



Listening Learning Leading

# 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**

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# **Executive Summary: Air Quality in Our Area**

Air quality in South Oxfordshire and Vale of White Horse continued to show improvement during 2024, with nitrogen dioxide (NO<sub>2</sub>) levels remaining below national air quality objectives at most monitoring locations. A key development this year was the formal revocation of the Abingdon and Wallingford Air Quality Management Areas (AQMAs), following five consecutive years of compliance with legal NO<sub>2</sub> limits. This marks a significant step in local air quality management, as it reflects the sustained achievement of national standards in areas previously identified as hotspots.

In addition, 2024 monitoring results confirmed continued compliance in the Henley, Watlington, and Marcham AQMAs. As a result, the Councils are proposing the revocation of these three AQMAs in 2025, subject to final confirmation.

Ongoing work has focused on providing accessible air quality information to the public, supporting lower-emission travel, and assessing options for future improvements. Priorities for 2025 include further investigation of key transport corridors, continued implementation of low-emission strategies, and partnership work with local authorities and regional agencies.

Residents can find updates, air quality forecasts, and guidance at www.oxonair.uk.

### Air Quality in South Oxfordshire and Vale of White Horse

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 early onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality.

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

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

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO <sub>2</sub> )	Nitrogen dioxide is a gas which is generally emitted from high- temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO <sub>2</sub> )	Sulphur dioxide (SO <sub>2</sub> ) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	Particulate matter is everything in the air that is not a gas.  Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes.  PM <sub>10</sub> refers to particles under 10 micrometres. Fine particulate matter or PM <sub>2.5</sub> are particles under 2.5 micrometres.

#### **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.

#### **Conclusions and Priorities**

The 2025 ASR confirms that South Oxfordshire and Vale of White Horse District Councils are achieving continued reductions in nitrogen dioxide across most of their monitoring network. No exceedances of the NO<sub>2</sub> annual mean objective were identified outside of existing AQMAs, and concentrations within Henley, Watlington, and Marcham have remained below legal limits for five consecutive years, allowing for revocation proposals. The Botley AQMA continues to show concentrations close to the objective at some roadside locations, although values at relevant receptor sites are now compliant, subject to further verification.

The Councils remain on track with the implementation of their updated Air Quality Action Plan, with key areas of progress in public information systems, transport accessibility, and vehicle fleet upgrades. Priorities for the coming year include completing feasibility studies to inform future action in traffic-dense areas, advancing low-emission transport schemes, and maintaining focus on school and community-based measures.

Challenges ahead include ensuring adequate funding is available, managing the dependencies on third-party actions, and adapting to evolving national and local policy frameworks. The Councils are committed to maintaining momentum through collaborative, evidence-led work that safeguards public health and improves air quality across the districts.

#### How to get Involved

There are many ways in which the public can get involved in helping to improve air quality in their area, from using their car less, driving more efficiently when they do have to drive, or considering a cleaner vehicle when they choose to upgrade their car. The different initiatives looking to improve air quality in the districts can be found in the oxonair website: https://www.oxonair.uk/local-initiatives.

Many smart travel choices and other tips to reduce air pollution can also be found in the links below:

- The air quality website for Oxfordshire (oxonair.com) is where residents and visitors can access useful information and advice related to air quality, including air pollution levels and relevant local and national policies, as well as tools like an air quality forecast and a high pollution alert system.

Figure 1 – Text alert system available in Oxonair website.



- The "Turn It Off" campaign run by South Oxfordshire District Council and Vale of White Horse District Council encourages drivers to turn off their engines while idling to improve local air quality. The campaign website offers information and campaign materials, highlighting the environmental impact of idling and promoting better air quality practices: <a href="https://www.southandvale.gov.uk/turnitoff/">https://www.southandvale.gov.uk/turnitoff/</a>
- The Burn Better website (<a href="https://uk-air.defra.gov.uk/library/burnbetter/-">https://uk-air.defra.gov.uk/library/burnbetter/-</a>) offers guidance on reducing air pollution from domestic burning. It includes tips on choosing the right fuels, maintaining stoves and fireplaces, and minimizing health risks

associated with particulate matter. The site also provides links to resources for further information and advice on best practices for cleaner burning to improve air quality.

- The Climate Action Oxfordshire website (<a href="https://www.climateactionoxfordshire.org.uk/">https://www.climateactionoxfordshire.org.uk/</a>) offers a comprehensive resource for individuals, communities, and organisations aiming to reduce their carbon footprint. It provides practical advice on energy efficiency, transport, lifestyle changes, and biodiversity, with tips ranging from simple changes in habits like recycling more, to significant investments like installing solar panels. The site includes an interactive map to locate nearby community action groups and resources, fostering local climate initiatives.
- The Oxford Bus Company app (<a href="https://www.oxfordbus.co.uk/app">https://www.oxfordbus.co.uk/app</a>) provides a variety of features to enhance bus travel in Oxfordshire. Users can track buses live, plan journeys, purchase and store mobile tickets, and access live bus departure times. It also offers real-time service updates and route planning for the Oxford Bus Company and Thames Travel networks.
- Oxfordshire County Council provides information about public EV charging points, installing home chargers, and government grants for EV charge point installation here: <a href="https://www.oxfordshire.gov.uk/residents/environment-and-planning/energy-and-climate-change/electric-vehicles">https://www.oxfordshire.gov.uk/residents/environment-and-planning/energy-and-climate-change/electric-vehicles</a>. It addresses solutions for Oxfordshire residents without off-street parking, such as EV charging hubs and pavement gullies. The site also includes details on the county's initiatives to expand EV infrastructure, like the Park and Charge project and the Gul-e trial.
- If you are a science teacher or a person responsible for running an environment club at your primary school, please have a look at our <u>"Kids Zone" on Oxonair</u> which promotes an understanding of the causes and impacts of air pollution with the aim to reduce children's exposure to air pollutants, within the school and through their travel;

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# 1 Local Air Quality Management

This report provides an overview of air quality in South Oxfordshire and Vale of White Horse District Councils 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 South Oxfordshire and Vale of White Horse District Councils to improve air quality and any progress that has been made.

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

# 2 Actions to Improve Air Quality

#### 2.1 Air Quality Management Areas

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

A summary of AQMAs declared by South Oxfordshire and Vale of White Horse District Councils can be found in Table 2.1. The table presents a description of the four AQMAs that are currently designated within South Oxfordshire and Vale of White Horse Districts. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designation(s) are as follows:

#### NO<sub>2</sub> annual mean

South Oxfordshire and Vale of White Horse District Councils propose to **revoke Henley**, **Watlington and Marcham AQMAs in 2025**, following compliance with objectives now being achieved for 5 years. For further information on the NO<sub>2</sub> trends within these AQMAs please see Section 3.1 below and Appendix A.

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
Botley	29/04/2008	NO2 Annual Mean	Residential properties close to the A34	YES	58.8	34	2	2023 South Oxfordshire and Vale of White Horse	https://www.whitehorsedc.g ov.uk/wp- content/uploads/sites/3/202 4/02/SOVOWH-AQAP- 2023.pdf
Marcham	15/06/2006	NO2 Annual Mean	Residential properties near A415	NO	53.9	25.1	5	2023 South Oxfordshire and Vale of White Horse	https://www.whitehorsedc.g ov.uk/wp- content/uploads/sites/3/202 4/02/SOVOWH-AQAP- 2023.pdf
Henley	01/01/2003	NO2 Annual Mean	An area encompassing Duke Street and Bell Street in 2002, extended in 2004 to include the Market Place, Hart Street and Reading Road	NO	45.1	31.2	5	2023 South Oxfordshire and Vale of White Horse	https://www.southoxon.gov. uk/wp- content/uploads/sites/2/202 4/02/SOVOWH-AQAP- 2023.pdf

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
Watlington	31/03/2009	NO2 Annual Mean	An area encompassing Shirburn Street, Couching Street and Brook Street	NO	51.3	23.7	5	2023 South Oxfordshire and Vale of White Horse	https://www.southoxon.gov. uk/wp- content/uploads/sites/2/202 4/02/SOVOWH-AQAP- 2023.pdf

<sup>□</sup> South Oxfordshire and Vale of White Horse District Councils confirm the information on UK-Air regarding their AQMA(s) is up to date

<sup>☑</sup> South Oxfordshire and Vale of White Horse District Councils confirm that all current AQAPs have been submitted to Defra

# 2.2 Progress and Impact of Measures to address Air Quality in South Oxfordshire and Vale of White Horse District Councils

Defra's appraisal of the 2024 ASR concluded:

- 1. The Councils propose to revoke Wallingford and Abingdon AQMAs in 2024 in line with LAQM guidance, this is welcomed and encouraged for all AQMA with more than three years of compliance. Wallingford and Abingdon AQMAs were revoked in December 2024, with the revocation Orders sealed in April 2025.
- 2. The Councils have updated the Action plan measures which are detailed and robust. The Councils are commended for their efforts to update the AQAP in line with technical guidance.
- 3. The Councils have included a detailed section on measures to address PM<sub>2.5</sub> emissions including the fraction of mortality indicator D01 which has been discussed. The Council have also included a comprehensive discussion regarding which AQAP measures target the reduction of PM<sub>2.5</sub> emissions. This section is an example of good practice and should continue in future reports. The PM<sub>2.5</sub> section has similar content as the one in the 2024 ASR plus additional information.
- 4. Robust and detailed QA/QC procedures including the calculation of annualisation of passive diffusion tubes by combining 4 annualisation factor, and the calculation of the bias adjustment factor with the accompanying justification. The fall off with distance calculations have been carried out appropriately. This section is commended, and The Council should continue this in future reports. The QA/QC sections in this report have the same content as the ones in the 2024 ASR.
- 5. Trends are presented and discussed well. Figures A.1- A.15 illustrate the annual mean NO<sub>2</sub> concentration within each location effectively with a comparison to the previous five years. This is encouraged. The same style of figures is included in Appendix A of this report.
- 6. The maps Illustrating the details of monitoring locations are commended for their concise and clear nature to allow the monitoring locations to be easily identified.

  The same style of map is included in Appendix D this report.

- 7. The details for the AQMA on the portal do not match the details described within the ASR. Table 2.1 The Marcham AQMA details on the portal detailed as 2015-06-15, the ASR has listed 2006-06-15. The Councils should update this in future reports. The details have been updated to reflect recent revocations and amend existing data.
- 8. Minor grammatical errors in the captions for figure A.2-A.15 where NO<sub>2</sub> is not subscripted. The Councils should ensure all grammatical errors are checked prior to submission. This report has been checked for grammatical errors and amended where necessary.

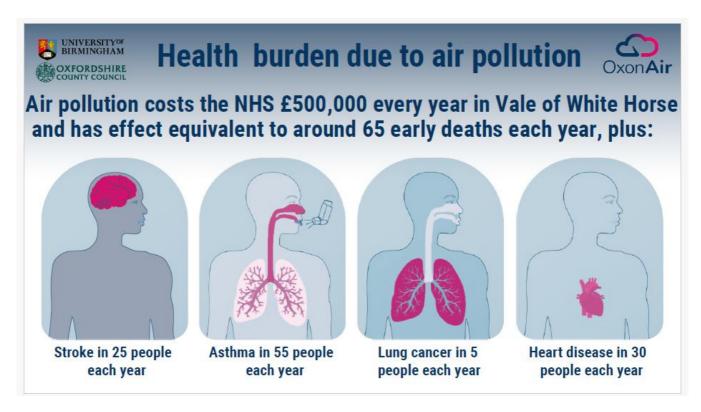
South Oxfordshire and Vale of White Horse District Councils have taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. There are 17 measures within Table 2.2, with the type of measure and the progress South Oxfordshire and Vale of White Horse District Councils 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 these measures can be found in the 2023 South Oxfordshire and Vale of White Horse Air Quality Action Plan.

#### Key completed measures are:

- AW4 Public Information on Air Quality Monitoring. In 2024, a high pollution alert system was introduced, and in 2024 the oxonair.uk platform saw 14,500 visits. The site now provides residents with access to air quality data, local policies, and pollution forecasts, supporting greater public awareness and engagement. The Air Quality Lifecourse Assessment Tool (AQLAT) was acquired in 2024; this tool uses county-wide air quality modelling data to estimate the health and economic benefits of reducing air pollution at ward level (see Figures 2 and 3 below).
- AW2 Promotion of Public Transport Uptake. Significant progress was made in 2024, including an update to the Oxfordshire Bus Service Improvement Plan, the

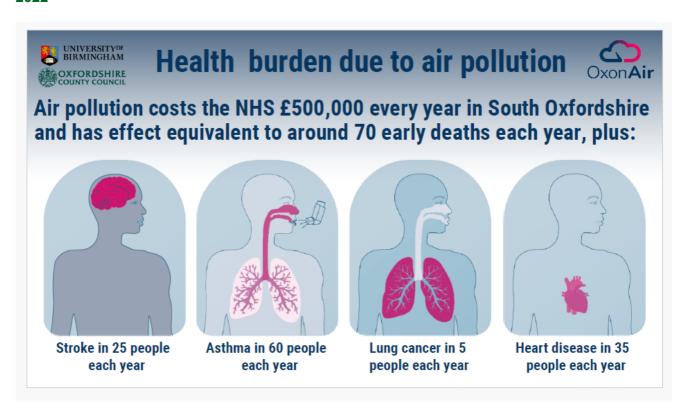
launch of the "My Bus Oxfordshire" ticketing scheme, £1 bus fares on Sundays in December, and completion of 50% of the Real-Time Passenger Information screen upgrades.

Figure 2 – Health burden of air pollution in Vale of White Horse, data from the beta version of the AQLAT using modelled air pollutant concentration data from Defra Background Maps 2022



- AW6 Upgrading Council-Owned Vehicle Fleet. A new procurement strategy for
  waste and street cleansing vehicles was adopted in April 2024. As part of initial
  implementation, a 10-tonne food waste vehicle (see Figure 4 below) and an electric
  caged tipper were added to the fleet to assess the viability of further low-emission
  vehicle replacements.
- AW7 Feasibility study on use of green infrastructure. This feasibility study was carried out in 2024 and concluded that green infrastructure was not a viable measure to significantly improve local air quality in Henley.

Figure 3 – Health burden of air pollution in Vale of White Horse, data from the beta version of the AQLAT using modelled air pollutant concentration data from Defra Background Maps 2022



historically explored a wide range of potential measures to improve air quality alongside the A34, Botley. The completed studies looking at the various options concluded that it was not possible to either close the footpath, or construct barriers between the road and the footpath, nor did any of work looking at traffic management measures find any viable solutions to changing traffic movements along this section of the A34, that would help to reduce of levels of nitrogen dioxide. More recently National Highways have not identified any new measures that could help to improve air quality in this area. As no new measures have been found as part of the work to support the agreed action, and compliance with the objectives has been achieved in 2024, this action has been deemed completed and closed.

Members of the public can review the progress and further information on these and additional projects on the Local Initiatives page on <a href="https://www.oxonair.uk/local-initiatives">https://www.oxonair.uk/local-initiatives</a>.

Figure 4 – Electric food waste collection vehicle added to the councils' fleet in 2024



South Oxfordshire and Vale of White Horse District Councils, together with their AQ Partners, have the following priorities for 2025:

- To complete or make significant progress on feasibility studies for traffic and emissions reduction in Henley, as well as a review of parking options.
- To develop and implement low-emission transport initiatives, by commencing work on the Low Emission Taxi Strategy, and exploring emission-based parking incentives and Park & Ride/stride options.
- To strengthen freight management and HGV reduction strategies: Analyse data from Henley's HGV study, continue delivery of Freight and Logistics Strategy actions, and identify viable interventions to reduce freight emissions.
- To progress school and community-focused air quality measures: start Oxfordshirewide review of schools to inform School Streets Programme planning and explore options to expand anti-idling enforcement beyond council-owned car parks.

South Oxfordshire and Vale of White Horse District Councils worked to implement the following measures in partnership with their stakeholders during 2024:

- Oxfordshire County Council
- National Highways
- The Oxfordshire Air Quality Group, which includes air quality officers from all Local Authorities in Oxfordshire, together with representatives from teams that have an

involvement in air quality such as colleagues in the Public Health and community safety directorate.

The principal challenges and barriers to implementation that South Oxfordshire and Vale of White Horse District Councils anticipates facing are some action's progress depends on third parties, changing policies or lack of resources.

South Oxfordshire and Vale of White Horse District Councils anticipate that the measures stated above and in Table 2.2 will further achieve compliance in all six AQMAs in coming years.

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
B1	Feasibility study to improve air quality on the A34	Transport Planning and Infrastructure	Other	2023	2024	National Highways	TBD, potential to use National Highways designated funds	Not funded	£50k - £100k	Completed	Improved air quality within Botley AQMA, such that there is compliance with the air quality objectives	Completion of feasibility study, quantification of options, and development of a plan to implement recommendations	NH has explored multiple options to improve air quality along the A34 in Botley. Studies found that closing the footpath, building barriers, or altering traffic patterns were not viable solutions. More recently, no new effective measures have been identified to reduce nitrogen dioxide levels in the area.	
M1	Strategic highway improvements to relieve pressure on through traffic in Marcham (incl. potential bypass)	Traffic Management	Strategic highway improvements	2023	2035	Oxfordshire County Council	TBD	Not funded	Not yet determined	Planning	Reduced vehicle emissions within Marcham AQMA	Annual average concentration of NO2 within Marcham AQMA	Initial optioneering is taking place (2024/2025). Transport modelling was completed in 2024, which will help inform the shortlisting of design options. Phase 2 of this work has been commissioned.	Review to consider all options to reduce vehicle emissions within Marcham AQMA, including redirecting traffic (incl. potential route for bypass), junction and road improvement schemes, traffic calming measures

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
H1	Henley Low Emission Neighbourhood (HLEN), incl. promotion of cycling and walking	Transport Planning and Infrastructure	Other	2023	2026/2027	Oxfordshire County Council	TBD (will explore developer contributions and DfT grant opportunities)	Partially funded	£100k - £500k	Planning	Reduced vehicle emissions (private cars)	Annual average concentration of NO2 within Henley AQMA	Movement and Place Strategy Team was recruited in September 2024; MAPs for Henley will be explored in a Market Towns chapter	HLEN looks to explore an areabased package of measures like promoting walking / improved walking infrastructure, improving cycle network, EV infrastructure, targeted behaviour changes and travel planning. This will be considered through work to develop LTCP Movement and Place Frameworks. These Frameworks will deliver a clear set of Actions and Objectives for each defined area, in accordance with Local Transport Connectivity Plan (LTCP)
AW1	Promotion of cycling	Promoting Travel Alternatives	Promotion of cycling	2023	2025	Oxfordshire County Council	Active Travel England	Partially funded	£1 million - £10 million	Implementation	Reduced vehicle emissions	Number of cycling trips per week and percentage of residents cycling by purpose	Thame, Wantage & Grove, and Wallingford Area Local Walking and Cycling Infrastructure Plans (LCWIPs) in progress.	

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
AW2	Promotion of public transport uptake	Promoting Travel Alternatives	Other	2023	2030	Oxfordshire County Council	National Bus Strategy (also investigating developer contributions and DfT bid opportunities)	Partially funded	>£10 M	Implementation	Reduced vehicle emissions	Passenger journeys on local bus services	Oxfordshire Bus Service Improvement Plan updated June 2024. £1 bus journeys in Oxfordshire on Sundays in December offered in 2024. New countywide multi operator day and week tickets, known as My Bus Oxfordshire, were launched in July 2024 with a supporting countywide promotional campaign (the young persons tickets in particular offer good value for money). Launched a new Oxfordshire Bus Partnership website in July 2024 with plans for further developing this to include travel information and public bus maps in 2025/26. Real Time Passenger Information (RTPI) screen upgrades 50% of programme completed. Remainder to be delivered in 25/26.	

