | 37.6 | 39.9 |
| 625 | 357842 | 170514 | Roadside | 100.0 | 100.0 | | 45.4 | 44.7 | 37.6 | 32.9 |
| 626 | 357667 | 170466 | Roadside | 64.2 | 64.2 | | 43.0 | 43.3 | 38.7 | 33.4 |
| 627 | 357829 | 170658 | Roadside | 83.0 | 83.0 | | 34.0 | 33.3 | 27.9 | 29.2 |
| 628 | 359899 | 174335 | Roadside | 100.0 | 100.0 | | 35.9 | 33.2 | 29.5 | 28.6 |
| 629 | 359956 | 174314 | Roadside | 92.5 | 92.5 | | 38.9 | 34.8 | 34.6 | 26.7 |
| 630 | 357533 | 170410 | Roadside | 75.0 | 75.0 | | 30.3 | 35.5 | 26.7 | 24.3 |
| 632 | 358073 | 171063 | Roadside | 100.0 | 100.0 | | 23.4 | 24.6 | 22.6 | 22.1 |
| 633 | 358217 | 171299 | Roadside | 90.6 | 90.6 | | 36.5 | 34.6 | 31.4 | 33.2 |
| 634 | 358772 | 171741 | Roadside | 90.6 | 90.6 | | 34.6 | 30.1 | 28.1 | 26.1 |
| 635 | 359106 | 171962 | Kerbside | 100.0 | 100.0 | | 25.3 | 23.8 | 19.9 | 16.5 |
| 636 | 359940 | 171838 | Roadside | 92.5 | 92.5 | | 26.2 | 25.5 | 22.1 | 21.0 |
| 637 | 361206 | 171390 | Roadside | 100.0 | 100.0 | | 21.7 | 24.2 | 17.1 | 16.9 |
| 638 | 359498 | 173144 | Roadside | 100.0 | 100.0 | | 43.8 | 42.4 | 44.8 | 41.6 |
| 639 | 359318 | 172634 | Roadside | 100.0 | 100.0 | | 27.0 | 29.5 | 29.6 | 25.8 |
| 640 | 359792 | 173319 | Roadside | 90.6 | 90.6 | | 28.1 | 27.1 | 23.6 | 22.3 |

| 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 |
|---------------------------|-------------------------|--------------------------|-----------|---|--|------|-------------|-------------|-------------|-------------|
| 641 | 359114 | 174007 | Roadside | 90.6 | 90.6 | | 39.7 | 38.1 | 36.8 | 34.7 |
| 642 | 359276 | 174155 | Roadside | 100.0 | 100.0 | | 28.9 | 24.6 | 24.9 | 22.7 |
| 643 | 359817 | 174401 | Kerbside | 100.0 | 100.0 | | 39.7 | 35.6 | 28.8 | 25.4 |
| 644 | 359676 | 175102 | Roadside | 100.0 | 100.0 | | 31.8 | 31.7 | 28.2 | 25.1 |
| 645 | 359033 | 175259 | Kerbside | 90.6 | 90.6 | | 30.3 | 28.9 | 28.3 | 27.3 |
| 646 | 359038 | 174391 | Kerbside | 100.0 | 100.0 | | 31.7 | 31.7 | 31.9 | 30.3 |
| 647 | 357124 | 172400 | Roadside | 100.0 | 100.0 | | 34.3 | 30.9 | 22.9 | 23.0 |
| 648 | 360905 | 170185 | Roadside | 100.0 | 100.0 | | 29.0 | 29.2 | 25.3 | 25.8 |
| 649 | 362089 | 170606 | Roadside | 100.0 | 100.0 | | 30.1 | 30.0 | 27.1 | 24.7 |
| 650 | 360818 | 170448 | Roadside | 92.5 | 92.5 | | 22.8 | 21.6 | 19.3 | 19.6 |
| 651 | 360938 | 173376 | Roadside | 83.0 | 83.0 | | 35.2 | 33.9 | 26.6 | 28.6 |
| 652 | 361119 | 173796 | Roadside | 90.6 | 90.6 | | 41.5 | 37.0 | 33.3 | 30.4 |
| 653 | 360515 | 174134 | Roadside | 100.0 | 100.0 | | 26.0 | 30.9 | 33.5 | 26.2 |
| 654 | 360207 | 174403 | Roadside | 100.0 | 100.0 | | 22.9 | 24.0 | 20.0 | 18.9 |
| 655 | 361355 | 175203 | Roadside | 100.0 | 100.0 | | 29.2 | 28.6 | 26.9 | 26.6 |
| 656 | 361141 | 175446 | Kerbside | 100.0 | 100.0 | | 28.8 | 27.3 | 23.3 | 21.0 |
| 657 | 361676 | 175127 | Roadside | 84.9 | 84.9 | | 29.2 | 33.5 | 24.9 | 23.9 |
| 658 | 363325 | 175803 | Roadside | 100.0 | 100.0 | | 23.6 | 24.1 | 22.9 | 20.2 |
| 659 | 359773 | 176702 | Kerbside | 90.6 | 90.6 | | 26.5 | 25.1 | 22.3 | 23.8 |
| 660 | 360896 | 175312 | Kerbside | 100.0 | 100.0 | | 32.1 | 32.4 | 28.1 | 27.7 |
| 661 | 358022 | 175630 | Kerbside | 84.9 | 84.9 | | 23.3 | 22.0 | 20.2 | 18.3 |
| 662 | 357868 | 175723 | Roadside | 100.0 | 100.0 | | 21.2 | 20.7 | 19.1 | 16.5 |
| 663 | 357396 | 174761 | Roadside | 92.5 | 92.5 | | 24.7 | 25.9 | 22.4 | 20.8 |
| 664 | 357347 | 174992 | Kerbside | 100.0 | 100.0 | | 25.5 | 24.8 | 19.7 | 21.3 |
| 665 | 358675 | 173405 | Roadside | 83.0 | 83.0 | | 37.6 | 37.1 | 31.6 | 23.5 |
| 666 | 358646 | 173426 | Roadside | 67.9 | 67.9 | | 32.8 | 31.3 | 25.4 | 22.4 |
| 667 | 358531 | 172803 | Kerbside | 100.0 | 100.0 | | 43.6 | 45.3 | 42.0 | 41.0 |
| 669 | 359511 | 172754 | Roadside | 100.0 | 100.0 | | 28.6 | 33.2 | 29.7 | 22.0 |
| 670 | 361749 | 170690 | Roadside | 100.0 | 100.0 | | 39.9 | 38.8 | 32.8 | 33.1 |
| 671 | 357381 | 175781 | Kerbside | 83.0 | 83.0 | | 26.1 | 23.5 | 21.3 | 20.8 |
| 673_1, 673_2, 673_3 | 358728 | 173520 | Roadside | 92.5 | 92.5 | | 36.1 | 33.5 | 26.1 | 24.2 |

| 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 |
|-------------------|-------------------------|--------------------------|-----------|---|--|------|------|------|------|-------------|
| 674 | 363157 | 173215 | Roadside | 100.0 | 100.0 | | | 15.2 | 14.2 | 13.4 |
| 675 | 361615 | 172728 | Roadside | 100.0 | 100.0 | | | 26.4 | 23.7 | 23.0 |
| 676 | 361734 | 173291 | Roadside | 100.0 | 100.0 | | | 19.8 | 19.0 | 16.1 |
| 677 | 362105 | 173350 | Kerbside | 92.5 | 92.5 | | | 21.4 | 17.6 | 15.2 |
| 678 | 361279 | 173283 | Roadside | 90.6 | 90.6 | | | 17.7 | 15.6 | 14.0 |
| 679 | 361134 | 173034 | Kerbside | 83.0 | 83.0 | | | 21.0 | 20.3 | 21.4 |
| 680 | 360973 | 173193 | Roadside | 90.6 | 90.6 | | | 20.8 | 19.9 | 18.5 |
| 681 | 360985 | 173541 | Roadside | 92.5 | 92.5 | | | 24.8 | 22.4 | 21.7 |
| 682 | 361359 | 173460 | Kerbside | 83.0 | 83.0 | | | 26.7 | 22.9 | 23.5 |
| 683 | 361451 | 173617 | Roadside | 100.0 | 100.0 | | | 18.6 | 17.2 | 13.5 |
| 684 | 361597 | 173622 | Kerbside | 100.0 | 100.0 | | | 20.1 | 17.0 | 15.3 |
| 698 | 354633 | 176588 | Roadside | 90.6 | 90.6 | | | | 19.9 | 21.7 |
| 699 | 355122 | 175764 | Roadside | 100.0 | 100.0 | | | | 18.8 | 16.7 |
| 700 | 356336 | 173464 | Kerbside | 100.0 | 100.0 | | | | 25.8 | 20.2 |
| 701 | 357448 | 174634 | Kerbside | 90.6 | 90.6 | | | | | 22.7 |
| 702 | 359833 | 173376 | Roadside | 49.1 | 49.1 | | | | | 19.6 |
| 703 | 359829 | 174376 | Roadside | 100.0 | 100.0 | | | | | 26.9 |
| 704 | 357724 | 170651 | Roadside | 83.0 | 83.0 | | | | | 25.9 |
| 705 | 359506 | 173139 | Kerbside | 100.0 | 67.9 | | | | | 48.1 |
| 706 | 362449 | 174228 | Kerbside | 100.0 | 43.4 | | | | | 15.7 |
| 707 | 363424 | 174168 | Kerbside | 100.0 | 43.4 | | | | | 13.5 |
| 708 | 362882 | 173755 | Kerbside | 100.0 | 43.4 | | | | | 16.8 |
| 709 | 363234 | 173422 | Kerbside | 100.0 | 43.4 | | | | | 11.2 |
| 710 | 363548 | 172933 | Kerbside | 100.0 | 43.4 | | | | | 18.6 |
| 711 | 360877 | 172939 | Kerbside | 100.0 | 43.4 | | | | | 21.1 |

Table A.4 – Annual Mean NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

- 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 $\mu\text{g}/\text{m}^3$.

Exceedances of the NO_2 annual mean objective of $40\mu\text{g}/\text{m}^3$ are shown in **bold**.

NO_2 annual means exceeding $60\mu\text{g}/\text{m}^3$, 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 Nitrogen Dioxide Concentrations at Central Locations 2010 to 2024

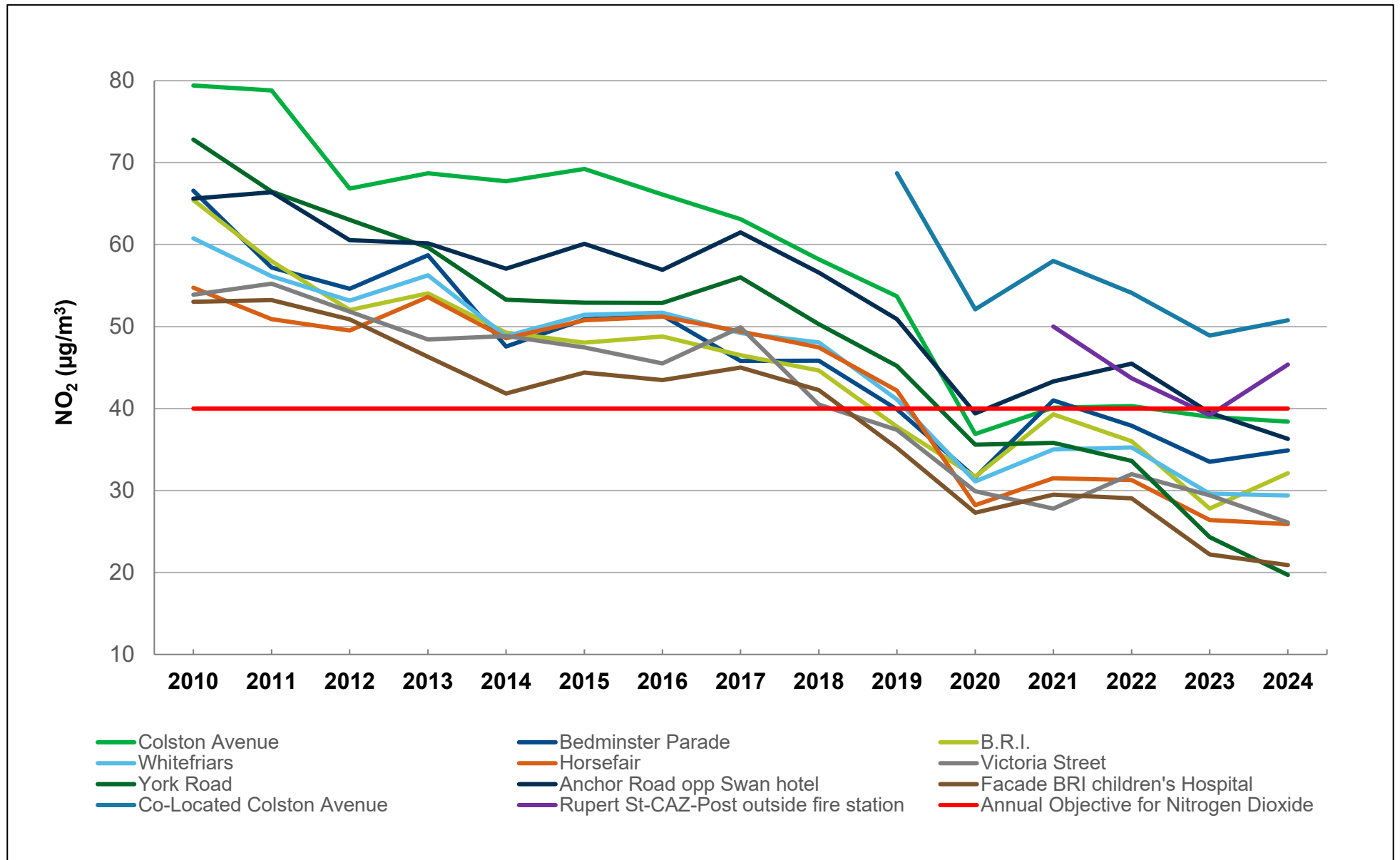


Figure A.2 - Trends in Annual Mean Nitrogen Dioxide Concentrations at Gloucester Road/Cheltenham Road Locations 2010 to 2024

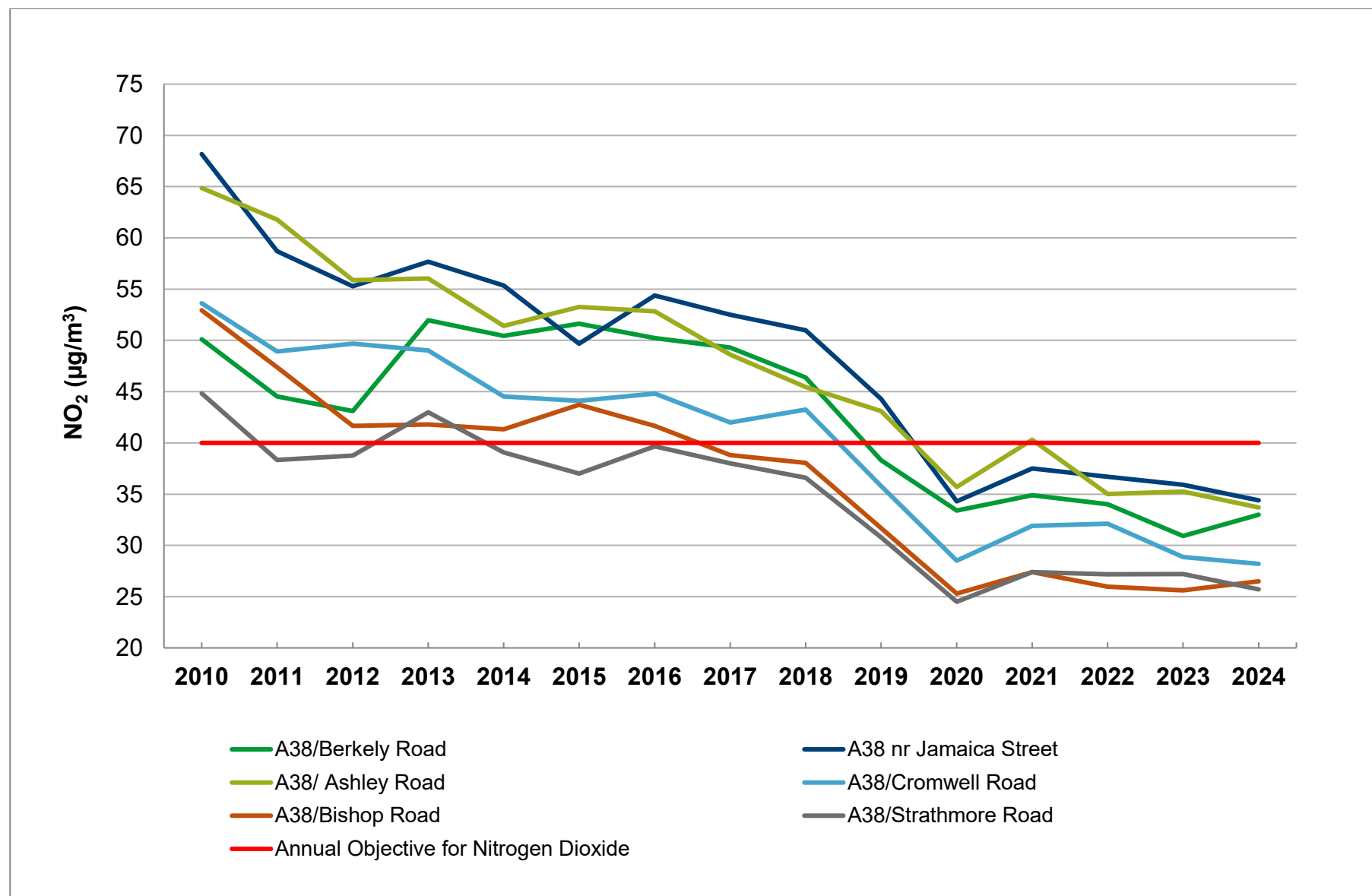


Figure A.3 - Trends in Annual Mean Nitrogen Dioxide Concentrations at Parson Street Gyratory Locations 2010 to 2024

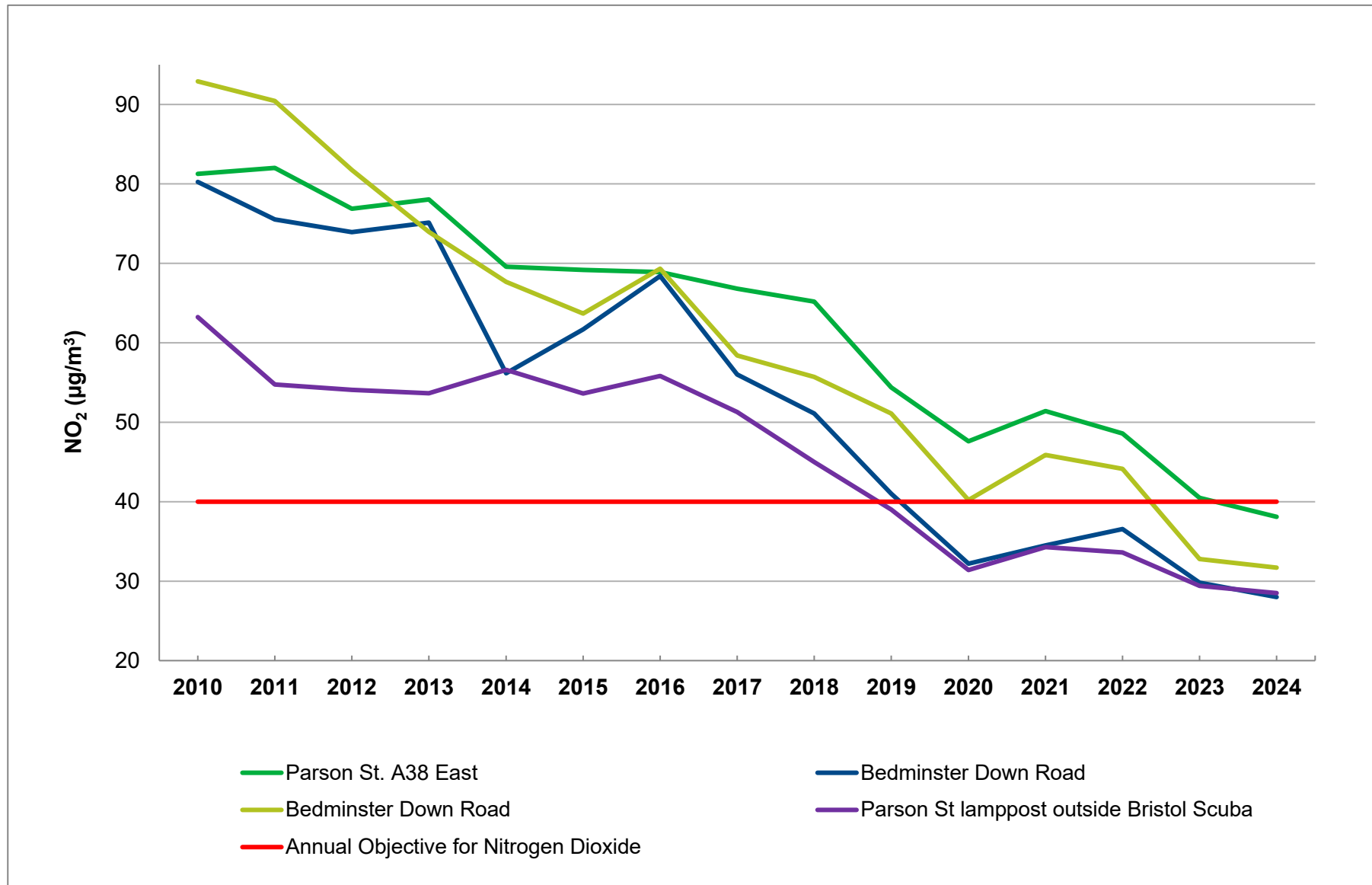


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) ⁽¹⁾ | Valid Data Capture 2024 (%) ⁽²⁾ | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|-------------------------|--------------------------|------------------|---|--|----------|----------|------|------|------|
| 203 | 361178 | 171566 | Urban background | 97.2 | 97.2 | 0 | 0 | 0 | 0 | 0 |
| 215 | 358042 | 170582 | Roadside | 97.8 | 97.8 | 0 | 0 | 0 | 0 | 0 |
| 270 | 360903 | 170024 | Roadside | 98.9 | 98.9 | 0 | 0 | 0 | 0 | 0 |
| 452 | 359488 | 173924 | Urban background | 99.3 | 99.3 | 0 | 0 | 0 | 0 | 0 |
| 463 | 362926 | 175590 | Roadside | 97.2 | 97.2 | 0 (81.3) | 0 | 0 | 0 | 0 |
| 500 | 359522 | 173381 | Roadside | 98.4 | 98.4 | 0 | 0 | 0 | 0 | 0 |
| 501 | 358640 | 173090 | Roadside | 94.4 | 94.4 | 6 | 0 | 9 | 0 | 0 |
| 672 | 358728 | 173520 | Roadside | 98.6 | 98.6 | | 0 (80.2) | 0 | 0 | 0 |

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m³ have been recorded.

