2024 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 2024

Information	South Oxfordshire and Vale of White Horse District Councils Details
Local Authority Officer	Carmen C Martinez
Department	Environmental Protection Team
Address	South Oxfordshire and Vale of White Horse District Councils Abbey House, Abbey Close, Abingdon, OX14 3JE
Telephone	01235 422403
E-mail	carmen.cubillas.martinez@southandvale.gov.uk
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Executive Summary: Air Quality in Our Area

In 2023, South Oxfordshire and Vale of White Horse districts demonstrated a continuation of the positive trend in air quality improvement, with no exceedances of the national air quality objectives. Nitrogen dioxide levels across most monitoring sites showed a decrease compared to 2022, with all designated Air Quality Management Areas (AQMAs) have complied with annual mean NO2 concentrations well below the objective limit of 40µg/m^3.

The adoption of a new Air Quality Action Plan (AQAP) in January 2024 marked a significant milestone. This plan replaces earlier versions from 2017 and 2015, unifying efforts across South Oxfordshire and Vale of White Horse.

Key actions from the new AQAP already underway include the launch of the oxonair.uk website for public information and engagement, and the development of an Air Quality Lifecourse Assessment Tool (AQ-LAT) in collaboration with Oxfordshire County Council and University of Birmingham. This tool aims to support local authorities in evaluating the health impacts of potential air quality interventions.

For 2024, the councils' focus will be on implementing the new AQAP. Upcoming projects include a feasibility study on the use of green infrastructure to enhance air quality, exploring the adoption of air quality guidance for developers as supplementary planning guidance, and the introduction of a high pollution alert system on the oxonair.uk website. Continued enforcement against vehicle idling and partnership efforts with Oxfordshire County Council and National Highways are also key priorities.

The effective monitoring, planning, and implementation strategies in South Oxfordshire and Vale of White Horse have led to tangible improvements in air quality. The councils are committed to sustaining this progress through strategic action and collaborative efforts, aiming to achieve and maintain air quality that meets and exceeds national objectives.

Air Quality in South Oxfordshire and Vale of White Horse District Councils

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

UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

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

Table ES 1 - Description of Key Pollutants

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

All six of the AQMAs in the districts have been declared due to exceedances of the nitrogen dioxide annual average objective caused by traffic emissions.

In cases like Henley, Abingdon, Wallingford, Marcham and Watlington AQMA, the narrow busy roads in the town centre are flanked by tall buildings on both sides, causing a canyon effect. This urban feature influences air circulation and pollution dispersion into the atmosphere, trapping pollution close to the surface.

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

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

Actions to Improve Air Quality

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

The Environmental Improvement Plan[3] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[4] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[5] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Conclusions and Priorities

No exceedances of the national air quality objectives were identified in South Oxfordshire and Vale of White Horse in 2023. Nitrogen dioxide levels recorded were, at most monitoring sites, lower in 2023 than those recorded in 2022, which supports the decreasing trend observed in previous years.

A new AQAP was adopted in February 2024 and the councils' priority for 2024, in terms of Local Air Quality Management, will be to launch and implement the measures outlined in the document in collaboration with our AQ Partners.

Local Engagement and 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 your car less, driving more efficiently when you do have to drive, or

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

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

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

considering a cleaner vehicle when you choose to upgrade your 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 also can be found in the links below:

- oxonair.com, the new air quality website for Oxfordshire 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 or a high pollution alert system.
- The "Turn It Off" campaign 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: https://www.southandvale.gov.uk/turnitoff/
- https://uk-air.defra.gov.uk/library/burnbetter/- The Burn Better website 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.
- https://www.climateactionoxfordshire.org.uk/ - The Climate Action Oxfordshire website offers a comprehensive resource for individuals, communities, and organizations aiming to reduce their carbon footprint. It provides practical advice on energy efficiency, transport, lifestyle changes, and biodiversity, with tips ranging from simple 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.
- https://www.oxfordbus.co.uk/app - The Oxford Bus Company app provides a variety of features to enhance bus travel in Oxford. Users can 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.
- https://www.oxfordshire.gov.uk/residents/environment-and-planning/energy-and-climate-change/electric-vehicles provides information about public EV charging

points, installing home chargers, and government grants for EV charge point installation. 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 "Kids Zone" on Oxonair 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;

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection Team of South Oxfordshire and Vale of White Horse District Councils Council with the support and agreement of the following officers and departments:

- Carmen Cubillas Martinez, Air Quality Officer
- Simon Hill, Environmental Protection Team Leader

This ASR has been approved by:

- Paul Fielding, Head of Housing and Environment at South Oxfordshire and Vale of White Horse District Councils
- Stephen Inch, Air Quality Programme Lead, National Highways
- Paul Fermer, Director of Environment & Highways
- Ansaf Azhar, Director of Public Health, Oxfordshire County Council.

If you have any comments on this ASR, please send them to:

Environmental Protection Team, South Oxfordshire and Vale of White Horse District Councils

Abbey House, Abbey Close, Abingdon, OX14 3JE

Tel: 01235 422403

env.health@southandvale.gov.uk

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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 2023. 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 4 AQMAs that are currently designated within South Oxfordshire and Vale of White Horse District Councils. 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 objective pertinent to all of the current AQMA designations is the NO_2 annual mean objective.

The councils propose to revoke Wallingford and Abingdon AQMAs in 2024 (see section 3 below for further information on monitoring data and objective compliance).

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
Abingdon	23/08/2006	NO2 Annual Mean	Major town centre roads	NO	63.2	30.2	4	2023 South Oxfordshire and Vale of White Horse	https://www.whitehorsedc.gov.uk/wp-content/uploads/sites/3/2024/02/SOVOWH-AQAP-2023.pdf
Botley	29/04/2008	NO2 Annual Mean	Residential properties close to the A34	YES	58.8	29.8	1	2023 South Oxfordshire and Vale of White Horse	https://www.whitehorsedc.gov.uk/wp-content/uploads/sites/3/2024/02/SOVOWH-AQAP-2023.pdf
Marcham	15/06/2006	NO2 Annual Mean	Residential properties near A415	NO	53.9	29.8	4	2023 South Oxfordshire and Vale of White Horse	https://www.whitehorsedc.gov.uk/wp-content/uploads/sites/3/2024/02/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
Henley	01/01/2003	NO2 Annual Mean	An area encompassing Duke Street and Bell Street in 2002 and was further extended in 2004 to include the Market Place, Hart street and Reading Road.	NO	45.1	31.0	4	2023 South Oxfordshire and Vale of White Horse	https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2024/02/SOVOWH-AQAP-2023.pdf
Wallingford	28/03/2008	NO2 Annual Mean	An area encompassing the High Street and part of Castle Street, St Marys Street and St Martins Street	NO	48.3	25.7	6	2023 South Oxfordshire and Vale of White Horse	https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2024/02/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	27.7	4	2023 South Oxfordshire and Vale of White Horse	https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2024/02/SOVOWH-AQAP-2023.pdf

☒ **South Oxfordshire and Vale of White Horse District Councils confirm the information on UK-Air regarding their AQMA(s) is up to date (confirm by selecting in box).**

☒ **South Oxfordshire and Vale of White Horse District Councils confirm that all current AQAPs have been submitted to Defra (confirm by selecting in box).**

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 last year's ASR concluded:

1. *Good quality graphs have been provided in Figures A.1 to A.15 showing the trends in the NO_2 annual mean concentration at each monitoring site. This allows the reader to easily see if there are any exceedances at each monitoring site and to see up to 5 years' worth of measurements at each monitoring site. This is encouraged for future reports.* The same style of graph is included in Appendix A of this report.

2. *Good quality maps have been provided in Figures D.2 to D.15 showing the location of each monitoring site and the boundaries of each AQMA. This allows the reader to easily see the location of each monitoring site in proximity to main/major roads, and to see if the current monitoring network is still relevant. This is encouraged for future reports.* The same style of map is included in Appendix D this report.

3. *There is good in-depth discussion about $PM_{2.5}$ emissions within the district. There is comprehensive discussion about current $PM_{2.5}$ concentrations within the district, and about the measures that VoWHDC and SODC are implementing to reduce $PM_{2.5}$ concentrations.* A discussion of $PM_{2.5}$ emissions within the district has been included in Section 2 of this report.