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
AW3	Review options to reduce freight emissions	Freight and Delivery Management	Other	2023	2025	Oxfordshire County Council	TBD (will investigate future DfT bid opportunities)	Not funded	£1 million - £10 million	Implementation	Reduced HGV emissions within AQMAs	Completion of review and plan to implement rec's	The Freight and Logistics Strategy was adopted in 2022 and there is ongoing work to deliver actions to reduce freight emissions such as an area weight restriction feasibility study, a review of current rest stops and lorry parking facilities, investigation of how to promote cycle freight, freight consolidation centre feasibility study and detailed HGV studies in Henley-on-Thames and Windrush Valley. Work is ongoing to develop a new rail strategy OxRail 2040 which will include consideration of rail freight and opportunities to support modal shift to rail freight.	
AW4	Public info, linked to AQ monitoring results	Public Information	Via leaflets/posters, radio, television, internet/social media, other	2023	2024	SODC, VOWHDC	TBD	Not funded	£10k - £50k	Completed	Reduced personal exposure	Completion of Comms Strategy, and plan to implement rec's	14k visits to the website in 2024. A high pollution alert system was made available in 2024.	Oxonair.uk provides air quality information such as monitoring data, local policies, local initiatives to reduce pollution levels, and air pollution forecast.

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
AW5	Low Emission & Air Quality Policy and Guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2027/28	SODC, VOWHDC	TDB	Not funded	£10k - £50k	Planning	Reduced vehicle emissions (NO2). Addressing other key sources (PM2.5)	AQ & Emissions Strategy adopted	Exploring the adoption of existing AQ Guidance for Developers as statutory planning guidance postponed until Local Government restructure takes place	AQ Developers Guidance is available on Oxonair and the council's webpages. It is regularly referenced during the planning process when assessing the potential impact that new developments may have on local air quality. The guidance outlines best practices and mitigation measures expected from developments, ensuring these considerations are addressed early in the planning process.
AW6	Upgrading council owned vehicle fleet	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2025	SODC, VOWHDC	TBD	Not funded	£500k - £1 million	Implementation	Reduced vehicle emissions	% of fleet that is zero (tailpipe) emission	The new Joint South Oxfordshire and Vale of White Horse Waste and Street Cleansing Vehicle Procurement Strategy was adopted in April 2024. A 10-tonne electric food waste collection vehicle and a small electric caged tipper to use on the street cleansing service were added to the council's fleet in 2024. These will provide an understanding on the viability of using this type of vehicle that will inform future procurements	

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
													when further vehicles need to be replaced.	
AW7	Feasibility study on use of green infrastructure	Transport Planning and Infrastructure	Green	2023	2024	SODC, VOWHDC	TBD	Not funded	<£10k	Completed	Reduced personal exposure	Completion of feasibility study and plan to implement rec's	Review of green infrastructure as a tool for pollution mitigation within Henley AQMA took place in 2024 in collaboration with OCC's Tree Service. The study concluded that the introduction of new green infrastructure within Henley's AQMA is not viable due to spatial and structural limitations. However, targeted optimisation of existing tree bays (replanting empty tree bays, replacing declining trees in existing bays) is a feasible intervention, though its impact will be limited in scale and confined to	The remaining AQMAs will be reviewed in 2025/26 with OCC, but we expect similar spatial and structural limitations will also apply within these localities.

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
													specific locations.	
H2	Parking review, including implementation of park and ride / stride, and emission-based parking incentives		Other	2023	2025	SODC	TBD	Not funded	£100k - £500k	Planning	Reduced vehicle emissions (private cars)	Annual average concentration of NO2 within Henley AQMA	Measure not explored yet	This work will build on the recent review of parking charges and will explore options like Park and Stride, rail-based Park and Ride, priority parking for EVs, review of emission-based parking charges, workplace parking levy. Any review needs to be conducted jointly with OCC and consider the potential broader impacts on parking. The councils will explore this measure together with OCC in 2025/2026 taking into consideration the revocation of the AQMA.

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
Н3	Henley HGV Study	Freight and Delivery Management	Other	2023	2025	Oxfordshire County Council	TBD	Not funded	£100k - £500k	Planning	Reduced vehicle emissions (HGVs) within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	Initial data collection and scoping was completed in early 2024. Additional data collection via ANPR cameras was conducted in September 2024 and is currently being analysed.	Ongoing HGV study to fully understand HGV movements and issues and then work with a range of stakeholders to develop the appropriate solution. Once the data has been analysed, next steps and future options will be reviewed
H4	Develop a Low Emission Taxi Strategy (LETS)	Promoting Low Emission Transport	Taxi emission incentives	2023	2026	SODC	TBD	Not funded	£10k - £50k	Planning	Reduced vehicle emissions (taxis)	Adoption of Strategy with plan to implement recommendations	Internal planning work began in 2024 to ensure a review of the current Taxi Licensing Policy is carried out in 2025, allowing for the updated policy to be adopted in early 2026	

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
H5	Low emission schools and colleges	Promoting Travel Alternatives	Other	2023	2025	Oxfordshire County Council	TBD	Not funded	£100k - £500k	Planning	Reduced vehicle emissions (private cars)	Annual average concentration of NO2 within Henley AQMA		OCC will be carrying out a review of all schools across Oxfordshire in 2025 to see which schools would benefit from a School Street, to help form a longerterm programme for School Street Programme delivery and funding allocations.
H6	Anti-idling enforcement	Traffic Management	Anti-idling awareness and enforcement	2024	2025	SODC	TBD	Not funded	£50k - £100k	Implementation	Reduced vehicle emissions within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	Current car park orders do include for a penalty charge notice to be issued for idling engines. Parking wardens awarded powers to enforce antidling in council owned car parks on behalf of SODC.	On street anti- idling enforcement falls with OCC and will bexplored in 2025.

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
H7	Strategic highway improvements to relieve pressure on traffic in Henley	Traffic Management	Strategic highway improvements	2023	2026/2027	Oxfordshire County Council	TBD	Not funded	Not yet determined	Planning	Reduced vehicle emissions within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	See progress with H1 and H3 as these measures overlap	
B2	Feasibility study to reduce traffic emissions within Botley	Transport Planning and Infrastructure	Other	2023	2026/2027	Oxfordshire County Council	TBD, potential to use National Highways designated funds	Not funded	£50k - £100k	Planning	Reduced vehicle emissions within Botley AQMA	Completion of feasibility study, quantification of options, and development of a plan to implement recommendations	Measure not explored yet.	Building on existing body of knowledge through development of LTCP and Central Oxfordshire Travel Plan, this study will focus on potential actions to reduce traffic travelling to and from Oxford city centre. To be included within work to develop and deliver the Central Oxfordshire Travel Plan and Central Oxfordshire Movement and Place Framework.

# 2.3 PM<sub>2.5</sub> – Local Authority Approach to Reducing Emissions and/or Concentrations

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

Regarding particulate matter levels in the districts, examples from councils across the country who have traffic related AQMA's highlight that where  $NO_2$  levels are typically around 60-70  $\mu$ g/m³, measured particulate matter (PM<sub>10</sub>) levels at the same location remain below 25  $\mu$ g/m³, which is well below the national objective level of 40  $\mu$ g/m³.

#### 2.3.1 Particulate matter monitoring

Although no particulate matter monitoring has been carried out in the districts in 2024, the councils have commissioned particulate matter surveys in recent years, which used sensors and provided an indication of levels in the area. The results of these surveys are shown in Table 3 below:

Table 3 – Particulate matter monitoring data obtained at the surveys commissioned by the Councils in 2021 and 2022

	Annual A	verage (μg/m3)
Pollutant	Henley Survey 2021	Marcham Survey 2022
PM <sub>2.5</sub>	5	7
PM <sub>10</sub>	18	12

Further information on these surveys (including data capture, length of the survey, type of sensor etc) being available in previous years ASRs and on the AQE Website at:

- <a href="https://www.airqualityengland.co.uk/site/exceedence?site\_id=VS006">https://www.airqualityengland.co.uk/site/exceedence?site\_id=VS006</a>

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<sup>&</sup>lt;sup>1</sup> Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

https://www.airqualityengland.co.uk/site/exceedence?site\_id=VWH001

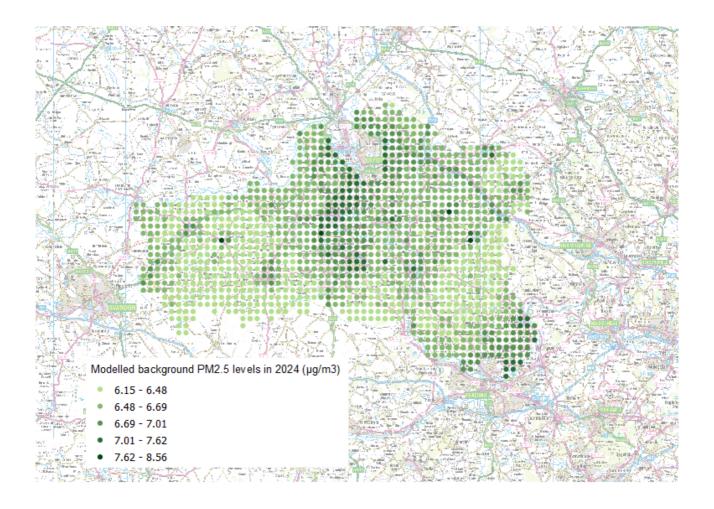
#### 2.3.2 Modelled Particulate Matter levels

Modelled data also supports levels in the district complying with the national objectives and Environmental Targets.

#### **DEFRA** background maps

Although there are both primary and secondary traffic related PM<sub>10</sub> sources, the majority of the PM<sub>10</sub> and PM<sub>2.5</sub> fraction in our Districts is made up from background sources. No other significant PM sources have been identified in the districts (see below Appendix F) and therefore the DEFRA background maps of PM are believed to be accurate putting PM<sub>2.5</sub> levels below 8.55  $\mu$ g/m³ in South Oxfordshire and Vale of White Horse in 2022 (please see Figure 5 below for an illustration of Defra's PM<sub>2.5</sub> modelled levels in the districts), which is less than half that of the national objective level.

Figure 5 – Modelled background PM<sub>2.5</sub> levels in the districts in 2024



The Public Health Outcomes Framework research has determined that the percentage of deaths from all causes in those aged 30 years plus are attributable to long-term exposure to PM<sub>2.5</sub> is 5.8% South Oxfordshire and Vale of White Horse. Oxfordshire level data on the number of deaths attributable to PM<sub>2.5</sub> can be found on the Oxfordshire Joint Strategic Needs Assessment on Air Quality.

This figure puts the districts just below both the county average fraction of mortality attributable to PM<sub>2.5</sub> (as shown on Table 4 below).

Table 4 – Fraction of mortality attributable to particulate air pollution in South Oxfordshire and Vale of White Horse

Indicator	South Oxfordshire and Vale of White Horse	Oxfordshire	Southeast Region	England
D01 - Fraction of mortality attributable to particulate air pollution (new method)	5.8	6	5.7	5.8

#### **AQLAT Tool**

Furthermore, in 2024 Oxfordshire County Council, together with South Oxfordshire and Vale of White Horse District Councils and the other district councils in the county, purchased the Air Quality Lifecourse Assessment Tool (AQLAT) from the University of Birmingham. This tool provides figures on the health and economic benefits of reducing air pollution at a ward-level resolution and will be used to inform future policies and projects in the county.

A county-wide air quality modelling project was commissioned to environmental consultancy CERC, the results of this study will feed into the AQLAT Tool.

This study estimated the PM $^{10}$  and PM $_{2.5}$  levels in the district are in the present and the figures for 2035. This information, summarised in Table 5 below, suggests the new Environmental Target of 10  $\mu$ g PM $_{2.5}$ /m $^3$  for 2024, will be met in both districts.

Table 5 - Modelled PM levels in the districts

Year	Pollutant	Modelled PM	levels (μg/m³)
i Gai	Tonutant	South Oxfordshire	Vale of White Horse
2023	PM <sub>10</sub>	12.72	12.68
2020	PM <sub>2.5</sub>	7.53	7.51
2035	PM <sub>10</sub>	12.42	12.35
2300	PM <sub>2.5</sub>	7.25	7.19

#### 2.3.3 Targeting particulate matter

In order to reduce PM levels further and working towards achieving the new 2021 Guideline values set by the World Health Organisation, some of the measures taken by the council to tackle NO<sub>2</sub> levels will also result in a reduction of PM emissions. Table 5 below shows which of the actions in the 2023 AQAP also target the reduction of the existing PM<sub>2.5</sub> levels in the district.

Table 6 – List of measures in 2023 AQAP that target PM<sub>2.5</sub> reduction according to LAQM.TG16 Action Toolbox

Measure No.	Measure	Reduces PM2.5 emissions
AW1	Promotion of cycling	✓
AW2	Promotion of public transport uptake	✓
AW3	Review options to reduce freight emissions	✓
AW4	Public info, linked to AQ monitoring results	
AW5	Low Emission & Air Quality Policy and Guidance	
AW6	Upgrading council owned vehicle fleet	✓
AW7	Feasibility study on use of green infrastructure	
H1	Henley Low Emission Neighbourhood (HLEN), incl. promotion of cycling and walking	<b>√</b>
H2	Parking review, including implementation of park and ride / stride, and emission-based parking incentives	
H3	Henley HGV Study	<b>√</b>
H4	Develop a Low Emission Taxi Strategy	<b>√</b>

# South Oxfordshire and Vale of White Horse District Councils

H5	Low emission schools and colleges	✓
H6	Anti-idling enforcement	✓
H7	Strategic highway improvements to relieve pressure on traffic in Henley	✓
M1	Strategic highway improvements to relieve pressure on through traffic in Marcham (incl. potential bypass)	<b>√</b>
B1	Feasibility study to improve air quality on the A34	
B2	Feasibility study to reduce traffic emissions within Botley	

There is also a Smoke Control Area in South Oxfordshire, the <u>Ladygrove SCA</u>, in Didcot. In 2024, the council did not issue any warning letters or financial penalties related to this SCA. There are no SCAs in the Vale of White Horse.

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

This section sets out the monitoring undertaken within 2024 by South Oxfordshire and Vale of White Horse District Councils 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

South Oxfordshire and Vale of White Horse District Councils undertook automatic (continuous) monitoring at 4 sites during 2024. Table A.1 and Figure A.15 in Appendix A show the details of the automatic monitoring sites. The <a href="mailto:oxonair.uk">oxonair.uk</a> page presents automatic monitoring results for South Oxfordshire and Vale of White Horse District Councils, 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

South Oxfordshire and Vale of White Horse District Councils undertook non- automatic (i.e. passive) monitoring of NO<sub>2</sub> at 129 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 (NO<sub>2</sub>)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40μg/m<sup>3</sup>. 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.

**Error! Reference source not found.** in Appendix A compares the ratified continuous monitored NO<sub>2</sub> hourly mean concentrations for the past five years with the air quality objective of 200µg/m<sup>3</sup>, not to be exceeded more than 18 times per year.

#### Nitrogen dioxide levels in South Oxfordshire

Only one of 15 monitoring sites in **Henley AQMA** recorded higher values in 2024 than it did in 2023, supporting the downward trend observed in recent years. Compliance has now been achieved in Henley AQMA for five years, as shown in Figure A.1 in Appendix A, with the highest recorded NO<sub>2</sub> concentration in 2024 being 31.2 µg/m3 (SS59).

In **Watlington AQMA**, 2023 monitoring data also supports a downward trend, with all monitoring sites recording lowers levels of  $NO_2$  in 2024 than they did in 2023, as shown in Figure A.2 in Appendix A, compliance has been achieved in Watlington AQMA for five years with levels now being well below the objective as the highest registered  $NO_2$  concentration in 2024 has been 23.7  $\mu$ g/m3 (SS30).

All monitoring sites in **Wallingford**, **Didcot and Thame** also recorded lower nitrogen dioxide levels in 2024 than they did in 2023 (shown in Figures A.5-.7), supporting the downward trend observed in recent years.

The remaining monitoring sites recorded also levels significantly below the national objectives in 2024 (see Figures A.8 and A.9), with only two sites recording slightly higher levels than those recorded in 2023 (SS15 in Chinnor and SS22 in Tetsworth).

#### Nitrogen dioxide levels in Vale of White Horse

In **Botley AQMA**, 2024 monitoring data also support a downward trend in NO<sub>2</sub> levels, with all the monitoring sites registering lower levels in 2024 than they did in 2023 (see Figure A.3).

Two of these monitoring sites, VS17 and VS20, recorded NO<sub>2</sub> values above 40  $\mu$ g/m³. However, these monitoring sites are located on a path adjacent to the A34 but over 10 metres away from the nearest receptor (see Table C.4 in Appendix C and Figure D.10). Distance correction was therefore applied to the data recorded, with the levels estimated at the façade of the nearest properties complying with the objectives (please see Appendix C and Table C.4 for further information on this).

All monitoring data gathered in **Marcham AQMA** in 2024 showed a decrease in pollution levels with respect to 2023, supporting the downward trend identified in previous years. Compliance has therefore been achieved in Marcham AQMA for five years now, as shown in Figure A.4 in Appendix 1, with levels now being well below the objective as the highest recorded NO<sub>2</sub> concentration in 2024 was 25.1 µg/m³ (VS38).

In **Abingdon**, compliance with the objectives was recorded at all monitoring sites as shown in Figure A.10. Only one monitoring site (VS11) recording slightly higher levels in 2024 than it did in 2023 (22.5 µg/m³, the highest recorded figure in Abingdon in 2024).

The remaining monitoring sites recorded also levels significantly below the national objectives in 2024, see figures A.9-13 in Appendix A.