Exceedances of the NO₂ 1-hour mean objective (200µg/m³ not to be exceeded more than 18 times/year) are shown in **bold**.

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

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

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

Table A.6 – Annual Mean PM₁₀ Monitoring Results (µg/m³)

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) ⁽¹⁾ | Valid Data Capture 2024 (%) ⁽²⁾ | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|-------------------------|--------------------------|------------------|---|--|------|------|------|------|------|
| 452 | 359488 | 173924 | Urban background | 96.5 | 96.5 | 17.3 | 15.7 | 17.3 | 15.8 | 15.0 |
| 500 | 359522 | 173381 | Roadside | 94.5 | 94.5 | 19.7 | 17.9 | 20.9 | 17.5 | 16.2 |
| 501 | 358640 | 173090 | Roadside | N/A | N/A | 19.4 | 18.2 | | | |

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the PM₁₀ annual mean objective of 40µg/m³ are shown in **bold**.

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

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

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

Figure A.4 – Trends in Annual Mean PM₁₀ Concentrations

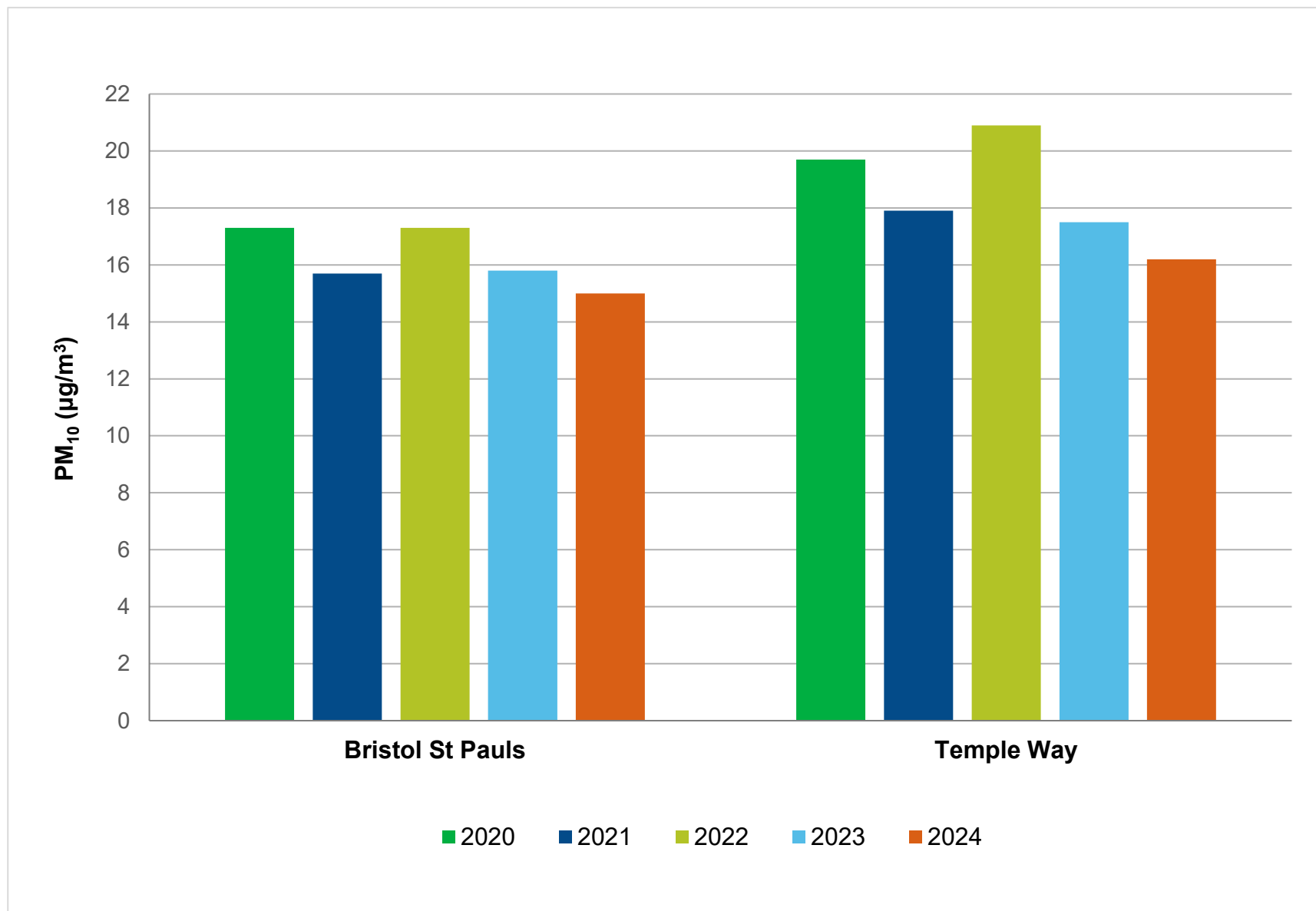


Table A.7 – 24-Hour Mean PM₁₀ Monitoring Results, Number of PM₁₀ 24-Hour Means > 50µg/m³

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) ⁽¹⁾ | Valid Data Capture 2024 (%) ⁽²⁾ | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|-------------------------|--------------------------|------------------|---|--|------|----------|----------|------|------|
| 452 | 359488 | 173924 | Urban background | 96.5 | 96.5 | 2 | 2 | 2 | 1 | 0 |
| 500 | 359522 | 173381 | Roadside | 94.5 | 94.5 | 4 | 3 | 4 (31.7) | 2 | 0 |
| 501 | 358640 | 173090 | Roadside | N/A | N/A | 0 | 2 (27.4) | | | |

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m³ have been recorded.

Exceedances of the PM₁₀ 24-hour mean objective (50µg/m³ not to be exceeded more than 35 times/year) are shown in **bold**.

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

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

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

Table A.8 – Annual Mean PM_{2.5} Monitoring Results (µg/m³)

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) ⁽¹⁾ | Valid Data Capture 2024 (%) ⁽²⁾ | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|-------------------------|--------------------------|------------------|---|--|------|------|------|------|------|
| 215 | 358042 | 170582 | Roadside | 97.9 | 97.9 | 11.8 | 12 | 13 | 9.1 | 8.4 |
| 452 | 359488 | 173924 | Urban background | 94.0 | 94.0 | 9.7 | 8.3 | 8.4 | 8.2 | 7.1 |

Notes:

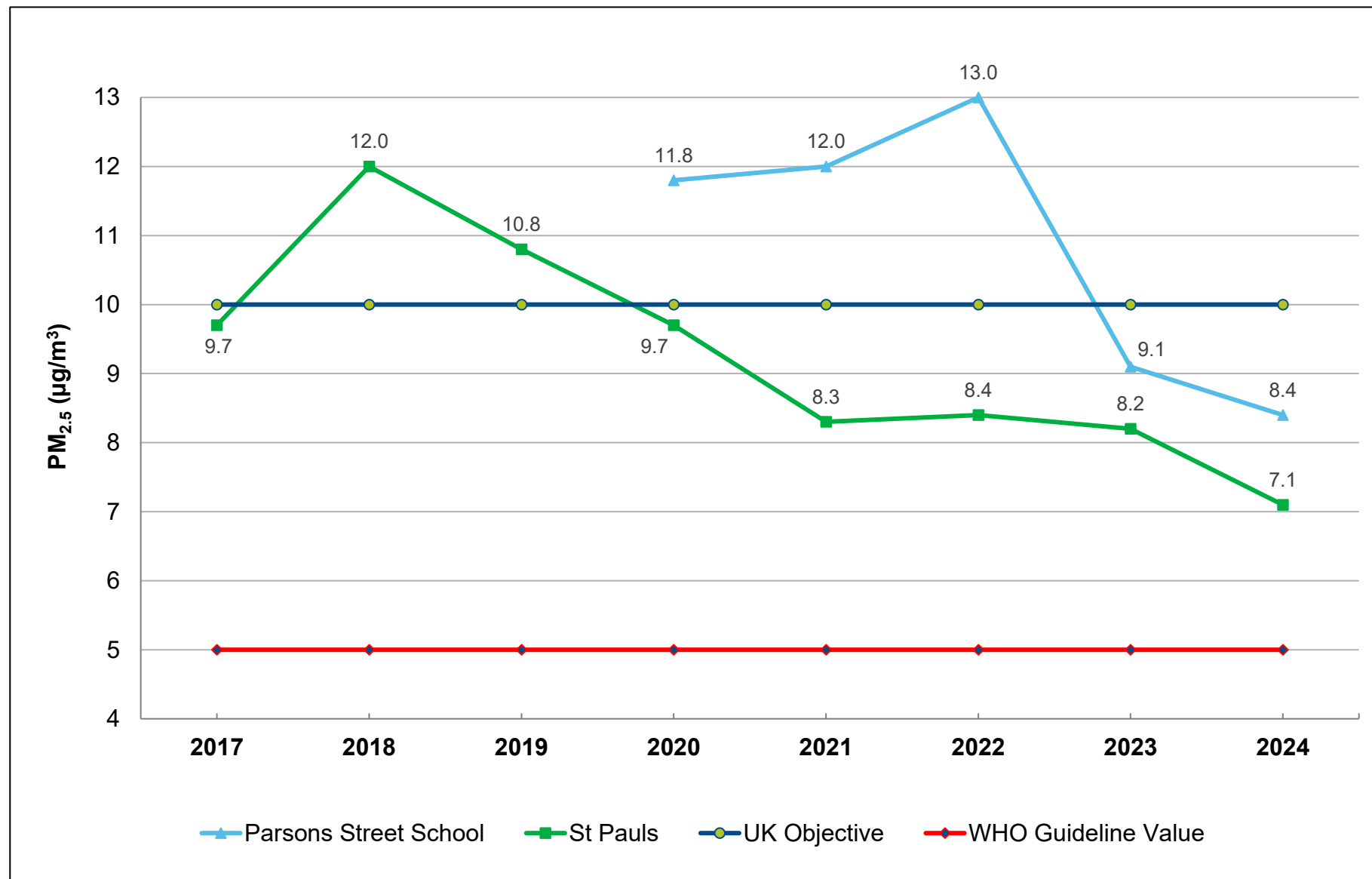
The annual mean concentrations are presented as µg/m³.

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

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

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

Figure A.5 – Trends in Annual Mean PM_{2.5} Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO₂ 2024 Diffusion Tube Results (µg/m³)

| 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---------|
| 2 | 358628 | 173011 | 49.2 | 51.6 | | 42.9 | 34.0 | 36.3 | 37.0 | 46.5 | | 57.1 | 53.4 | 49.6 | 45.8 | 38.4 | - | |
| 3 | 357448 | 174650 | 57.3 | 43.1 | 57.9 | 24.5 | 26.6 | 20.5 | 20.6 | 19.5 | 48.2 | 31.8 | 36.8 | 27.7 | 34.5 | 29.0 | - | |
| 4 | 359903 | 171850 | 44.3 | 38.7 | 31.9 | 33.0 | 29.7 | 30.3 | 29.1 | 31.6 | 44.8 | 43.2 | 46.2 | 35.7 | 36.5 | 30.7 | - | |
| 5 | 358723 | 171704 | 49.3 | 49.6 | 32.4 | 39.3 | 33.7 | 31.3 | 36.4 | 39.5 | 55.6 | 47.6 | 44.2 | 39.8 | 41.6 | 34.9 | - | |
| 9 | 358729 | 173499 | | | | | | | | | | | | | | - | - | |
| 10 | 361217 | 171429 | 44.6 | 37.6 | 33.5 | 31.7 | 28.8 | 26.8 | 27.8 | 28.9 | 42.9 | 51.4 | 45.4 | 33.3 | 36.1 | 30.3 | - | |
| 11 | 358813 | 173342 | 40.3 | 37.0 | 33.3 | 32.5 | 31.3 | 27.5 | 27.8 | 30.4 | 37.7 | 46.2 | 42.8 | 32.8 | 35.0 | 29.4 | - | |
| 12 | 359142 | 173211 | 46.8 | 48.9 | 28.8 | 42.0 | 39.8 | 38.4 | | 38.1 | 45.6 | 42.6 | 47.9 | 43.6 | 42.0 | 35.3 | - | |
| 14 | 360877 | 170280 | 40.8 | 29.9 | 24.7 | 28.6 | 28.9 | 29.5 | 27.7 | 27.3 | 35.4 | 34.5 | 35.9 | 25.4 | 30.7 | 25.8 | - | |
| 15 | 359294 | 173485 | 34.6 | 30.2 | 23.7 | 29.4 | 26.0 | 22.9 | 25.6 | 26.0 | 37.6 | 40.1 | 41.3 | 32.6 | 30.8 | 25.9 | - | |
| 16 | 352287 | 178698 | 31.5 | 31.8 | 24.5 | 22.5 | 21.4 | 19.6 | 21.8 | 24.2 | 22.6 | 28.5 | 31.1 | 28.0 | 25.6 | 21.5 | - | |
| 21 | 359035 | 175306 | 45.6 | 46.9 | 28.6 | 41.3 | 32.1 | 36.4 | 36.3 | 36.3 | 42.4 | 43.7 | 45.9 | 35.4 | 39.2 | 33.0 | - | |
| 22 | 359109 | 173886 | 47.5 | | 29.0 | 38.5 | 35.4 | | 34.5 | 38.6 | 47.0 | 47.2 | 51.3 | | 41.0 | 34.4 | - | |
| 113 | 359258 | 172696 | 44.2 | 44.3 | 30.0 | 29.0 | 27.8 | 28.1 | 28.4 | 31.0 | 40.0 | | | 34.2 | 33.7 | 28.3 | - | |
| 125 | 359214 | 171917 | 39.3 | 32.3 | 27.1 | 22.6 | 22.6 | 18.4 | 14.6 | 12.7 | 22.1 | 23.1 | 28.0 | 19.2 | 23.5 | 19.7 | - | |
| 147 | 358514 | 172691 | 59.3 | 52.8 | 35.5 | 49.0 | 35.2 | 33.4 | 30.5 | 42.1 | 42.9 | 42.4 | 56.0 | 40.1 | 43.3 | 36.3 | - | |
| 154 | 357601 | 172483 | 25.9 | 22.3 | 17.0 | 15.9 | 20.1 | 15.2 | 17.8 | 16.4 | 25.6 | 23.2 | 29.7 | 21.3 | 20.9 | 17.5 | - | |
| 155 | 357838 | 172713 | 27.4 | 19.4 | 21.2 | 16.3 | 11.2 | 13.7 | 14.8 | 16.2 | 21.3 | 15.1 | 30.1 | 11.1 | 18.2 | 15.2 | - | |
| 156 | 357709 | 173018 | 29.5 | 24.6 | 18.8 | 15.8 | 20.0 | 14.3 | 16.1 | 15.7 | 20.4 | 27.3 | 30.6 | 20.2 | 21.1 | 17.7 | - | |
| 157 | 359119 | 174090 | 47.9 | 44.3 | 27.9 | 39.5 | 36.8 | 38.3 | 34.7 | 38.0 | 45.0 | 44.0 | 49.0 | 35.6 | 40.1 | 33.7 | - | |
| 159 | 358891 | 174608 | 46.0 | 35.2 | 43.8 | 29.8 | 28.1 | 25.8 | 26.0 | 25.8 | 37.7 | 36.8 | 39.9 | 28.3 | 33.6 | 28.2 | - | |
| 161 | 359152 | 175733 | 41.4 | 32.7 | 31.0 | 28.9 | 25.2 | | 24.4 | 27.6 | 34.0 | 35.1 | 41.9 | 25.1 | 31.6 | 26.5 | - | |
| 163 | 359435 | 176574 | 44.4 | 30.0 | 25.2 | 28.6 | 25.6 | 26.0 | 26.1 | 25.7 | 33.5 | 35.3 | 38.5 | 28.4 | 30.6 | 25.7 | - | |
| 175 | 362147 | 170525 | 37.7 | 38.5 | 26.0 | 33.2 | 31.6 | 34.7 | 32.8 | 39.4 | 40.4 | 41.8 | 43.0 | 33.3 | 36.0 | 30.3 | - | |
| 239 | 357880 | 170506 | 58.4 | 52.9 | 40.7 | 45.7 | 35.6 | 40.9 | 40.3 | 49.1 | 47.8 | 45.4 | 47.0 | 40.6 | 45.4 | 38.1 | 25.4 | |
| 242 | 357510 | 170401 | 40.9 | 36.8 | 28.9 | 29.4 | 28.5 | 31.0 | 29.1 | 31.2 | | 36.9 | 41.7 | 31.9 | 33.3 | 28.0 | - | |
| 254 | 357118 | 172429 | 38.8 | 33.8 | 23.3 | 24.1 | 24.6 | 25.1 | 22.8 | | 30.1 | 28.9 | 33.6 | 27.9 | 28.5 | 23.9 | - | |
| 260 | 361140 | 175366 | 34.7 | 34.5 | 25.1 | 31.4 | 24.3 | 27.7 | 28.0 | 30.9 | 33.4 | 33.8 | 38.3 | 29.1 | 30.9 | 26.0 | - | |