4. *The list of AQMAs listed in Table 2.1 should match the details of the AQMAs that is recorded in the Portal.* The data in Table 2.1 of this report matches the AQMA details in the Portal, with Wallingford, Henley and Watlington AQMAs recorded under the South Oxfordshire District Council dashboard and Botley, Marcham and Abingdon AQMA recorded under the Vale of White Horse District Council dashboard.

5. *Not all cells have been filled in in Table 2.2 for the measures included in the AQAP. This should be rectified for future reports.* All cells have been filled in Table 2.2 of this report.

6. *There is no text justifying the choice of bias adjustment factor used as part of the QA/QC process.* Information on the choice of the BAF applied to the 2023 monitoring dataset has been included in Appendix C of this report.

7. *If PM_{10} and $PM_{2.5}$ concentrations have been recorded at, at least 1 monitoring site, these should be reported in the ASR and should be rectified for future reports.* The councils have not carried out particulate matter surveys in 2023.

8. *The title of the figures included in Appendix D should start at 'Figure D.1'.* Figures included in Appendix D of this report start with Figure D.1

9. *The tables completed within the excel template should exactly match the tables included in the ASR.* The tables included in this report match those of the submitted 2024 ASR Table Template

South Oxfordshire and Vale of White Horse District Councils have taken forward a number of direct measures during the current reporting year of 2023, in pursuit of improving local air quality. Details of all measures completed, in progress or planned, are set out in Table 2.2. 17 measures are included within Table 2.2, with the type of measure and the progress the councils have made during the reporting year of 2023 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.

The **adoption of the new AQAP** was both council's priority in 2023, with most of the resources allocated to LAQM, being focused on this task.

Replacing the 2014 South Oxfordshire AQAP and the 2015 Vale of White Horse District Councils AQAP with a new combined AQAP was identified as a key project in 2021 and, following the Councils' Corporate Plan, the work on this commenced in 2022, with the contract for leading on the project being awarded to Atkins Ltd, an environmental consultancy with broad experience on working with local authorities on projects relating to the LAQM regime, in August 2022.

Traffic surveys were conducted in December 2022 to complete a source apportionment study, which helped determine the various contributions to local air pollution levels.

Based on these findings, a comprehensive list of potential air quality actions was proposed. These were initially discussed in a stakeholder workshop in February 2023, attended by council members, representatives from Oxfordshire County Council and National Highways, and key council officers. Following insights gained from this workshop, council officers held further consultations with ward councillors representing the six designated AQMAs in March 2023.

The cost benefits and impacts of the proposed actions were then assessed, leading to a curated list of recommended actions, which were included in the draft of the new joint AQAP.

The draft AQAP was submitted for public consultation in June and July 2023. This included meetings with representatives of Town and Parish Councils within AQMAs and district councillors, as well as public workshops in the market towns within AQMAs to gather a broad range of feedback.

The responses from this consultation exercise were carefully analysed, and a second draft AQAP was produced in August 2023. This version incorporated feedback from Defra and addressed points raised during the public consultation.

This document was then shared with the council's air quality partners—Oxfordshire County Council and National Highways—to confirm their commitment to allocating the necessary resources for the actions assigned to them. Written confirmations were received from National Highways in September 2023, and from Oxfordshire County Council, with the AQAP being signed by the Director of Public Health in November 2023.

Following Defra's final appraisal in December 2023, the Councils' Cabinets then approved this final version of the AQAP, which was formally adopted by the Licensing Committees in January 2024.

Due to the 2023 AQAP only being adopted in February 2024, many of the actions outlined in the document have not been implemented yet.

However, one of the measures included in this new AQAP was completed in 2023: the launch of **www.oxonair.uk/**. The website was developed with Defra AQ Grant funding awarded to the six Local Authorities in Oxfordshire and it features a forecast system, an area aimed at children and clear information on the LAQM regime, monitoring data, and national and local AQ policies as well as information on local initiatives to improve air quality and information on what members of the public can do to reduce their pollution emissions and exposure.

Figure 1 Logo of the new oxonair.uk air quality website

Another completed measure is the publishing of Oxfordshire County Council's (OCC) **Air Quality Strategy** on Clean Air Day. As part of this strategy, OCC is developing an air quality impact assessment tool, in partnership with the University of Birmingham and the District Councils. This tool, which includes additional modelling for traffic and point sources, will allow Local Authorities to quantify the impacts in improving local air quality levels and resident's health. It will therefore be key in the development of new policies. Further information on progress on the implementation of the AQ Strategy can be found here: https://news.oxfordshire.gov.uk/efforts-to-reduce-air-pollution-launched-on-clean-air-day/.

South Oxfordshire and Vale of White Horse District Councils expect the following measures to be completed over the course of the next reporting year:

- Adoption of the Joint South Oxfordshire and Vale of White Horse Waste and Street Cleansing Vehicle Procurement Strategy to take place in April 2024.
- A feasibility study on the uses of green infrastructure as means to improve local air quality (measure AW7) will commence in 2024.
- The councils will explore the adoption of the existing AQ Guidance for Developers as statutory planning guidance (measure AW5).
- A high pollution text alert system will be available on the Oxonair website in 2024 (measure AW4).
- South Oxfordshire DC will explore increased anti-idling enforcement in Henley (measure H6).

Figure 2 Text alert system available in the new AQ website

South Oxfordshire and Vale of White Horse District Councils' priorities for the coming year are to launch and implement the measures identified in the recently adopted 2023 AQAP.

South Oxfordshire and Vale of White Horse District Councils worked to implement these measures in partnership with the following stakeholders during 2023:

- 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 anticipates 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	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
B1	Feasibility study to improve air quality on the A34	Transport Planning and Infrastructure	Other	2023	2025	National Highways	TBD, potential to use National Highways designated funds	No	Not funded	£50k - £100k	Planning	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	Project delayed until the next round of designated funding (2025-2030)	Study will explore actions to reduce traffic and improve air quality, such as traffic and behaviour surveys, footpath relocation, etc
M1	Strategic highway improvements to relieve pressure on through traffic in Marcham (incl. potential bypass)	Traffic Management	Strategic highway improvements	Not yet determined	Not yet determined	Oxfordshire County Council	TBD	No	Not funded	Not yet determined	Planning	Reduced vehicle emissions within Marcham AQMA	Annual average concentration of NO2 within Marcham AQMA	Measure not explored yet	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
H1	Henley Low Emission Neighbourhood (HLEN), incl. promotion of cycling and walking	Transport Planning and Infrastructure	Other	2023	Not yet determined	Oxfordshire County Council	TBD (will explore developer contributions and DfT grant opportunities)	No	Partially funded	£100k - £500k	Planning	Reduced vehicle emissions (private cars)	Annual average concentration of NO2 within Henley AQMA	Work on Local Transport Connectivity Plan (LTCP) Area Travel Plans has not commenced yet. An Area Travel Plan Team is being recruited to produce area travel plans. Park and charge and EV car club schemes available.	HLEN looks to explore an area-based package of measures like promoting walking / improved walking infrastructure, improving cycle network, EV infrastructure, targeted behaviour change and travel planning
AW1	Promotion of cycling	Promoting Travel Alternatives	Promotion of cycling	2023	2025	Oxfordshire County Council	Active Travel England	No	Partially funded	£1 million - £10 million	Planning / implementation	Reduced vehicle emissions	Number of cycling trips per week and percentage of residents cycling by purpose	Schemes in place to encourage active travel in children include Bikeability, Footsteps and the Oxfordshire Cycle Training Scheme. Abingdon Local Cycling and walking Infrastructure Plan approved.	OCC conducting ongoing work to identify and develop active travel schemes including development of a Strategic Active Travel Network.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
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)	No	Partially funded	>£10 M	Implementation	Reduced vehicle emissions	Passenger journeys on local bus services	Bus Service Improvement Plan updated in 2022. The Real Time Passenger Information Screen (RTPI) upgrades in the districts identified in the plan have now been completed.	OCC currently exploring developing further bus services and infrastructure enhancements and feasibility of traffic signal upgrades that will allow buses to run more efficiently and a countywide multi operator bus ticket.
AW3	Review options to reduce freight emissions	Freight and Delivery Management	Other	2023	2024	Oxfordshire County Council	TBD (will investigate future DfT bid opportunities)	No	Not funded	£1 million - £10 million	Implementation	Reduced HGV emissions within AQMAs	Completion of review and plan to implement rec's	Oxfordshire Freight and Logistics Strategy adopted 2022. Countywide area weight restriction study completed 2023. Oxfordshire Freight Steering Group established 2023. Ongoing HGV study in Henley (see H3)	OCC are exploring options to reduce freight emissions but the freight system is extremely complex and much of it is beyond local authority control.
AW4	Public info, linked to AQ monitoring results	Public Information	Via leaflets/posters, radio, television, internet/social media, other	2023	2024	SODC, VOWHDC	TBD (will investigate future Defra AQ Grant bid)	No	Not funded	£10k - £50k	Implementation	Reduced personal exposure	Completion of Comms Strategy, and plan to implement rec's	Oxonair.uk website launched in 2023 with over 27k visits to the website since.	Oxonair.uk provides air quality information such as monitoring data, local policies, local initiatives to reduce pollution levels, and air pollution forecast. A high pollution alert system will be made available in 2024.
AW5	Low Emission & Air Quality Policy and Guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2025	SODC, VOWHDC	TBD (will investigate future Defra AQ Grant bid)	No	Not funded	£10k - £50k	Planning	Reduced vehicle emissions (NO2). Addressing other key sources (PM2.5)	AQ & Emissions Strategy adopted	SOWVH have published AQ planning guidance. OCC has adopted an Air Quality Strategy in 2023, work to implement can be	Adoption of existing AQ Guidance for Developers as statutory planning guidance will be explored in 2024.
AW6	Upgrading council owned vehicle fleet	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2023	2025	SODC, VOWHDC	TBD (will investigate future Defra AQ Grant bid)	No	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 produced in 2023. The policy will be adopted in April 2024.	This strategy outlines the council's vehicle fleet transition away from diesel-powered HGVs towards a more sustainable mix
AW7	Feasibility study on use of green infrastructure	Transport Planning and Infrastructure	Green Infrastructure	2024	2025	SODC, VOWHDC	TBD (will investigate future Defra AQ Grant bid)	No	Not funded	<£10k	Planning	Reduced personal exposure	Completion of feasibility study and plan to implement rec's	Measure not explored yet	Review of green infrastructure as a tool for pollution mitigation, focussed on AQMAs, to commence in 2024.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
H2	Parking review, including implementation of park and ride / stride, and emission based parking incentives	Promoting Low Emission Transport	Other	2023	2025	SODC	TBD (will investigate future Defra AQ Grant bid)	No	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.
H3	Henley HGV Study	Freight and Delivery Management	Other	2023	2025	Oxfordshire County Council	TBD	No	Not funded	£100k - £500k	Planning	Reduced vehicle emissions (HGVs) within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	Ongoing HGV study to fully understand HGV movements and issues and then work with a range of stakeholders to develop the appropriate solution. Initial data collection and scoping completed 2024.	Additional data collection and options appraisal planned for March 2024 – March 2025.
H4	Develop a Low Emission Taxi Strategy (LETS)	Promoting Low Emission Transport	Taxi emission incentives	2024	2025	SODC	TBD (will investigate future Defra AQ Grant bid)	No	Not funded	£10k - £50k	Planning	Reduced vehicle emissions (taxis)	Adoption of Strategy with plan to implement recommendations	New SODC Taxi Licensing Policy adopted in 2021. Further work on Low Emission Taxi Strategy has not commenced yet.	
H5	Low emission schools and colleges	Promoting Travel Alternatives	Other	2023	2027 (ongoing)	Oxfordshire County Council	TBD	No	Not funded	£100k - £500k	Planning	Reduced vehicle emissions (private cars)	Annual average concentration of NO2 within Henley AQMA	Measure not explored yet	Measure building on ongoing work with schools and colleges across the county. Includes a review of options for promoting active travel to school, including School Streets, wayfinding, park and stride.
H6	Anti-idling enforcement	Traffic Management	Anti-idling awareness and enforcement	2024	2025	SODC	TBD (will investigate future Defra AQ Grant bid)	No	Not funded	£50k - £100k	Planning	Reduced vehicle emissions within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	Measure not explored yet	SODC will explore increased anti-idling enforcement from traffic wardens, following recent anti-idling campaign Turn it Off.
H7	Strategic highway improvements to relieve pressure on traffic in Henley	Traffic Management	Strategic highway improvements	Not yet determined	Not yet determined	Oxfordshire County Council	TBD	No	Not funded	Not yet determined	Planning	Reduced vehicle emissions within Henley AQMA	Annual average concentration of NO2 within Henley AQMA	Work on Local Transport Connectivity Plan (LTCP) Area Travel Plans has not commenced yet. An Area Travel Plan Team is being recruited to produce area travel plans.	Until the Henley Area Travel Plan is produced, OCC cannot commit to highway schemes in the Henley area. There are also limited options to redirect traffic in Henley.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
B2	Feasibility study to reduce traffic emissions within Botley	Transport Planning and Infrastructure	Other	2023	2025	Oxfordshire County Council	TBD, potential to use National Highways designated funds	No	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 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[6], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

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 µg/m^3, measured particulate matter (PM_{10}) levels at the same location remain below 25 µg/m^3, which is well below the national objective level of 40 µg/m^3.

Although there are both primary and secondary traffic related PM_{10} sources, the majority of the PM_{10} and $PM_{2.5}$ 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 mappings of PM are believed to be accurate putting $PM_{2.5}$ levels below 10.74 µg/m^3 in South Oxfordshire and Vale of White Horse in 2022 (please see Figure 3 below for an illustration of Defra's $PM_{2.5}$ modelled levels in the districts), which is just half that of the national objective level.

Although no particulate matter monitoring has been carried out in the districts in 2023, the councils have commissioned particulate matter surveys in recent years, which used sensors and provide an indication of levels in the area and confirmed the information provided in the Defra background maps. The results of these surveys are shown in Table 3 below, with further information on the surveys (including data capture, length of the survey, type of sensor etc) being available in previous years ASRs and on the AQE Website at:

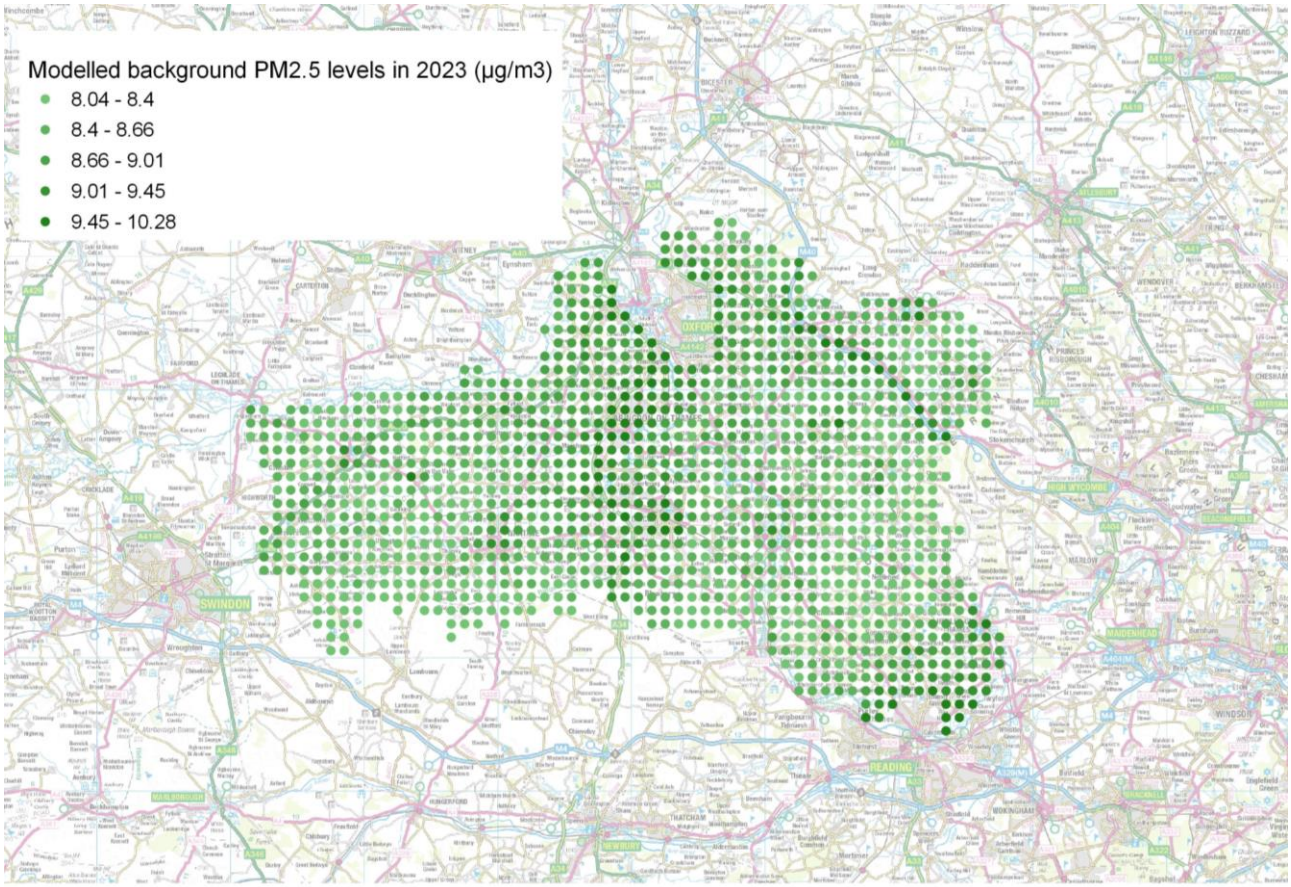
- https://www.airqualityengland.co.uk/site/exceedence?site_id=VS006
- https://www.airqualityengland.co.uk/site/exceedence?site_id=VWH001