# **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? <sup>(1)</sup>	Monitoring Technique	Distance to Relevant Exposure (m) <sup>(2)</sup>	Distance to kerb of nearest road (m) <sup>(1)</sup>	Inlet Height (m)
Abingdon CA	Abingdon, 39 Stert St (Masons)	Roadside	449790	197180	NOx/NO <sub>2</sub>	No	N/A	Chemiluminescent	0.0	3.6	3.0
Wallingford CA	Wallingford, 83 High St	Roadside	460799	189500	NOx/NO <sub>2</sub>	No	N/A	Chemiluminescent	0.0	1.2	1.5
Henley CA	Henley, 45 Duke St	Roadside	476116	182531	NOx/NO <sub>2</sub>	YES	Henley AQMA	Chemiluminescent	0.0	3.5	1.5
Watlington CA	Watlington, Town hall	Kerbside	468973	194487	NOx/NO <sub>2</sub>	YES	Watlington AQMA	Chemiluminescent	0.0	0.2	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

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS1	SS1 - Wheatley- 50 High Street	Kerbside	459532	205740	NO2	No	0.0	1.0	No	2.0
SS2	SS2 - Wheatley- 2 Old London Road	Kerbside	460228	205720	NO2	No	4.0	1.0	No	2.0
SS3	SS3 - Wheatley- 16 Old London Road	Kerbside	460504	205642	NO2	No	8.0	1.0	No	1.5
SS4	SS4 - Thame- 41 Aylesbury Road	Roadside	470605	206554	NO2	No	2.0	2.0	No	2.0
SS5	SS5 - Thame- 16 Park Street	Kerbside	471010	205598	NO2	No	1.0	1.0	No	2.0
SS6	SS6 - Thame- 2 Youens Drive (Jane Morbey Rd)	Roadside	471103	205107	NO2	No	3.0	4.0	No	2.0
SS7	SS7 - Thame- 3 Massey Road	Kerbside	471155	205016	NO2	No	2.0	1.0	No	2.0
SS8	SS8 - Thame- 2 Robin Gibb Road	Kerbside	471078	204851	NO2	No	13.0	1.0	No	2.0
SS9	SS9 - Thame- 12 Markus Avenue	Kerbside	470964	204914	NO2	No	7.0	1.0	No	2.0
SS10	SS10 - Thame- 1 Thame Park Road (The Falcon)	Kerbside	471212	205340	NO2	No	9.0	1.0	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS11	SS11 - Thame- Opp 1 Howland Road	Kerbside	471918	204934	NO2	No	17.0	1.0	No	2.0
SS12	SS12 - Thame- Churchill Crescent, Kingsey Road	Roadside	471695	205806	NO2	No	0.0	2.0	No	2.0
SS13	SS13 - Thame- 1 Ludlow Drive	Roadside	471283	205977	NO2	No	6.0	2.0	No	2.0
SS14	SS14 - Chinnor- 49 Mill Lane	Kerbside	474930	201039	NO2	No	9.0	1.0	No	2.0
SS15	SS15 - Chinnor- 3 Lower Road	Roadside	475250	201230	NO2	No	2.0	2.0	No	2.0
SS16	SS16 - Chinnor- 35 High Street	Kerbside	475703	201120	NO2	No	9.0	1.0	No	2.0
SS17	SS17 - Chinnor- 20 Church Road	Kerbside	475720	200930	NO2	No	9.0	1.0	No	2.0
SS18	SS18 - Chinnor- 31 Station Road	Roadside	475415	200942	NO2	No	6.0	2.0	No	2.0
SS19	SS19 - Chinnor- Plum Cottage, Crowell Road	Kerbside	475001	200196	NO2	No	1.0	1.0	No	2.0
SS20	SS20 - Whitchurch - 1Duchess Close	Roadside	470207	200190	NO2	No	0.0	15.0	No	2.0
SS21	SS21 - Whitchurch - Hawthorn House	Kerbside	463527	177174	NO2	No	0.0	1.0	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS22	SS22 - 10 Adwell Cottages, OX9 7DF	Kerbside	463555	177099	NO2	No	0.0	1.0	No	2.0
SS23	SS23 - Little Milton- 63 High Street, Plumtree Cottage	Kerbside	461901	200989	NO2	No	0.0	1.0	No	2.0
SS24	SS24 - Stadhampton- 2 Cratlands Close	Kerbside	460279	198618	NO2	No	10.0	1.0	No	2.0
SS25	SS25 - Stadhampton- Holme Cottage, Newington Road	Kerbside	460163	198398	NO2	No	2.0	1.0	No	2.0
SS26	SS26 - Watlington- 17 St Leonards Close	Urban Background	468562	194779	NO2	No	0.0	6.0	No	2.0
SS27	SS27 - Watlington- 27 Brook Street	Kerbside	468756	194360	NO2	Watlington AQMA	2.0	1.0	No	2.0
SS28	SS28 - Watlington- 57 Brook Street	Roadside	468856	194293	NO2	Watlington AQMA	5.0	2.0	No	2.0
SS29	SS29 - Watlington- 9 Couching Street	Roadside	468852	194343	NO2	Watlington AQMA	3.0	2.0	No	2.0
SS30	SS30 - Watlington- 41 Couching Street	Kerbside	468951	194457	NO2	Watlington AQMA	0.0	1.0	No	2.0
SS31	SS31 - Watlington- 48-	Kerbside	468962	194458	NO2	Watlington AQMA	0.0	1.0	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
	52 Couching Street									
SS32	SS32 - Watlington- 23 Shirburn Street	Kerbside	469061	194590	NO2	Watlington AQMA	0.0	1.0	No	2.0
SS33	SS33 - Watlington- 8 Shirburn Street	Kerbside	469017.458	194513.661	NO2	No	0.0	1.0	No	2.0
SS34	SS34 - Benson- 11A Watlington Road	Kerbside	461724	191785	NO2	No	4.0	0.0	No	2.0
SS35	SS35 - Wallingford- 3A The Street (Crowmarsh Gifford)	Kerbside	461298	189367	NO2	No	3.0	1.0	No	2.0
SS36	SS36 - Wallingford- 2 Station Road	Roadside	460389	189498	NO2	Wallingford AQMA	0.0	2.0	No	2.0
SS37	SS37 - Wallingford- 68 High Street	Kerbside	460640	189483	NO2	No	0.0	1.0	No	2.0
SS38	SS38 - Wallingford- 33 Castle Street	Kerbside	460736	189567	NO2	No	1.0	1.0	No	2.0
SS39, SS40, SS41	SS41 - Wallingford, George Hotel, High Street	Roadside	460799	189500	NO2	No	0.0	2.0	Yes	1.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS42	SS42 - Wallingford- 102 High Street	Roadside	460938	189496	NO2	No	0.0	2.0	No	2.0
SS43	SS43 - Wallingford- 52 St Marys Street	Roadside	460713	189279	NO2	No	0.0	2.0	No	2.0
SS44	SS44 - Wallingford- 10 St Martins Street	Roadside	460679	189281	NO2	No	0.0	1.5	No	2.0
SS45	SS45 - Wallingford- 19 St Johns Road	Kerbside	460152	189130	NO2	No	3.0	1.0	No	2.0
SS46	SS46 - Wallingford- 57 Brookmead Drive	Urban Background	460282	188807	NO2	No	16.0	1.0	No	2.0
SS47	SS47 - Wallingford- Bartlett Close, Reading Road	Urban Background	460470	188224	NO2	No	9.0	1.0	No	2.0
SS48	SS48 - Wallingford- The Lodge, Wallingford Rd OX10 9HB	Roadside	460110	187862	NO2	No	14.0	3.0	No	1.0
SS49	SS49 - Wallingford- Willow Cottage, 68 Wallingford Road OX10 9LA	Roadside	459805	187574	NO2	No	38.0	2.0	No	2.0
SS50	SS50 - Wallingford-	Roadside	461916	188424	NO2	No	25.0	1.0	No	1.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
	Newnham Manor Farm, A4070									
SS51	SS51 - Henley- 82 Northfield End	Roadside	475869	183217	NO2	No	2.0	2.0	No	2.0
SS52	SS52 - Henley- 39 Kings Road	Kerbside	475878	182760	NO2	No	1.0	1.0	No	2.0
SS53	SS53 - Henley- 2 Greys Road	Kerbside	476103	182506	NO2	Henley AQMA	1.0	1.0	No	2.0
SS54	SS54 - Henley- 35 Reading Road	Roadside	476174	182396	NO2	Henley AQMA	3.0	1.0	No	2.0
SS55	SS55 - Henley- Imperial Court, Station Road	Roadside	476286	182290	NO2	No	6.0	2.0	No	2.0
SS56, SS57, SS58	SS58 - Henley- 45 Duke Street	Roadside	476115	182532	NO2	Henley AQMA	1.0	4.0	Yes	1.5
SS59	SS59 - Henley- 4 Duke Street	Kerbside	476071	182612	NO2	Henley AQMA	0.0	1.0	No	2.0
SS60	SS60 - Henley- 23 Market Place	Roadside	475997	182614	NO2	Henley AQMA	0.0	3.0	No	2.0
SS61	SS61 - Henley- 82 Bell Street	Kerbside	476080	182951	NO2	No	1.0	1.0	No	2.0
SS62	SS62 - Henley- 33 New Street	Kerbside	476209	182831	NO2	No	0.0	1.0	No	2.0
SS63	SS63 - Henley- 23 Thameside	Roadside	476308	182760	NO2	No	0.0	2.0	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS64	SS64 - Henley- 40 Hart Street	Roadside	476288	182078	NO2	No	18.0	2.0	No	2.0
SS65	SS65 - Henley- Upton Close, St Andrews Road	Roadside	476223	182652	NO2	Henley AQMA	0.0	2.0	No	2.0
SS66	SS66 - Henley- 178 Reading Road	Roadside	476547	181735	NO2	No	1.0	3.0	No	2.0
SS67	SS67 - Henley- 15 Lovell Close	Urban Background	475104	181557	NO2	No	6.0	1.0	No	2.0
SS68	SS68 - Didcot- 8 Lune Close	Urban Background	453499	190384	NO2	No	2.0	1.0	No	2.0
SS69	SS69 - Didcot- Marsh Play Area	Kerbside	453357	190030	NO2	No	0.0	1.0	No	2.0
SS70	SS70 - Didcot- 55 Broadway	Roadside	453099	190031	NO2	No	4.0	3.0	No	2.0
SS71	SS71 - Didcot- 77 Broadway	Roadside	453023	189999	NO2	No	0.0	5.0	No	2.0
SS72	SS72 - Didcot- 110 Broadway	Roadside	452865	189979	NO2	No	2.0	2.0	No	2.0
SS73	SS73 - Didcot- 18 Mereland Road	Kerbside	452753	189729	NO2	No	9.0	1.0	No	2.0
SS74	SS74 - Didcot- 4 Cronshaw Close	Kerbside	452358	190521	NO2	No	5.0	1.0	No	2.0
SS75	SS75 - Didcot- 8 Great Western Drive, Station Road	Roadside	452084	190694	NO2	No	9.0	2.0	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
SS76	SS76 - Didcot- 20 Wantage Road	Kerbside	451780	189920	NO2	No	9.0	1.0	No	2.0
SS77	SS77 - Didcot- 100 Park Road	Kerbside	451643	189369	NO2	No	15.0	1.0	No	2.0
SS78	SS78 - Didcot- 1 Blackthorn Road	Kerbside	450870	190495	NO2	No	6.0	2.0	No	2.0
SS79	SS79 - Didcot-6 Mendip Heights	Roadside	451424	190943	NO2	No	0.0	7.0	No	1.5
SS80	SS80 - Clifton Hampden- Bus stop, Abingdon Road	Roadside	454637	195614	NO2	No	0.0	2.0	No	2.0
SS81	SS81 - Clifton Hampden- Marsh Cottages, Post Office	Roadside	454710	195562	NO2	No	0.0	3.0	No	2.0
SS82	SS82 - Clifton Hampden- 52 Oxford Road	Roadside	454760	195794	NO2	No	7.0	2.0	No	2.0
SS83	SS83 - Horspath	Roadside	457228	204708	NO2	No	3.0	17.0	No	2.0
VS1	VS1: Abingdon- Baptist Church, Ock Street	Roadside	449452	197047	NO2	No	1.0	2.0	No	2.5
VS2	VS2: Abingdon- Bath Street	Kerbside	449585	197273	NO2	No	1.0	1.0	No	2.5
VS3	VS3: Abingdon- Copenhagen Drive	Kerbside	448364	197836	NO2	No	42.0	0.0	No	2.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
VS4	VS4: Abingdon- Henry Liddon Court	Roadside	448442	196953	NO2	No	0.0	14.0	No	2.5
VS5	VS5: Abingdon- High St	Roadside	449695	197049	NO2	No	4.0	1.0	No	2.5
VS6	VS6: Abingdon- Lamp post 7 Drayton Rd	Roadside	448791	196725	NO2	No	2.5	5.0	No	2.5
VS7	VS7: Abingdon- Marcham Rd Lamp post 5	Roadside	448738	196967	NO2	No	3.5	2.0	No	2.5
VS8, VS9, VS10	VS10: Abingdon- Masons Stert Street	Roadside	449794	197176	NO2	No	0.0	3.6	Yes	3.0
VS11	VS11: Abingdon- Ock Street Drama Club	Roadside	448828	196966	NO2	No	1.5	2.0	No	2.5
VS12	VS12: Abingdon- Ock Street Lamp Post 12	Roadside	449225	196992	NO2	No	0.0	5.0	No	2.5
VS13	VS13: Abingdon- Stratton Way	Roadside	449452	197047	NO2	No	1.0	2.0	No	2.5
VS14	VS14: Abingdon- Turner Road	Urban Background	448869	196180	NO2	No	2.0	4.0	No	2.5
VS15	VS15: Abingdon- CYPS, Stratton Way	Roadside	449518	197160	NO2	No	1.0	6.0	No	2.5
VS16	VS16: Botley - 71 Southern Bypass Fence (temp)	Roadside	449008	205729	NO2	Botley AQMA	11.0	3.0	No	2.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
VS17	VS17: Botley- 4 Yarnells Rd (Fence)	Roadside	449003	205724	NO2	Botley AQMA	11.0	3.0	No	2.0
VS18	VS18: Botley- 61 Southern Bypass	Roadside	448894	205826	NO2	Botley AQMA	0.0	8.0	No	2.0
VS19	VS19: Botley- 63 Southern Bypass	Roadside	448917	205804	NO2	Botley AQMA	0.0	10.0	No	2.0
VS20	VS20: Botley- 63 Southern Bypass Fence	Roadside	448914	205798	NO2	Botley AQMA	8.0	2.0	No	2.5
VS21	VS21: Botley- 65 Southern Bypass	Roadside	448946	205780	NO2	Botley AQMA	0.0	10.0	No	2.0
VS22	VS22: Botley- 71 Southern Bypass	Roadside	448991	205745	NO2	Botley AQMA	0.0	14.0	No	2.5
VS23	VS23: Botley- Hutchcomb Rd	Urban Background	448403	205709	NO2	No	11.0	2.0	No	2.5
VS24	VS24: Abingdon- LP35 Dunmore Rd	Kerbside	449558	199016	NO2	No	19.0	0.0	No	2.5
VS25	VS25: Abingdon- LP9 Dunmore Rd	Roadside	450222	199464	NO2	No	19.0	2.0	No	2.5
VS26	VS26: South Hinksey- Manor Rd	Kerbside	450764	204105	NO2	No	17.0	5.4	No	2.0
VS27	VS27: Botley- N. Hinksey La	Roadside	449404	205422	NO2	No	15.0	4.0	No	2.5
VS28	VS28: Botley- Primary Sch	Roadside	448610	206289	NO2	No	0.0	20.0	No	2.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
VS29	VS29: A420- Rockley Cottages	Kerbside	446273	202333	NO2	No	5.0	3.5	No	2.0
VS30	VS30: Kennington- St Swithuns Church Pole35	Kerbside	452253	202255	NO2	No	7.0	1.0	No	2.5
VS31	VS31: Kennington- St Swithuns Sch LP68	Urban Background	452290	201912	NO2	No	0.0	2.0	No	2.5
VS32	VS32: Botley- Stanley Close	Kerbside	448913	205813	NO2	Botley AQMA	2.0	8.0	No	2.5
VS33	VS33: Botley- Westminster Way	Kerbside	448866	205807	NO2	Botley AQMA	2.0	8.0	No	2.5
VS34	VS34: Faringdon- Folly View Rd	Kerbside	428823	195554	NO2	No	0.0	1.0	No	2.5
VS35	VS35: Faringdon- Town Hall	Kerbside	450886	194359	NO2	No	13.0	1.0	No	2.5
VS36	VS36: Fyfield & Tubney - Tubney A420	Roadside	442239	198622	NO2	No	42.0	11.0	No	2.5
VS37	VS37: Fyfield & Tubney- Fyfield A420	Kerbside	443526	199184	NO2	No	3.0	2.0	No	2.0
VS38	VS38: Marcham- 10 Packhorse Lane	Kerbside	445552	196639	NO2	Marcham AQMA	0.0	0.5	No	2.5
VS39	VS39: Marcham- 13 Packhorse Lane	Roadside	445571	196675	NO2	Marcham AQMA	13.0	1.5	No	2.5

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
VS40	VS40: Marcham- 24 Mill Rd (pole 193 opp)	Urban Background	445522	196470	NO2	No	32.0	6.0	No	2.0
VS41	VS41: Marcham- 4 Frilford Road	Roadside	445456	196623	NO2	Marcham AQMA	1.0	1.5	No	2.5
VS42	VS42: Marcham- 4 Packhorse Lane	Kerbside	445528	196628	NO2	Marcham AQMA	16.0	1.0	No	2.5
VS43	VS43: Marcham- Rafters B&B Abingdon Road	Kerbside	445875	196657	NO2	Marcham AQMA	18.0	1.0	No	2.5
VS44	VS44: Shippon- 1 Whitehouse Close	Urban Background	448150	198190	NO2	No	3.0	5.0	No	2.5
VS45	VS45: Shippon- Barrow Road	Roadside	448092	198055	NO2	No	4.0	2.0	No	2.5
VS46	VS46: Shippon- Faringdon Rd	Roadside	448349	198086	NO2	No	0.0	1.0	No	2.5
VS47	VS47: Sutton Courtenay- Junction	Kerbside	450886	194359	NO2	No	13.0	1.0	No	2.5
VS48	VS48: Sutton Courtenay- Mill House	Kerbside	450588	194391	NO2	No	1.0	1.0	No	2.5
VS49	VS49: Wantage- Grove Rd/Wolage Dr LPLP47A	Roadside	440068	189087	NO2	No	3.0	2.0	No	2.5
VS50	VS50: Wantage- Hampden Rd	Urban Background	440409	188319	NO2	No	14.0	3.5	No	2.0

Diffusio n 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) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co- located with a Continuous Analyser?	Tube Height (m)
VS51	VS51: Wantage- Market Sq	Kerbside	439807	187941	NO2	No	0.0	1.0	No	2.5
VS52	VS52: Watchfield / Shrivenham	Kerbside	424275	190640	NO2	No	33.0	4.0	No	2.5

#### Notes:

- (1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).
- (2) N/A if not applicable.

Table A.3 – Annual Mean NO<sub>2</sub> 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 (%)	Valid Data Capture 2024 (%)	2020	2021	2022	2023	2024
Abingdon CA	449790	197180	Roadside	99.0	98.6	16	17	18	18	13.0
Wallingford CA	460799	189500	Roadside	70.1	70.1	29	33	32	29	23.6
Henley CA	476116	182531	Roadside	97.0	97.0	19	18	18	17	14.7
Watlington CA	468973	194487	Kerbside	98.3	98.3	22	24	23	21	18.9

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

⊠ 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/m<sup>3</sup>.

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> 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%).