| 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---|
| 261 | 361103 | 175059 | 52.0 | 45.0 | 28.9 | 40.1 | 33.1 | 35.7 | 29.5 | 33.4 | 44.9 | 43.6 | 50.3 | 34.9 | 39.3 | 33.0 | - | |
| 295 | 359913 | 174315 | 48.1 | 47.0 | 33.2 | 41.5 | 31.0 | 40.7 | 36.7 | 41.3 | 41.2 | 43.0 | 52.5 | 40.9 | 41.4 | 34.8 | - | |
| 300 | 363365 | 175883 | 39.6 | 35.1 | 22.4 | 27.2 | 24.1 | 24.1 | 27.2 | 31.6 | 36.9 | 34.4 | 41.3 | 32.7 | 31.4 | 26.4 | - | |
| 303 | 361368 | 175170 | 33.1 | 28.6 | 21.3 | 25.7 | 24.6 | 26.2 | 21.3 | 26.4 | 32.4 | 30.0 | 36.0 | 27.8 | 27.8 | 23.3 | - | |
| 307 | 360747 | 175328 | 34.9 | 30.8 | 24.2 | 25.3 | 21.6 | 16.9 | 19.8 | 20.0 | 26.0 | 30.0 | 34.7 | 23.8 | 25.7 | 21.6 | - | |
| 312 | 359832 | 174616 | 39.0 | 26.9 | 25.8 | 26.5 | 23.8 | 23.1 | 23.4 | 19.5 | 31.7 | 36.5 | 35.2 | 25.0 | 28.0 | 23.5 | - | |
| 320_1 | 361180 | 171567 | 27.8 | 22.7 | 19.4 | 17.4 | 19.4 | 16.2 | 15.8 | 17.7 | 21.6 | 22.4 | 26.0 | 17.4 | - | - | - | Triplicate Site with 320_1, 320_2 and 320_3 - Annual data provided for 320_3 only |
| 320_2 | 361180 | 171567 | 27.6 | 21.9 | 19.6 | 18.5 | 17.9 | 16.1 | 19.0 | 17.3 | 19.6 | 22.8 | 24.9 | 16.6 | - | - | - | Triplicate Site with 320_1, 320_2 and 320_3 - Annual data provided for 320_3 only |
| 320_3 | 361180 | 171567 | 26.3 | 21.4 | 19.8 | 17.5 | 18.7 | 16.8 | 17.7 | 16.5 | 20.6 | 22.1 | 26.4 | 19.2 | 20.2 | 17.0 | - | Triplicate Site with 320_1, 320_2 and 320_3 - Annual data provided for 320_3 only |
| 325 | 361667 | 175103 | 33.5 | 31.9 | 26.0 | 30.8 | 28.5 | 32.6 | 29.6 | 35.0 | 35.4 | 37.8 | 41.4 | 32.4 | 32.9 | 27.6 | - | |
| 363 | 359075 | 173613 | 31.4 | 30.9 | | 23.4 | 22.9 | 20.4 | 23.7 | 26.6 | 31.4 | 35.7 | 38.1 | 28.6 | 28.5 | 23.9 | - | |
| 370 | 359775 | 173513 | 33.2 | 25.7 | 18.8 | 18.5 | | 16.0 | 18.3 | 33.8 | 24.6 | 30.3 | 32.6 | 25.8 | 25.2 | 21.2 | - | |
| 373 | 359747 | 173774 | 31.1 | 29.8 | 23.7 | 18.7 | 21.1 | | 20.6 | 20.9 | 24.0 | 33.3 | 33.2 | 24.6 | 25.5 | 21.5 | - | |
| 374 | 359509 | 173595 | 34.8 | 37.7 | 27.3 | 27.8 | 23.3 | 18.0 | 24.8 | 25.3 | 36.0 | 35.7 | 36.8 | 30.7 | 29.9 | 25.1 | - | |
| 403 | 360508 | 171676 | 29.6 | 27.8 | 22.5 | 18.1 | 17.9 | 17.8 | 20.6 | 21.1 | 26.5 | 35.8 | 32.8 | 24.1 | 24.6 | 20.6 | - | |
| 405 | 361051 | 173743 | 45.0 | 47.6 | 33.6 | 35.9 | 30.5 | 33.0 | 32.8 | 37.8 | 46.9 | 47.4 | 52.6 | 37.2 | 40.0 | 33.6 | - | |
| 406 | 361576 | 173806 | 37.7 | 30.5 | 23.2 | 22.9 | 22.5 | 22.1 | 21.4 | 22.8 | 34.2 | 29.5 | 35.8 | 29.5 | 27.7 | 23.2 | - | |
| 413 | 360043 | 171508 | 32.2 | 28.7 | 22.1 | 24.3 | 24.7 | 26.0 | 24.6 | 24.5 | 29.8 | 26.7 | 32.7 | 24.6 | 26.7 | 22.5 | - | |
| 417 | 359635 | 171413 | 36.5 | 28.7 | 19.3 | 21.9 | 21.2 | 19.6 | 21.5 | 20.5 | 26.3 | 25.1 | 32.8 | 25.5 | 24.9 | 20.9 | - | |
| 418 | 357737 | 170642 | 48.7 | 42.3 | 17.4 | 35.7 | 34.8 | 29.3 | 34.1 | 38.6 | 43.1 | 44.5 | 46.9 | 38.1 | 37.8 | 31.7 | - | |
| 419 | 357832 | 170686 | 42.4 | 41.1 | 32.7 | 29.6 | 25.7 | 27.3 | 29.9 | 30.0 | 35.0 | 37.8 | 43.3 | 32.3 | 33.9 | 28.5 | - | |
| 420 | 358277 | 171562 | 37.0 | | | 23.2 | 23.8 | 20.5 | 22.0 | 21.6 | 29.2 | 28.8 | 34.4 | 24.8 | 26.5 | 22.3 | - | |
| 423 | 358623 | 173386 | 29.9 | 28.5 | 22.9 | 21.0 | 22.0 | 19.8 | 24.0 | 20.8 | 24.2 | 29.3 | 32.5 | 23.4 | 24.9 | 20.9 | - | |
| 429 | 360484 | 174097 | 48.4 | 47.0 | 31.0 | 33.4 | 32.3 | 41.6 | 39.0 | 46.3 | 47.8 | 41.3 | 49.0 | 47.7 | 42.1 | 35.3 | - | |
| 436 | 361013 | 173352 | 35.7 | 32.2 | 25.7 | 25.7 | 26.3 | 26.0 | 27.4 | 31.8 | 37.5 | 36.9 | 37.9 | | 31.2 | 26.2 | - | |
| 438_1 | 360903 | 170024 | 32.3 | 33.9 | 25.8 | 22.8 | 20.2 | 24.5 | 23.8 | 26.5 | 25.6 | 28.8 | 32.6 | 24.3 | - | - | - | Triplicate Site with 438_1, 438_2 and 438_3 - Annual data provided for 438_3 only |
| 438_2 | 360903 | 170024 | 34.1 | 33.2 | 26.3 | 25.5 | 24.3 | 24.8 | 25.9 | 27.4 | 27.8 | 30.8 | 33.3 | 25.8 | - | - | - | Triplicate Site with 438_1, 438_2 and 438_3 - Annual data provided for 438_3 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---|
| 438_3 | 360903 | 170024 | 33.5 | 33.7 | 28.0 | 26.1 | 26.4 | 23.9 | 25.2 | 25.4 | 29.1 | 28.7 | 31.3 | 24.5 | 27.7 | 23.2 | - | Triplicate Site with 438_1, 438_2 and 438_3 - Annual data provided for 438_3 only |
| 439_1 | 358042 | 170582 | 33.7 | 30.3 | 27.8 | 21.5 | 25.6 | 22.6 | 23.6 | 24.5 | 29.7 | 25.5 | 30.5 | 25.1 | - | - | - | Triplicate Site with 439_1, 439_2 and 439_3 - Annual data provided for 439_3 only |
| 439_2 | 358042 | 170582 | 36.0 | 29.6 | 25.7 | 23.6 | 26.3 | 20.9 | 25.2 | 22.5 | 26.7 | 26.5 | 30.3 | 26.5 | - | - | - | Triplicate Site with 439_1, 439_2 and 439_3 - Annual data provided for 439_3 only |
| 439_3 | 358042 | 170582 | 31.9 | 27.9 | 26.2 | 22.5 | 22.1 | 24.1 | 24.3 | 24.1 | 30.8 | 27.2 | 31.4 | 25.3 | 26.6 | 22.4 | - | Triplicate Site with 439_1, 439_2 and 439_3 - Annual data provided for 439_3 only |
| 455_1 | 359487 | 173924 | 23.2 | 19.2 | 14.7 | 13.8 | 13.0 | 10.8 | 12.3 | 11.6 | 14.7 | 28.3 | 24.9 | 18.0 | - | - | - | Triplicate Site with 455_1, 455_2 and 455_3 - Annual data provided for 455_3 only |
| 455_2 | 359487 | 173924 | 24.2 | 18.3 | 16.0 | 13.6 | 12.2 | 9.2 | 12.6 | 8.0 | 15.1 | 20.7 | 23.9 | 17.2 | - | - | - | Triplicate Site with 455_1, 455_2 and 455_3 - Annual data provided for 455_3 only |
| 455_3 | 359487 | 173924 | 21.6 | 18.3 | 17.9 | 13.9 | 13.0 | 10.1 | 11.7 | 12.5 | 15.4 | 21.4 | 23.5 | 18.0 | 16.5 | 13.8 | - | Triplicate Site with 455_1, 455_2 and 455_3 - Annual data provided for 455_3 only |
| 464_1 | 362927 | 175592 | 27.1 | 28.3 | 24.8 | 21.0 | 18.9 | 17.9 | 20.5 | 20.0 | 24.4 | 18.7 | 35.0 | 30.3 | - | - | - | Triplicate Site with 464_1, 464_2 and 464_3 - Annual data provided for 464_3 only |
| 464_2 | 362927 | 175592 | 29.0 | 28.8 | 23.1 | 18.7 | 18.4 | 16.5 | 22.0 | 21.6 | 24.2 | 29.8 | 36.1 | 30.2 | - | - | - | Triplicate Site with 464_1, 464_2 and 464_3 - Annual data provided for 464_3 only |
| 464_3 | 362927 | 175592 | 31.5 | 30.5 | 24.6 | 19.0 | 19.0 | | 19.2 | 23.0 | 22.8 | 32.1 | 35.0 | 30.8 | 24.7 | 20.8 | - | Triplicate Site with 464_1, 464_2 and 464_3 - Annual data provided for 464_3 only |
| 470 | 359213 | 170997 | 41.1 | 26.0 | 22.5 | 22.7 | 22.7 | 20.7 | 20.6 | 18.9 | 28.1 | 31.2 | 30.4 | 25.3 | 25.9 | 21.7 | - | |
| 472 | 358226 | 171284 | 40.3 | 33.5 | 32.2 | 27.3 | 26.3 | | 26.6 | 28.1 | 32.7 | 23.0 | 37.8 | 28.2 | 30.5 | 25.7 | - | |
| 473 | 358105 | 171124 | 44.6 | 30.4 | 22.9 | 25.2 | | 26.0 | 26.5 | 25.5 | 34.9 | 36.2 | 35.6 | 28.3 | 30.6 | 25.7 | - | |
| 487 | 360243 | 174327 | | 34.7 | 30.3 | 27.5 | 25.4 | 25.5 | 25.5 | 26.2 | 28.5 | 29.6 | 35.7 | 26.3 | 28.7 | 24.1 | - | |
| 492 | 359445 | 176627 | 35.9 | 31.8 | 29.6 | 27.7 | 22.3 | 20.7 | 21.3 | 25.6 | 28.9 | 29.8 | 38.2 | 27.1 | 28.2 | 23.7 | - | |
| 493 | 359677 | 176758 | 39.3 | 32.0 | 28.7 | 30.4 | 30.3 | 28.1 | 30.5 | 14.2 | 32.4 | 34.0 | 37.7 | 31.2 | 30.7 | 25.8 | - | |
| 494 | 359558 | 176850 | 31.2 | 26.7 | 23.2 | 23.4 | 25.0 | 21.1 | 24.0 | 21.6 | 25.0 | 29.1 | 34.9 | 22.9 | 25.7 | 21.6 | - | |
| 496 | 362296 | 173620 | 27.7 | 29.5 | 22.0 | 20.3 | 21.5 | 19.5 | 22.6 | 22.8 | 21.7 | 24.5 | 31.3 | 24.6 | 24.0 | 20.2 | - | |
| 497 | 359268 | 174132 | 34.4 | 30.8 | 30.5 | 23.8 | 24.0 | 18.3 | 14.6 | 22.1 | 27.9 | 34.1 | 33.9 | 27.6 | 26.8 | 22.5 | - | |
| 499_1 | 359522 | 173381 | 40.7 | | 30.0 | 28.4 | 25.2 | 18.3 | 22.8 | 23.4 | 33.9 | 31.1 | 37.1 | 30.1 | - | - | - | Triplicate Site with 499_1, 499_2 and 499_3 - Annual data provided for 499_3 only |
| 499_2 | 359522 | 173381 | 39.4 | | | 27.4 | 25.8 | 19.5 | 10.1 | 23.1 | 31.5 | 32.4 | 36.6 | 30.3 | - | - | - | Triplicate Site with 499_1, 499_2 and 499_3 - Annual data provided for 499_3 only |
| 499_3 | 359522 | 173381 | 37.6 | | | | | 19.4 | 21.4 | 24.1 | 31.7 | 29.5 | 35.9 | 30.6 | 28.5 | 23.9 | - | Triplicate Site with 499_1, 499_2 and 499_3 - Annual data provided for 499_3 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---|
| 502_1 | 358640 | 173090 | 63.9 | 65.8 | 52.5 | 52.1 | 53.5 | 55.7 | 56.8 | 57.7 | 71.8 | 66.7 | 69.7 | | - | - | - | Triplicate Site with 502_1, 502_2 and 502_3 - Annual data provided for 502_3 only |
| 502_2 | 358640 | 173090 | 62.7 | 68.7 | 50.0 | 49.4 | 47.6 | 47.8 | 60.1 | 63.5 | 59.6 | 63.2 | 69.7 | | - | - | - | Triplicate Site with 502_1, 502_2 and 502_3 - Annual data provided for 502_3 only |
| 502_3 | 358640 | 173090 | 72.1 | 69.9 | 54.2 | 55.7 | 50.1 | 55.3 | 54.9 | 56.6 | 74.6 | 70.4 | 72.4 | | 60.5 | 50.8 | 43.4 | Triplicate Site with 502_1, 502_2 and 502_3 - Annual data provided for 502_3 only |
| 512 | 359026 | 174432 | 49.9 | 42.5 | 34.1 | 37.2 | 44.3 | 44.4 | 44.4 | 39.0 | 55.9 | | | | 43.5 | 36.6 | 33.4 | |
| 525 | 362455 | 173687 | 32.3 | 29.5 | 23.7 | 23.7 | 24.4 | 23.2 | 24.6 | 23.5 | 26.8 | 33.1 | 34.4 | 32.7 | 27.7 | 23.2 | - | |
| 538 | 358681 | 171478 | | | | | | | | | | | | | - | - | - | |
| 539 | 358599 | 171391 | 44.9 | 36.0 | 20.6 | 19.5 | 24.0 | 26.7 | 23.3 | 19.9 | 22.7 | | | | 26.4 | 22.2 | - | |
| 545 | 356379 | 171436 | 25.0 | 27.9 | 20.9 | 18.1 | 16.9 | 13.3 | 15.6 | 16.5 | 15.8 | 20.7 | 25.2 | 16.6 | 19.4 | 16.3 | - | |
| 550 | 358353 | 172613 | 41.2 | 24.6 | | 23.6 | | | 18.4 | 20.5 | 29.6 | | 35.4 | 24.4 | 27.2 | 21.9 | - | |
| 555 | 356679 | 172589 | 25.9 | 19.8 | 18.1 | 18.7 | 21.6 | 18.4 | 16.4 | 15.7 | 25.5 | 24.2 | 29.6 | 20.5 | 21.2 | 17.8 | - | |
| 556 | 356827 | 172303 | 31.4 | 25.2 | 24.2 | 23.2 | 22.9 | 20.9 | 21.9 | 16.8 | 28.8 | 26.1 | 31.7 | 24.1 | 24.8 | 20.8 | - | |
| 559 | 356485 | 171580 | 31.6 | 31.2 | 25.2 | 17.1 | 20.6 | 17.1 | 17.4 | | 23.7 | 23.4 | 33.2 | 21.2 | 23.8 | 20.0 | - | |
| 560_1 | 358665 | 173439 | 35.5 | 27.6 | 26.7 | 23.0 | 24.0 | 17.0 | 18.4 | 17.9 | 23.5 | 30.4 | | 23.1 | - | - | - | Duplicate Site with 560_1 and 560_2 - Annual data provided for 560_2 only |
| 560_2 | 358665 | 173439 | 35.5 | 30.8 | 27.6 | 23.7 | 20.3 | 13.7 | 16.2 | 19.1 | 24.5 | 31.8 | | 26.3 | 24.4 | 20.5 | - | Duplicate Site with 560_1 and 560_2 - Annual data provided for 560_2 only |
| 561_1 | 358688 | 173431 | 35.4 | 28.4 | 31.1 | 24.8 | 25.1 | 23.0 | 26.1 | | | | | | - | - | - | Duplicate Site with 561_1 and 561_2 - Annual data provided for 561_2 only |
| 561_2 | 358688 | 173431 | 39.8 | 32.9 | 34.0 | 23.5 | 28.3 | 20.5 | 24.1 | | | | | | 28.4 | 25.7 | - | Duplicate Site with 561_1 and 561_2 - Annual data provided for 561_2 only |
| 565 | 357227 | 179101 | 30.9 | 27.2 | 20.9 | 21.1 | 23.8 | 23.7 | 24.1 | 21.0 | 31.1 | 43.6 | 34.2 | 24.7 | 27.2 | 22.8 | - | |
| 567 | 360728 | 175345 | 46.7 | 48.6 | 42.8 | 39.7 | 37.2 | 35.4 | 39.8 | 36.3 | 41.1 | 35.2 | 50.8 | 37.8 | 41.0 | 34.4 | - | |
| 568 | 360178 | 175779 | 42.5 | 36.3 | 32.6 | 32.0 | 32.5 | 29.3 | 30.7 | 28.5 | 34.6 | | 39.2 | | 33.8 | 28.4 | - | |
| 569 | 359855 | 176186 | 32.4 | 27.0 | 22.6 | 20.7 | 24.6 | 19.1 | 21.9 | 19.9 | 26.0 | 30.7 | 37.0 | 24.0 | 25.5 | 21.4 | - | |
| 570 | 359847 | 176439 | 36.9 | 35.8 | 32.2 | 28.5 | 28.6 | 24.6 | 23.8 | 27.6 | 30.2 | 37.3 | 42.9 | 29.1 | 31.5 | 26.4 | - | |
| 571 | 359848 | 176411 | 37.1 | 40.0 | 34.7 | 29.7 | 29.7 | 27.5 | 31.3 | 31.9 | 31.1 | 39.0 | 44.0 | 35.3 | 34.3 | 28.8 | - | |
| 574 | 357678 | 174229 | 32.6 | 37.4 | 25.5 | | 27.1 | 23.0 | 27.1 | 25.2 | 29.4 | 28.5 | 36.9 | 26.5 | 29.0 | 24.4 | - | |
| 575 | 358685 | 172881 | 49.7 | 44.8 | 38.5 | 34.2 | 37.0 | 31.3 | 32.5 | 36.8 | 43.2 | 46.1 | 50.4 | 41.4 | 40.5 | 34.0 | - | |
| 576 | 358792 | 172874 | 38.9 | 38.4 | 31.6 | 26.6 | 29.5 | 23.7 | 27.1 | 25.9 | 31.1 | 41.5 | 40.9 | 33.1 | 32.4 | 27.2 | - | |
| 577 | 358935 | 172981 | 44.6 | 44.0 | 39.2 | 38.1 | 36.9 | 37.0 | | 40.9 | 43.4 | 48.1 | 48.3 | 40.7 | 41.9 | 35.2 | - | |
| 578 | 361892 | 173552 | 34.0 | 28.0 | 24.3 | 26.5 | 28.7 | 25.7 | 26.0 | | 31.8 | 33.8 | 39.6 | | 29.8 | 25.1 | - | |

| 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---------|
| 579 | 362198 | 173580 | 35.1 | | 27.9 | 26.6 | 29.3 | 21.1 | 25.7 | 25.6 | 33.0 | 37.8 | 43.1 | 33.2 | 30.8 | 25.8 | - | |
| 580 | 358754 | 173528 | 43.8 | | | 30.1 | 32.8 | 29.8 | 33.9 | 29.3 | 32.9 | 38.4 | 42.8 | 35.7 | 35.0 | 29.4 | - | |
| 581 | 358908 | 173574 | 42.2 | 38.5 | 35.9 | | 31.2 | 24.1 | 25.7 | 28.9 | 32.8 | 39.7 | 45.1 | 35.4 | 34.5 | 29.0 | - | |
| 582 | 358893 | 173333 | 51.8 | 61.9 | 54.5 | 45.0 | 49.4 | | | 42.3 | 54.3 | 64.3 | 65.0 | 51.7 | 54.0 | 45.4 | - | |
| 583 | 358870 | 173340 | 49.9 | 51.9 | | 38.5 | | 39.1 | 40.0 | 25.4 | 48.1 | | 50.6 | 48.7 | 43.6 | 36.6 | - | |
| 584 | 358773 | 173276 | 45.3 | 33.3 | 30.8 | 33.3 | 31.6 | 24.5 | 24.2 | | 50.2 | 42.8 | 31.1 | 39.6 | 35.2 | 29.5 | - | |
| 585 | 358192 | 173050 | 40.6 | 33.7 | 34.4 | 34.0 | 39.2 | 22.9 | | | 40.7 | 31.6 | 46.8 | 32.6 | 35.7 | 29.9 | - | |
| 586 | 358195 | 173018 | 45.7 | 46.7 | | 41.1 | | 34.4 | 39.2 | 37.6 | 48.7 | 51.1 | 48.1 | 41.3 | 43.4 | 36.4 | 26.4 | |
| 587 | 358802 | 172896 | 39.0 | 38.1 | 32.4 | 29.2 | | 26.7 | 27.6 | | 34.8 | 41.8 | 36.9 | 34.6 | 34.1 | 28.7 | - | |
| 588 | 358739 | 172869 | 40.0 | 40.0 | 33.3 | 29.5 | 30.7 | 23.7 | 29.6 | 29.9 | 30.3 | 43.3 | 38.2 | 36.3 | 33.7 | 28.3 | - | |
| 589 | 358849 | 173606 | 32.3 | 24.8 | 23.3 | 20.5 | 25.1 | 15.5 | 16.6 | 18.2 | 23.5 | 31.2 | 32.5 | 22.0 | 23.8 | 20.0 | - | |
| 590 | 358789 | 173589 | 39.8 | 43.8 | 37.0 | 29.4 | 30.0 | 29.8 | 34.2 | 31.1 | 31.3 | 42.1 | 38.5 | 31.1 | 34.8 | 29.3 | - | |
| 591 | 358805 | 173575 | 32.6 | 36.2 | 31.2 | | 25.9 | 18.8 | 26.3 | 23.4 | 23.0 | 35.6 | 26.6 | 26.9 | 27.9 | 23.4 | - | |
| 592 | 358662 | 173409 | 40.8 | 40.3 | 33.7 | | | | | | | | | | 38.3 | 26.7 | - | |
| 593 | 358610 | 173350 | 37.5 | 32.8 | 27.1 | 25.1 | 25.5 | 23.3 | 22.2 | 22.2 | 28.0 | 31.1 | 34.1 | 30.6 | 28.3 | 23.8 | - | |
| 594 | 358540 | 173234 | 35.1 | 27.5 | 26.0 | 25.3 | 25.2 | 22.8 | 22.8 | 23.4 | 32.3 | 31.7 | 35.8 | | 28.0 | 23.5 | - | |
| 595 | 358510 | 173197 | 37.3 | 31.3 | 26.9 | | 26.7 | 21.1 | | | | 35.6 | 36.4 | 27.2 | 30.3 | 22.6 | - | |
| 596 | 358431 | 173120 | | 34.9 | 30.1 | 23.5 | | 19.9 | 23.5 | 24.4 | | 27.5 | 33.3 | 28.1 | 27.2 | 22.9 | - | |
| 597 | 358403 | 173124 | 29.0 | 25.6 | 23.4 | 20.7 | 21.7 | 17.0 | 21.1 | 21.7 | 25.1 | 36.0 | 29.8 | 25.5 | 24.7 | 20.8 | - | |
| 598 | 358061 | 173182 | 33.2 | 23.5 | 23.9 | 25.3 | 26.5 | 19.4 | 18.3 | 18.5 | 41.7 | 34.7 | | 26.4 | 26.5 | 22.3 | - | |
| 599 | 358135 | 173123 | 37.7 | 32.4 | 35.8 | 31.9 | 32.2 | 27.0 | 29.1 | 27.3 | 28.2 | 49.1 | 41.9 | 34.0 | 33.9 | 28.5 | - | |
| 600 | 358322 | 172858 | 28.6 | | 25.6 | 24.0 | 25.9 | 18.9 | 22.1 | 21.3 | 32.0 | | | 24.1 | 24.7 | 20.8 | - | |
| 601 | 358563 | 172818 | 44.8 | | 35.7 | 29.2 | 31.2 | 25.9 | 27.0 | 19.4 | 38.3 | 34.1 | 37.0 | 37.6 | 32.7 | 27.5 | - | |
| 602 | 358469 | 172656 | | | 42.1 | 41.0 | 43.3 | 31.4 | 28.7 | 35.1 | 44.6 | 42.6 | 45.9 | 43.7 | 39.8 | 33.5 | - | |
| 603 | 358767 | 173320 | 49.9 | 42.0 | 37.7 | 36.9 | 40.8 | 30.7 | 33.7 | 35.8 | 49.5 | 45.9 | 52.4 | 44.0 | 41.6 | 35.0 | - | |
| 604 | 358817 | 173342 | 51.4 | 51.3 | 39.1 | 39.9 | 47.7 | 32.7 | | 40.9 | 34.3 | 33.4 | 48.8 | 43.7 | 42.1 | 35.4 | - | |
| 605 | 358718 | 173227 | 39.9 | 38.4 | 32.1 | 32.5 | 33.7 | 22.8 | 26.4 | 31.2 | 37.4 | 40.1 | 42.8 | 38.7 | 34.7 | 29.1 | - | |
| 606 | 359124 | 172803 | 37.3 | 29.9 | 25.6 | 21.8 | 23.8 | 16.8 | 19.7 | 20.5 | 26.7 | 30.7 | 33.0 | 25.9 | 26.0 | 21.8 | - | |
| 607 | 359183 | 172826 | 32.5 | 27.0 | 23.9 | 20.0 | 24.1 | 18.4 | 21.5 | 20.2 | 31.1 | 27.5 | 33.1 | 25.8 | 25.4 | 21.4 | - | |
| 608 | 359563 | 172290 | 44.6 | 38.7 | 36.3 | 34.8 | 39.6 | 30.2 | 32.4 | 35.3 | 44.9 | 40.9 | 41.6 | 38.4 | 38.1 | 32.0 | - | |
| 609 | 359740 | 172116 | 40.2 | 25.7 | 25.1 | 26.3 | 28.1 | 20.8 | 24.2 | 20.8 | 43.3 | 34.0 | 38.2 | 28.4 | 29.6 | 24.9 | - | |