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

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

Pollutant	Annual Average (µg/m3)	
	Henley Survey 2021	Marcham Survey 2022
$PM_{2.5}$	5	7
PM_{10}	18	12

Figure 3 Modelled background $PM_{2.5}$ levels in the districts in 2023



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 $PM_{2.5}$ is 5.8% South Oxfordshire and Vale of White Horse. Oxfordshire level data on the number of deaths attributable to $PM_{2.5}$ 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 $PM_{2.5}$ (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	South East Region	England
D01 - Fraction of mortality attributable to particulate air pollution (new method)	5.8	6	5.7	5.8

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_2 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 PM2.5 levels in the district.

Table 5 List of measures in 2023 AQAP that target $PM_{2.5}$ 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	✓
H2	Parking review, including implementation of park and ride / stride, and emission-based parking incentives	
H3	Henley HGV Study	✓
H4	Develop a Low Emission Taxi Strategy	✓
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)	✓
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 Ladygrove SCA, in Didcot. In 2023, the council did not issue any warning letters issued 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 2023 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 2019 and 2023 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 2023. Table A.1 in Appendix A shows the details of the automatic monitoring sites. The oxonair.uk website 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_2 at 129 sites during 2023. 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_2)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2023 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Table A.5 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

No exceedances of either the annual mean or 1-hour objective were recorded in South Oxfordshire in 2023, with levels remaining well below the objectives as in 2022.

All four continuous analysers, as well as over 80% of the diffusion tubes, recorded lower or equal NO2 levels in 2023 than they did in 2022. The 2023 dataset therefore supports the general downward trend in pollution concentrations identified in previous years.

Nitrogen dioxide levels in Vale of White Horse

In **Abingdon**, compliance with the objectives has now been achieved for 6 consecutive years (2017-2023), with 5 out of the 8 monitoring sites within the AQMA recording lower NO_2 levels in 2023 than they did in 2022, as shown in Figures A.1 and A.2 in Appendix A. In 2023, the highest NO2 concentration recorded in Abingdon was 30.15 µg/m^3 (VS13).

The councils' 2023 AQAP outlined the intention to revoke Abingdon AQMA in 2024, in line with the LAQM TG22, and the 2023 monitoring data further supports this.

In **Botley**, 2023 monitoring data also support a downward trend in NO2 levels, with all but one of the monitoring sites registering lower levels in 2023 than they did in 2022.

Two of these monitoring sites, VS17 and VS20, recorded NO2 values above 40 µg/m^3 as shown in Figure A.4. These monitoring sites are located on a path adjacent to the A34 but are a significant distance away from the nearest receptor (see Table C.4 in Appendix C and Figure D.11).

Monitoring sites VS22 and VS19 are located on the façade of the nearest houses to VS17 and VS20, respectively, therefore registering concentrations the receptors are exposed to more accurately. Levels registered at these sites in 2023 were 21.70 µg/m^3 (VS22) and 21.09 µg/m^3 (VS19).

With the annual average objective for NO2 not applying at VS17 and VS20, due to the lack of receptors at the locations, compliance has been achieved in Botley AQMA in 2023[7]. In 2023, the highest recorded concentration receptors are exposed to in the area was 29.83 µg/m^3 (VS32).

All monitoring data gathered in **Marcham** in 2023 showed a decrease in pollution levels with respect to 2022, supporting the downward trend identified in previous years. Compliance has therefore been achieved in Marcham AQMA for four years now, as shown in Figure A.3 in Appendix 1, with levels now being well below the objective as the highest recorded NO2 concentration in 2023 was 29.83 µg/m^3 (SS30).

Nitrogen dioxide levels in South Oxfordshire

Only one of 15 monitoring sites in **Henley** recorded higher values in 2023 than it did in 2022, supporting the downward trend observed in recent years. Compliance has now been achieved in Henley AQMA for four years, as shown in Figure A.9 in Appendix A, with the highest recorded NO2 concentration in 2023 being 30.96 µg/m3 (SS59).

In **Wallingford**, compliance with the objectives has now been achieved for 6 consecutive years (2018-2023), with 10 of the 14 monitoring sites recorded lower NO2 levels in 2023

[7] Further information on monitoring in the area, as well as the recent discussions with the LAQM Helpdesk (regarding the objectives apply and whether they were being exceeded in this case) can be found in the correspondence also uploaded to the RSW.

than they did in 2022, as shown in Figure A.6 in Appendix A. The highest recorded NO2 levels recorded in Abingdon in 2023 were 26.65 µg/m3 (SS41).

The councils' 2023 AQAP outlined the intention to revoke Wallingford AQMA in 2024, in line with the LAQM TG22, and the 2023 monitoring data further supports this.

In **Watlington**, 2023 monitoring data also supports a downward trend, with 8 of the 9 monitoring sites recording lowers levels of NO2 in 2023 than they did in 2022, as shown in Figure A.8 in Appendix A, compliance has been achieved in Watlington AQMA for four years with levels now being well below the objective as the highest registered NO2 concentration in 2023 has been 27.72 µg/m3 (SS30).

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?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
Abingdon CA	Masons 39 Stert St Abingdon	Roadside	449790	197180	NOx/NO2	YES, Abingdon AQMA	Chemiluminescent	0	3.6	3
Wallingford CA	Wallingford 83 High St	Roadside	460799	189500	NOx/NO2	YES, Wallingford AQMA	Chemiluminescent	0	1.2	1.5
Henley CA	Henley 45 Duke St	Roadside	476116	182531	NOx/NO2	YES, Henley AQMA	Chemiluminescent	0	3.5	1.5
Watlington CA	Watlington Town hall	Kerbside	468973	194487	NOx/NO2	YES, Watlington AQMA	Chemiluminescent	0	0.2	1.5

Notes:

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

(2) N/A if not applicable

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
	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	Wallingford AQMA	0.0	1.0	No	2.0
SS38	SS38 - Wallingford- 33 Castle Street	Kerbside	460736	189567	NO2	Wallingford AQMA	1.0	1.0	No	2.0
SS39, SS40, SS41	SS41 - Wallingford, George Hotel, High Street	Roadside	460799	189500	NO2	Wallingford AQMA	0.0	2.0	Yes	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
SS42	SS42 - Wallingford- 102 High Street	Roadside	460938	189496	NO2	Wallingford AQMA	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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
	Newnham Manor Farm, A4070									
SS51	SS51 - Henley-82 Norhfield 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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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	Abingdon AQMA	1.0	2.0	No	2.5
VS2	VS2: Abingdon-Bath Street	Kerbside	449585	197273	NO2	Abingdon AQMA	1.0	1.0	No	2.5
VS3	VS3: Abingdon-Copenhagen Drive	Kerbside	448364	197836	NO2	No	42.0	0.0	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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	Abingdon AQMA	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	Abingdon AQMA	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	Abingdon AQMA	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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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: Botley- Manor Rd S. Hinksey	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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
VS29	VS29: Botley-Rockley Cottages A420	Kerbside	446273	202333	NO2	No	5.0	3.5	No	2.0
VS30	VS30: Botley- St Swithuns Church Pole35	Kerbside	452253	202255	NO2	No	7.0	1.0	No	2.5
VS31	VS31: Botley- 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	448913	205813	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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
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_2 Monitoring Results: Automatic Monitoring (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Abingdon CA	449790	197180	Roadside	99.79	99.79	22	16	17	18	18
Henley CA	476116	182531	Roadside	97.31	97.31	28	19	18	18	17
Wallingford CA	189500	189500	Roadside	96.45	95.45	35	29	33	32	29
Watlington CA	468973	194487	Kerbside	96.95	96.95	32	22	24	23	21