Table A.4 – Annual Mean NO<sub>2</sub> Monitoring Results: Non-Automatic Monitoring (μg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
SS1	459532	205740	Kerbside	100.0	64.2	15.2	14.3	15.1	13.1	11.6
SS2	460228	205720	Kerbside	100.0	90.6	14.0	13.5	13.9	13.9	13.7
SS3	460504	205642	Kerbside	100.0	90.6	14.0	14.3	15.4	12.9	11.1
SS4	470605	206554	Roadside	100.0	75.0	22.9	22.7	25.7	23.5	20.7
SS5	471010	205598	Kerbside	100.0	75.0	15.9	16.0	16.3	15.8	12.9
SS6	471103	205107	Roadside	100.0	83.0	9.4	9.0	9.2	8.8	8.0
SS7	471155	205016	Kerbside	100.0	83.0	9.5	9.3	9.5	8.8	8.0
SS8	471078	204851	Kerbside	100.0	75.0	9.6	8.8	9.3	8.3	7.6
SS9	470964	204914	Kerbside	100.0	83.0	10.2	8.6	8.5	8.5	7.3
SS10	471212	205340	Kerbside	100.0	83.0	12.0	12.0	12.3	10.7	10.0
SS11	471918	204934	Kerbside	100.0	83.0	14.7	14.9	14.3	13.6	12.4
SS12	471695	205806	Roadside	100.0	83.0	14.4	13.4	12.9	12.2	10.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS13	471283	205977	Roadside	100.0	75.0	9.6	9.2	9.4	9.2	8.4
SS14	474930	201039	Kerbside	100.0	83.0	13.0	10.4	9.7	9.7	8.2
SS15	475250	201230	Roadside	100.0	75.0	17.1	21.2	20.2	15.9	16.0
SS16	475703	201120	Kerbside	100.0	75.0	13.3	13.0	12.6	11.6	10.3
SS17	475720	200930	Kerbside	100.0	75.0	16.0	14.7	14.7	13.4	12.6
SS18	475415	200942	Roadside	100.0	75.0	15.0	17.6	16.7	15.9	14.7
SS19	475001	200196	Kerbside	100.0	83.0	16.5	17.5	17.5	18.1	14.8
SS20	470207	200190	Roadside	100.0	83.0	19.9	15.2	16.3	12.8	12.6
SS21	463527	177174	Kerbside	100.0	83.0	0.0	15.2	16.4	15.1	14.4
SS22	463555	177099	Kerbside	100.0	75.0	0.0	19.3	21.9	18.3	20.1
SS23	461901	200989	Kerbside	100.0	83.0	17.8	18.4	19.0	17.1	14.5
SS24	460279	198618	Kerbside	100.0	75.0	13.3	12.9	13.4	12.9	12.5
SS25	460163	198398	Kerbside	100.0	83.0	16.0	16.5	16.3	15.9	12.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS26	468562	194779	Urban Background	100.0	90.6	5.6	6.9	7.5	6.6	5.1
SS27	468756	194360	Kerbside	100.0	90.6	18.1	18.7	17.9	16.5	14.8
SS28	468856	194293	Roadside	100.0	90.6	16.7	17.0	16.4	15.9	12.1
SS29	468852	194343	Roadside	100.0	90.6	17.0	16.7	16.4	16.6	14.6
SS30	468951	194457	Kerbside	100.0	90.6	28.1	28.5	27.9	27.7	23.7
SS31	468962	194458	Kerbside	100.0	90.6	25.7	25.6	26.4	23.6	20.1
SS32	469061	194590	Kerbside	100.0	83.0	19.6	23.2	20.5	17.5	16.5
SS33	469017.458	194513.661	Kerbside	100.0	49.1	27.6	27.5	25.3	24.8	19.4
SS34	461724	191785	Kerbside	100.0	81.1	17.2	18.0	18.6	16.2	13.9
SS35	461298	189367	Kerbside	100.0	81.1	12.8	13.6	14.3	12.8	10.2
SS36	460389	189498	Roadside	100.0	90.6	20.6	20.5	20.1	18.6	17.2
SS37	460640	189483	Kerbside	100.0	64.2	21.0	21.5	21.7	20.8	16.7
SS38	460736	189567	Kerbside	100.0	83.0	18.3	22.5	22.4	20.4	15.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS39, SS40, SS41	460799	189500	Roadside	100.0	90.6	28.4	29.2	28.5	26.6	21.8
SS42	460938	189496	Roadside	100.0	75.0	22.0	23.9	23.8	21.8	18.3
SS43	460713	189279	Roadside	100.0	90.6	19.2	21.0	21.0	19.7	17.2
SS44	460679	189281	Roadside	100.0	90.6	16.9	17.1	16.5	17.1	13.7
SS45	460152	189130	Kerbside	100.0	81.1	13.5	12.7	11.4	11.8	9.6
SS46	460282	188807	Urban Background	100.0	90.6	9.2	9.2	9.9	7.8	7.1
SS47	460470	188224	Urban Background	100.0	90.6	13.9	13.2	13.3	13.4	11.7
SS48	460110	187862	Roadside	100.0	90.6	11.3	11.0	11.6	10.4	8.1
SS49	459805	187574	Roadside	100.0	90.6	14.0	14.1	11.9	12.3	10.2
SS50	461916	188424	Roadside	100.0	66.0	25.2	22.8	21.7	22.4	17.9
SS51	475869	183217	Roadside	100.0	90.6	17.5	18.2	17.8	15.7	14.0
SS52	475878	182760	Kerbside	100.0	90.6	16.4	15.4	16.6	13.8	11.4
SS53	476103	182506	Kerbside	100.0	90.6	25.1	24.1	23.8	22.6	20.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS54	476174	182396	Roadside	100.0	83.0	20.3	20.8	20.0	18.8	15.6
SS55	476286	182290	Roadside	100.0	75.0	17.4	17.4	19.3	15.5	15.0
SS56, SS57, SS58	476115	182532	Roadside	100.0	90.6	20.0	19.3	19.7	17.8	15.6
SS59	476071	182612	Kerbside	100.0	75.0	38.7	34.0	30.5	31.0	31.2
SS60	475997	182614	Roadside	100.0	90.6	15.6	16.3	18.3	14.6	13.9
SS61	476080	182951	Kerbside	100.0	66.0	21.1	20.6	21.5	21.0	20.5
SS62	476209	182831	Kerbside	100.0	66.0	17.4	17.3	18.7	16.0	14.4
SS63	476308	182760	Roadside	100.0	83.0	26.6	26.8	25.4	23.9	22.6
SS64	476288	182078	Roadside	100.0	81.1	23.2	21.8	21.8	20.7	18.6
SS65	476223	182652	Roadside	100.0	83.0	17.5	15.6	15.6	15.6	12.6
SS66	476547	181735	Roadside	100.0	90.6	19.3	18.6	18.0	16.7	13.4
SS67	475104	181557	Urban Background	100.0	83.0	8.4	9.3	7.5	6.6	6.2
SS68	453499	190384	Urban Background	100.0	81.1	10.6	10.9	11.6	11.0	10.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS69	453357	190030	Kerbside	100.0	90.6	18.7	19.4	20.8	19.0	16.7
SS70	453099	190031	Roadside	100.0	90.6	22.5	22.2	23.5	22.1	20.0
SS71	453023	189999	Roadside	100.0	83.0	20.1	18.9	22.6	26.8	21.5
SS72	452865	189979	Roadside	100.0	90.6	18.9	18.7	20.6	19.8	15.3
SS73	452753	189729	Kerbside	100.0	83.0	11.4	10.8	11.5	10.7	9.6
SS74	452358	190521	Kerbside	100.0	83.0	17.2	17.0	17.1	17.2	12.2
SS75	452084	190694	Roadside	100.0	81.1	19.5	19.7	20.4	19.9	15.7
SS76	451780	189920	Kerbside	100.0	81.1	18.8	16.9	19.9	19.6	15.0
SS77	451643	189369	Kerbside	100.0	83.0	12.9	13.5	14.5	12.5	11.4
SS78	450870	190495	Kerbside	100.0	90.6	15.0	15.7	14.2	15.9	11.1
SS79	451424	190943	Roadside	100.0	90.6	12.6	12.3	12.3	11.9	9.5
SS80	454637	195614	Roadside	100.0	90.6	14.9	14.5	14.8	15.1	12.5
SS81	454710	195562	Roadside	100.0	90.6	15.8	17.0	16.8	15.9	12.7

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
SS82	454760	195794	Roadside	100.0	90.6	13.7	14.1	13.5	12.6	11.0
SS83	457228	204708	Roadside	100.0	83.0	14.8	10.8	11.3	11.5	8.7
VS1	449452	197047	Roadside	100.0	92.5	17.9	21.2	21.3	20.2	17.6
VS2	449585	197273	Kerbside	100.0	92.5	15.1	17.6	17.5	18.5	15.0
VS3	448364	197836	Kerbside	100.0	100.0	18.9	21.3	20.9	20.9	14.6
VS4	448442	196953	Roadside	100.0	100.0	23.0	25.3	26.6	25.6	20.7
VS5	449695	197049	Roadside	100.0	90.6	21.8	23.2	25.6	23.9	20.4
VS6	448791	196725	Roadside	100.0	100.0	18.7	22.5	22.9	23.5	17.5
VS7	448738	196967	Roadside	100.0	84.9	25.6	30.1	31.1	29.4	19.0
VS8, VS9, VS10	449794	197176	Roadside	100.0	100.0	15.4	17.6	18.4	17.4	14.7
VS11	448828	196966	Roadside	100.0	50.9	20.8	22.5	24.8	20.5	22.5
VS12	449225	196992	Roadside	100.0	75.0	16.0	20.3	20.6	21.2	14.8
VS13	449452	197047	Roadside	100.0	100.0	27.6	27.2	28.1	30.2	21.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
VS14	448869	196180	Urban Background	100.0	100.0	8.4	9.2	10.2	8.2	7.1
VS15	449518	197160	Roadside	100.0	100.0	13.1	13.3	14.0	13.1	11.7
VS16	449008	205729	Roadside	100.0	90.6				36.2	34.0
VS17	449003	205724	Roadside	100.0	92.5	50.9	55.1	53.7	49.5	40.1
VS18	448894	205826	Roadside	100.0	90.6	22.3	24.7	25.5	22.2	18.8
VS19	448917	205804	Roadside	100.0	39.6	22.2	22.6	24.4	21.1	19.9
VS20	448914	205798	Roadside	100.0	100.0	44.7	48.3	50.5	45.6	40.5
VS21	448946	205780	Roadside	100.0	100.0	20.4	22.2	24.2	19.9	17.4
VS22	448991	205745	Roadside	100.0	92.5	20.0	21.7	21.9	21.7	20.6
VS23	448403	205709	Urban Background	100.0	75.0	8.0	10.0	9.0	8.1	6.4
VS24	449558	199016	Kerbside	100.0	100.0	14.9	18.3	18.9	16.7	10.5
VS25	450222	199464	Roadside	100.0	100.0	17.2	19.1	22.0	19.1	15.3
VS26	450764	204105	Kerbside	100.0	100.0	15.6	18.2	20.2	18.3	16.2

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
VS27	449404	205422	Roadside	100.0	100.0	16.2	15.4	15.6	14.5	12.8
VS28	448610	206289	Roadside	100.0	100.0	12.8	18.6	16.2	17.7	12.3
VS29	446273	202333	Kerbside	100.0	100.0	17.7	19.9	20.2	18.4	15.5
VS30	452253	202255	Kerbside	100.0	92.5	11.1	13.3	14.2	13.7	12.0
VS31	452290	201912	Urban Background	100.0	75.0	12.0	13.2	13.7	12.9	10.2
VS32	448913	205813	Kerbside	100.0	100.0	27.8	29.4	32.2	29.8	26.1
VS33	448866	205807	Kerbside	100.0	75.0	19.8	22.4	24.1	23.0	17.5
VS34	428823	195554	Kerbside	100.0	100.0	6.8	7.7	7.5	7.1	6.0
VS35	450886	194359	Kerbside	100.0	100.0	13.9	14.1	14.1	15.0	11.8
VS36	442239	198622	Roadside	100.0	100.0	13.6	15.1	13.9	12.8	10.3
VS37	443526	199184	Kerbside	100.0	90.6	11.6	12.0	13.6	14.0	12.0
VS38	445552	196639	Kerbside	100.0	100.0	24.3	31.3	30.4	29.8	25.1
VS39	445571	196675	Roadside	100.0	100.0	20.8	25.6	26.5	24.1	20.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)	Valid Data Capture 2024 (%) <sup>(2)</sup>	2020	2021	2022	2023	2024
VS40	445522	196470	Urban Background	100.0	75.0	6.7	7.9	7.9	6.1	5.8
VS41	445456	196623	Roadside	100.0	100.0	22.5	26.5	26.8	25.3	19.7
VS42	445528	196628	Kerbside	100.0	84.9	16.6	20.2	19.8	17.8	14.6
VS43	445875	196657	Kerbside	100.0	100.0	18.2	21.2	20.8	19.9	16.9
VS44	448150	198190	Urban Background	100.0	100.0		8.4	8.8	8.0	7.0
VS45	448092	198055	Roadside	100.0	100.0		12.9	13.4	10.9	9.8
VS46	448349	198086	Roadside	100.0	83.0		17.5	17.5	16.2	15.1
VS47	450886	194359	Kerbside	100.0	92.5	14.8	14.5	17.3	15.8	14.2
VS48	450588	194391	Kerbside	100.0	92.5	14.4	16.2	17.3	14.7	12.2
VS49	440068	189087	Roadside	100.0	83.0	16.2	20.6	21.4	19.2	15.1
VS50	440409	188319	Urban Background	100.0	92.5	6.5	9.3	7.2	6.4	6.8
VS51	439807	187941	Kerbside	100.0	83.0	15.1	15.2	17.5	17.2	14.8
VS52	424275	190640	Kerbside	100.0	83.0	14.5	16.2	16.4	15.7	12.9

- ☑ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22
- ☑ Diffusion tube data has been bias adjusted
- ⊠ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction

#### Notes:

The annual mean concentrations are presented as μg/m<sup>3</sup>.

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m³ are shown in **bold**.

NO<sub>2</sub> annual means exceeding  $60\mu g/m^3$ , indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

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

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

- (1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
- (2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure A. 1- Trends in Annual Mean NO<sub>2</sub> Concentrations in Henley