| 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---------|
| 610 | 359967 | 171548 | 38.2 | 32.9 | 30.8 | 28.0 | 33.3 | 27.8 | 23.9 | 21.8 | 32.0 | 30.8 | 35.3 | 26.4 | 30.1 | 25.3 | - | |
| 611 | 357425 | 170769 | 27.1 | 18.3 | 16.9 | 14.5 | 17.1 | 12.4 | 12.7 | 12.4 | 19.2 | 21.3 | 27.9 | 18.7 | 18.2 | 15.3 | - | |
| 612 | 359206 | 173557 | 34.2 | 27.1 | 24.8 | 27.2 | 29.0 | 23.3 | 21.4 | 21.7 | 37.3 | 29.6 | 33.1 | 27.9 | 28.1 | 23.6 | - | |
| 613 | 359316 | 173554 | | 35.4 | 33.7 | 34.3 | 40.5 | | 32.1 | 37.1 | | 46.7 | 48.4 | 35.1 | 38.1 | 32.0 | - | |
| 614 | 359516 | 173374 | 35.1 | 29.7 | 27.4 | 26.2 | | 20.3 | 23.0 | 23.6 | 24.8 | 33.4 | 35.3 | 28.2 | 27.9 | 23.4 | - | |
| 615 | 359659 | 173688 | 45.2 | 51.9 | 44.5 | 38.8 | 42.6 | 39.4 | 36.8 | 43.6 | 49.0 | 49.5 | 48.1 | 40.8 | 44.2 | 37.1 | 27.3 | |
| 616 | 359747 | 173717 | 45.4 | | 29.9 | 28.4 | 33.4 | 29.6 | 26.7 | 31.9 | 47.1 | 38.2 | 42.9 | 33.1 | 35.1 | 29.5 | - | |
| 617 | 359686 | 173587 | | | 27.2 | | | | 26.5 | 26.0 | 28.0 | | | 29.0 | 27.3 | 27.9 | - | |
| 618 | 359086 | 174187 | 43.9 | 42.8 | 39.3 | 40.0 | 33.0 | 35.3 | 36.3 | 21.9 | 32.0 | 41.3 | 41.9 | 34.4 | 36.8 | 30.9 | - | |
| 619 | 359119 | 174149 | 47.0 | 42.5 | 38.5 | 34.8 | 34.2 | 32.6 | 34.3 | 32.8 | 39.5 | 48.2 | 43.4 | 30.1 | 38.2 | 32.1 | - | |
| 621 | 359256 | 175999 | 37.6 | 34.3 | | 29.5 | 24.7 | | 25.0 | 26.9 | | | | 27.3 | 29.3 | 26.0 | - | |
| 622 | 358059 | 170597 | 41.3 | 38.7 | 30.1 | 28.7 | 32.6 | 30.0 | 31.8 | 31.4 | 31.0 | 32.1 | 32.4 | 32.8 | 32.7 | 27.5 | - | |
| 623 | 358034 | 170602 | 38.0 | 34.4 | | | 27.1 | 21.7 | 23.0 | 24.9 | 19.1 | 28.7 | 32.3 | 28.3 | 27.8 | 23.3 | - | |
| 624 | 357858 | 170499 | 59.1 | 53.1 | 52.2 | 48.5 | 48.8 | 46.3 | 46.7 | 31.5 | 47.2 | 43.5 | 47.6 | 45.3 | 47.5 | 39.9 | 29.2 | |
| 625 | 357842 | 170514 | 48.2 | 48.1 | 40.0 | 37.8 | 39.9 | 38.6 | 39.5 | 39.1 | 15.7 | 41.8 | 44.6 | 37.1 | 39.2 | 32.9 | - | |
| 626 | 357667 | 170466 | 53.1 | | 48.8 | 39.5 | | 36.2 | | 31.5 | 26.2 | | 44.7 | 41.0 | 40.1 | 33.4 | - | |
| 627 | 357829 | 170658 | | | 37.3 | 32.5 | 34.8 | 32.1 | 31.5 | 32.3 | 34.8 | 39.5 | 39.5 | 32.9 | 34.7 | 29.2 | - | |
| 628 | 359899 | 174335 | 44.2 | 36.1 | 28.2 | 33.1 | 34.8 | 30.1 | 32.0 | 28.5 | 36.2 | 35.7 | 40.1 | 29.3 | 34.0 | 28.6 | - | |
| 629 | 359956 | 174314 | | 40.3 | 35.6 | 33.9 | 31.8 | 28.9 | 19.6 | 31.8 | 31.9 | 37.3 | 40.7 | 17.8 | 31.8 | 26.7 | - | |
| 630 | 357533 | 170410 | 35.4 | | 34.7 | 28.6 | | 21.2 | 21.2 | 25.6 | | 28.9 | 36.8 | 27.8 | 28.9 | 24.3 | - | |
| 632 | 358073 | 171063 | 35.1 | 28.9 | 24.6 | 22.1 | 24.2 | 19.6 | 21.4 | 22.6 | 25.6 | 30.8 | 33.9 | 26.8 | 26.3 | 22.1 | - | |
| 633 | 358217 | 171299 | 48.8 | | 37.4 | 34.7 | 39.0 | 34.9 | 38.7 | 37.5 | 42.5 | 39.3 | 43.4 | 38.7 | 39.5 | 33.2 | - | |
| 634 | 358772 | 171741 | 40.7 | | 30.8 | 24.6 | 15.1 | 22.0 | 27.9 | 32.7 | 39.9 | 37.3 | 40.9 | 29.8 | 31.1 | 26.1 | - | |
| 635 | 359106 | 171962 | 31.1 | 25.9 | 21.1 | 17.3 | 10.8 | 14.0 | 15.6 | 16.4 | 10.3 | 24.2 | 28.6 | 20.8 | 19.7 | 16.5 | - | |
| 636 | 359940 | 171838 | 38.8 | 31.2 | | 23.6 | 21.1 | 19.0 | 18.5 | 19.9 | 21.3 | 24.3 | 29.4 | 27.9 | 25.0 | 21.0 | - | |
| 637 | 361206 | 171390 | 35.8 | 29.1 | 23.1 | 18.6 | 16.0 | 12.0 | 10.8 | 13.5 | 15.1 | 24.6 | 23.4 | 19.2 | 20.1 | 16.9 | - | |
| 638 | 359498 | 173144 | 61.7 | 52.5 | 47.9 | 53.2 | 42.4 | 40.5 | 43.2 | 51.5 | 48.3 | 49.5 | 49.6 | 54.6 | 49.6 | 41.6 | - | |
| 639 | 359318 | 172634 | 40.3 | 35.9 | 33.0 | 26.6 | 27.5 | 21.1 | 25.3 | 24.2 | 31.5 | 37.5 | 40.1 | 25.5 | 30.7 | 25.8 | - | |
| 640 | 359792 | 173319 | 28.6 | | 26.5 | 22.7 | 25.0 | 20.6 | 23.5 | 24.8 | 27.7 | 34.1 | 31.5 | 27.6 | 26.6 | 22.3 | - | |
| 641 | 359114 | 174007 | 53.5 | | 39.0 | 38.7 | 37.8 | 39.5 | 36.7 | 43.5 | 34.4 | 46.2 | 45.4 | 39.4 | 41.3 | 34.7 | - | |
| 642 | 359276 | 174155 | 34.7 | 27.1 | 28.2 | 27.0 | 25.1 | 21.8 | 22.9 | 20.7 | 26.5 | 30.1 | 34.6 | 25.0 | 27.0 | 22.7 | - | |

| 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---|
| 643 | 359817 | 174401 | 42.7 | 35.8 | 33.2 | 29.9 | 31.0 | 27.5 | 25.4 | 18.4 | 13.4 | 35.7 | 39.0 | 30.8 | 30.2 | 25.4 | - | |
| 644 | 359676 | 175102 | 42.4 | 33.7 | 28.4 | 30.5 | 27.7 | 27.5 | 25.4 | 26.3 | 25.0 | 28.7 | 35.8 | 27.2 | 29.9 | 25.1 | - | |
| 645 | 359033 | 175259 | 53.0 | 32.6 | 35.0 | 29.7 | 27.2 | 23.7 | 23.6 | 36.6 | 30.4 | | 39.5 | 26.8 | 32.6 | 27.3 | - | |
| 646 | 359038 | 174391 | 32.1 | 34.4 | 32.7 | 35.3 | 33.9 | 40.9 | 34.9 | 23.3 | 46.7 | 40.6 | 43.7 | 34.4 | 36.1 | 30.3 | - | |
| 647 | 357124 | 172400 | 35.2 | 30.9 | 27.7 | 22.7 | 27.5 | 20.6 | 20.8 | 16.4 | 29.5 | 34.3 | 37.5 | 25.3 | 27.4 | 23.0 | - | |
| 648 | 360905 | 170185 | 32.5 | 31.6 | 32.5 | 25.6 | 27.5 | 22.7 | 24.6 | 24.8 | 44.6 | 40.8 | 36.7 | 25.2 | 30.8 | 25.8 | - | |
| 649 | 362089 | 170606 | 37.4 | 26.1 | 24.1 | 24.9 | 27.1 | 21.2 | 26.5 | 15.4 | 41.5 | 39.9 | 42.3 | 26.2 | 29.4 | 24.7 | - | |
| 650 | 360818 | 170448 | 26.8 | 21.3 | 20.4 | 17.3 | 21.6 | | 17.7 | 34.8 | 20.5 | 25.9 | 31.0 | 19.0 | 23.3 | 19.6 | - | |
| 651 | 360938 | 173376 | 40.7 | 32.4 | 31.7 | | 31.7 | 30.5 | 26.8 | 30.5 | 34.5 | 39.2 | 42.0 | | 34.0 | 28.6 | - | |
| 652 | 361119 | 173796 | 47.4 | 38.9 | 38.0 | 33.5 | 26.9 | 37.6 | 30.7 | 24.4 | 47.3 | | 30.4 | 43.4 | 36.2 | 30.4 | - | |
| 653 | 360515 | 174134 | 41.6 | 34.2 | 30.2 | 29.6 | 25.7 | 22.3 | 24.7 | 27.3 | 30.5 | 38.1 | 40.7 | 29.9 | 31.2 | 26.2 | - | |
| 654 | 360207 | 174403 | 31.5 | 26.3 | 24.1 | 19.9 | 17.8 | 14.1 | 17.7 | 19.0 | 23.6 | 29.7 | 27.9 | 19.1 | 22.6 | 18.9 | - | |
| 655 | 361355 | 175203 | 33.6 | 35.4 | 30.0 | 28.0 | 27.3 | 27.7 | 29.4 | 30.4 | 34.7 | 35.0 | 40.0 | 29.2 | 31.7 | 26.6 | - | |
| 656 | 361141 | 175446 | 32.6 | 30.9 | 22.7 | 23.3 | 22.0 | 19.0 | 21.4 | 19.2 | 23.9 | 30.3 | 29.8 | 25.6 | 25.1 | 21.0 | - | |
| 657 | 361676 | 175127 | | 32.0 | | 26.8 | 28.9 | 17.9 | 19.9 | 28.5 | 30.1 | 37.1 | 28.6 | 34.3 | 28.4 | 23.9 | - | |
| 658 | 363325 | 175803 | 28.6 | 25.7 | 20.1 | 22.8 | 16.2 | 16.6 | 19.8 | 20.4 | 29.8 | 30.6 | 33.5 | 23.9 | 24.0 | 20.2 | - | |
| 659 | 359773 | 176702 | 33.8 | 31.3 | 28.1 | 25.8 | 23.5 | 26.0 | 26.4 | 20.1 | 27.5 | 33.7 | 35.1 | | 28.3 | 23.8 | - | |
| 660 | 360896 | 175312 | 38.9 | 33.5 | 34.2 | 31.0 | 27.6 | 26.4 | 28.3 | 28.4 | 36.6 | 40.2 | 39.8 | 30.4 | 32.9 | 27.7 | - | |
| 661 | 358022 | 175630 | 29.7 | 22.9 | 19.7 | 16.7 | 18.4 | | | 14.2 | 20.8 | 24.8 | 29.4 | 21.6 | 21.8 | 18.3 | - | |
| 662 | 357868 | 175723 | 28.4 | 20.3 | 20.0 | 16.9 | 17.8 | 13.0 | 13.9 | 11.0 | 18.9 | 24.7 | 30.7 | 20.4 | 19.7 | 16.5 | - | |
| 663 | 357396 | 174761 | | 27.5 | 23.5 | 21.3 | 25.1 | 20.2 | 20.0 | 16.1 | 28.0 | 31.2 | 35.9 | 24.2 | 24.8 | 20.8 | - | |
| 664 | 357347 | 174992 | 28.9 | 27.1 | 26.2 | 25.8 | 19.4 | 18.9 | 24.7 | 22.4 | 26.3 | 30.1 | 35.4 | 18.7 | 25.3 | 21.3 | - | |
| 665 | 358675 | 173405 | 39.1 | 35.5 | 32.3 | 26.9 | 27.0 | 18.4 | 23.5 | 23.0 | 24.9 | | | 29.3 | 28.0 | 23.5 | - | |
| 666 | 358646 | 173426 | 35.9 | 31.3 | 26.9 | 24.1 | 22.3 | | 11.7 | 20.6 | | | | 28.9 | 25.2 | 22.4 | - | |
| 667 | 358531 | 172803 | 65.8 | 53.1 | 51.1 | 48.3 | 43.8 | 40.4 | 41.7 | 46.2 | 46.5 | 45.1 | 56.3 | 46.9 | 48.8 | 41.0 | 29.8 | |
| 669 | 359511 | 172754 | 35.5 | 28.8 | 26.3 | 21.1 | 24.0 | 15.5 | 19.3 | 17.4 | 28.8 | 32.8 | 38.3 | 26.0 | 26.2 | 22.0 | - | |
| 670 | 361749 | 170690 | 47.2 | 34.0 | 34.9 | 30.8 | 37.1 | 30.5 | 32.0 | 26.0 | 62.7 | 51.3 | 50.9 | 34.9 | 39.4 | 33.1 | - | |
| 671 | 357381 | 175781 | 30.9 | 27.1 | 26.3 | 21.6 | | 20.6 | 23.0 | 18.4 | 26.2 | 28.3 | | 24.8 | 24.7 | 20.8 | - | |
| 673_1 | 358728 | 173520 | | 31.0 | 28.9 | 26.6 | 25.5 | 21.8 | 23.1 | 23.1 | 31.6 | 32.3 | 37.5 | 29.6 | - | - | - | Triplicate Site with 673_1, 673_2 and 673_3 - Annual data provided for 673_3 only |
| 673_2 | 358728 | 173520 | | 30.1 | 29.8 | 27.0 | 27.0 | 21.8 | 23.4 | 23.8 | 31.4 | 33.1 | 40.9 | 29.2 | - | - | - | Triplicate Site with 673_1, 673_2 and 673_3 - Annual data provided for 673_3 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 |
|-------|-------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------|--|---|---|
| 673_3 | 358728 | 173520 | | 30.9 | 28.2 | 26.3 | 29.8 | 22.0 | 23.7 | 24.1 | 33.5 | 33.7 | | 29.8 | 28.8 | 24.2 | - | Triplicate Site with 673_1, 673_2 and 673_3 - Annual data provided for 673_3 only |
| 674 | 363157 | 173215 | 22.9 | 17.7 | 14.3 | 13.5 | 13.9 | 10.6 | 10.1 | 10.4 | 16.2 | 18.0 | 24.8 | 18.8 | 15.9 | 13.4 | - | |
| 675 | 361615 | 172728 | 37.2 | 29.5 | 25.8 | 24.8 | 25.3 | 19.0 | 21.7 | 26.2 | 27.8 | 31.7 | 32.8 | 26.8 | 27.4 | 23.0 | - | |
| 676 | 361734 | 173291 | 24.7 | 22.2 | 16.8 | 16.0 | 16.7 | 14.8 | 16.1 | 14.5 | 21.1 | 21.8 | 27.0 | 18.6 | 19.2 | 16.1 | - | |
| 677 | 362105 | 173350 | 26.7 | 23.2 | 18.1 | 15.4 | 17.5 | 12.6 | 13.5 | 15.2 | | 18.0 | 21.5 | 17.6 | 18.1 | 15.2 | - | |
| 678 | 361279 | 173283 | 22.5 | | 16.2 | 15.7 | 14.0 | 12.4 | 12.3 | 13.3 | 16.6 | 18.0 | 22.5 | 20.4 | 16.7 | 14.0 | - | |
| 679 | 361134 | 173034 | 30.5 | 31.3 | | 20.8 | | 20.1 | 20.8 | 20.1 | 22.1 | 26.9 | 33.3 | 29.2 | 25.5 | 21.4 | - | |
| 680 | 360973 | 173193 | 27.7 | 25.5 | 20.2 | 19.8 | | 17.7 | 18.3 | 18.6 | 21.3 | 22.4 | 27.5 | 23.5 | 22.0 | 18.5 | - | |
| 681 | 360985 | 173541 | 34.0 | 28.4 | 23.9 | 23.1 | 21.2 | | 20.6 | 21.4 | 21.5 | 30.1 | 28.9 | 31.0 | 25.8 | 21.7 | - | |
| 682 | 361359 | 173460 | 41.2 | | 23.9 | 24.1 | 26.8 | 18.2 | 22.3 | 24.1 | | 31.2 | 38.5 | 29.7 | 28.0 | 23.5 | - | |
| 683 | 361451 | 173617 | 13.7 | 20.4 | 15.6 | 13.7 | 13.2 | 13.1 | 10.8 | 13.1 | 18.2 | 18.7 | 21.3 | 21.3 | 16.1 | 13.5 | - | |
| 684 | 361597 | 173622 | 26.7 | 20.4 | 16.5 | 15.8 | 14.3 | 12.1 | 12.8 | 14.4 | 16.9 | 20.7 | 27.0 | 21.0 | 18.2 | 15.3 | - | |
| 698 | 354633 | 176588 | 34.3 | | 23.7 | 22.3 | 24.2 | 20.9 | 21.8 | 20.2 | 30.3 | 29.5 | 35.1 | 22.5 | 25.9 | 21.7 | - | |
| 699 | 355122 | 175764 | 28.3 | 23.8 | 19.0 | 18.6 | 19.2 | 16.0 | 14.2 | 12.1 | 19.5 | 20.1 | 27.3 | 21.1 | 19.9 | 16.7 | - | |
| 700 | 356336 | 173464 | 26.7 | 25.1 | 22.7 | 20.8 | 25.8 | 22.6 | 15.4 | 23.7 | 27.5 | 26.5 | 27.7 | 24.7 | 24.1 | 20.2 | - | |
| 701 | 357448 | 174634 | 39.4 | 28.4 | 22.7 | 22.4 | 28.1 | 17.3 | 16.3 | | 28.6 | 29.8 | 40.3 | 23.4 | 27.0 | 22.7 | - | |
| 702 | 359833 | 173376 | 31.6 | | | 17.3 | | | 21.3 | 21.5 | 10.5 | 33.1 | | | 22.6 | 19.6 | - | |
| 703 | 359829 | 174376 | 45.8 | 37.0 | 32.0 | 29.3 | 28.9 | 23.5 | 25.4 | 25.0 | 28.4 | 39.7 | 41.0 | 28.9 | 32.1 | 26.9 | - | |
| 704 | 357724 | 170651 | 38.6 | | 28.6 | | 29.0 | 25.5 | 25.0 | 27.8 | 36.4 | 30.2 | 38.1 | 28.6 | 30.8 | 25.9 | - | |
| 705 | 359506 | 173139 | | | | | 45.5 | 45.6 | 47.4 | 41.6 | 68.6 | 61.1 | 68.7 | 57.0 | 54.4 | 48.1 | - | |
| 706 | 362449 | 174228 | | | | | | | | 13.5 | 22.3 | 19.9 | 26.2 | 20.7 | 20.5 | 15.7 | - | |
| 707 | 363424 | 174168 | | | | | | | | 11.9 | 14.1 | 19.3 | 24.9 | 17.9 | 17.6 | 13.5 | - | |
| 708 | 362882 | 173755 | | | | | | | | 15.9 | 19.3 | 23.3 | 28.6 | 22.6 | 21.9 | 16.8 | - | |
| 709 | 363234 | 173422 | | | | | | | | 9.4 | 13.4 | 15.6 | 20.2 | 14.4 | 14.6 | 11.2 | - | |
| 710 | 363548 | 172933 | | | | | | | | 10.9 | 28.7 | 29.5 | 31.7 | 20.5 | 24.3 | 18.6 | - | |
| 711 | 360877 | 172939 | | | | | | | | 13.6 | 34.5 | 29.1 | 31.8 | 28.8 | 27.6 | 21.1 | - | |

- All erroneous data has been removed from the NO₂ 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.
- Where applicable, data has been distance corrected for relevant exposure in the final column.