☒ **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 NO_2 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 2023**

Notes:

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

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

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_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
SS1	459532	205740	Kerbside	100	100.0	21.3	15.2	14.3	15.1	13.1
SS2	460228	205720	Kerbside	100	100.0	23.2	14.0	13.5	13.9	13.9
SS3	460504	205642	Kerbside	100	100.0	18.8	14.0	14.3	15.4	12.9
SS4	470605	206554	Roadside	100	100.0	28.3	22.9	22.7	25.7	23.5
SS5	471010	205598	Kerbside	100	92.3	22.6	15.9	16.0	16.3	15.8
SS6	471103	205107	Roadside	100	100.0	14.3	9.4	9.0	9.2	8.8
SS7	471155	205016	Kerbside	100	100.0	14.1	9.5	9.3	9.5	8.8
SS8	471078	204851	Kerbside	100	84.6	13.5	9.6	8.8	9.3	8.3
SS9	470964	204914	Kerbside	100	100.0	12.9	10.2	8.6	8.5	8.5
SS10	471212	205340	Kerbside	100	100.0	17.0	12.0	12.0	12.3	10.7
SS11	471918	204934	Kerbside	100	92.3	18.4	14.7	14.9	14.3	13.6
SS12	471695	205806	Roadside	100	82.7	19.4	14.4	13.4	12.9	12.2
SS13	471283	205977	Roadside	100	84.6	12.7	9.6	9.2	9.4	9.2

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
SS14	474930	201039	Kerbside	100	90.4	16.0	13.0	10.4	9.7	9.7
SS15	475250	201230	Roadside	100	100.0	24.6	17.1	21.2	20.2	15.9
SS16	475703	201120	Kerbside	100	90.4	19.7	13.3	13.0	12.6	11.6
SS17	475720	200930	Kerbside	100	92.3	20.2	16.0	14.7	14.7	13.4
SS18	475415	200942	Roadside	100	82.7	24.4	15.0	17.6	16.7	15.9
SS19	475001	200196	Kerbside	100	90.4	22.3	16.5	17.5	17.5	18.1
SS20	470207	200190	Roadside	100	100.0	30.3	19.9	15.2	16.3	12.8
SS21	463527	177174	Kerbside	100	82.7	0.0	0.0	15.2	16.4	15.1
SS22	463555	177099	Kerbside	100	90.4	0.0	0.0	19.3	21.9	18.3
SS23	461901	200989	Kerbside	100	84.6	22.4	17.8	18.4	19.0	17.1
SS24	460279	198618	Kerbside	100	100.0	19.6	13.3	12.9	13.4	12.9
SS25	460163	198398	Kerbside	100	100.0	19.4	16.0	16.5	16.3	15.9
SS26	468562	194779	Urban Background	100	92.3	10.7	5.6	6.9	7.5	6.6
SS27	468756	194360	Kerbside	100	100.0	25.5	18.1	18.7	17.9	16.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
SS28	468856	194293	Roadside	100	82.7	23.0	16.7	17.0	16.4	15.9
SS29	468852	194343	Roadside	100	100.0	22.6	17.0	16.7	16.4	16.6
SS30	468951	194457	Kerbside	100	100.0	40.0	28.1	28.5	27.9	27.7
SS31	468962	194458	Kerbside	100	100.0	35.8	25.7	25.6	26.4	23.6
SS32	469061	194590	Kerbside	100	67.3	29.1	19.6	23.2	20.5	17.5
SS33	469017.458	194513.661	Kerbside	100	90.4	36.0	27.6	27.5	25.3	24.8
SS34	461724	191785	Kerbside	100	100.0	24.9	17.2	18.0	18.6	16.2
SS35	461298	189367	Kerbside	100	92.3	17.4	12.8	13.6	14.3	12.8
SS36	460389	189498	Roadside	100	100.0	27.4	20.6	20.5	20.1	18.6
SS37	460640	189483	Kerbside	100	90.4	29.7	21.0	21.5	21.7	20.8
SS38	460736	189567	Kerbside	100	82.7	26.2	18.3	22.5	22.4	20.4
SS39, SS40, SS41	460799	189500	Roadside	100	92.3	35.9	28.4	29.2	28.5	26.6
SS42	460938	189496	Roadside	100	100.0	31.0	22.0	23.9	23.8	21.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
SS43	460713	189279	Roadside	100	100.0	24.9	19.2	21.0	21.0	19.7
SS44	460679	189281	Roadside	100	90.4	22.9	16.9	17.1	16.5	17.1
SS45	460152	189130	Kerbside	100	100.0	16.6	13.5	12.7	11.4	11.8
SS46	460282	188807	Urban Background	100	92.3	14.0	9.2	9.2	9.9	7.8
SS47	460470	188224	Urban Background	100	100.0	17.1	13.9	13.2	13.3	13.4
SS48	460110	187862	Roadside	100	100.0	14.8	11.3	11.0	11.6	10.4
SS49	459805	187574	Roadside	100	92.3	20.6	14.0	14.1	11.9	12.3
SS50	461916	188424	Roadside	100	67.3	29.5	25.2	22.8	21.7	22.4
SS51	475869	183217	Roadside	100	92.3	24.4	17.5	18.2	17.8	15.7
SS52	475878	182760	Kerbside	100	100.0	23.7	16.4	15.4	16.6	13.8
SS53	476103	182506	Kerbside	100	100.0	32.1	25.1	24.1	23.8	22.6
SS54	476174	182396	Roadside	100	100.0	29.8	20.3	20.8	20.0	18.8
SS55	476286	182290	Roadside	100	100.0	27.8	17.4	17.4	19.3	15.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
SS56, SS57, SS58	476115	182532	Roadside	100	100.0	28.2	20.0	19.3	19.7	17.8
SS59	476071	182612	Kerbside	100	84.6	**49.0**	38.7	34.0	30.5	31.0
SS60	475997	182614	Roadside	100	100.0	22.1	15.6	16.3	18.3	14.6
SS61	476080	182951	Kerbside	100	75.0	30.3	21.1	20.6	21.5	21.0
SS62	476209	182831	Kerbside	100	100.0	25.1	17.4	17.3	18.7	16.0
SS63	476308	182760	Roadside	100	100.0	36.6	26.6	26.8	25.4	23.9
SS64	476288	182078	Roadside	100	90.4	23.5	23.2	21.8	21.8	20.7
SS65	476223	182652	Roadside	100	82.7	32.9	17.5	15.6	15.6	15.6
SS66	476547	181735	Roadside	100	100.0	25.9	19.3	18.6	18.0	16.7
SS67	475104	181557	Urban Background	100	75.0	12.1	8.4	9.3	7.5	6.6
SS68	453499	190384	Urban Background	100	92.3	16.2	10.6	10.9	11.6	11.0
SS69	453357	190030	Kerbside	100	92.3	24.6	18.7	19.4	20.8	19.0
SS70	453099	190031	Roadside	100	92.3	30.7	22.5	22.2	23.5	22.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
SS71	453023	189999	Roadside	100	73.1	26.7	20.1	18.9	22.6	26.8
SS72	452865	189979	Roadside	100	92.3	24.1	18.9	18.7	20.6	19.8
SS73	452753	189729	Kerbside	100	84.6	15.1	11.4	10.8	11.5	10.7
SS74	452358	190521	Kerbside	100	92.3	23.1	17.2	17.0	17.1	17.2
SS75	452084	190694	Roadside	100	92.3	27.2	19.5	19.7	20.4	19.9
SS76	451780	189920	Kerbside	100	92.3	23.9	18.8	16.9	19.9	19.6
SS77	451643	189369	Kerbside	100	76.9	19.4	12.9	13.5	14.5	12.5
SS78	450870	190495	Kerbside	100	75.0	19.6	15.0	15.7	14.2	15.9
SS79	451424	190943	Roadside	100	92.3	16.7	12.6	12.3	12.3	11.9
SS80	454637	195614	Roadside	100	82.7	21.1	14.9	14.5	14.8	15.1
SS81	454710	195562	Roadside	100	90.4	22.2	15.8	17.0	16.8	15.9
SS82	454760	195794	Roadside	100	100.0	19.9	13.7	14.1	13.5	12.6
SS83	457228	204708	Roadside	100	92.3		14.8	10.8	11.3	11.5
VS1	449452	197047	Roadside	100	92.3	29.9	17.9	21.2	21.3	20.2