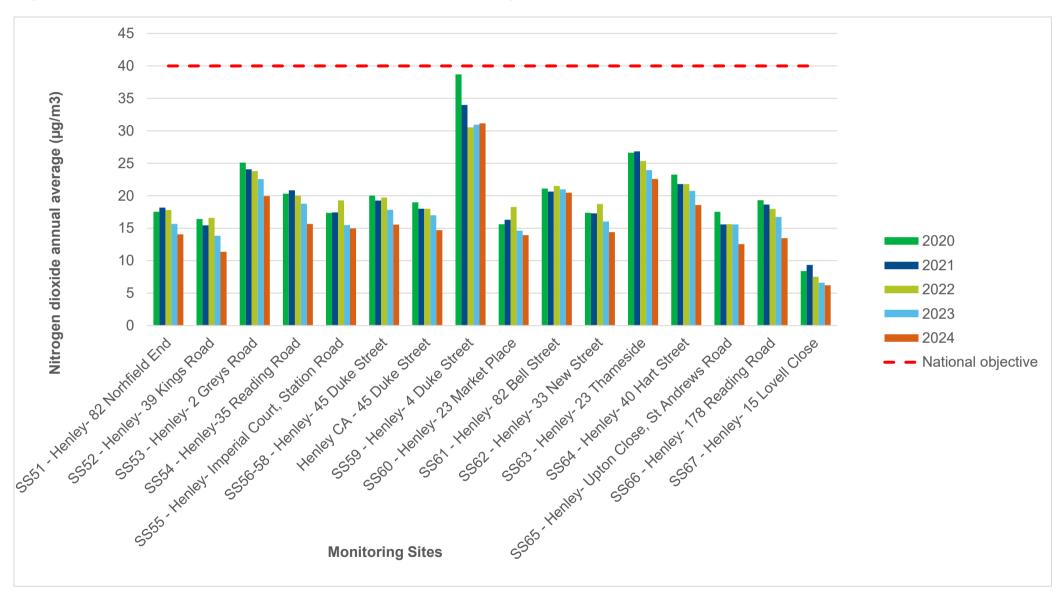


Figure A. 2 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Watlington

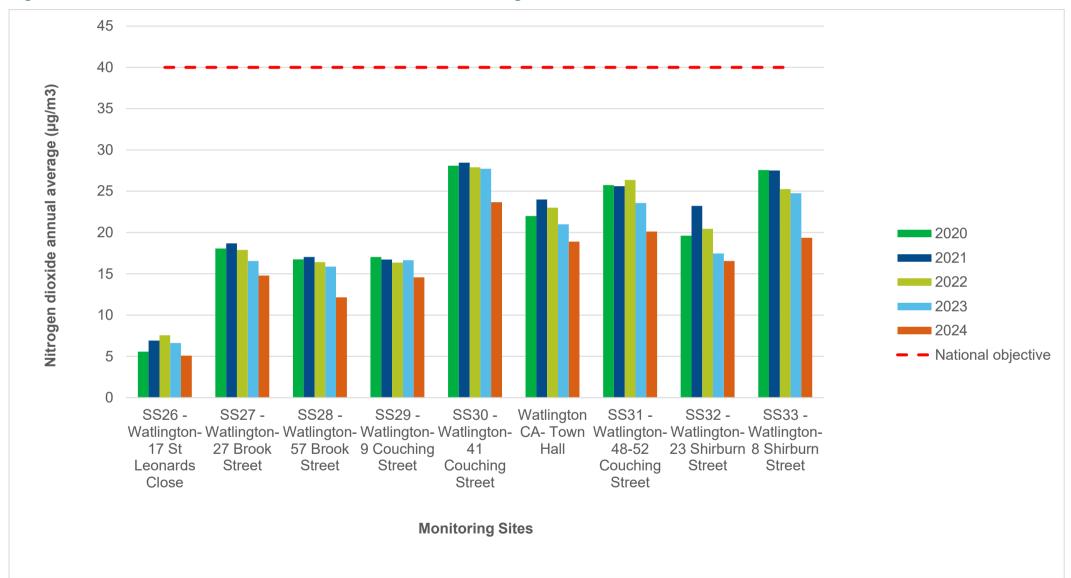


Figure A. 3 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Botley

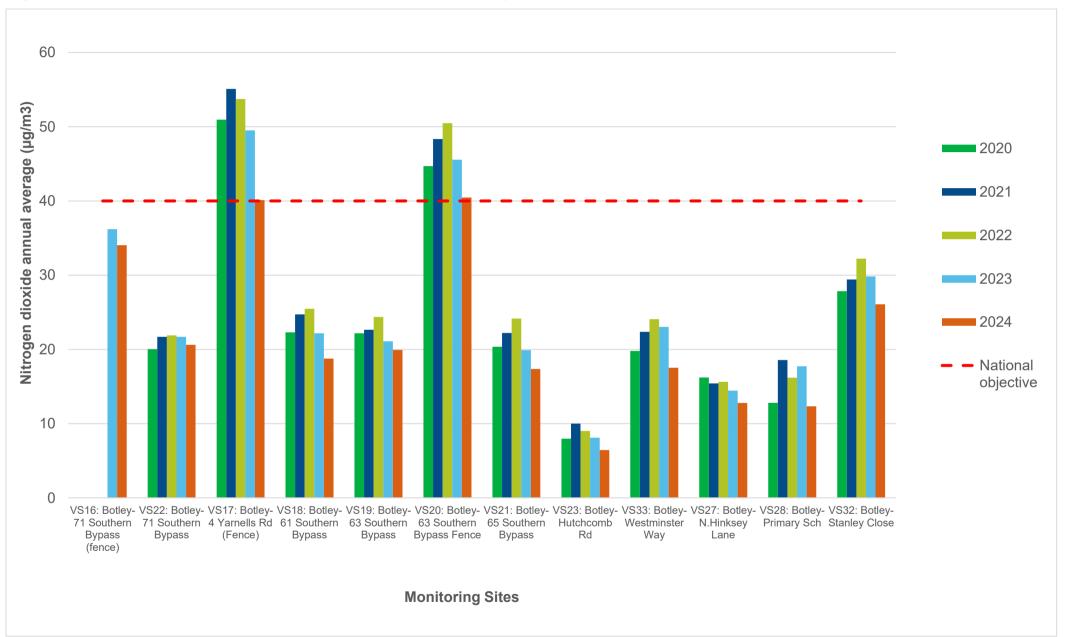


Figure A. 4 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Marcham

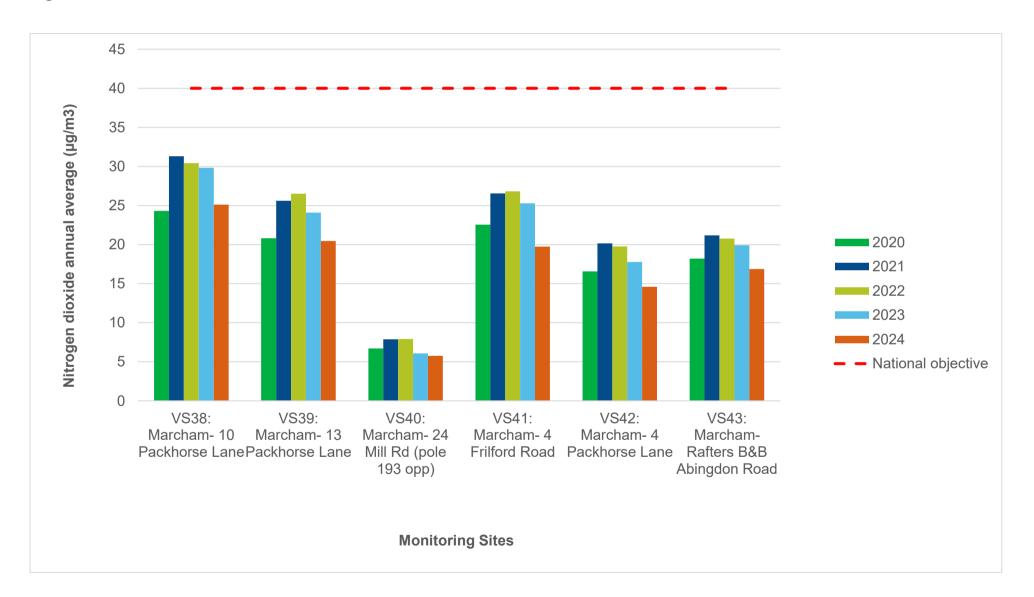


Figure A. 5 Trends in Annual Mean NO<sub>2</sub> Concentrations in Wallingford

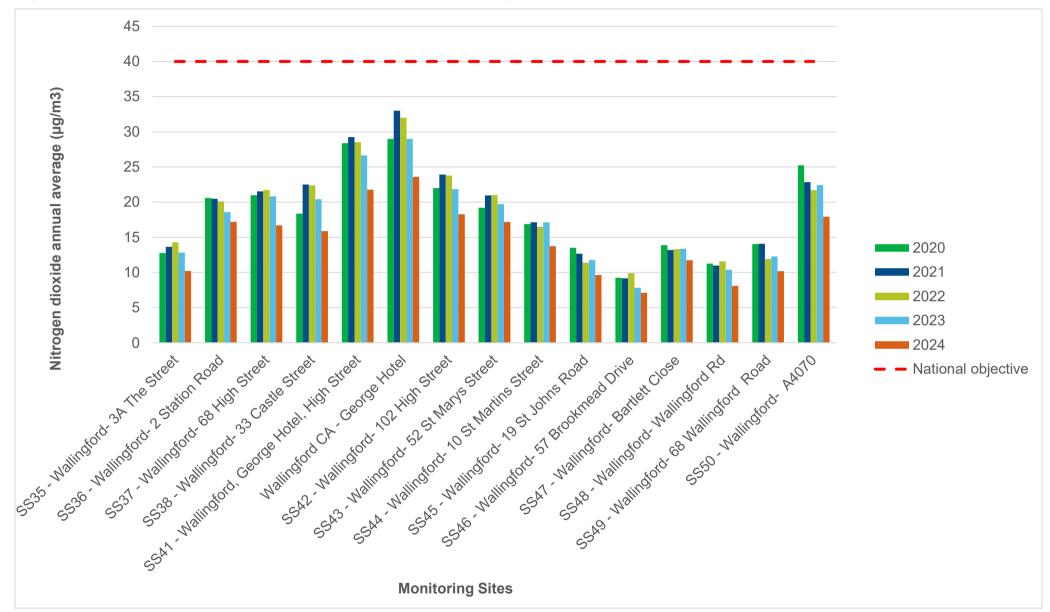


Figure A. 6 - Trends in Annual Mean NO<sub>2</sub> Concentrations in Didcot

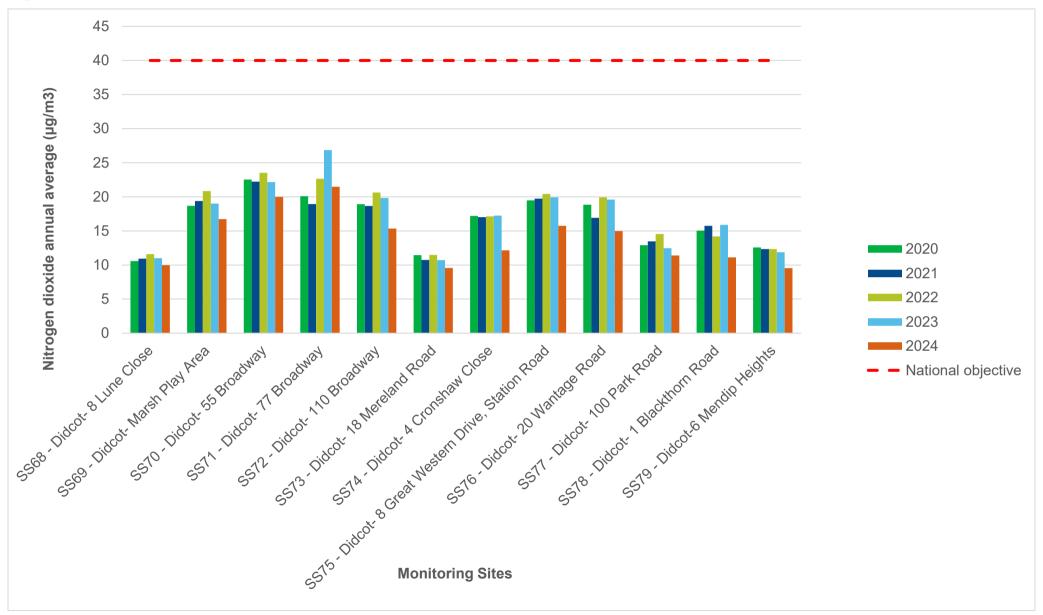


Figure A. 7 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Thame

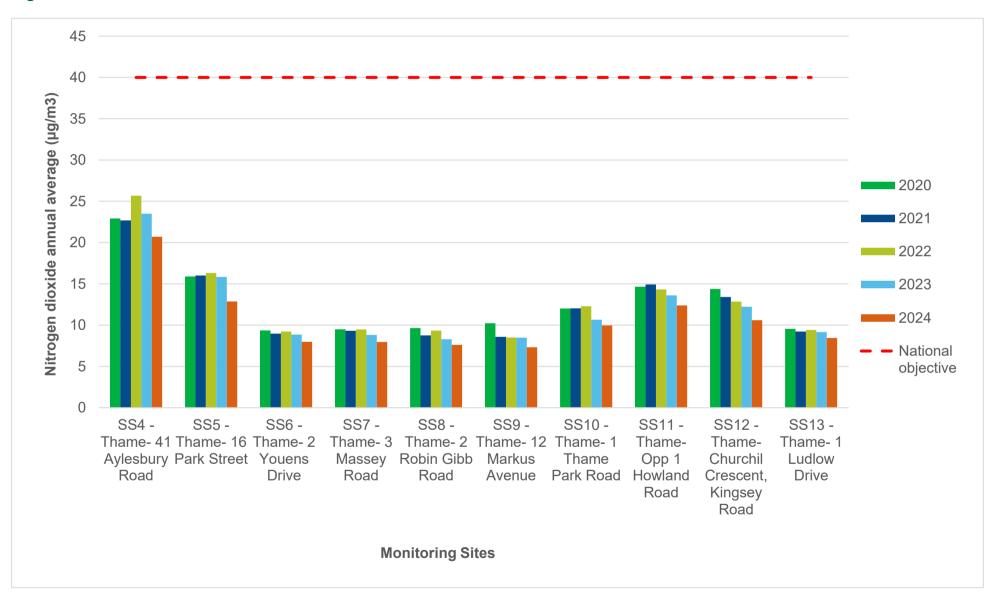


Figure A. 8 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Wheatley, Clifton Hampden and Horspath

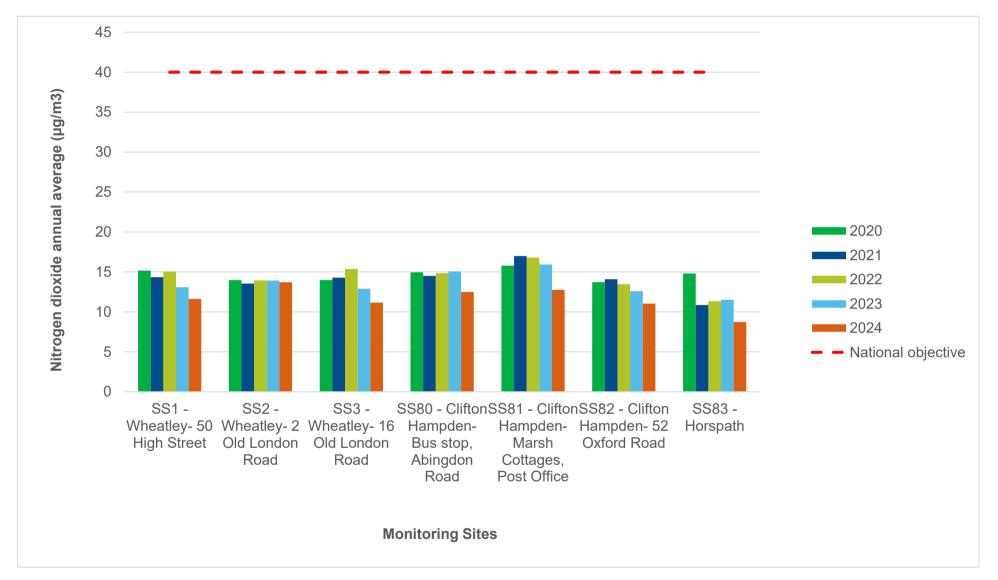


Figure A. 9 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Whitchurch, Tetsworth, Stadhampton and Benson

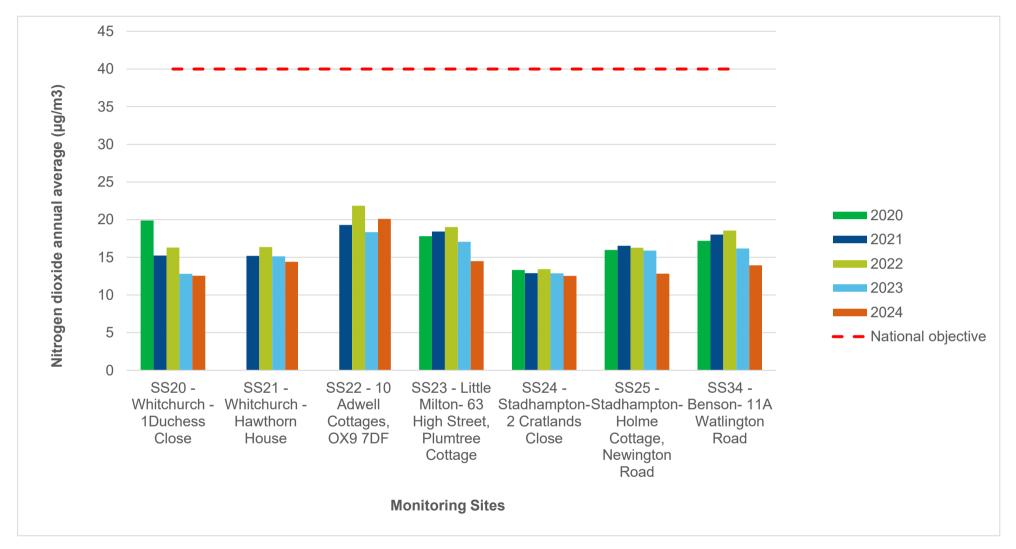


Figure A. 10 - Trends in Annual Mean NO<sub>2</sub> Concentrations in Abingdon

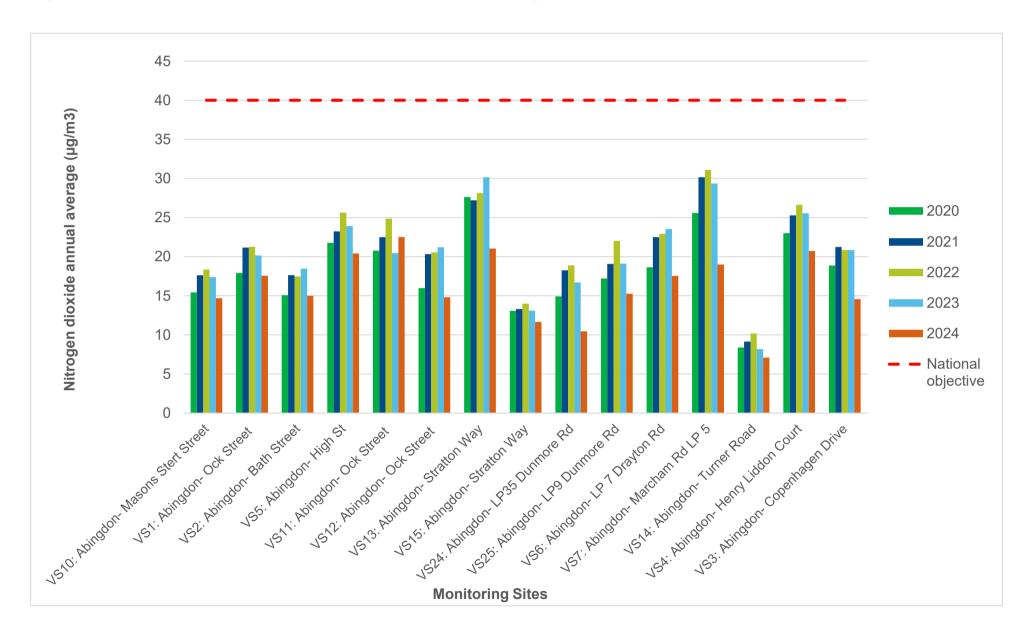


Figure A. 11 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Wantage, Faringdon and Watchfield



Figure A. 12 – Trends in Annual Mean NO<sub>2</sub> Concentrations in Shippon, Sutton Courtenay, Kennington, Fyfield and Tubney

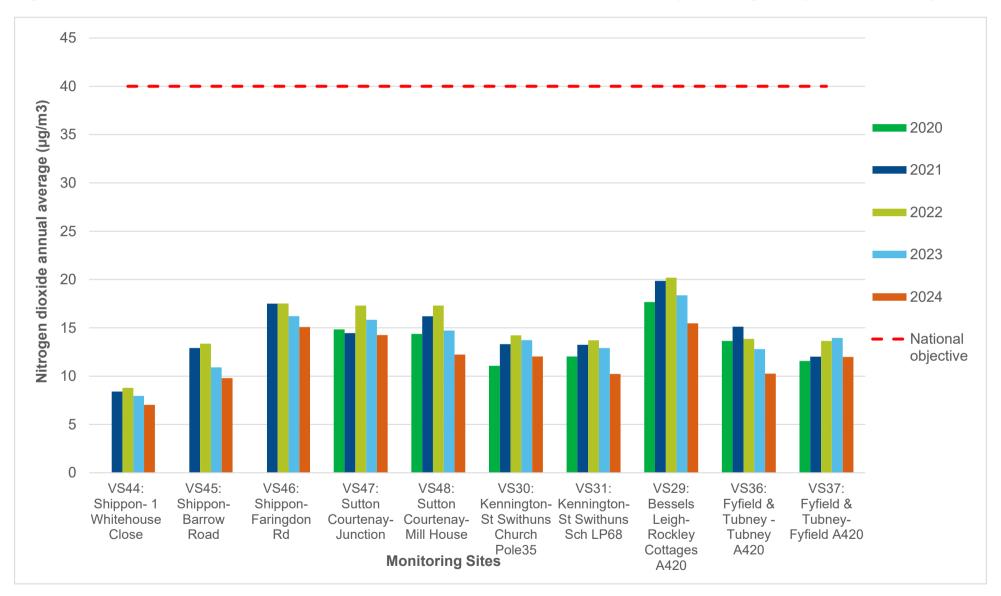
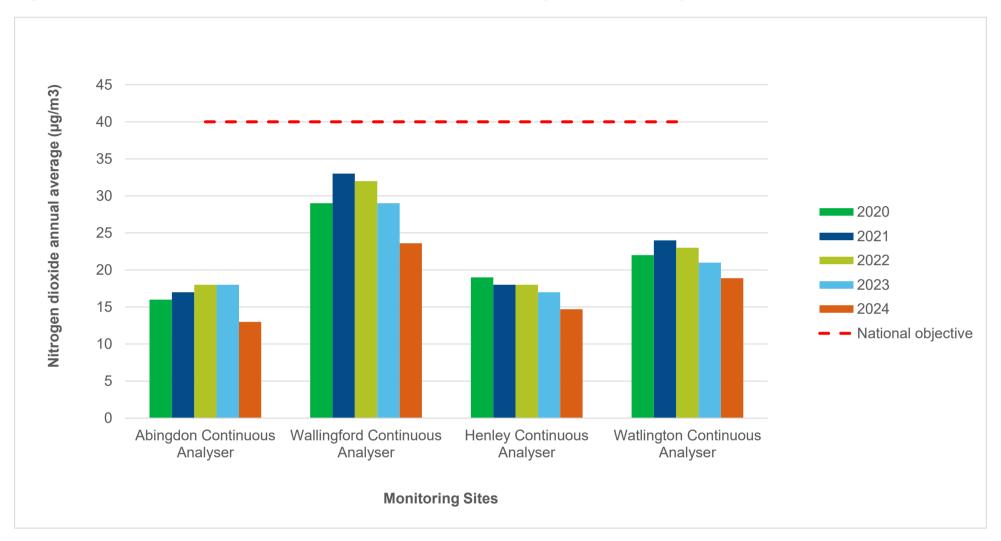


Figure A. 13 – Trends in Annual Mean NO<sub>2</sub> Concentrations recorded by continuous analysers at the different AQMAs



## **Appendix B: Full Monthly Diffusion Tube Results for 2024**

Table B.1 - NO<sub>2</sub> 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 <0.76>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS1	459532	205740	21.6	18.2	16.2	14.4	14.2	12.0	15.1				18.8		16.3	11.6	-	
SS2	460228	205720	20.4	16.5	52.5	13.2	11.6	11.2	13.8	11.5	14.2	18.3	14.3		18.0	13.7	-	
SS3	460504	205642	23.3	11.7	13.8	14.7	13.2	12.7	12.0	10.4	10.9	20.5	17.4		14.6	11.1	-	
SS4	470605	206554	34.5	28.0	26.4	22.8	36.3			18.7	23.8	23.3	30.2		27.1	20.7	-	
SS5	471010	205598		15.8	14.8	14.7	23.3		13.9	11.4	16.9	19.3	21.5		16.8	12.9	-	
SS6	471103	205107	13.1	10.0	9.5	7.6	12.2		7.8	7.5	10.3	12.7	13.8		10.5	8.0	-	
SS7	471155	205016	11.9	9.2	9.4	7.5	11.3		8.0	7.0	10.0	14.3	15.6		10.4	8.0	1	
SS8	471078	204851	14.1	11.0	8.6	7.9	11.8		8.0	6.6	10.4	11.3			10.0	7.6	1	
SS9	470964	204914	12.2	6.5	8.9	7.9	10.1		6.9	6.4	10.0	13.1	13.9		9.6	7.3	1	
SS10	471212	205340	13.7	12.4	10.6	10.8	17.2		9.0	10.1	12.8	17.2	16.7		13.1	10.0	-	
SS11	471918	204934	21.3	15.5	12.5	12.3	20.8		13.3	12.1	15.5	17.7	21.3		16.2	12.4	-	
SS12	471695	205806	19.3	14.1	11.4	10.6	16.3		11.2	9.1	13.0	16.9	16.8		13.9	10.6	-	
SS13	471283	205977	14.1	10.8	9.7	8.5	10.8			6.9	8.9	16.8	13.1		11.1	8.4	-	
SS14	474930	201039	9.6	9.0	9.8	9.3	16.4		8.8	7.2	10.4	11.1	15.2		10.7	8.2	-	
SS15	475250	201230	26.3	19.5	19.7		28.6		16.3	15.6	17.9	20.7	24.0		21.0	16.0	-	
SS16	475703	201120	17.4	13.3	11.6	11.5			11.7	9.7	12.7	14.5	18.8		13.5	10.3	-	
SS17	475720	200930		14.3	16.7	14.8	24.0		15.1	13.0	16.5	14.0	20.3		16.5	12.6	-	
SS18	475415	200942	22.3	17.0	18.7	15.8	28.1		17.0	13.9		18.8	22.1		19.3	14.7	-	