Bristol City Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 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

Additional Air Quality Works Undertaken by Bristol City Council During 2024

Bristol City Council has continued to work with the Joint Air Quality Unit (JAQU) with the aim of achieving compliance with air quality objectives within Bristol in the shortest time possible. In 2024 work continued to better understand why compliance has not been achieved in some limited locations. As part of this work, a source apportionment exercise was carried out for Bond Street and Colston Avenue. This used anonymised automatic number plate recognition data from a seven-day period of Q4 of 2023 to determine the percentage of NO_x emissions from different vehicle types using Defra's Emission Factor Toolkit. Figure C.1 to Figure C.4 show the percentage of fleet by vehicle type, and NO_x emissions source apportionment by vehicle type, for Bond Street and Colston Avenue.

Outputs from this work have been used to identify options for further investigation to bring compliance forward more quickly in these locations. Work on this is ongoing and will be reported by BCC as it develops.

Figure C.1 - Bond Street Fleet Composition by Vehicle Type

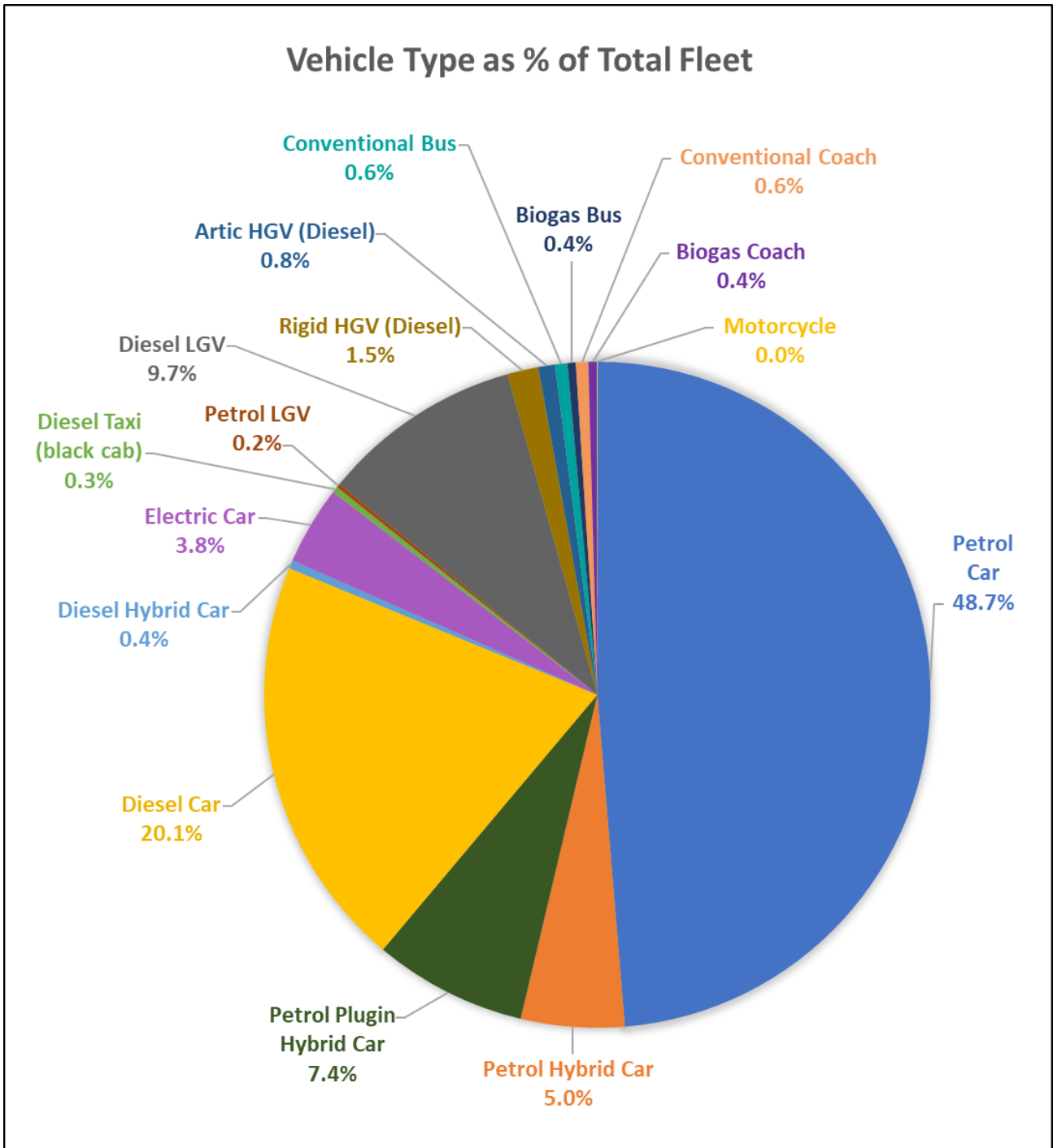
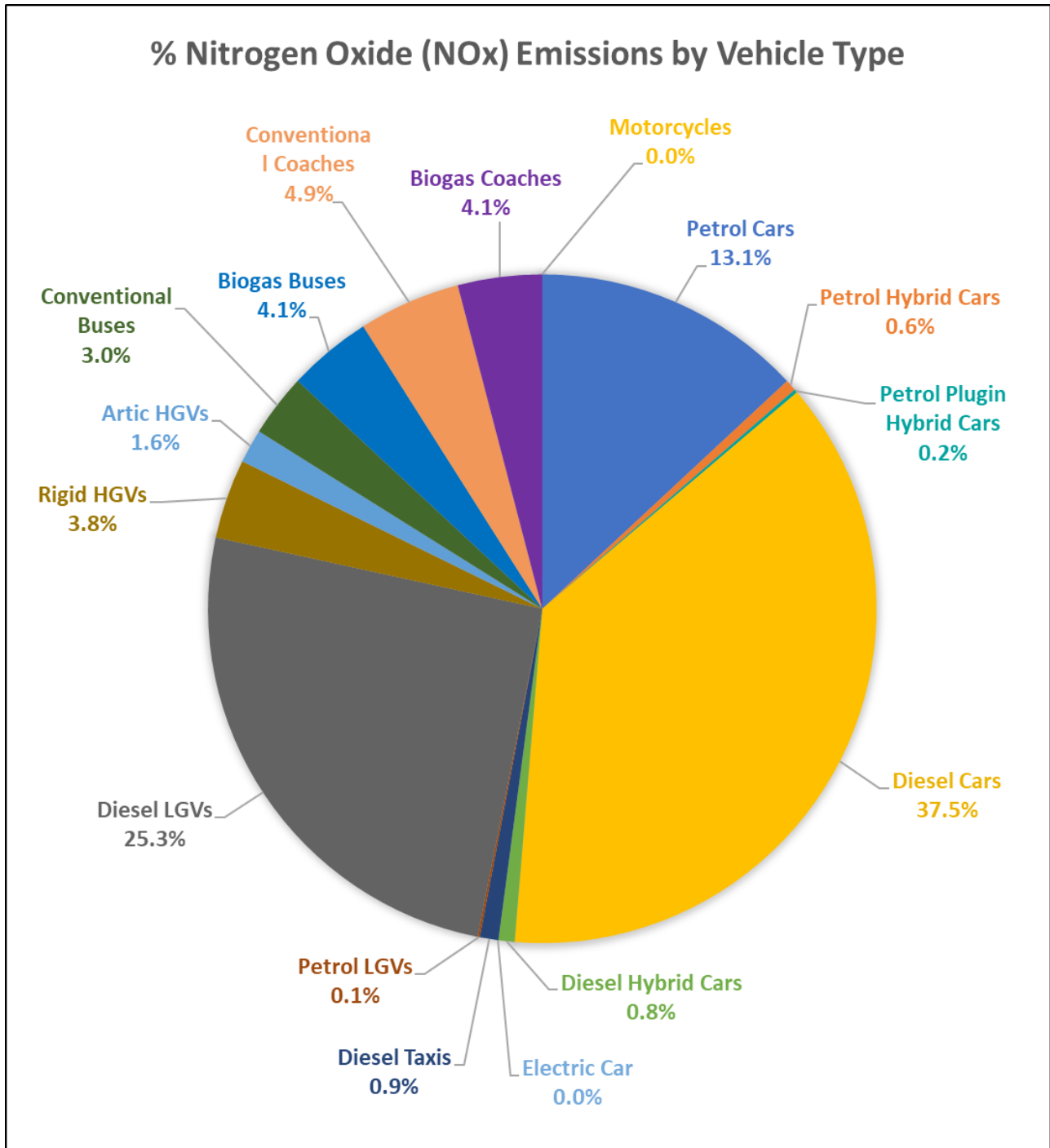


Figure C.2 - Bond Street NOx Emissions Source Apportionment by Vehicle Type



The biggest contributor to NOx emissions are diesel cars, accounting for 37.5% of NOx emissions despite representing only 20.1% of vehicles. The second largest contributor is diesel LGVs at 23.5% of NOx emissions whilst making up 9.7% of the fleet. Petrol cars are next at 13.1% of NOx emissions, however, they make up 48.7% of all vehicle movements in these locations. Buses and coaches account for 16.1% of NOx emissions when they only account for 2% of the fleet with HGVs accounting for 5.4% of NOx emissions from 2.3% of the fleet.

Figure C.3 - Colston Avenue Fleet Composition by Vehicle Type

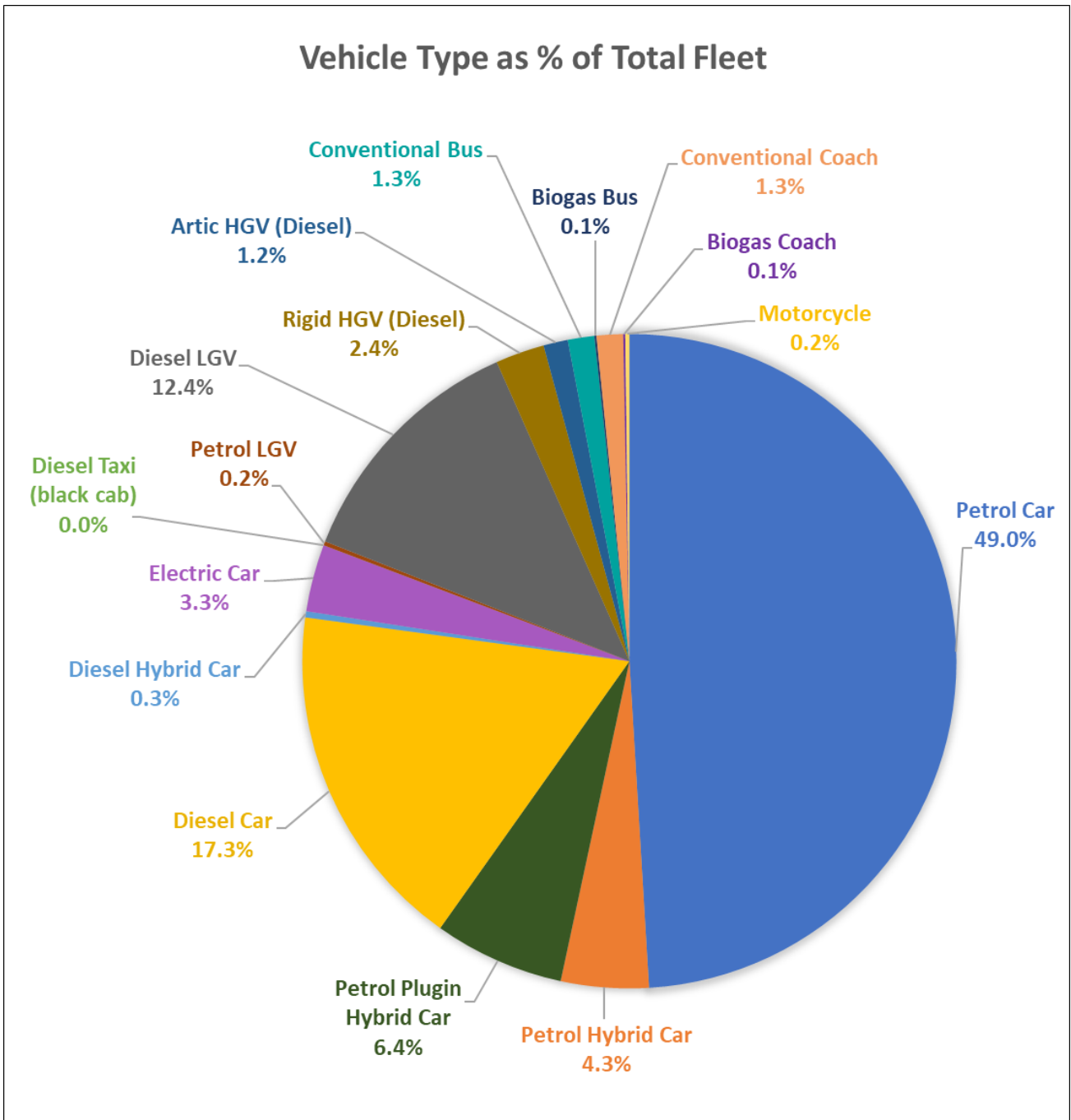
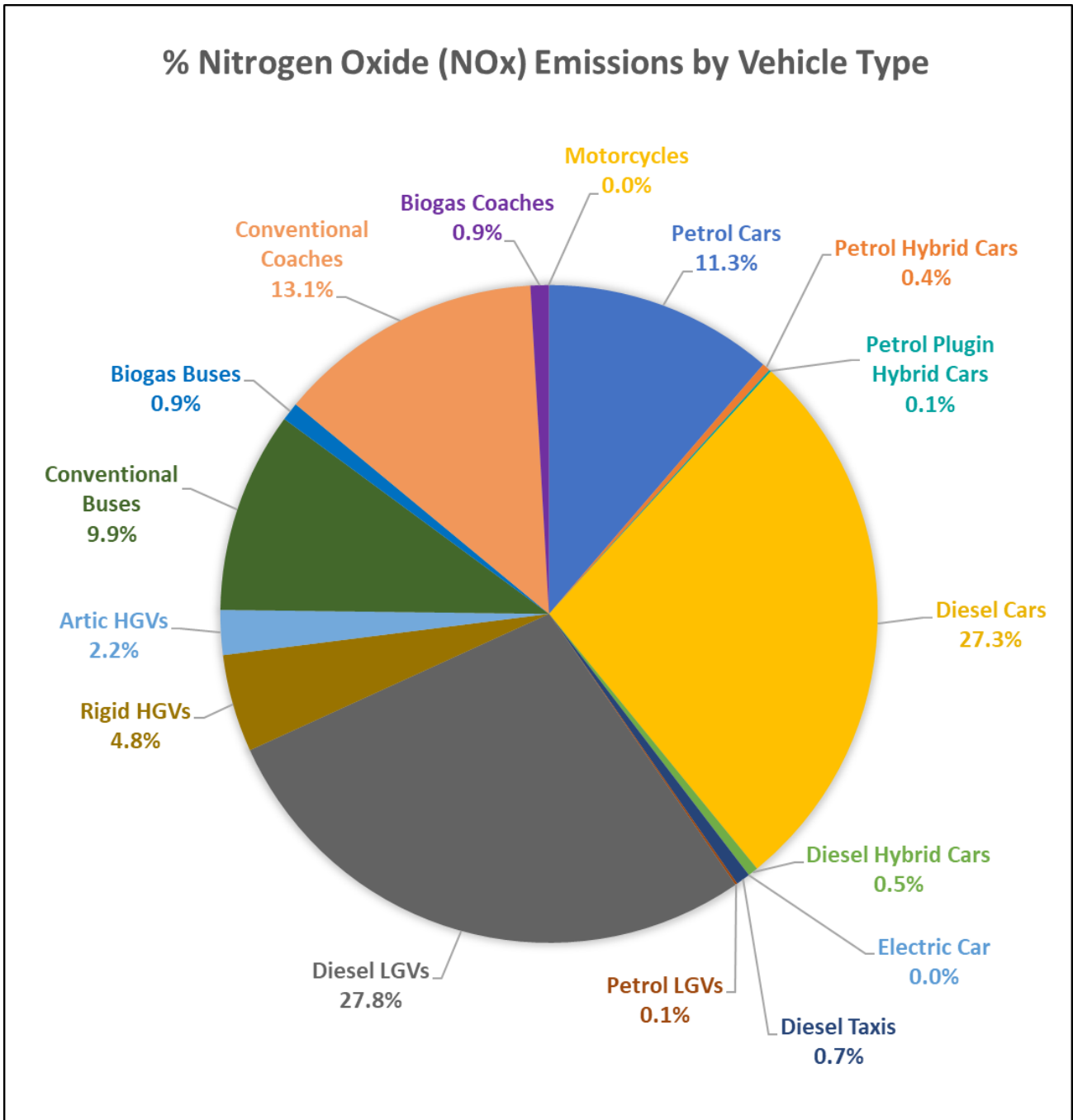


Figure C.4 - Colston Avenue NOx Emissions Source Apportionment by Vehicle Type



The estimate for Colston Avenue is that the biggest contributor to NOx emissions are diesel LGVs, accounting for 27.8% of NOx emissions despite representing only 12.4% of vehicles. The second largest contributor are diesel cars at 27.3% of NOx emissions whilst making up 17.3% of the fleet. Conventional Coaches are next with 13.1% of NOx emissions, whilst making up only 1.3% of all vehicle movements in these locations. Buses and coaches account for 24.8% of NOx emissions when they only account for 2.8% of the fleet, with HGVs accounting for 7% of NOx emissions from 3.6% of the fleet.

Locations Recording Exceedance Outside the AQMA

The next section of the report discusses the locations which have shown some exceedances of the annual objective for NO₂ in the past 5 years that are located outside of the AQMA. Table C.1 shows these locations and provides measured pollutant concentrations for the past 5 years. In 2024, there were no sites outside of the AQMA which exceeded the annual objective.

Table C.1 - Tubes Outside AQMA Exceeding the Annual Air Quality Objective for NO₂ Since 2020

| Site Location | Site ID | Annual Mean Concentrations (µg/m ³) | | | | |
|--|---------|---|-----------------------|-----------------------|-------------|------|
| | | 2020 | 2021 | 2022 | 2023 | 2024 |
| Blackboy Hill | 3 | 28.7 | 44.4 | 38.8 | 47.7 | 29.0 |
| Muller Road/ Glenfrome Road junction north | 567 | 41.3 (37.3) | 44.8 (40.2) | 43.2 (38.7) | 35.3 | 34.4 |

Distance adjusted data reported in ().

Site 3 - Blackboy Hill

2021 monitoring data for this site showed an exceedance of the annual air quality objective for NO₂ at 44.4µg/m³. The concentration fell in 2022 to 38.8µg/m³ before increasing again in 2023 to 47.7µg/m³. In 2024, the mean annual concentration decreased significantly to 29.0µg/m³.

Analysis of the monthly diffusion tube monitoring data from 2020 indicates that there is a local source of pollution, other than traffic, that has been impacting upon NO₂ concentrations at this monitoring site. During this time, it is thought that the façade of a fast-food establishment was refurbished. A façade that previously had no openable windows was replaced with one where there were openable windows, one of which is within around 30cm of the diffusion tube at Site 3. The diffusion location is indicated in Figure C.5 by the red arrow.

Additional monitoring was installed in 2024, Site 701, to determine whether a non-road source of pollution is impacting this site. Site 701 is located 0.3m from the kerbside, around 20m from Site 3, and in 2024 annual NO₂ concentrations at Site 701 were 22µg/m³. This is lower than the 2024 data for Site 3, which is located 3m from the roadside. This comparison provides evidence that there is a local non-road source

impacting on Site 3, rather than the recent exceedances being caused by the local road contribution. Monitoring at both sites will continue in 2025.

Figure C.5 - Site 3 Blackboy Hill



Site 567 – Muller Road/Glenfrome Road

This site was set up in 2019 to investigate possible exceedances along Muller Road. NO₂ concentrations exceeded air quality objectives at this location from 2020 to 2022, however, 2021 was the only year during which the distance adjusted concentration to the nearest receptor was in breach of objectives at 40.2µg/m³. 2024 data showed a continued reduction in pollution at this site, with compliance at the monitoring location continuing to be achieved in 2024. Monitoring will continue at this location in 2025.

Figure C.6 shows the 2024 annual concentrations and change from 2023 at Site 567 and nearby sites along Muller Road.

As no locations outside of the AQMA in 2024 exceed air quality objectives it is not proposed to consider any extensions to the AQMA.

Figure C.6 - Muller Road (South) 2024 Measured Annual NO₂ Concentrations and Change Between 2023 and 2024



*Change in NO₂ concentrations between 2023 and 2024 shown in ()

Pollution Hotspots – Measured Data >36µg/m³

In the review of the 2019 ASR provided by Defra, a request was made for future ASRs to highlight and identify pollution hotspots in the city.