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
VS2	449585	197273	Kerbside	100	92.3	25.4	15.1	17.6	17.5	18.5
VS3	448364	197836	Kerbside	100	92.3	29.1	18.9	21.3	20.9	20.9
VS4	448442	196953	Roadside	100	92.3	35.8	23.0	25.3	26.6	25.6
VS5	449695	197049	Roadside	100	92.3	36.5	21.8	23.2	25.6	23.9
VS6	448791	196725	Roadside	100	84.6	30.8	18.7	22.5	22.9	23.5
VS7	448738	196967	Roadside	100	92.3	38.9	25.6	30.1	31.1	29.4
VS8, VS9, VS10	449794	197176	Roadside	100	92.3	25.0	15.4	17.6	18.4	17.4
VS11	448828	196966	Roadside	100	75.0	32.6	20.8	22.5	24.8	20.5
VS12	449225	196992	Roadside	100	69.2	29.4	16.0	20.3	20.6	21.2
VS13	449452	197047	Roadside	100	84.6	**41.3**	27.6	27.2	28.1	30.2
VS14	448869	196180	Urban Background	100	92.3	14.4	8.4	9.2	10.2	8.2
VS15	449518	197160	Roadside	100	84.6	20.7	13.1	13.3	14.0	13.1
VS16	449008	205729	Roadside	100	25.0					36.2

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
VS17	449003	205724	Roadside	100	82.7	**80.0**	**50.9**	**55.1**	**53.7**	**49.5**
VS18	448894	205826	Roadside	100	92.3	35.2	22.3	24.7	25.5	22.2
VS19	448917	205804	Roadside	100	92.3	33.3	22.2	22.6	24.4	21.1
VS20	448914	205798	Roadside	100	92.3	**73.7**	**44.7**	**48.3**	**50.5**	**45.6**
VS21	448946	205780	Roadside	100	84.6	32.2	20.4	22.2	24.2	19.9
VS22	448991	205745	Roadside	100	82.7	31.4	20.0	21.7	21.9	21.7
VS23	448403	205709	Urban Background	100	82.7	13.4	8.0	10.0	9.0	8.1
VS24	449558	199016	Kerbside	100	84.6		14.9	18.3	18.9	16.7
VS25	450222	199464	Roadside	100	92.3		17.2	19.1	22.0	19.1
VS26	450764	204105	Kerbside	100	84.6		15.6	18.2	20.2	18.3
VS27	449404	205422	Roadside	100	84.6		16.2	15.4	15.6	14.5
VS28	448610	206289	Roadside	100	82.7		12.8	18.6	16.2	17.7
VS29	446273	202333	Kerbside	100	92.3		17.7	19.9	20.2	18.4
VS30	452253	202255	Kerbside	100	84.6	10.2	11.1	13.3	14.2	13.7

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
VS31	452290	201912	Urban Background	100	82.7	20.0	12.0	13.2	13.7	12.9
VS32	448913	205813	Kerbside	100	73.1	**44.3**	27.8	29.4	32.2	29.8
VS33	448913	205813	Kerbside	100	92.3	30.9	19.8	22.4	24.1	23.0
VS34	428823	195554	Kerbside	100	92.3	11.2	6.8	7.7	7.5	7.1
VS35	450886	194359	Kerbside	100	75.0	20.7	13.9	14.1	14.1	15.0
VS36	442239	198622	Roadside	100	84.6	18.9	13.6	15.1	13.9	12.8
VS37	443526	199184	Kerbside	100	84.6	18.6	11.6	12.0	13.6	14.0
VS38	445552	196639	Kerbside	100	67.3	**41.4**	24.3	31.3	30.4	29.8
VS39	445571	196675	Roadside	100	84.6	33.3	20.8	25.6	26.5	24.1
VS40	445522	196470	Urban Background	100	75.0	10.6	6.7	7.9	7.9	6.1
VS41	445456	196623	Roadside	100	84.6	35.6	22.5	26.5	26.8	25.3
VS42	445528	196628	Kerbside	100	84.6	26.3	16.6	20.2	19.8	17.8
VS43	445875	196657	Kerbside	100	84.6	28.9	18.2	21.2	20.8	19.9
VS44	448150	198190	Urban Background	100	84.6			8.4	8.8	8.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
VS45	448092	198055	Roadside	100	76.9			12.9	13.4	10.9
VS46	448349	198086	Roadside	100	92.3			17.5	17.5	16.2
VS47	450886	194359	Kerbside	100	92.3	25.6	14.8	14.5	17.3	15.8
VS48	450588	194391	Kerbside	100	92.3	24.5	14.4	16.2	17.3	14.7
VS49	440068	189087	Roadside	100	69.2	15.1	16.2	20.6	21.4	19.2
VS50	440409	188319	Urban Background	100	76.9	10.5	6.5	9.3	7.2	6.4
VS51	439807	187941	Kerbside	100	76.9	25.6	15.1	15.2	17.5	17.2
VS52	424275	190640	Kerbside	100	92.3	23.9	14.5	16.2	16.4	15.7

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

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

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

Notes:

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

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

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

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

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

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

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

Figure A.1 Trends in Annual Mean NO_2 Concentrations in central Abingdon

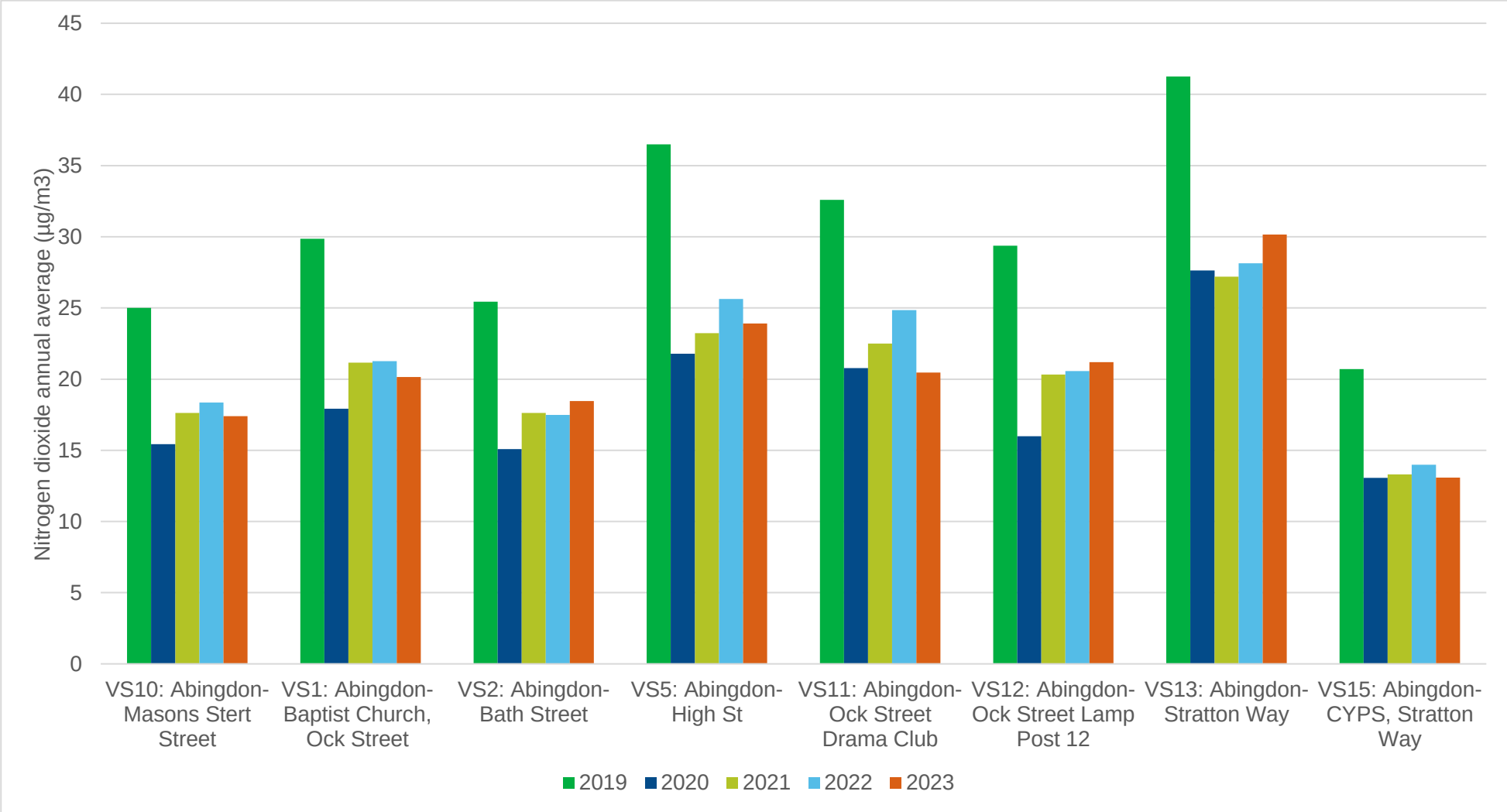