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 <0.76>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS19	475001	200196	21.6	17.3	16.9	16.0	28.4		16.1	15.1	19.0	20.3	23.1		19.4	14.8	-	
SS20	470207	200190	23.3	15.6	14.6	12.0	16.0	13.9	15.2	14.6		18.5	20.9		16.5	12.6	-	
SS21	463527	177174	17.0	15.9	17.8	14.1	16.8	14.3	15.5	35.8		24.5	17.0		18.9	14.4	-	
SS22	463555	177099	22.7	18.4	20.5	18.7	39.1		26.8	24.6	44.0		22.2		26.3	20.1	-	
SS23	461901	200989	18.3	14.9	19.2	15.6	28.0		18.2	15.2	17.7	20.4	22.3		19.0	14.5	-	
SS24	460279	198618	13.0	19.0	13.5	11.0	27.0			11.0	20.3	13.5	19.6		16.4	12.5	-	
SS25	460163	198398	20.5	15.4	14.5	16.3	19.6		14.7	14.9	12.2	16.8	23.3		16.8	12.8	-	
SS26	468562	194779	13.7	6.7	5.8	5.0	3.1	4.8	4.8	6.3	5.6	7.1	10.3		6.7	5.1	-	
SS27	468756	194360	24.2	18.8	18.9	17.4	16.6	17.0	19.1	13.4	21.2	21.6	24.8		19.4	14.8	-	
SS28	468856	194293	19.0	14.6	13.2	13.8	12.7	15.9	14.6	12.9	18.3	18.3	21.7		15.9	12.1	-	
SS29	468852	194343	23.5	17.1	16.4	17.0	16.3	18.2	18.1	15.3	25.0	19.1	24.0		19.1	14.6	-	
SS30	468951	194457	36.1	29.9	28.7	25.5	28.1	34.0	31.8	26.1	31.4	30.8	38.7		31.0	23.7	-	
SS31	468962	194458	35.5	27.6	27.7	19.6	22.9	21.2	23.0	22.4	26.1	31.3	32.5		26.3	20.1	-	
SS32	469061	194590	26.8	21.5	18.2	19.7	17.6		22.9	17.1	23.0	21.9	28.1		21.7	16.5	-	
SS33	469017	194514	23.3					23.0	22.8	27.6		27.3	31.2		25.9	19.4	-	
SS34	461724	191785	21.5	16.7	17.9	17.8	11.4	18.3	16.4	15.7	22.4		24.5		18.3	13.9	-	
SS35	461298	189367	16.8		11.4	11.2	12.8	11.8	13.4	11.5	15.0	14.0	15.7		13.4	10.2	-	
SS36	460389	189498	28.5	23.6	20.2	18.7	20.5	19.9	19.8	19.2	21.4	29.5	26.6		22.5	17.2	-	
SS37	460640	189483	27.6	23.4	24.0	21.1		22.4	21.8			23.1	26.4		23.7	16.7	-	
SS38	460736	189567	28.4	20.4	21.4	18.7	18.7	13.8	16.9	17.3		28.0	24.3		20.8	15.9	-	
SS39	460799	189500		30.0	23.0	27.9	29.8	28.9	29.3	22.5	30.5	28.4	30.3		-	-	-	Triplicate Site with SS39, SS40 and SS41 - Annual data provided for SS41 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 <0.76>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS40	460799	189500	27.3	29.4	19.7	27.5	32.0	29.0	29.0	24.3	33.1	29.3	33.8		-	-	-	Triplicate Site with SS39, SS40 and SS41 - Annual data provided for SS41 only
SS41	460799	189500	34.2	28.5	23.5	27.9	30.7	28.3	28.4	23.1	29.1	27.5	34.7		28.5	21.8	-	Triplicate Site with SS39, SS40 and SS41 - Annual data provided for SS41 only
SS42	460938	189496	29.5	23.0	21.0	22.6	25.9		23.3	19.4		21.9	28.7		23.9	18.3	-	
SS43	460713	189279	29.0	24.3	17.6	22.4	22.2	21.5	20.8	17.0	23.3	21.9	27.6		22.5	17.2	-	
SS44	460679	189281	23.7	18.4	16.2	15.9	15.9	17.4	16.6	11.9	20.1	17.4	24.4		18.0	13.7	-	
SS45	460152	189130	11.9	12.9	13.1	11.2		9.4	9.2	9.8	13.5	14.8	20.6		12.6	9.6	-	
SS46	460282	188807	15.2	9.8	8.7	8.0	5.4	5.3	9.6	5.6	8.7	10.8	15.5		9.3	7.1	-	
SS47	460470	188224	19.1	16.1	14.5	12.6	13.7	13.5	13.1	12.1	18.1	17.1	19.1		15.4	11.7	-	
SS48	460110	187862	15.5	9.1	8.3	9.8	11.3	9.3	7.0	7.0	11.2	11.6	16.5		10.6	8.1	-	
SS49	459805	187574	15.4	14.2	12.6	11.3	13.2	11.2	11.1	10.2	14.5	15.3	17.8		13.3	10.2	-	
SS50	461916	188424	25.4	25.0	24.1	22.6	23.9	20.4	23.0			31.7			24.5	17.9	-	
SS51	475869	183217	26.2	19.0	17.8	17.2	15.3	16.7	16.6	13.1	17.8	19.5	23.2		18.4	14.0	-	
SS52	475878	182760	14.7	20.6	17.6	12.3	11.9	10.9	13.5	12.3	13.8	12.6	23.6		14.9	11.4	-	
SS53	476103	182506	29.1	30.8	27.3	24.0	22.2	23.7	24.4	20.9	24.0	25.0	36.1		26.1	20.0	-	
SS54	476174	182396		22.5	21.2	19.9	18.4	16.4	18.6	15.3	20.9	22.7	29.1		20.5	15.6	-	
SS55	476286	182290	25.9		19.3	16.6	16.4		20.3	8.3	16.7	20.4	32.6		19.6	15.0	-	
SS56	476115	182532	24.3	20.8	20.6	20.9	20.2	17.2	29.7	14.4	19.7	21.8	17.7		-	-		Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS57	476115	182532	26.7	21.8	20.7	10.3	20.1	18.0	21.4		20.2	22.0	22.9		-	-	-	Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS58	476115	182532	26.4	21.3	27.5		20.9	17.6	17.2	15.6	20.5	20.1	23.5		20.4	15.6	-	Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS59	476071	182612		47.4	39.3	35.5	34.0	36.9	38.9	32.5		49.4	53.5		40.8	31.2	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <0.76>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS60	475997	182614	25.4	21.0	19.0	16.1	15.4	13.2	16.8	13.5	17.0	20.1	23.3		18.3	13.9	-	
SS61	476080	182951		22.1		30.3		19.7	24.1	16.0	36.5	26.1	30.8		25.7	20.5	-	
SS62	476209	182831	28.5	20.5	16.3	21.8	16.2	16.4			19.6	19.5			19.9	14.4	-	
SS63	476308	182760	40.5	34.7	34.7	21.1	23.0	31.7		25.2	25.5	27.9	31.7		29.6	22.6	-	
SS64	476288	182078	31.9	27.8	22.3	14.9		23.7	25.8	22.5	23.1	26.8	24.5		24.3	18.6	-	
SS65	476223	182652		15.3	17.0	18.1	13.3	14.2	19.0	12.7	14.1	18.6	22.2		16.5	12.6	-	
SS66	476547	181735	28.7	20.8	17.2	6.0	15.0	13.6	19.5	13.8	18.1	20.3	20.8		17.6	13.4	-	
SS67	475104	181557	11.7	8.4		11.0	5.2	5.0	5.8	5.3	6.8	10.2	12.0		8.1	6.2	-	
SS68	453499	190384	17.3	12.9	12.0	18.3	10.1	7.7	12.1	9.0	12.2		18.9		13.1	10.0	-	
SS69	453357	190030	23.4	20.2	17.8	22.6	22.2	21.3	22.2	18.3	23.7	24.0	25.4		21.9	16.7	-	
SS70	453099	190031	32.0	18.6	27.0	24.0	25.5	23.7	33.2	22.8	22.6	31.0	27.6		26.2	20.0	-	
SS71	453023	189999	29.0	32.0	27.7		26.8	23.9	28.4	24.6	26.8	32.4	29.8		28.1	21.5	-	
SS72	452865	189979	26.6	18.6	15.5	11.0	22.0	18.2	19.1	14.6	27.0	23.4	25.1		20.1	15.3	-	
SS73	452753	189729	16.6	12.3	11.2	14.7	9.8		9.0	7.1	12.3	13.5	18.9		12.5	9.6	-	
SS74	452358	190521		13.5	15.2	19.4	14.7	10.0	14.1	10.6	19.0	18.7	24.0		15.9	12.2	-	
SS75	452084	190694	28.2	21.2	21.1	18.5		17.6	19.4	16.3	22.6	25.4	16.0		20.6	15.7	-	
SS76	451780	189920	25.4	21.9	23.1	13.6	17.4	16.4	17.0	14.9	20.9		25.6		19.6	15.0	-	
SS77	451643	189369	19.8	16.9	13.3	13.5	11.5		11.8	9.2	15.5	18.1	19.6		14.9	11.4	-	
SS78	450870	190495	21.7	15.3	14.0	10.3	11.6	11.2	16.5	10.6	16.4	17.2	15.4		14.6	11.1	-	
SS79	451424	190943	18.0	13.4	10.7	14.7	10.7	7.4	9.6	7.2	13.6	15.5	16.7		12.5	9.5	-	
SS80	454637	195614	18.2	19.3	16.1	18.9	19.6	6.5	13.9	10.8	17.9	18.9	20.1		16.4	12.5	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <0.76>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS81	454710	195562	18.3	14.4	14.2	13.4	26.8	7.1	13.0	15.1	17.9	23.9	19.6		16.7	12.7	-	
SS82	454760	195794	9.7	16.6	13.6	11.3	24.0	6.0	12.8	10.6	15.7	19.3	19.5		14.5	11.0	-	
SS83	457228	204708	10.0	16.0	13.8		11.2	7.0	7.3	8.2	11.6	14.5	14.6		11.4	8.7	-	
VS1	449452	197047	34.1	26.4	20.3		20.5	17.2	19.1	18.0	23.8	24.0	26.1	23.4	23.0	17.6	-	
VS2	449585	197273	25.0	20.3	21.3		18.8	14.3	14.7	14.2	19.9	24.1	24.8	18.7	19.6	15.0	-	
VS3	448364	197836	29.8	23.7	24.2	21.7	17.6	17.0	15.3	16.3	23.2	21.3	18.2	0.7	19.1	14.6	-	
VS4	448442	196953	31.9	31.1	33.4	26.0	28.0	21.5	25.8	24.9	27.8	28.3	26.6	20.5	27.2	20.7	-	
VS5	449695	197049	28.6	27.3	31.0	26.4	16.8	26.8	24.7	21.2	26.2	32.8	32.2		26.7	20.4	-	
VS6	448791	196725	29.0	24.7	22.4	20.7	24.4	18.5	24.6	15.9	23.5	31.0	29.0	12.1	23.0	17.5	-	
VS7	448738	196967	27.6	32.4		26.4	26.3	22.7	22.3	21.6	26.3	17.9		25.2	24.9	19.0	-	
VS8	449794	197176	25.9	20.6	22.3	16.7	19.2	13.1		12.5	19.3	23.4	30.6	18.5	-	-	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS9	449794	197176	25.3	20.4	17.9	17.7	17.6	12.8	16.0	14.1	18.9	23.1	23.9	22.3	-	-	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS10	449794	197176	24.0	24.6	19.3	16.6	15.7	11.9	16.0	13.9	19.0	20.1	23.2	20.7	19.3	14.7	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS11	448828	196966		29.9	28.2				29.8		27.7	30.6		26.7	28.8	22.5	-	
VS12	449225	196992	24.9	19.5	19.3		19.2	15.0	15.8	15.6	21.6	23.8			19.4	14.8	-	
VS13	449452	197047	26.0	34.3	33.6	21.6	34.3	23.5	24.8	22.9	26.3	34.6	24.9	23.8	27.6	21.0	-	
VS14	448869	196180	14.8	10.6	9.4	7.4	7.4	6.0	7.9	5.9	9.1	9.8	13.8	9.3	9.3	7.1	-	
VS15	449518	197160	19.2	19.3	17.3	11.3	12.7	9.2	12.3	9.8	12.5	19.2	25.7	14.7	15.3	11.7	-	
VS16	449008	205729	48.1	45.0	47.9	39.7	42.9	51.2	46.8	48.8	44.4	44.5	31.2		44.6	34.0	-	
VS17	449003	205724		67.1	60.7	54.9	50.0	54.7	59.4	57.4	54.5	57.1	13.6	48.7	52.6	40.1	27.5	
VS18	448894	205826	33.0	30.4	28.3	21.0		22.7	26.3	21.2	20.9	24.6	20.8	21.0	24.6	18.8	-	

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VS19	448917	205804	28.8	32.8	30.4	22.3			25.0						27.9	19.9	-	
VS20	448914	205798	54.0	64.0	59.5	49.6	51.4	62.0	62.9	56.6	45.7	58.0	31.1	41.4	53.0	40.5	30.4	
VS21	448946	205780	28.8	27.6	25.3	20.7	20.4	20.2	24.2	20.2	19.6	23.8	23.0	19.2	22.8	17.4	-	
VS22	448991	205745	31.7	28.3	26.3	25.4	23.0	23.1		23.5	25.3	27.0	40.9	22.7	27.0	20.6	-	
VS23	448403	205709	14.3	9.7	10.3	7.6	6.7	5.7	5.1	7.0	9.4				8.4	6.4	-	
VS24	449558	199016	21.5	17.2	17.8	13.1	11.4	10.6	6.4	10.4	14.4	15.6	13.4	12.6	13.7	10.5	-	
VS25	450222	199464	37.9	24.8	19.9	17.2	17.1	15.1	19.1	14.0	15.5	22.8	20.7	16.0	20.0	15.3	-	
VS26	450764	204105	25.0	22.5	21.3	18.8	17.5	22.3	21.0	18.3	18.6	20.6	30.5	18.6	21.3	16.2	-	
VS27	449404	205422	22.0	18.8	17.5	13.7	13.8	12.7	13.1	14.9	17.1	20.5	22.0	15.0	16.8	12.8	-	
VS28	448610	206289	22.0	15.6	22.6	14.5	15.2	9.9	8.7	12.5	19.7	21.7	20.5	11.0	16.2	12.3	-	
VS29	446273	202333	20.9	21.4	15.9	19.6	18.8	19.8	22.7	19.8	16.1	21.7	28.6	17.9	20.3	15.5	-	
VS30	452253	202255	22.8	16.9		13.5	13.3	11.3	15.3	10.7	16.1	18.6	21.7	13.2	15.8	12.0	-	
VS31	452290	201912	19.2		15.0	12.1	11.5	8.1	11.8	9.0	16.2	17.6			13.4	10.2	-	
VS32	448913	205813	39.6	38.1	38.2	30.3	28.4	32.9	40.1	34.8	28.1	36.0	34.3	29.1	34.2	26.1	-	
VS33	448866	205807	28.9	25.4		21.6	22.4	18.5	23.3	20.8	26.5			19.2	23.0	17.5	-	
VS34	428823	195554	12.0	9.2	9.0	6.1	5.1	6.0	5.9	5.2	6.6	10.2	11.7	6.7	7.8	6.0	-	
VS35	450886	194359	20.4	17.3	18.0	13.9	13.5	10.5	13.9	12.2	13.9	18.4	18.9	15.1	15.5	11.8	-	
VS36	442239	198622	18.1	16.5	15.5	11.6	11.9	13.4	11.0	14.3	12.3	8.7	17.4	10.6	13.4	10.3	-	
VS37	443526	199184	21.0	18.0	14.4	13.9	12.5	16.9	14.4	13.7	12.4	17.1	18.4		15.7	12.0	-	
VS38	445552	196639	39.9	37.8	35.5	28.5	31.3	30.4	31.2	28.6	32.8	39.2	38.5	21.0	32.9	25.1	-	
VS39	445571	196675	34.9	31.3	26.1	25.1	24.6	22.5	22.0	22.0	24.1	31.9	32.6	24.6	26.8	20.5	-	

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VS40	445522	196470	12.2	8.6	9.1	6.3	6.1	4.7	7.1	6.2				7.7	7.6	5.8	-	
VS41	445456	196623	35.6	23.8	24.3	21.9	26.0	20.9	21.5	22.9	27.7	32.0	34.0	19.7	25.9	19.7	-	
VS42	445528	196628	24.9	21.6	19.9		16.2	17.5	17.1	15.8	20.0	22.1		16.2	19.1	14.6	-	
VS43	445875	196657	26.4	25.0	22.1	18.9	17.6	19.1	18.3	18.0	24.6	26.2	31.8	17.2	22.1	16.9	-	
VS44	448150	198190	14.7	10.6	9.8	6.7	6.1	5.6	3.4	6.1	6.2	11.8	14.3	15.2	9.2	7.0	-	
VS45	448092	198055	19.8	15.9	11.8	11.4	11.9	9.2	6.8	8.7	13.4	15.8	19.8	9.6	12.8	9.8	-	
VS46	448349	198086	24.5	25.2	22.5	17.3	13.1		15.2		21.2	19.9	24.5	14.3	19.8	15.1	-	
VS47	450886	194359		19.4	19.4	18.3	18.2	15.4	18.0	14.5	18.5	26.6	21.8	15.2	18.7	14.2	-	
VS48	450588	194391		17.6	17.1	16.9	15.7	13.7	10.7	12.1	18.4	19.7	20.5	13.9	16.0	12.2	-	
VS49	440068	189087		23.6	21.9	20.2		16.2	18.4	15.4	19.2	22.1	24.0	16.5	19.8	15.1	-	
VS50	440409	188319		8.5	7.4	6.1	4.3	5.4	3.6	5.3	6.7	11.2	21.0	18.5	8.9	6.8	-	
VS51	439807	187941		20.8	19.9	19.9		17.7	20.1	16.1	20.6	19.5	21.0	17.8	19.3	14.8	-	
VS52	424275	190640		17.5	17.9	16.2	18.4	15.5	15.7	14.5	15.8	18.8	18.6		16.9	12.9	-	

- ☑ 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
- □ National bias adjustment factor used
- ☐ Where applicable, data has been distance corrected for relevant exposure in the final column
- ☑ South Oxfordshire and Vale of White Horse District Councils confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

#### Notes:

Exceedances of the NO<sub>2</sub> annual mean objective of 40µg/m<sup>3</sup> are shown in **bold**.

NO<sub>2</sub> annual means exceeding 60μg/m³, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

# Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

# New or Changed Sources Identified Within South Oxfordshire and Vale of White Horse District Councils During 2024

South Oxfordshire and Vale of White Horse District Councils have not identified any new sources relating to air quality within the reporting year of 2024.

# Additional Air Quality Works Undertaken by South Oxfordshire and Vale of White Horse District Councils During 2024

South Oxfordshire and Vale of White Horse District Councils have not completed any additional works within the reporting year of 2024.

#### **QA/QC** of Diffusion Tube Monitoring

The diffusion tubes used by SODC are provided by Socotec Didcot. Please see the 2023 Performance Summary forwarded by the supplier below.

#### <u>Diffusion Tube Performance Summary 2024:</u>

- Tube Type: 20% TEA: 80% Water
- Uncertainty: "Diffusion Tubes for Ambient NO2 Monitoring: Practical Guidance" categorises diffusion tubes as an indicative method, and as such the uncertainty is defined as ± 25%.
  - During in field intercomparisons, SOCOTEC's diffusion tubes perform at ±10% uncertainty.
- Quality Control: A quality control (QC) sample of known concentration is run with the samples. The data generated is then assessed using a Shewhart control chart to determine the process is under statistical control.
- Analytical Repeatability: In 2024 ~9700 QC samples were analysed, achieving a relative standard deviation of 1.09%
- Confidence Intervals:  $2\sigma \pm 2.59\%$ ;  $3\sigma \pm 3.89\%$

- Limit of Detection: The analytical limit of detection is 0.03μg NO<sub>2</sub>. Over a 4-week exposure this would equate to 0.6μg/m<sup>3</sup>, or 0.3ppb
- Quality Assurance: The manufacture and analysis of NO<sub>2</sub> diffusion tubes is covered by our UKAS accreditation.

The laboratory has taken part in the AIR (previously WASP) proficiency scheme since its inception. To achieve the highest ranking of "Satisfactory" a laboratory must achieve a z-score of <2. For 2024, SOCOTEC had an average z-score of 0.19

Bought in ISO Guide 34 and ISO/IEC 17025 certified standards are used to prepare calibration and QC standards.

2% of tubes are checked for blankness during manufacture, to ensure there is no contamination introduced during the manufacturing process.

The method meets the requirements laid out in DEFRA's "Diffusion Tubes for Ambient NO2 Monitoring: A Practical Guidance."

#### **Diffusion Tube Annualisation**

The results from some non-automatic sites required annualisation since its data capture less than 75% but greater than 33%. Details of the calculation method undertaken (using the DT Data Processing Tool) are provided in Table C. 1 below.