To identify the locations in the city with the highest monitored pollution levels, a summary of data in locations where annual NO₂ concentrations above 36µg/m³ were measured in 2024 has been included within the 2025 ASR. These are shown in Table C.2. 13 monitoring locations had measured concentrations above 36µg/m³ (at risk of exceedance) in 2024, with 5 of these over 40µg/m³. In 2023 there were 18 monitoring locations with measured concentrations above 36µg/m³ and 6 over 40µg/m³. These summaries are based on measured concentrations and do not represent relevant exposure. It should be noted that in 2024 some additional tubes were added, with one of these added in a location of exceedance, which accounts for one of the exceedance sites in the 2024 summary (Site 705).

The locations with measured NO₂ concentrations in 2024 over 40µg/m³ are discussed in more detail in the following section of the report, as well as those sites that have had concentrations above 40µg/m³ within the past 5 years.

Figure C.8 to Figure C.12 contain maps showing the spatial distribution of sites that exceeded 36µg/m³ in 2024, alongside maps showing all 2024 monitoring locations.

Site 502 – Colston Avenue

In 2021 the annual NO₂ concentration at Site 502 was 58.0µg/m³. This has fallen gradually since then to 48.9µg/m³ in 2023 but then increased by 1.9µg/m³ to 50.8 µg/m³ in 2024.

There is a real time monitoring location at the same site which also recorded an increase in 2024 compared to 2023, from 48.0µg/m³ in 2023 to 48.7µg/m³. Site 502 has the highest recorded annual NO₂ concentration of any diffusion tube in Bristol. It is a city centre location impacted by large numbers of vehicles, including many buses, with high levels of congestion and restricted pollutant dispersion. It is also located next to a bus stop. At the nearest location of relevant exposure, concentrations of 43.4µg/m³ have been calculated. Monitoring will continue and work is currently being carried out, in conjunction with the Joint Air Quality Unit, to ensure that compliance is achieved here in the shortest time possible.


Sites 638 and 705 – A4404 Roundabout

Site 638 is located at a distance of 17m from the roadside and as a result, the high annual NO₂ concentrations recorded indicate that there is a non-transport source of pollution in this location. The site is not representative of relevant exposure for the annual objective for NO₂. The tube is located by vents which appear to be part of a hotel extraction system. In 2024 a new monitoring location, Site 705, was placed at the kerbside to confirm whether Site 638 is being impacted by a non-transport emission source.

In 2024, an annual NO₂ concentration of 48.1µg/m³ was measured at the new kerbside site, Site 705. This is higher than the 41.6µg/m³ measured at the original site, Site 638. The Fall Off with Distance Calculator has been used with data from the kerbside Site 705 to determine the expected NO₂ concentration at Site 638 if there was not a local non-road source of NO₂. The Fall Off with Distance Calculator predicts an annual NO₂ concentration of 28.6µg/m³ for Site 638, 13.0µg/m³ lower than the actual measured value. This indicates that there is a local non-road source of NO₂ at this location, as well as the roadside source.

Neither site is a location where there is relevant exposure in terms of annual averages, however, monitoring will continue at both locations in 2025.

Figure C.7 - Fall Off with Distance Calculator for Site 705/Site 638 Prediction

| | | |
|---|--|------------------------|
|  Enter data into the pink cells | | |
| Step 1 | How far from the KERB was your measurement made (in metres)? | 0.8 metres |
| Step 2 | How far from the KERB is your receptor (in metres)? | 17 metres |
| Step 3 | What is the local annual mean background NO ₂ concentration (in µg/m ³)? | 15 µg/m ³ |
| Step 4 | What is your measured annual mean NO ₂ concentration (in µg/m ³)? | 48.1 µg/m ³ |
| Result | The predicted annual mean NO ₂ concentration (in µg/m ³) at your receptor | 28.6 µg/m ³ |

Site 582 – Rupert Street

Site 582 is at the kerbside of a busy city centre location. Although the site was compliant with the annual NO₂ objective in 2023 with a concentration of 39.2µg/m³, concentrations have worsened in 2024 to 45.4µg/m³. This means that Site 582 has not achieved

compliance with objectives in three of the four years since monitoring began at this location. The site is not representative of relevant exposure. Monitoring will continue at this site in 2025.

Site 667 – College Green

Site 667 is at the kerbside of a busy city centre location with a 2024 NO₂ concentration of 41.0µg/m³. This site has exceeded objectives every year since monitoring began in 2021. When corrected for distance to the nearest relevant receptor location, NO₂ concentrations fall to 29.8µg/m³, indicating that compliance with objectives is met. Monitoring will continue at this location.

Table C.2 – Locations at which NO₂ Concentrations Above 36µg/m³ were Measured in 2024

| Site ID | Site Name | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | NO ₂ Annual Mean Concentration (µg/m ³) | | | | | |
|---------|---|-------------------------|--------------------------|--|-------------|-------------|-------------|-------------|------------------------|
| | | | | 2020 | 2021 | 2022 | 2023 | 2024 | 2024 Distance Adjusted |
| 502 | Co-located Colston Ave | 358640 | 173090 | 52.1 | 58.0 | 54.1 | 48.9 | 50.8 | 43.4 |
| 705 | A4044 Roundabout_Traffic Light | 359506 | 173139 | | | | | 48.1 | |
| 582 | Rupert St-CAZ-Post outside fire station | 358893 | 173333 | | 50.0 | 43.7 | 39.2 | 45.4 | |
| 638 | A4044 Roundabout-CAZ-Lamppost | 359498 | 173144 | | 43.8 | 42.4 | 44.8 | 41.6 | |
| 667 | College Green-CAZ-Post by Toni&Guy | 358531 | 172803 | | 43.6 | 45.3 | 42.0 | 41.0 | 29.8 |
| 624 | Bedminster Rd-CAZ-Post opp Van Sales | 357858 | 170499 | | 49.7 | 48.4 | 37.6 | 39.9 | 29.2 |
| 2 | Colston Avenue | 358628 | 173011 | 36.9 | 40.1 | 40.3 | 39.0 | 38.4 | |
| 239 | Parson St. A38 East | 357880 | 170506 | 47.6 | 51.4 | 48.6 | 40.5 | 38.1 | 25.4 |
| 615 | Newfoundland Way-CAZ-Lamppost by petrol station | 359659 | 173688 | | 53.0 | 49.4 | 38.4 | 37.1 | 27.3 |
| 583 | Rupert St-CAZ-Post outside police station | 358870 | 173340 | | 42.3 | 37.9 | 39.1 | 36.6 | |
| 512 | Montpelier High School | 359026 | 174432 | 30.7 | 36.1 | 36.2 | 37.3 | 36.6 | 33.4 |
| 586 | Park St-CAZ-Lamppost by Agora | 358195 | 173018 | | 38.6 | 41.8 | 32.6 | 36.4 | 26.4 |
| 147 | Anchor Road | 358514 | 172691 | 39.4 | 43.3 | 45.5 | 39.5 | 36.3 | |

Figure C.8 – Locations with Measured Annual NO₂ Concentrations ≥ 36µg/m³ in 2024 – Central Area



Figure C.9 – All NO₂ Monitoring Sites – Central Area

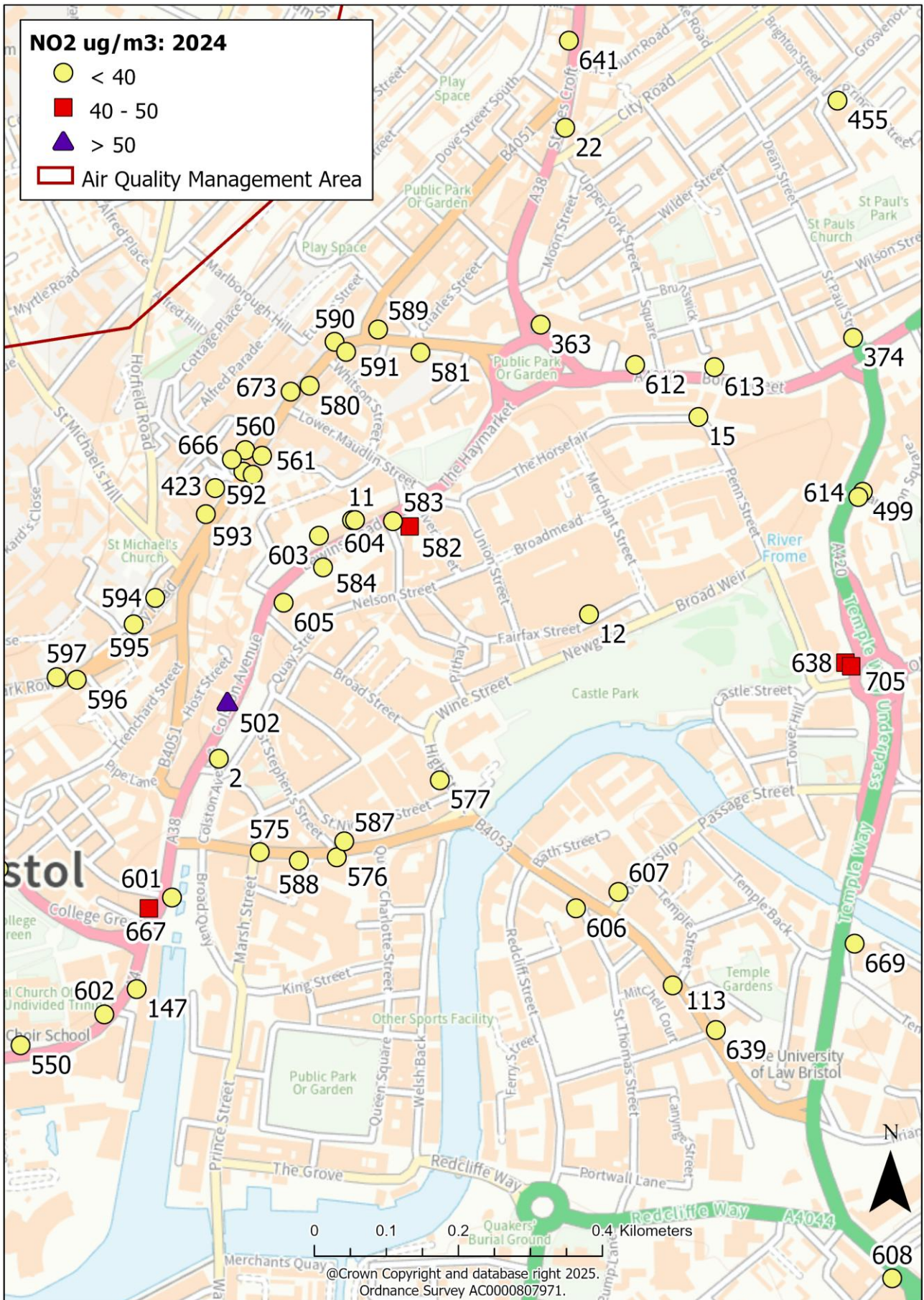


Figure C.10 - Locations with Measured Annual NO₂ Concentrations ≥ 36µg/m³ in 2024 – Parson Street Gyratory

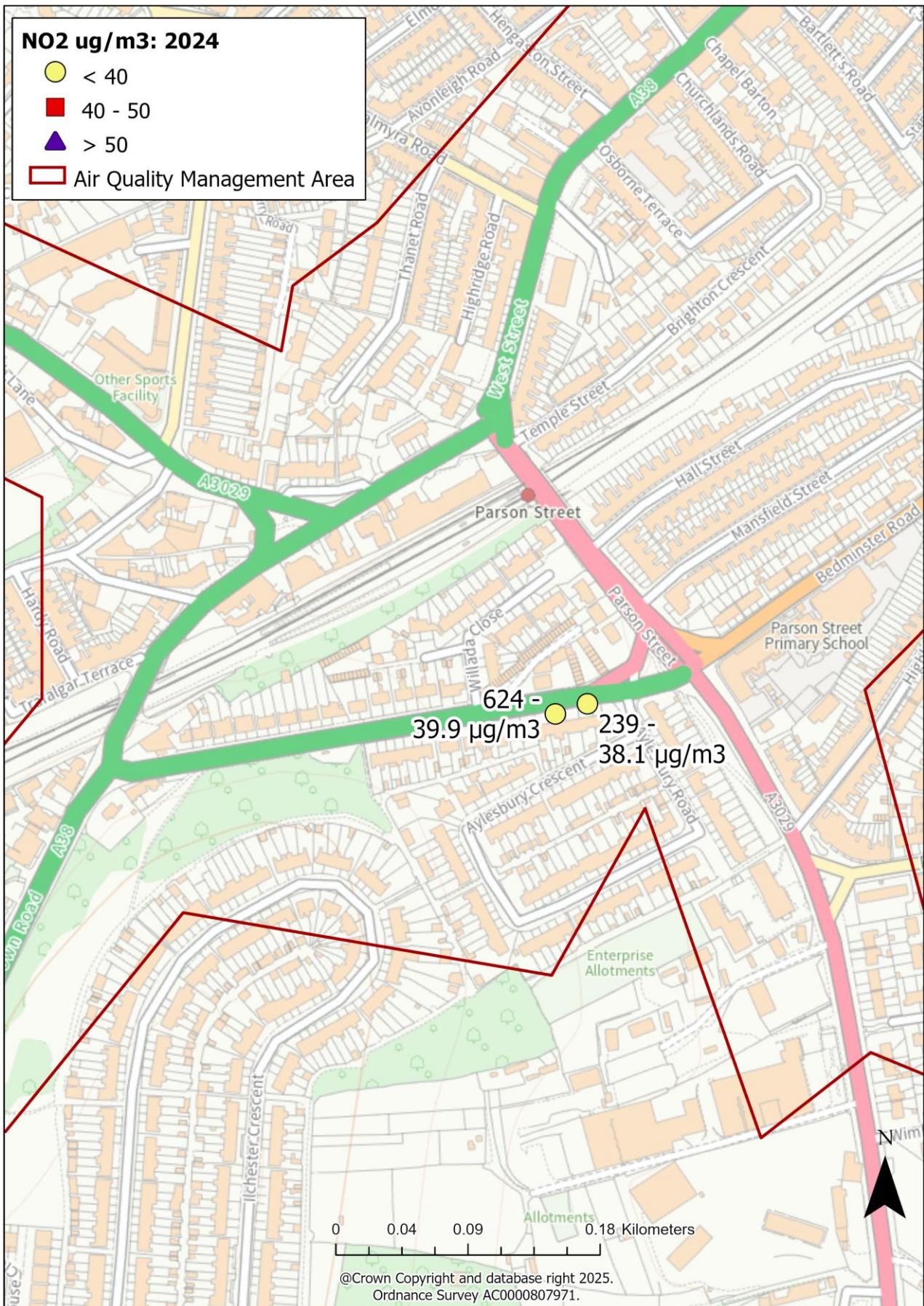


Figure C.11 - All NO₂ Monitoring Sites – Parson Street Gyratory

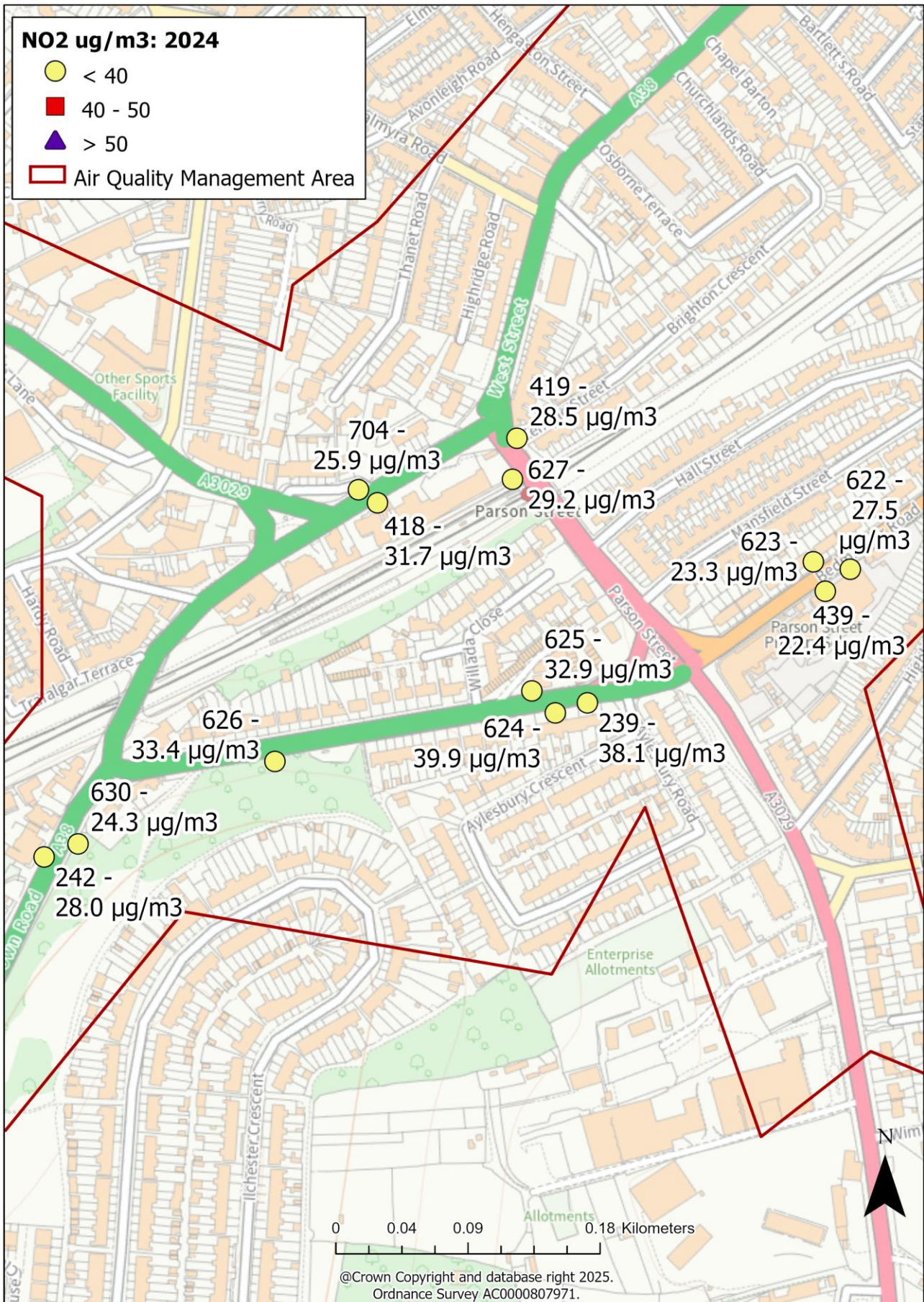
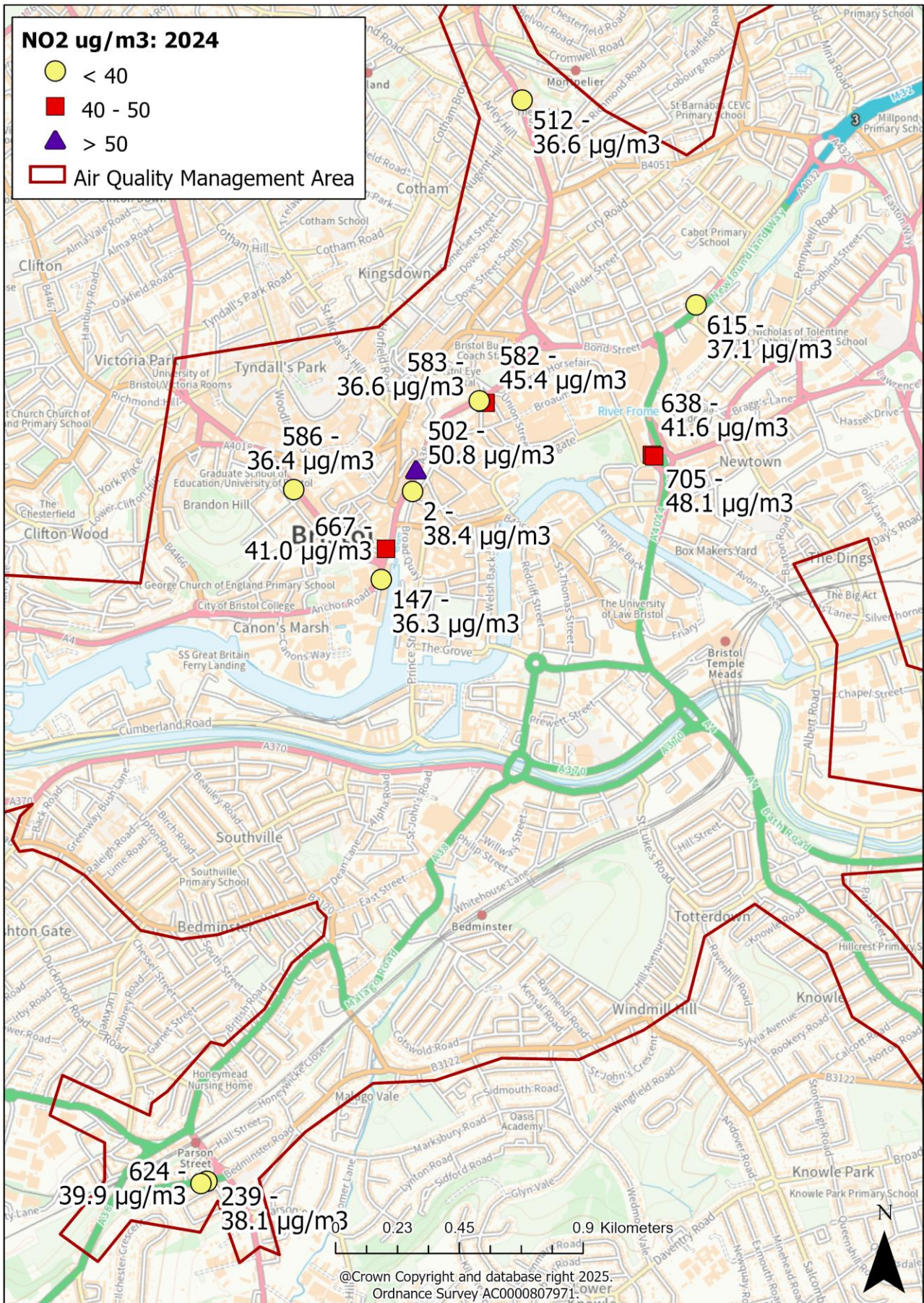


Figure C.12 – All sites with Measured Annual NO₂ Concentrations ≥ 36µg/m³ in 2024



QA/QC of Diffusion Tube Monitoring

Somerset Scientific Services were used throughout the whole of 2024 to provide and analyse diffusion tubes for BCC. This lab is not United Kingdom Accreditation Service (UKAS) accredited for diffusion tube analysis but does participate in the AIR PT Scheme for nitrogen dioxide tubes. All reference materials are of at least analytical grade or equivalent. Standards are prepared using equipment that is all within the normal quality system. The tubes used are recycled Gradko tubes prepared and set on a monthly basis. The tube changing frequency is as per the calendar on the [Air Quality Archive web site](#) and is carried out by Bristol City Council officers.

The tubes are prepared with 50 µL of 20% triethanolamine in water. The method follows that set out in the practical guidance document.

Diffusion Tube Annualisation

Data capture rates for 17 tube sites were below 75%. This is mostly as a result of tubes being tampered with by members of the public and taken from their sites. 6 of these were sites that were set up in August 2025 in response to additional calls for monitoring for the East Bristol Liveable Neighbourhood pilot.

Sites 9 and 538 were removed in March 2024 due to road remodelling works taking place in these areas. As a result, only two months of data was collected in these locations, which is less than the 25% requirement for annualisation to be possible. The details for Sites 9 and 538 have been reported, including previous years' results, however, no data for 2024 is available for either of these sites. The Diffusion Tube Data Processing Tool (DTDPT) recognises that data collection rates for these locations are below the required threshold, however, it still calculates an annual average for the locations. For this reason, the two months of monitoring data for these sites has been removed from the diffusion tube inputs tab in the DTDPT to ensure that an annual average is not calculated.

Annualisation of diffusion tube data for all sites with less than 75% data capture was carried out in accordance with the methodology in Box 7-10 of LAQM.TG22. Data from the Background AURN monitoring sites at Swindon Walcot, Bournemouth, Bristol St Paul's and Newport were used in the process.

The calculations made to annualise the data for these sites are included in Table C.3.

Table C.3 – Annualisation Summary (concentrations presented in $\mu\text{g}/\text{m}^3$)

| Site ID | Annualisation Factor Bristol St Pauls | Annualisation Factor Bournemouth | Annualisation Factor Newport | Annualisation Factor Swindon Walcot | Average Annualisation Factor | Raw Data Annual Mean | Annualised Annual Mean |
|---------|---------------------------------------|----------------------------------|------------------------------|-------------------------------------|------------------------------|----------------------|------------------------|
| 550 | 0.9697 | 0.9519 | 0.9566 | 0.9508 | 0.9572 | 27.2 | 26.0 |
| 561_1 | 1.0647 | 1.0534 | 1.0857 | 1.1191 | 1.0807 | - | - |
| 561_2 | 1.0647 | 1.0534 | 1.0857 | 1.1191 | 1.0807 | 28.4 | 30.6 |
| 592 | 0.8067 | 0.8143 | 0.8324 | 0.8739 | 0.8318 | 38.3 | 31.8 |
| 595 | 0.8862 | 0.8802 | 0.8870 | 0.8945 | 0.8870 | 30.3 | 26.9 |
| 617 | 1.1885 | 1.2271 | 1.2024 | 1.2330 | 1.2128 | 27.3 | 33.2 |
| 621 | 1.0574 | 1.0284 | 1.0536 | 1.0789 | 1.0545 | 29.3 | 30.9 |
| 626 | 1.0050 | 0.9776 | 0.9976 | 0.9778 | 0.9895 | 40.1 | 39.7 |
| 666 | 1.0504 | 1.0358 | 1.0637 | 1.0887 | 1.0596 | 25.2 | 26.7 |
| 702 | 1.0334 | 1.0406 | 1.0395 | 1.0320 | 1.0364 | 22.6 | 23.4 |
| 705 | 1.0680 | 1.0608 | 1.0468 | 1.0317 | 1.0518 | 54.4 | 57.3 |
| 706 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 20.5 | 18.7 |
| 707 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 17.6 | 16.1 |
| 708 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 21.9 | 20.0 |
| 709 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 14.6 | 13.3 |
| 710 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 24.3 | 22.2 |
| 711 | 0.9270 | 0.9366 | 0.9066 | 0.8825 | 0.9132 | 27.6 | 25.2 |

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 on 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 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.

Bristol City Council has applied a local bias adjustment factor of 0.84 to the 2024 monitoring data. A summary of bias adjustment factors used by Bristol City Council over the past five years is presented in Table C.4.

Discussion of Choice of Factor to Use

Box 7-13 of LAQM.TG22 was used in order to determine the most appropriate bias adjustment factor (BAF) to use in 2024. Bristol has a relatively large network of automatic NO_x analysers that are operated using robust QA/QC procedures. In 2024, 8 of these sites

recorded data capture rates of more than 90%. Precision calculations were undertaken for all sites in the co-location study. The precision checks indicated a “good” precision rating for all measurement periods at all sites when two or more tubes were available for analysis with the exception of Bristol St Pauls in August, Fishponds in October and Temple Way in July. Automatic monitor data capture rates were good at all sites for all months.

The locally derived bias adjustment factor calculated for 2024 was 0.84.

The national diffusion tube BAF spreadsheet at the time of writing contained 4 studies for sites that are not BCC sites. In 2024 the national BAF for Somerset Scientific Services, before the addition of the BCC co-location studies, was 0.81. Therefore, using our own BAF, excluding the additional 4 tubes from the national calculations, provides a worst case BAF.

Bias adjustment factors used since 2020 have been provided in Table C.4 to provide transparency and put the 2024 BAF in context to those used in previous years.

Table C.4 – Bias Adjustment Factor

| Monitoring Year | Local or National | If National, Version of National Spreadsheet | Adjustment Factor |
|-----------------|-------------------|--|-------------------|
| 2024 | Local | N/A | 0.84 |
| 2023 | Local | N/A | 0.85 |
| 2022 | Local | N/A | 0.86 |
| 2021 | Local | N/A | 0.87 |
| 2020 | Local | N/A | 0.85 |

Table C.5 – Local Bias Adjustment Calculation

| | Local Bias Adjustment Site 320/203 | Local Bias Adjustment Site 438/270 | Local Bias Adjustment Site 439/215 | Local Bias Adjustment Site 455/452 | Local Bias Adjustment Site 464/463 | Local Bias Adjustment Site 499/500 | Local Bias Adjustment Site 502/501 | Local Bias Adjustment Site 673/672 |
|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Periods used to calculate bias | 12 | 12 | 12 | 11 | 11 | 9 | 11 | 11 |
| Bias Factor A | 0.83 (0.79 - 0.88) | 0.74 (0.69 - 0.8) | 0.85 (0.77 - 0.94) | 0.97 (0.92 - 1.03) | 0.88 (0.84 - 0.92) | 0.84 (0.8 - 0.89) | 0.81 (0.76 - 0.86) | 0.82 (0.77 - 0.89) |
| Bias Factor B | 21% (14% - 27%) | 35% (25% - 46%) | 18% (6% - 30%) | 3% (-3% - 9%) | 13% (8% - 19%) | 19% (12% - 26%) | 24% (16% - 32%) | 22% (13% - 31%) |
| Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$) | 20.2 | 27.7 | 26.6 | 17 | 24.5 | 29.5 | 60.5 | 28.8 |
| Mean CV (Precision) | 3.9% | 4.6% | 4.8% | 5.5% | 4.5% | 2.9% | 5.9% | 2.8% |
| Automatic Mean ($\mu\text{g}/\text{m}^3$) | 16.8 | 20.4 | 22.5 | 16.5 | 21.6 | 24.8 | 48.8 | 23.6 |
| Data Capture | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$) | 17 (16 - 18) | 20 (19 - 22) | 23 (20 - 25) | 16 (16 - 18) | 22 (21 - 23) | 21 (20 - 22) | 49 (46 - 52) | 24 (22 - 26) |

*It has been noted that there are some discrepancies between the DTDPT local bias adjustment outputs and the DifTPAB Spreadsheet used to calculate BAF. The bias B figures are consistent, however, data capture rates and adjusted tube means have differed in some cases. The adjusted tube mean figure for Site 502/501 has been taken from calculations made in the DifTPAB spreadsheet as the outputs from the DTDPT were not as expected. All other data has been taken from the DTDPT.

A combined local bias adjustment factor of 0.84 has been used to bias adjust the 2024 diffusion tube results.

Triplicate tube data from 8 BCC co-location sites that have been used to calculate the local bias adjustment factor. The Diffusion Tube Data Processing Tool currently only allows data from 7 co-location sites to be included within it. As BCC have 8 co-location sites, the locally derived BAF has been calculated by using the DTDPT for all 8 sites, with 7 sites calculated in one DTDPT spreadsheet and an 8th site separately in a different DTDPT file. The DTDPT bias adjustment factor outputs for all 8 sites have then been used to calculate a single BAF using the methodology outlined in Section 7 of the [Local Air Quality Management Technical Guidance \(TG22\)](#). This locally derived BAF has then been entered into the DTDPT as a national factor to allow it to be applied to the Bristol City Council diffusion tube results. This has been done as per advice from the LAQM helpdesk.

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO₂ Fall-off with Distance Calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO₂ concentrations corrected for distance are presented in Table B.1.

Table C.6 – Non-Automatic NO₂ Fall off With Distance Calculations (concentrations presented in µg/m³)

| Site ID | Distance (m): Monitoring Site to Kerb | Distance (m): Receptor to Kerb | Monitored Concentration (Annualised and Bias Adjusted) | Background Concentration | Concentration Predicted at Receptor | Comments |
|---------------------------|---------------------------------------|--------------------------------|--|--------------------------|-------------------------------------|--|
| 239 | 0.7 | 9.0 | 38.1 | 11.6 | 25.4 | |
| 502_1, 502_2, 502_3 | 2.0 | 5.0 | 50.8 | 16.5 | 43.4 | <i>Predicted concentration at receptor above AQS objective</i> |
| 512 | 3.0 | 5.0 | 36.6 | 12.5 | 33.4 | |
| 586 | 0.1 | 4.0 | 36.4 | 16.5 | 26.4 | |
| 615 | 0.8 | 8.0 | 37.1 | 15 | 27.3 | |
| 624 | 2.0 | 10.0 | 39.9 | 11.6 | 29.2 | |
| 667 | 0.5 | 5.0 | 41.0 | 15.0 | 30.4 | |

QA/QC of Automatic Monitoring

The Council's monitoring network is operated and run by officers trained in all aspects of the monitoring processes including routine site operations, field calibrations and data ratification. The QA/QC for the AURN Bristol St Pauls and Temple Way sites is carried out by Ricardo-AEA. Live and historic air quality data can be found on the Bristol City Council [open data portal](#). During 2025 the portal will continue to be developed to improve the functionality.

Routine Site Operations

The Council's monitoring sites have a programme of routine operational checks and programmed fortnightly site visits including:

- Daily communications checks on lines, data transfer and analyser operation;
- Daily checks of data quality;
- Repairs of faulty equipment under arrangements with outside contractors;
- Fortnightly site inspections of equipment operational status, site safety, security, and calibration checks; and
- Planned six monthly servicing and re-calibration of analysers by equipment suppliers under contract to the Council.

The Temple Way site is an affiliate site which is owned and maintained by Bristol City Council but also incorporated in the Defra AURN network. This site is maintained in accordance with the QA/QC processes as required for sites that form part of the National AURN network.

Equipment Servicing and Maintenance Regimes

BCC analysers have planned maintenance schedules that broadly follow those assigned to the AURN and affiliated site network. All analysers are maintained following manufacturers' instructions and have a six-monthly full service and re-calibration conducted under the servicing contract. Since November 2022 these have been carried out by Enviro Technology Ltd.

BCC's internal data ratification procedures have been used to ensure that the reported data is valid and meets the required standards. Results of the servicing, calibrations and repairs that were carried out by Enviro Technology are fully documented and stored

centrally. BCC staff carry out routine maintenance during regular fortnightly site visits where all associated equipment such as sample lines, modem, and electrical system are examined, and sample inlet filters are changed. Any faults, repairs or changes made to the equipment are also recorded and stored centrally and at analyser locations.

Calibration Check Methods

The calibration check procedures are the same for all the Council's continuous analysers, with a two point zero/span calibration check being performed at regular intervals of two weeks. The methodology for the calibration check procedure is derived from the manufacturers' instruction handbooks and from the AURN Site Operator's Manuals, as follows:

- Pre-calibration check - the site condition and status of the analyser is recorded prior to the zero/span check being conducted;
- Zero check – the response of the analyser to the absence of the gas being monitored;
- Span check – the response of the analyser to the presence of the gas of a known concentration; and
- Post calibration check - the site condition and status of the analyser upon completion of all checks.

Each analyser zero/span check is fully documented with records being kept centrally using Google Sheets. Diagnostics data is recorded automatically through Envista ARM. Calibration factors are calculated in Google Sheets and are used in the scaling and ratification process.

Calibration Issues 2024

Some inconsistencies were identified with calibration scaling factors for 3 BCC sites during 2024. When this calibration data was used to scale real time data, it resulted in lower than expected real time NO₂ concentrations for the year at these sites. As a result, it was decided to only use data from a selected number of calibrations taken through the year that did not suffer from these inconsistencies. Some of the calibrations used were calibrations carried out by BCCs equipment servicing contractor, Enviro Technology Ltd. As a result of this, data from the Colston Avenue, Marlborough Avenue and Wells Road sites has been scaled using data from 6 calibrations for the year, as opposed to the usual

24 calibrations. As per LAQM.TG22 Guidance (Section 7) linear interpolation has been used to allow the scaling factors from this smaller number of calibrations to be applied to the data for the year.

It is unclear why this issue arose. At the end of 2024, BCC purchased new flowmeters for use during calibrations at all sites in the monitoring network. Since this change, the inconsistencies in calibration responses at these sites have been rectified, however, ongoing checks will continue to ensure that this continues.

Analyser Calibration

A two-point calibration is conducted on Bristol City Council analysers with a reference NO mixture at a concentration of approximately 450ppb. Gases are supplied and certified by BOC or Air Liquide.

Zero Air Generation

The contents of the portable scrubber (hopcalite, activated charcoal, purafil and drierite) are changed when necessary or at least every year.

PM₁₀ and PM_{2.5} Monitoring Adjustment

The type of PM₁₀/PM_{2.5} monitors utilised within Bristol do not require the application of a correction factor.

Automatic Monitoring Annualisation

All automatic NO₂ monitoring locations within Bristol recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data.

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO₂ concentrations corrected for distance are presented in Table C.7.

Table C.7 – Automatic NO₂ Fall off With Distance Calculations (concentrations presented in µg/m³)

| Site ID | Distance (m): Monitoring Site to Kerb | Distance (m): Receptor to Kerb | Monitored Concentration (Annualised and Bias Adjusted) | Background Concentration | Concentration Predicted at Receptor | Comments |
|----------------------|---------------------------------------|--------------------------------|--|--------------------------|-------------------------------------|----------|
| 501 – Colston Avenue | 2 | 5 | 48.7 | 16.5 | 41.8 | |

Appendix D: Maps of Monitoring Locations and AQMA

Figure D.1 – Extent of Air Quality Management Area

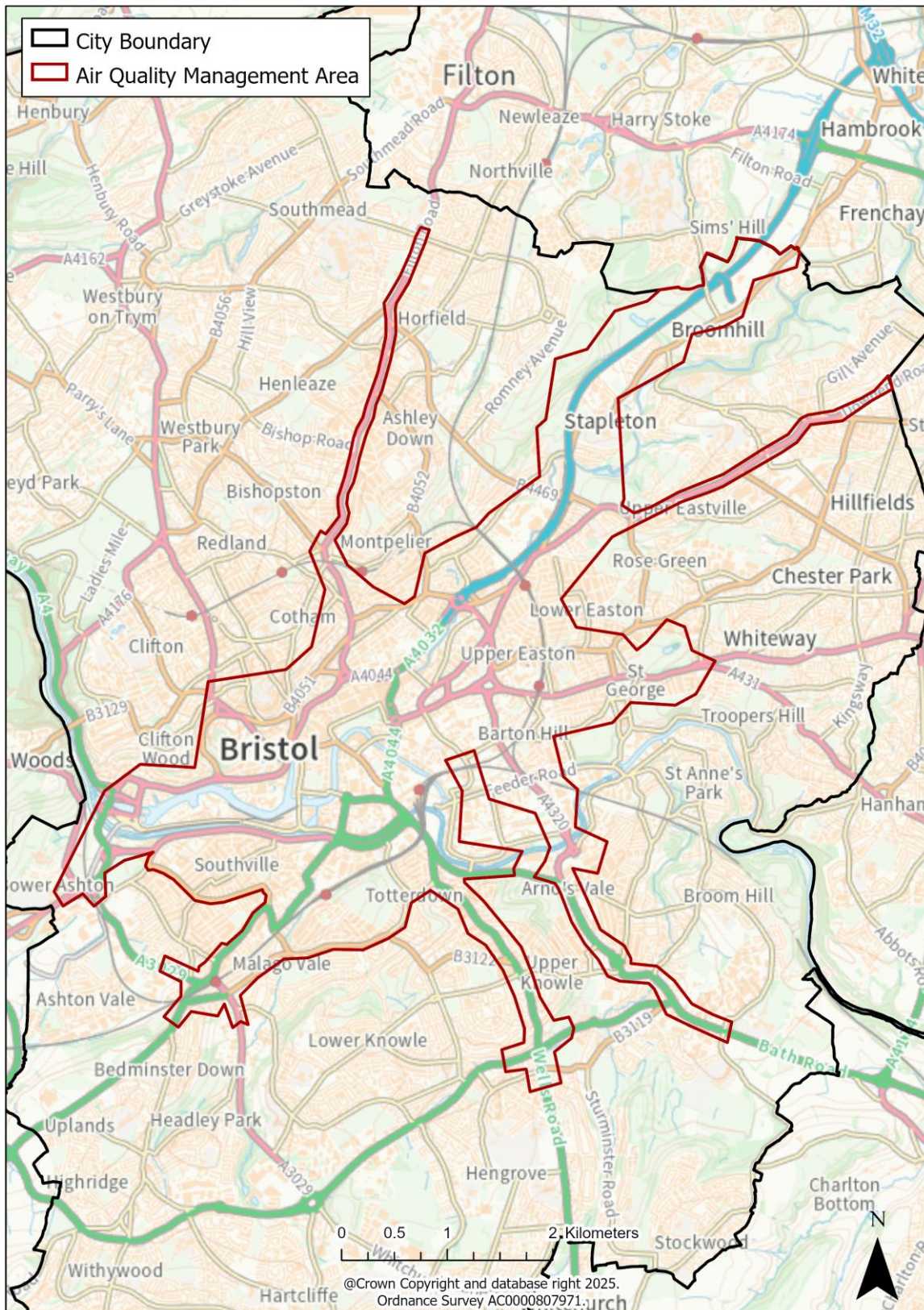


Figure D.2 - Central Monitoring Locations: 2024 Annual NO₂ Concentrations

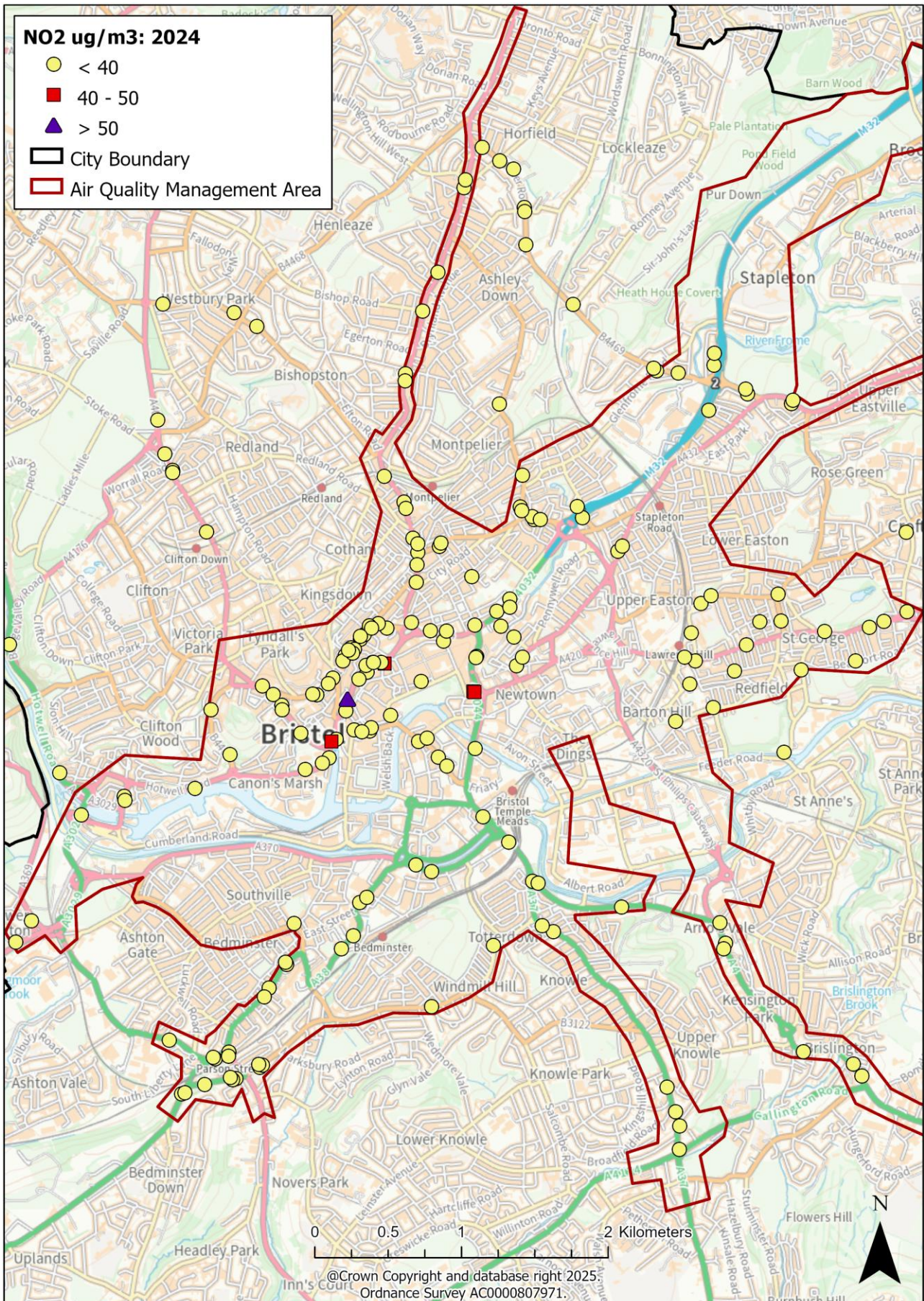


Figure D.3 - Central Monitoring Locations: 2024 Annual NO₂ Concentrations
Distance Adjusted (where relevant)