Table C.1 – Annualisation Summary (concentrations presented in μg/m³)

Site ID	Annualisation Factor Abingdon	Annualisation Factor Henley	Annualisation Factor Watlington	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
SS1	0.9004	0.9330	0.9661	0.9332	16.3	15.2
SS33	1.0119	1.0041	0.9243	0.9801	25.9	25.4
SS37	0.8999	0.9209	0.9448	0.9219	23.7	21.9
SS50	0.9372	0.9469	0.9886	0.9576	24.5	23.5
SS61	1.0780	1.0618	0.9887	1.0429	25.7	26.8
SS62	0.9272	0.9388	0.9870	0.9510	19.9	18.9
VS11	1.0302	1.0045	1.0367	1.0238	28.8	29.5
VS19	0.9016	0.9088	0.9989	0.9364	27.9	26.1

#### **Diffusion Tube Bias Adjustment Factors**

The diffusion tube data presented within the 2024 ASR have been corrected for bias using a local adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO<sub>x</sub>/NO<sub>2</sub> continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

South Oxfordshire and Vale of White Horse District Councils have applied a local bias adjustment factor (BAF) of 0.76 to the 2024 monitoring data. A summary of bias adjustment factors used by South Oxfordshire and Vale of White Horse District Councils over the past five years is presented in Table C.2.

The 03/25 National Diffusion Tube Bias Adjustment Factor Spreadsheet provided a bias adjustment factors for the councils' tube type (20% TEA in water) of 0.75 Similarly, the DT Data Processing Tool provided very similar BAF derived from the local co-locations, see Table C.3 below, and a combined local BAF of 0.76.

The 2024 dataset has been adjusted using the combined local BAF as this allows us to apply a single adjustment factor to the data, which considers the information from the 3 colocations in the districts.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	Local		0.76
2023	Local		0.81
2022	Local		0.80
2021	Local		0.79
2020	Local		0.88

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3
Periods used to calculate bias	6	8	12
Bias Factor A	0.91 (0.79 - 1.09)	0.73 (0.66 - 0.83)	0.67 (0.59 - 0.79)
Bias Factor B	9% (-8% - 27%)	36% (21% - 51%)	48% (27% - 70%)
Diffusion Tube Mean (µg/m³)	28.9	20.6	19.3
Mean CV (Precision)	6.5%	5.2%	7.1%
Automatic Mean (µg/m³)	26.4	15.1	13.0
Data Capture	96%	99%	97%
Adjusted Tube Mean (µg/m³)	26 (23 - 32)	15 (14 - 17)	13 (11 - 15)

#### NO<sub>2</sub> Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO<sub>2</sub> concentrations corrected for distance are presented in Table B.1.

Table C.4 – Non-automatic NO<sub>2</sub> Fall off With Distance Calculations (concentrations presented in  $\mu g/m^3$ )

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
VS17	3.0	14.0	40.1	8.4	27.5	
VS20	2.0	10.0	40.5	13.7	30.4	

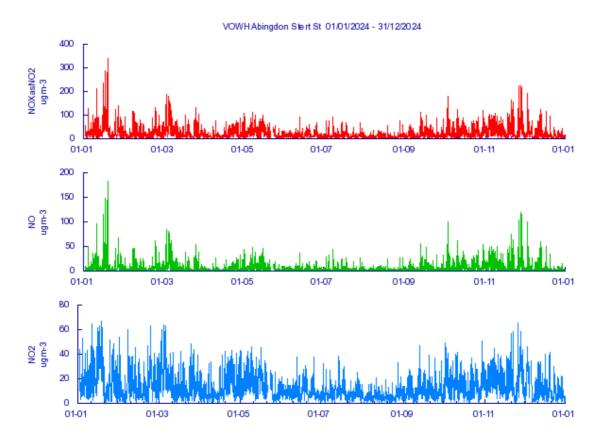
#### **QA/QC** of Automatic Monitoring

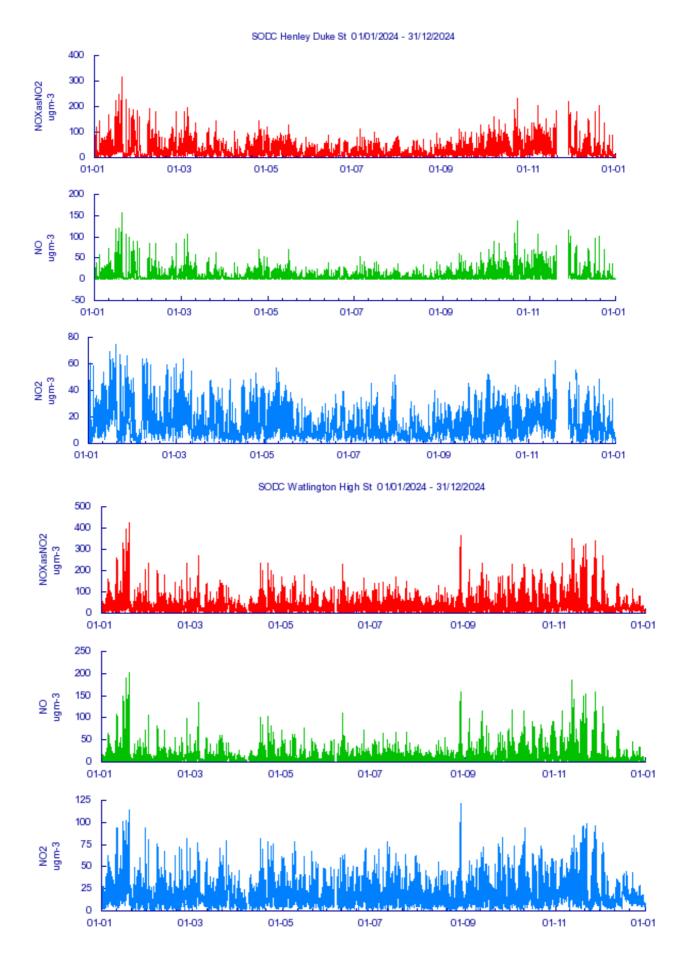
Ricardo Energy & Environment currently provide independent UKAS accredited quality control audits (biannual) and data management services to the three automatic monitoring stations in the district. Their data management process includes:

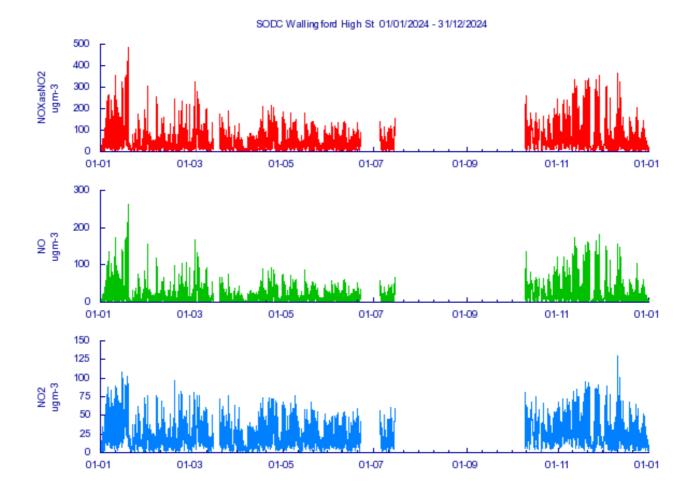
 Scaling data based on routine instrument calibrations. These calibrations are carried out by the Local Site Operator (Air Quality Officer at SODC) on a monthly/fortnightly basis

- Instrument and site infrastructure service and maintenance records obtained from the biannual servicing visits
- Local meteorological data where possible
- Results of quality control audits
- Comparisons with other nearby site concentrations to help ensure data integrity

Figures C1-3 show the annual data recorded at the council's continuous monitoring sites in 2024. Further historical data can be accessed here: <a href="https://www.oxonair.uk/">https://www.oxonair.uk/</a>.







#### **Automatic Monitoring Annualisation**

Due to mechanical faults the Wallingford CA recorded data capture of lower than 75% and therefore the monitoring data have been annualised.

Details of the calculation method undertaken (using the Automatic Data Processing Tool) are provided in Table C. 5 below.

Table C.5 – Automatic NO<sub>2</sub> Annualisation Summary (concentrations presented in μg/m<sup>3</sup>

	Annual Data	Annual Mean	Walling	ford CA
Background Site	Capture (%)	(A <sub>m</sub> )	Period Mean (P <sub>m</sub> )	Ratio (A <sub>m</sub> / P <sub>m</sub> )
Abingdon CA	98.6	13.0	14.8	0.875
Henley CA	97.0	14.7	16.0	0.916
Watlington CA	98.3	18.9	19.5	0.969

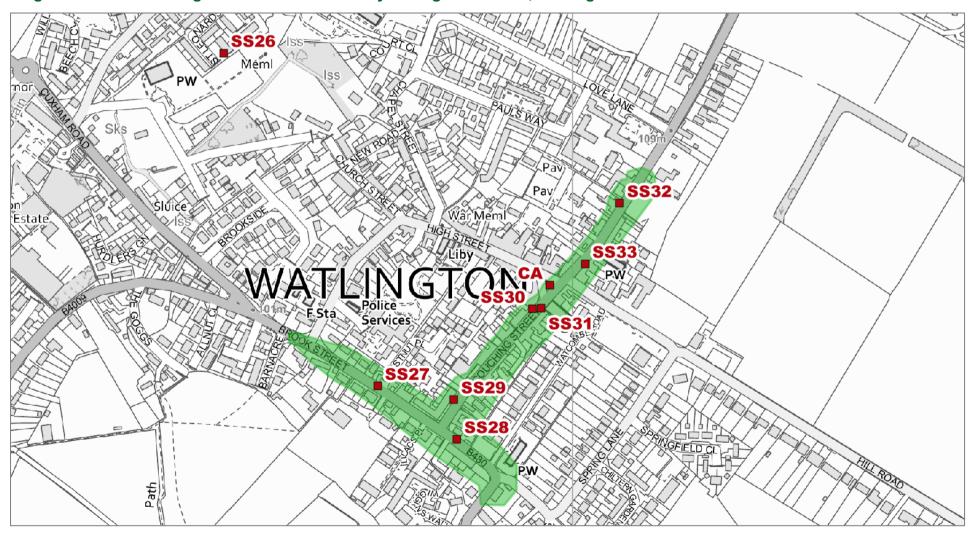
Background Site	Annual Data Capture (%)	Annual Mean (A <sub>m</sub> )	Wallingford CA	
			Period Mean (P <sub>m</sub> )	Ratio (A <sub>m</sub> / P <sub>m</sub> )
Average (R <sub>a</sub> )			0.920	
Raw Data Annual Mean (M)			25.6	
Annualised Annual Mean (M x R <sub>a</sub> )			23.6	

#### NO<sub>2</sub> Fall-off with Distance from the Road

No automatic NO<sub>2</sub> monitoring locations within South Oxfordshire and Vale of White Horse District Councils required distance correction during 2024.

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

Figure D. 1 – Monitoring stations and Air Quality Management Area, Watlington



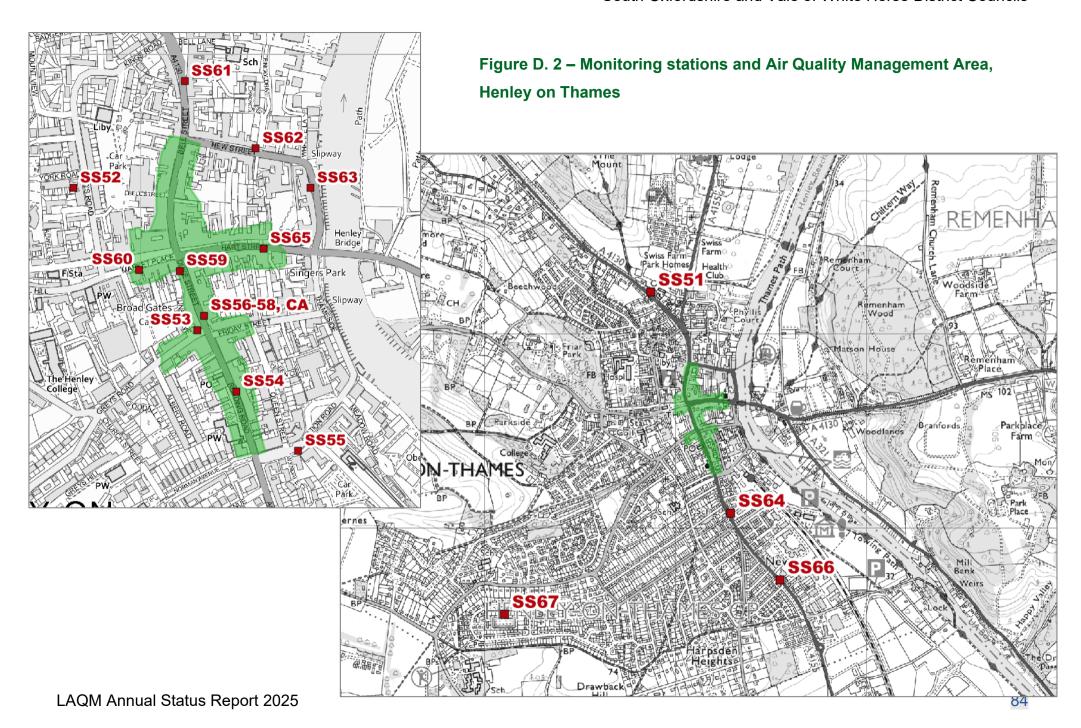
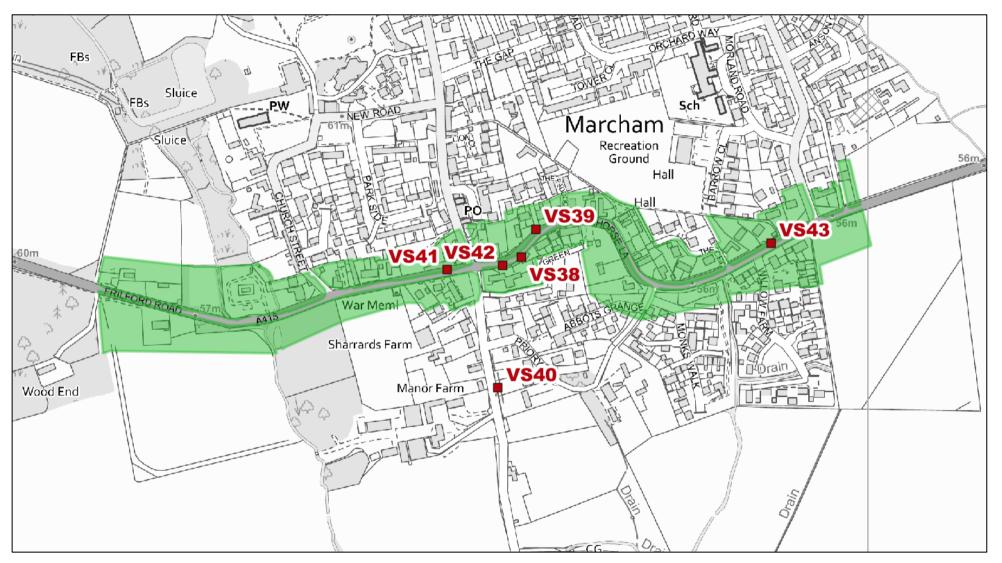