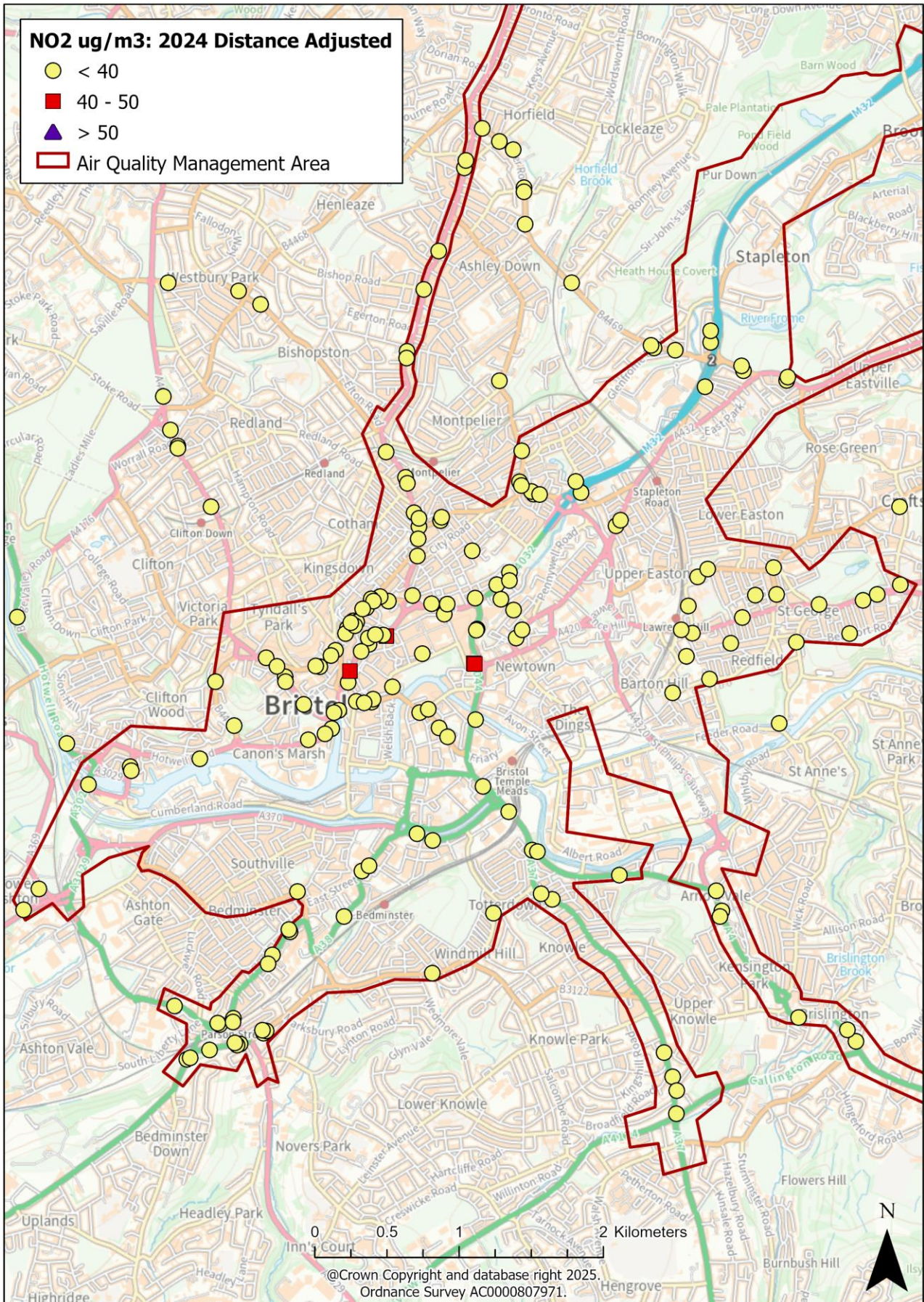


Figure D.4 – Avonmouth Monitoring Locations: 2024 Annual NO₂ Concentrations

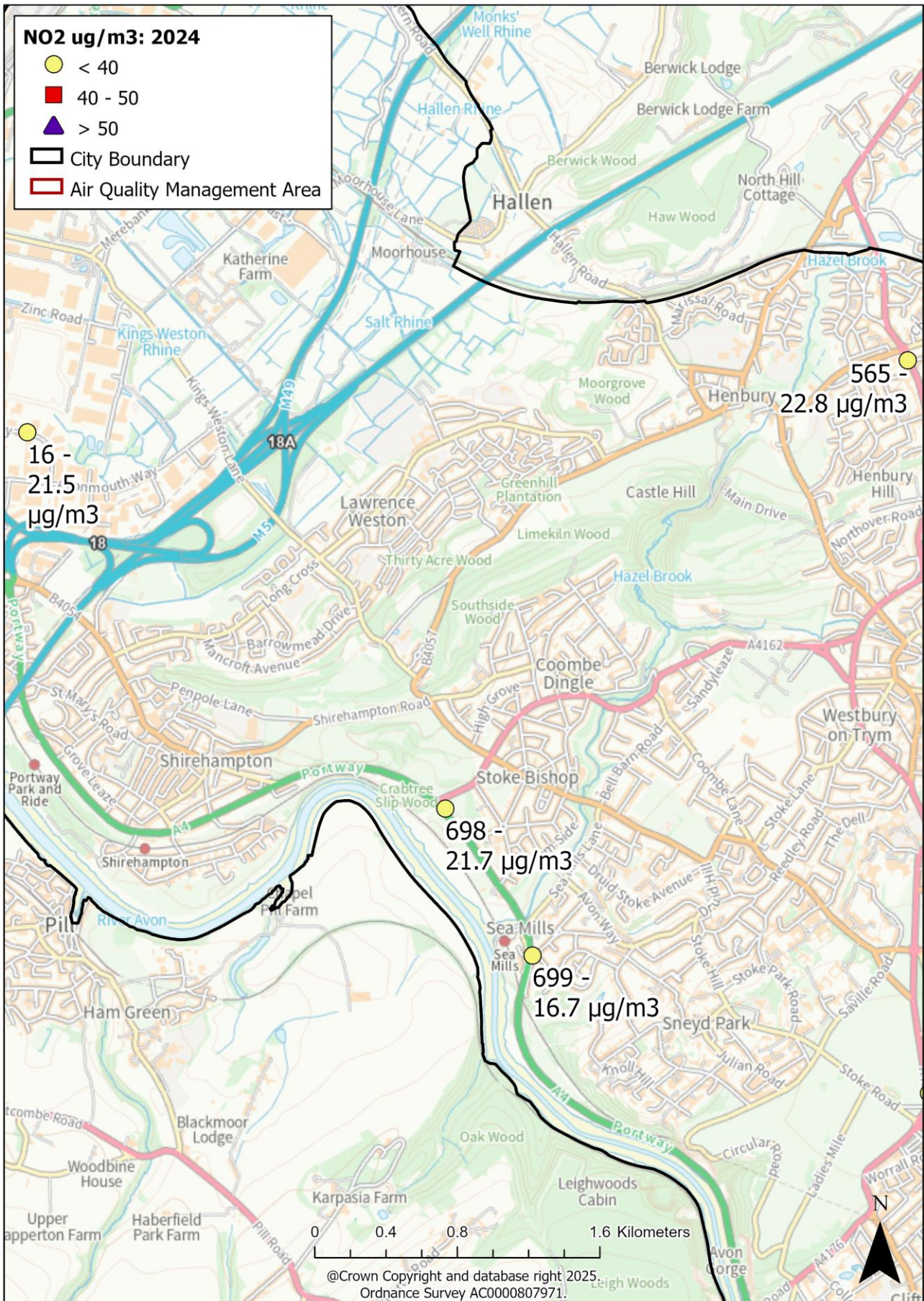


Figure D.5 - Monitoring Locations Where Annual NO2 Concentrations Increased in 2024 Compared to 2023

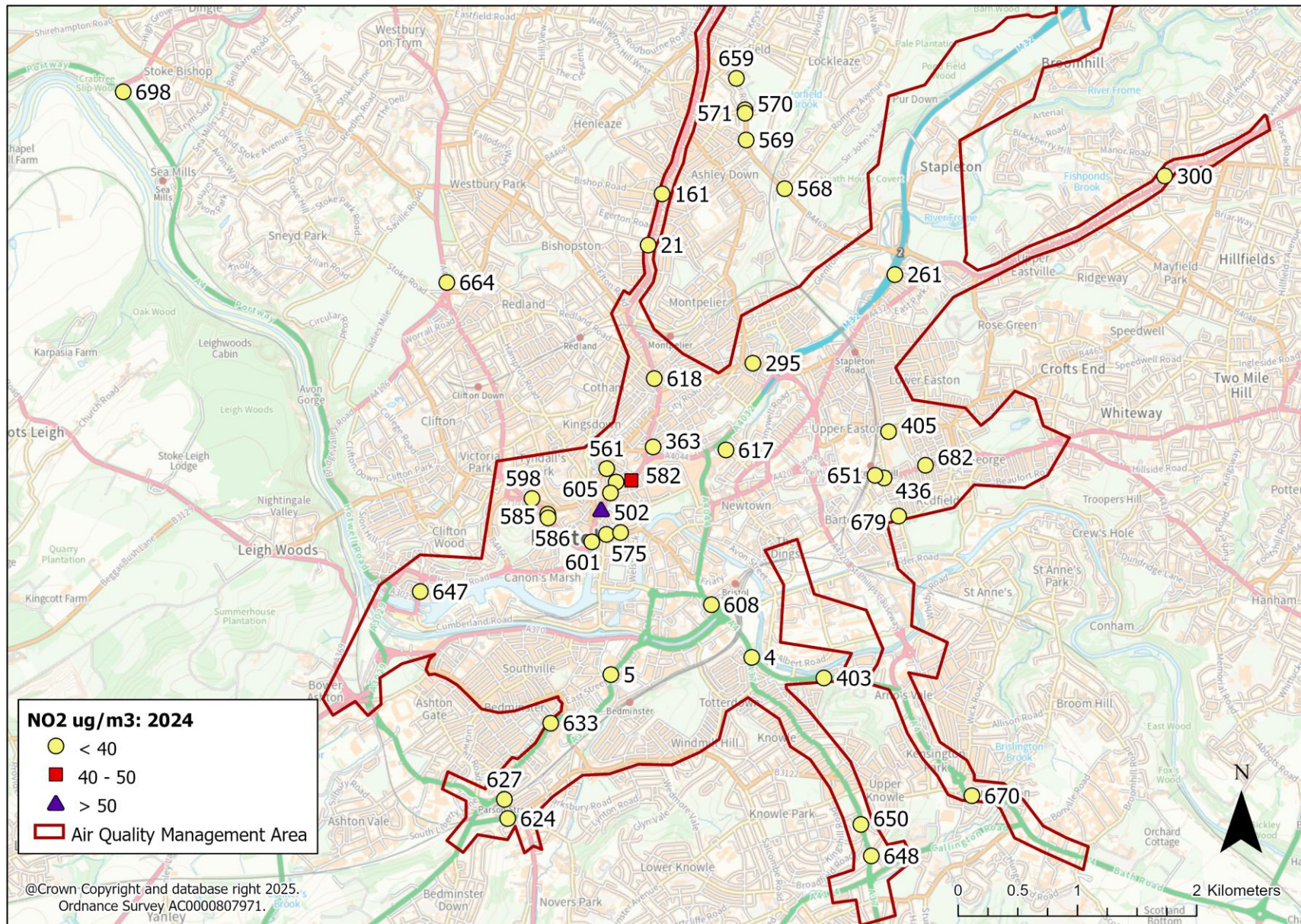


Figure D.6 – New Diffusion Tube Monitoring Locations in 2024

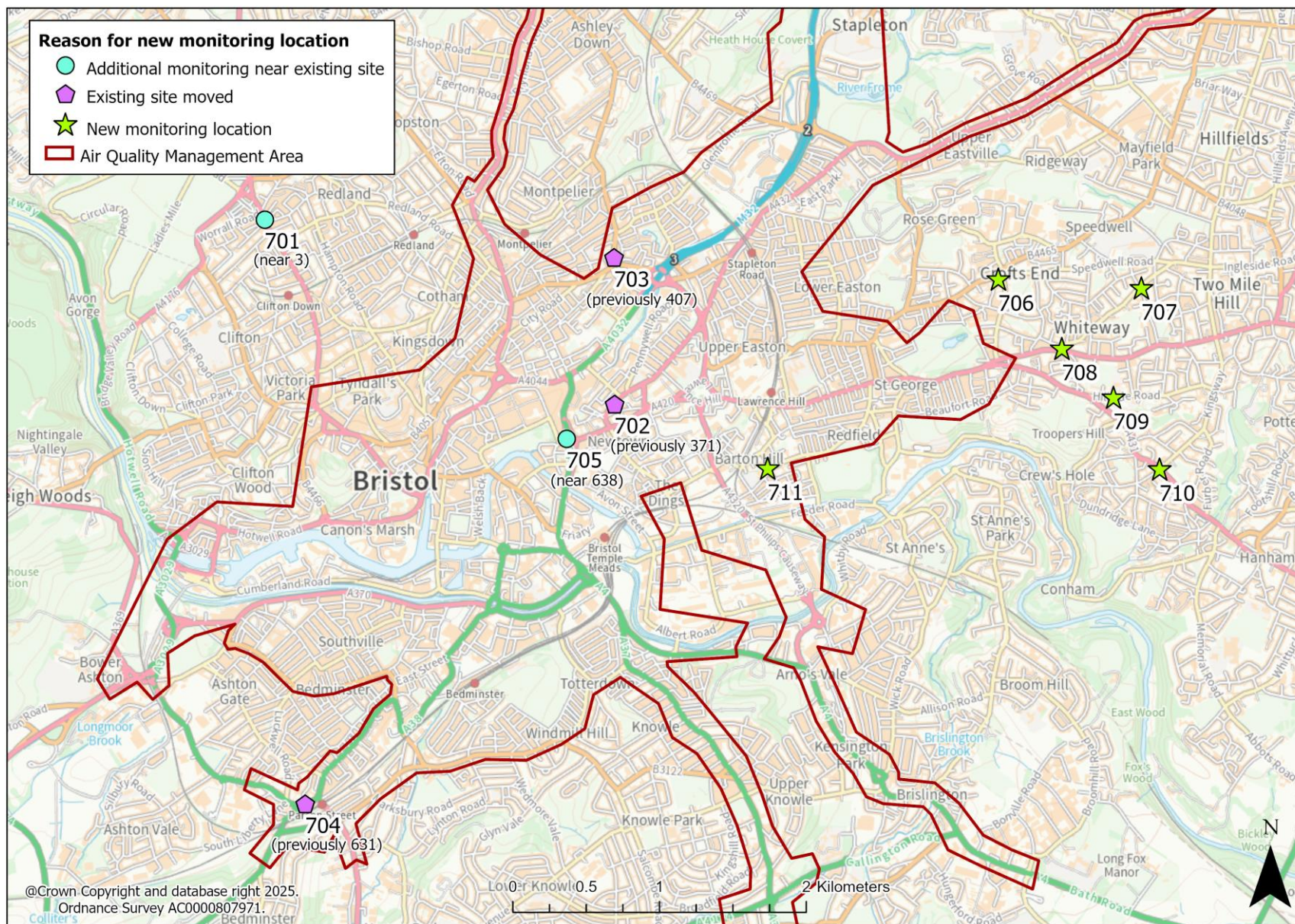
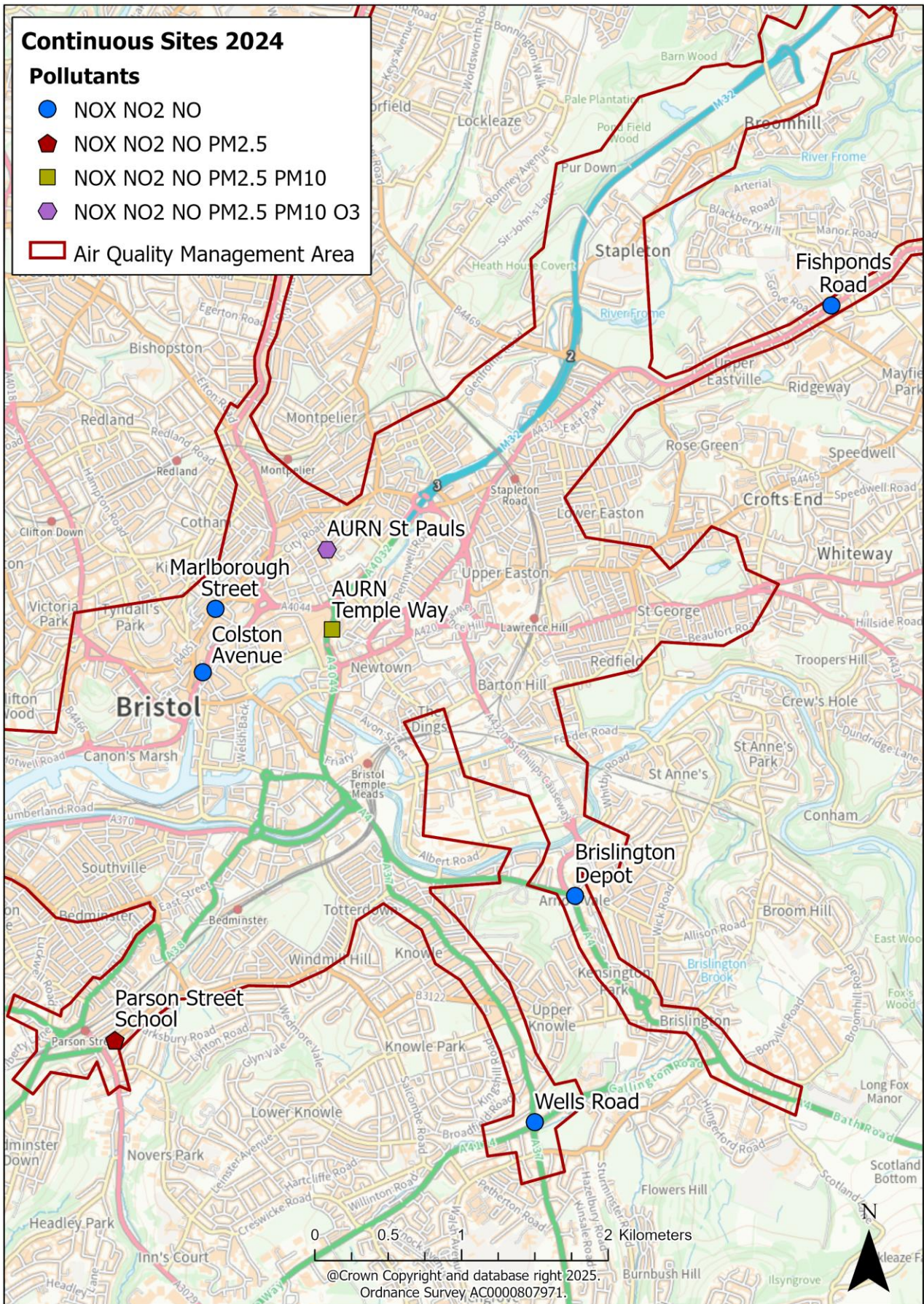


Figure D.7 - Continuous (Real-Time) Monitoring Locations in 2024



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England⁹

| 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 |

⁹ The units are in micrograms of pollutant per cubic metre of air (µg/m³).

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 |
| AURN | Automatic Urban and Rural Network |
| BAF | Bias Adjustment Factor |
| BCC | Bristol City Council |
| CAZ | Clean Air Zone |
| Defra | Department for Environment, Food and Rural Affairs |
| DMRB | Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways |
| DTDPT | Diffusion Tube Data Processing Tool |
| EU | European Union |
| FDMS | Filter Dynamics Measurement System |
| JAQU | Joint Air Quality Unit |
| LAQM | Local Air Quality Management |
| NRMM | Non-road mobile machinery |
| NO ₂ | Nitrogen Dioxide |
| NO _x | Nitrogen Oxides |
| PM | Particulate matter |
| 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 |
| WHO | World Health Organisation |

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.