Figure D. 3 – Monitoring stations and Air Quality Management Area, Marcham





€ **VS32** VS19 VS22 ■ 63 **VS20 VS17** 76.6m

Figure D. 5 – Close up maps of Botley monitoring sites

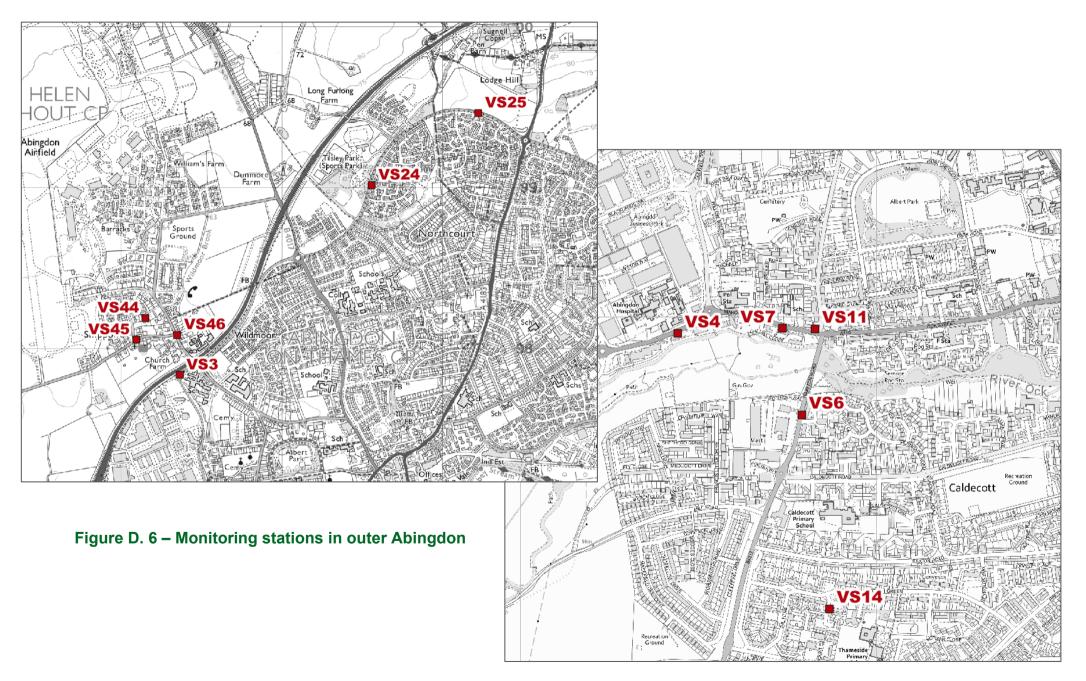


Figure D. 7 – Monitoring sites in central Abingdon



Figure D. 8 – Monitoring stations in outer Wallingford

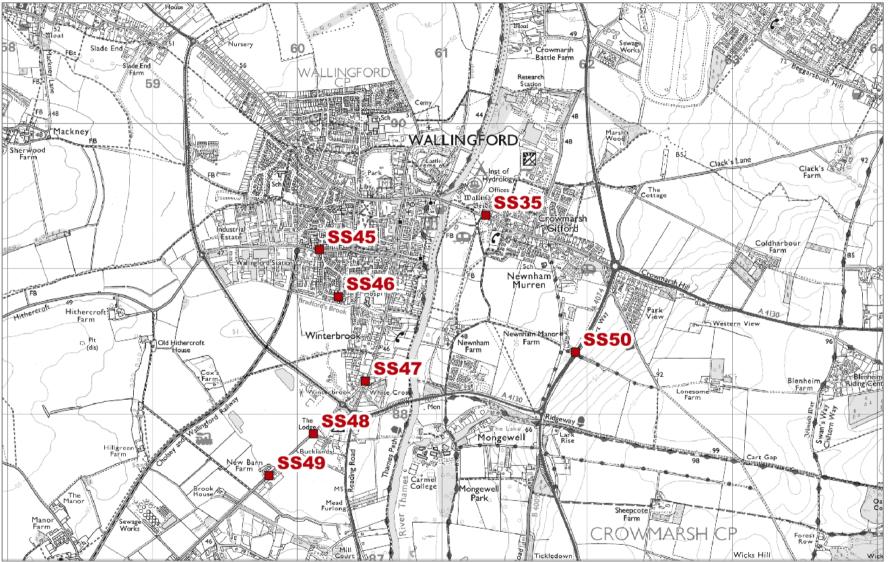


Figure D. 9 – Monitoring stations in central Wallingford

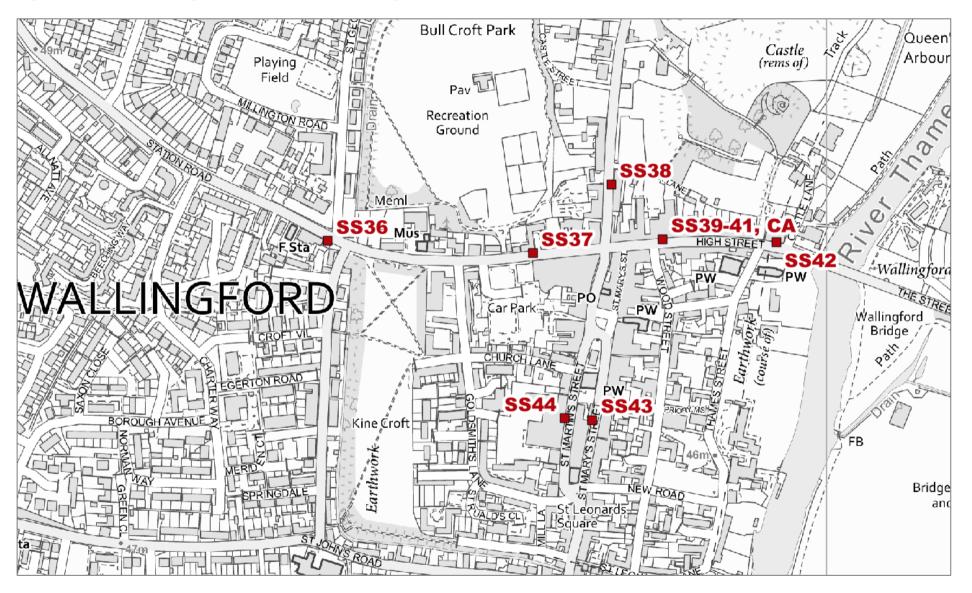


Figure D. 10 - Monitoring sites in Thame

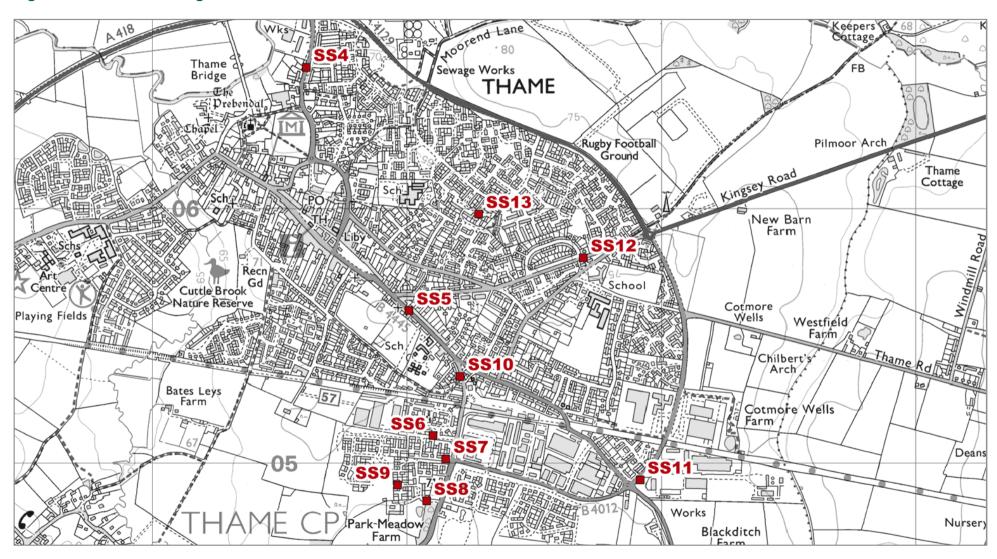


Figure D. 11 – Monitoring sites in Chinnor

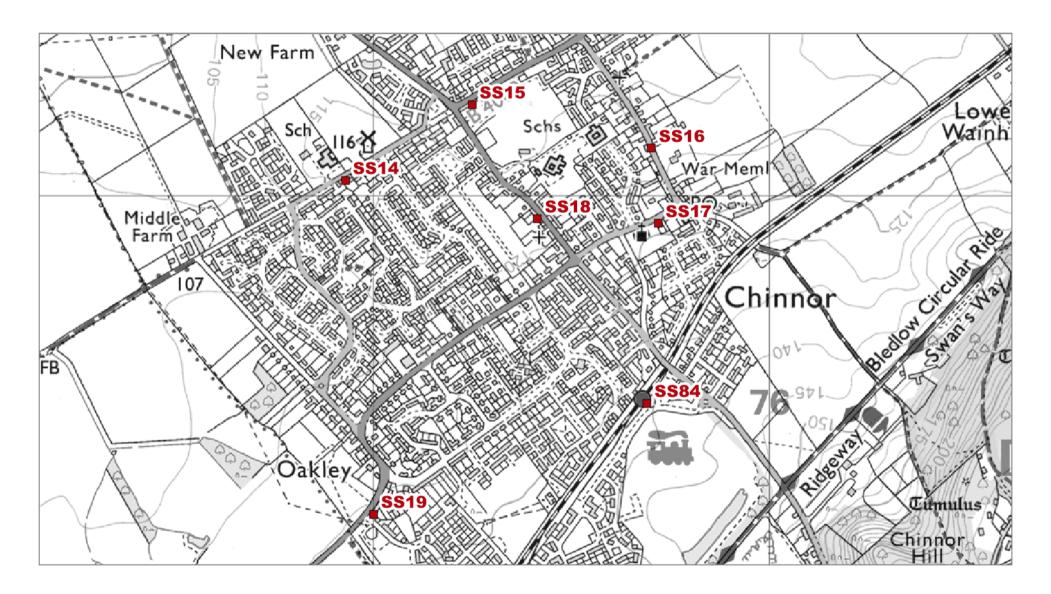
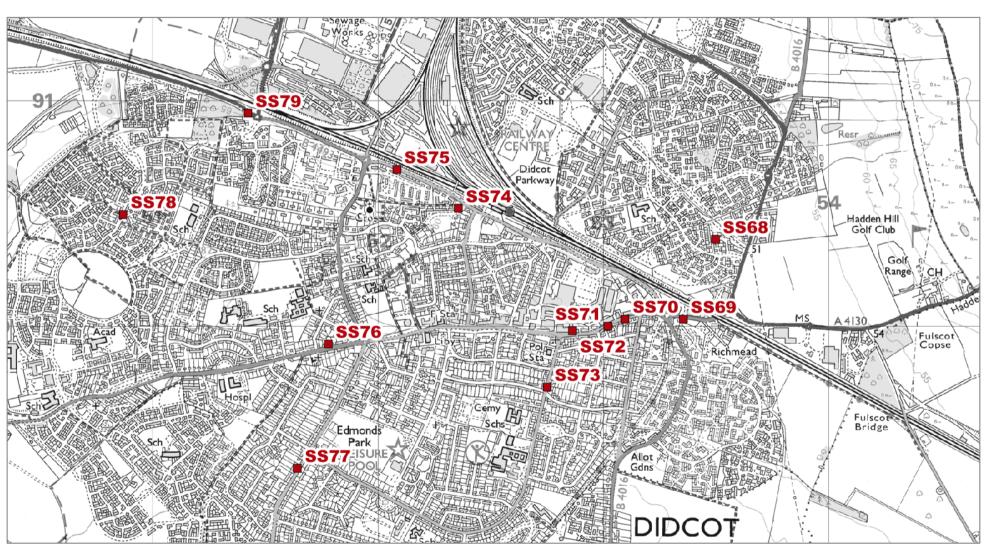
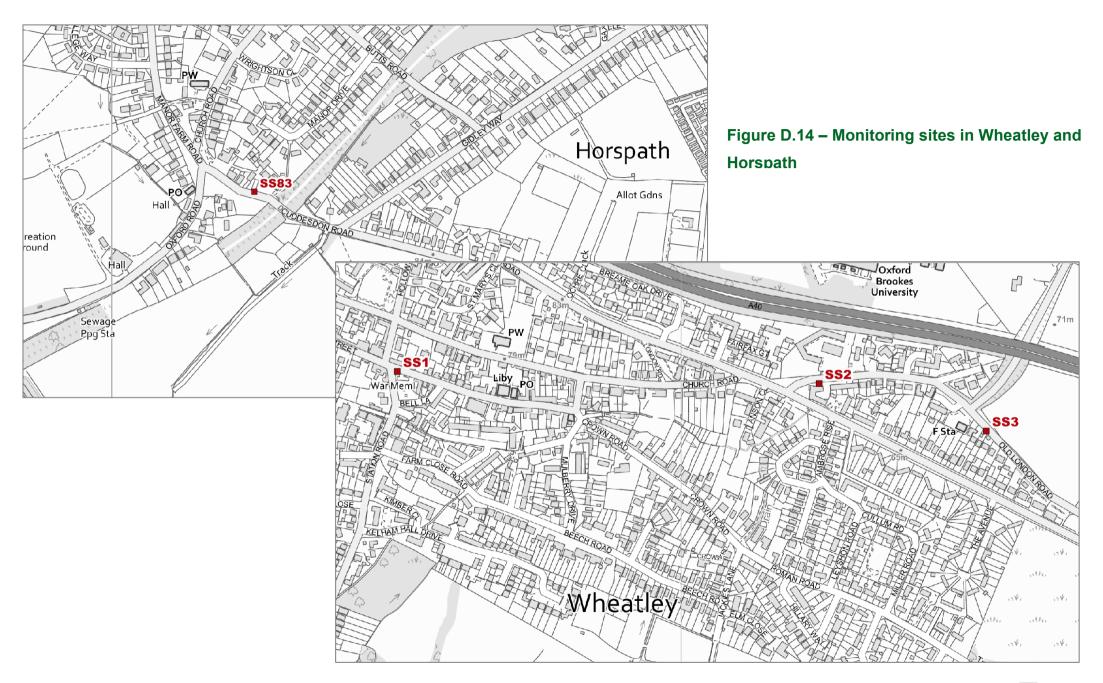
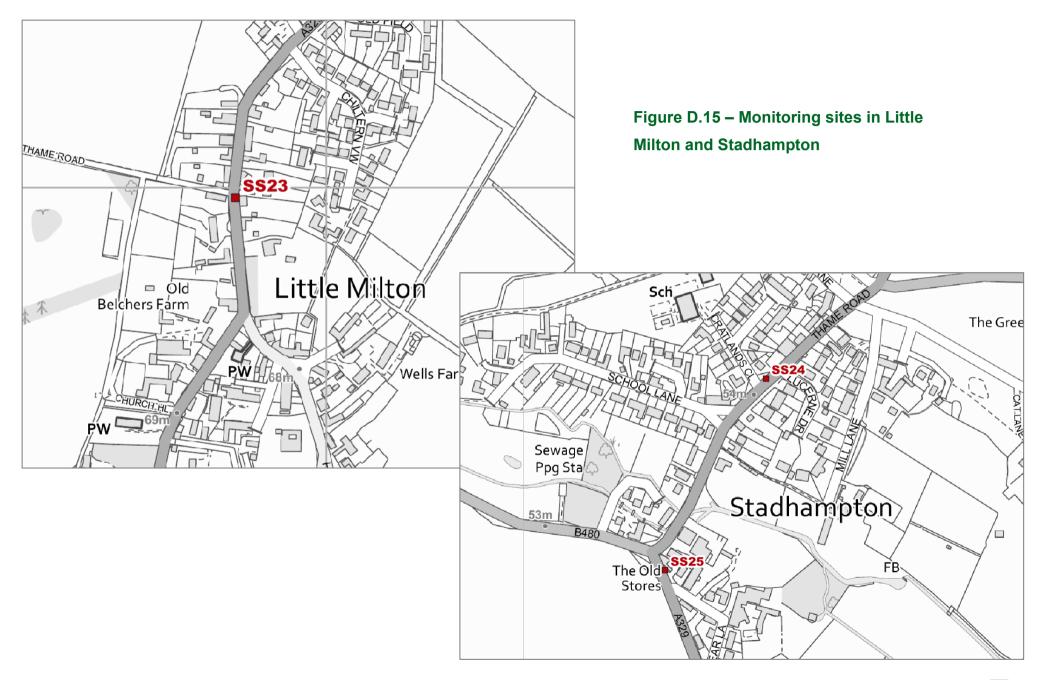


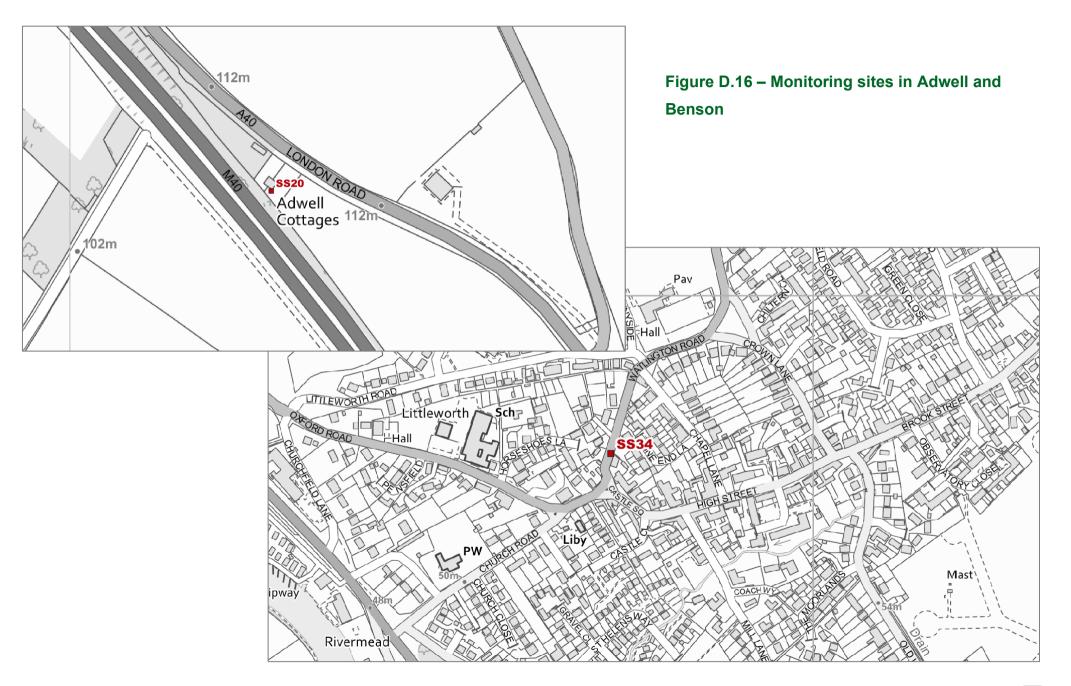
Figure D. 12 – Monitoring sites in Didcot



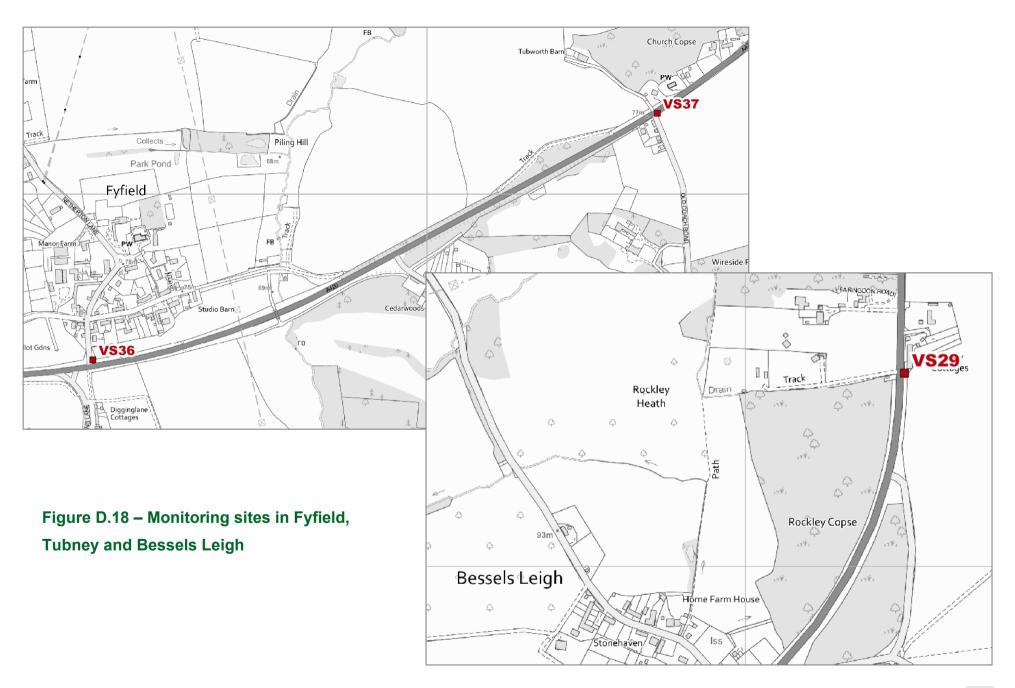


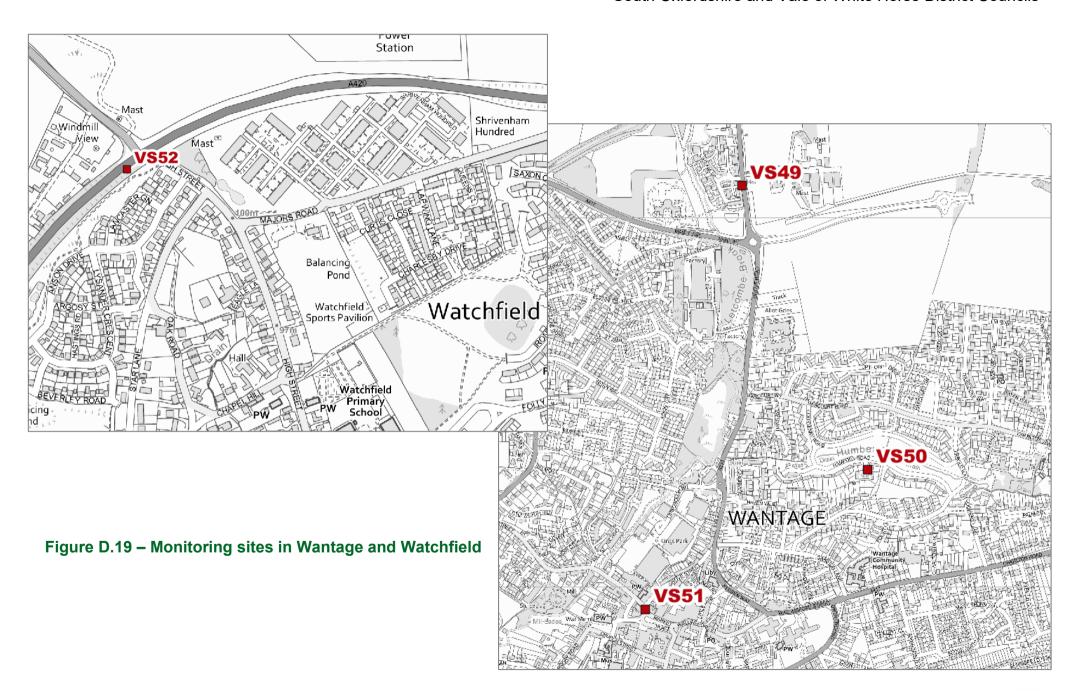












# Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England<sup>2</sup>

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	200μg/m³ not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO <sub>2</sub> )	40μg/m³	Annual mean
Particulate Matter (PM <sub>10</sub> )	50μg/m³, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM <sub>10</sub> )	40μg/m³	Annual mean
Sulphur Dioxide (SO <sub>2</sub> )	350μg/m³, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	125μg/m³, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO <sub>2</sub> )	266μg/m³, not to be exceeded more than 35 times a year	15-minute mean

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<sup>&</sup>lt;sup>2</sup> The units are in microgrammes 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		
Defra	Department for Environment, Food and Rural Affairs		
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways		
LAQM	Local Air Quality Management		
NO <sub>2</sub>	Nitrogen Dioxide		
NOx	Nitrogen Oxides		
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10μm or less		
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less		
QA/QC	Quality Assurance and Quality Control		
SO <sub>2</sub>	Sulphur Dioxide		

#### References

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