Figure A 2 Trends in Annual Mean NO_2 Concentrations in outer Abingdon

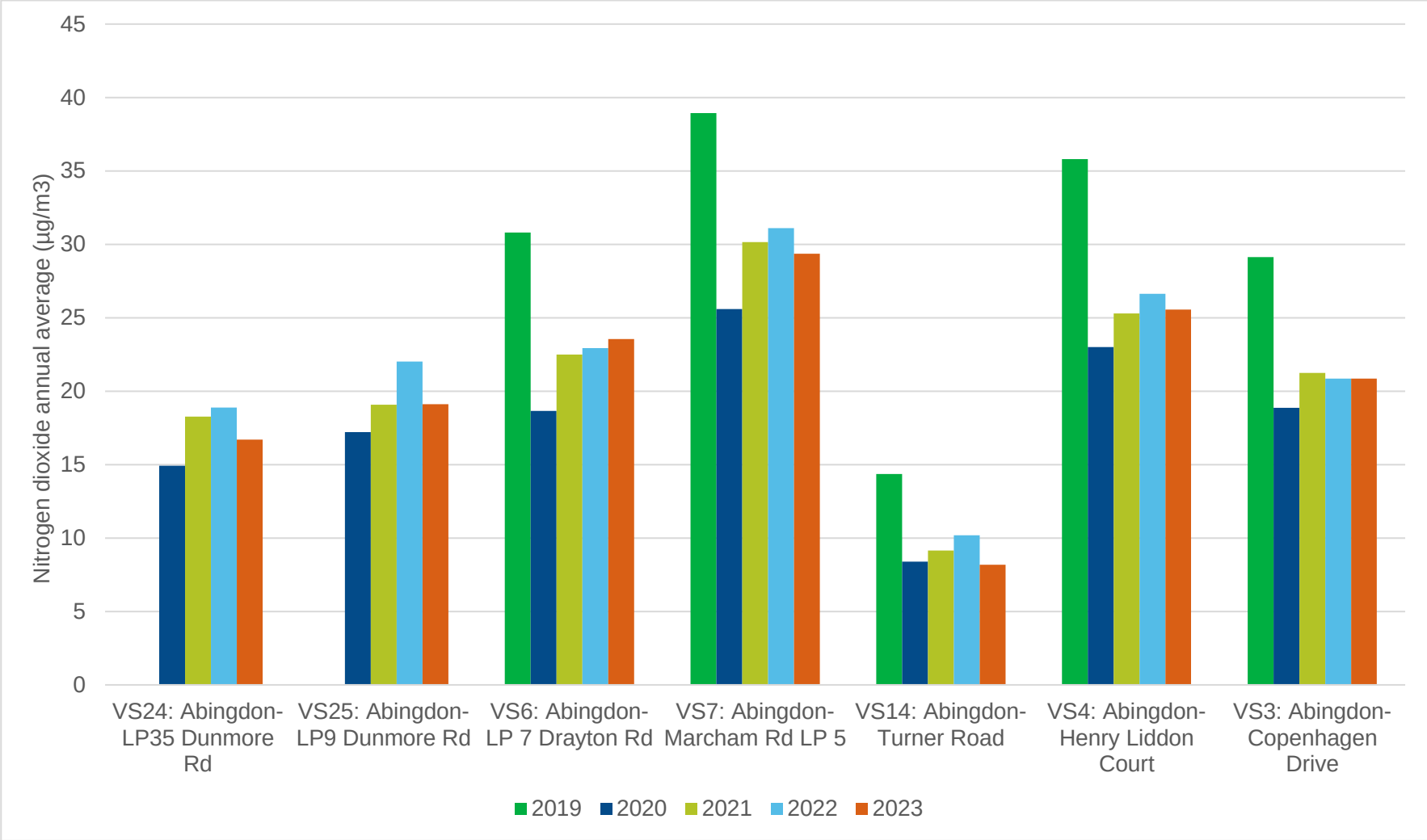


Figure A 3 Trends in Annual Mean NO_2 Concentrations in Botley

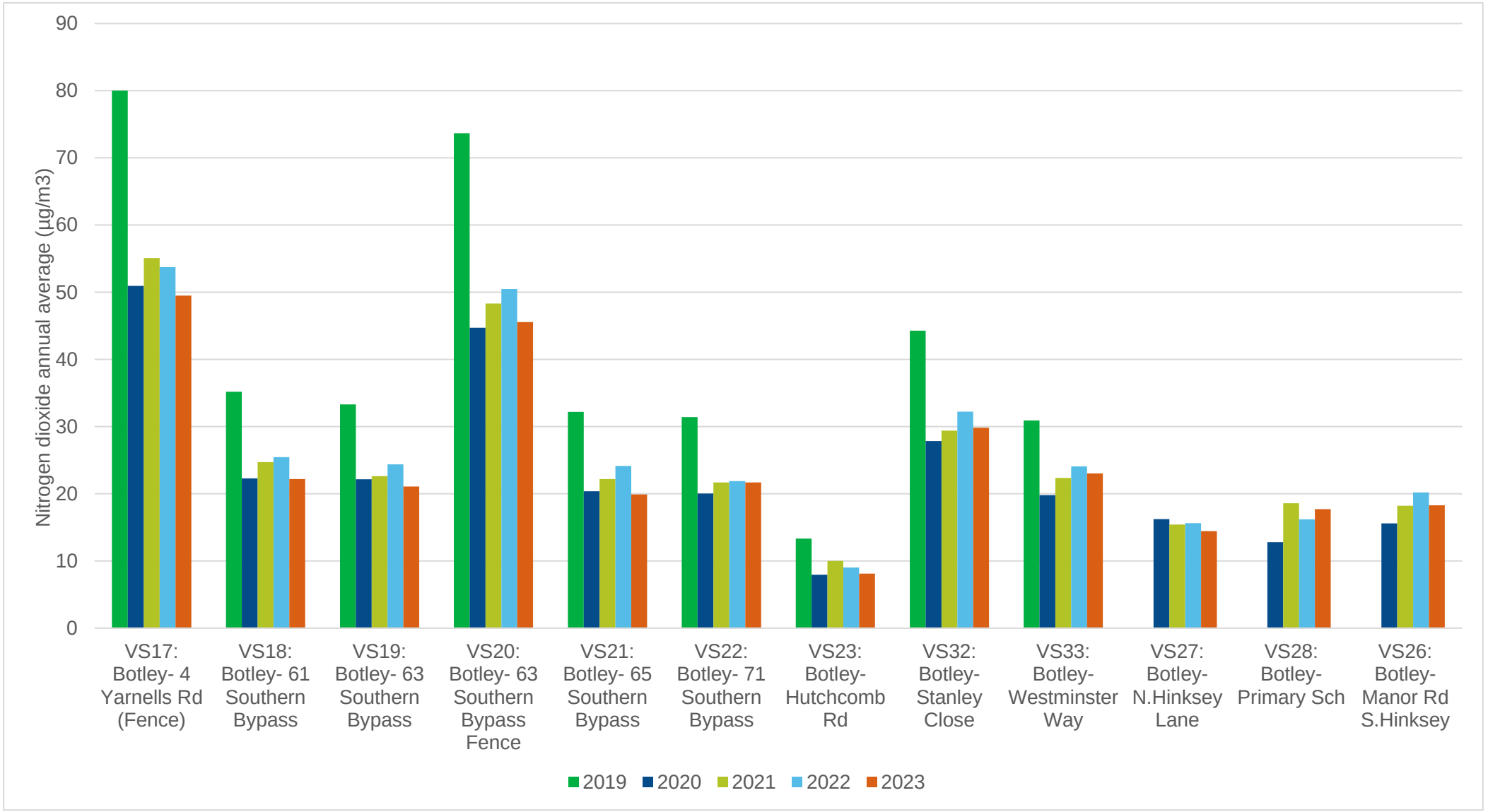


Figure A 4 Trends in Annual Mean NO_2 Concentrations in Marcham

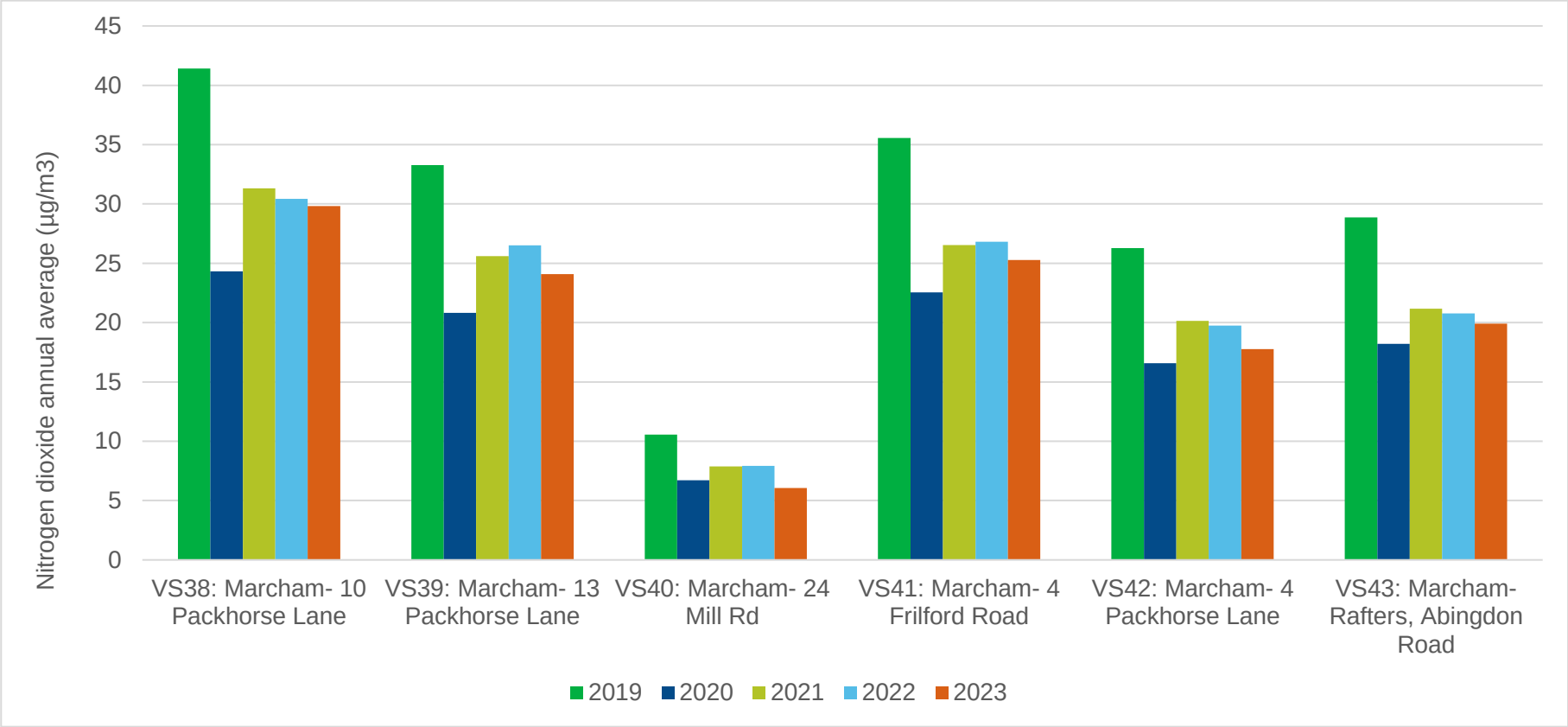


Figure A 5 Trends in Annual Mean NO_2 Concentrations in Henley

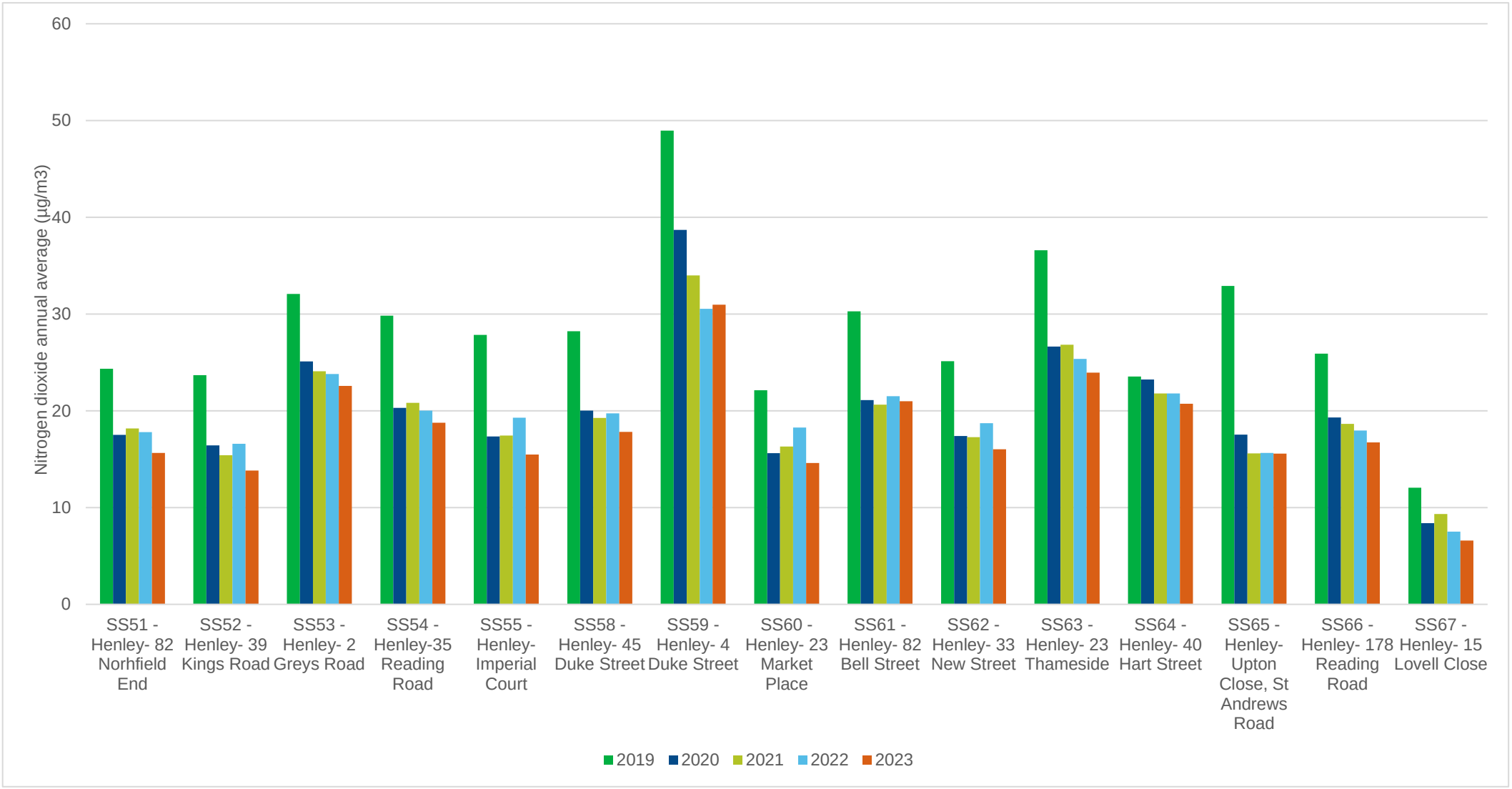


Figure A 6 Trends in Annual Mean NO_2 Concentrations in central Wallingford

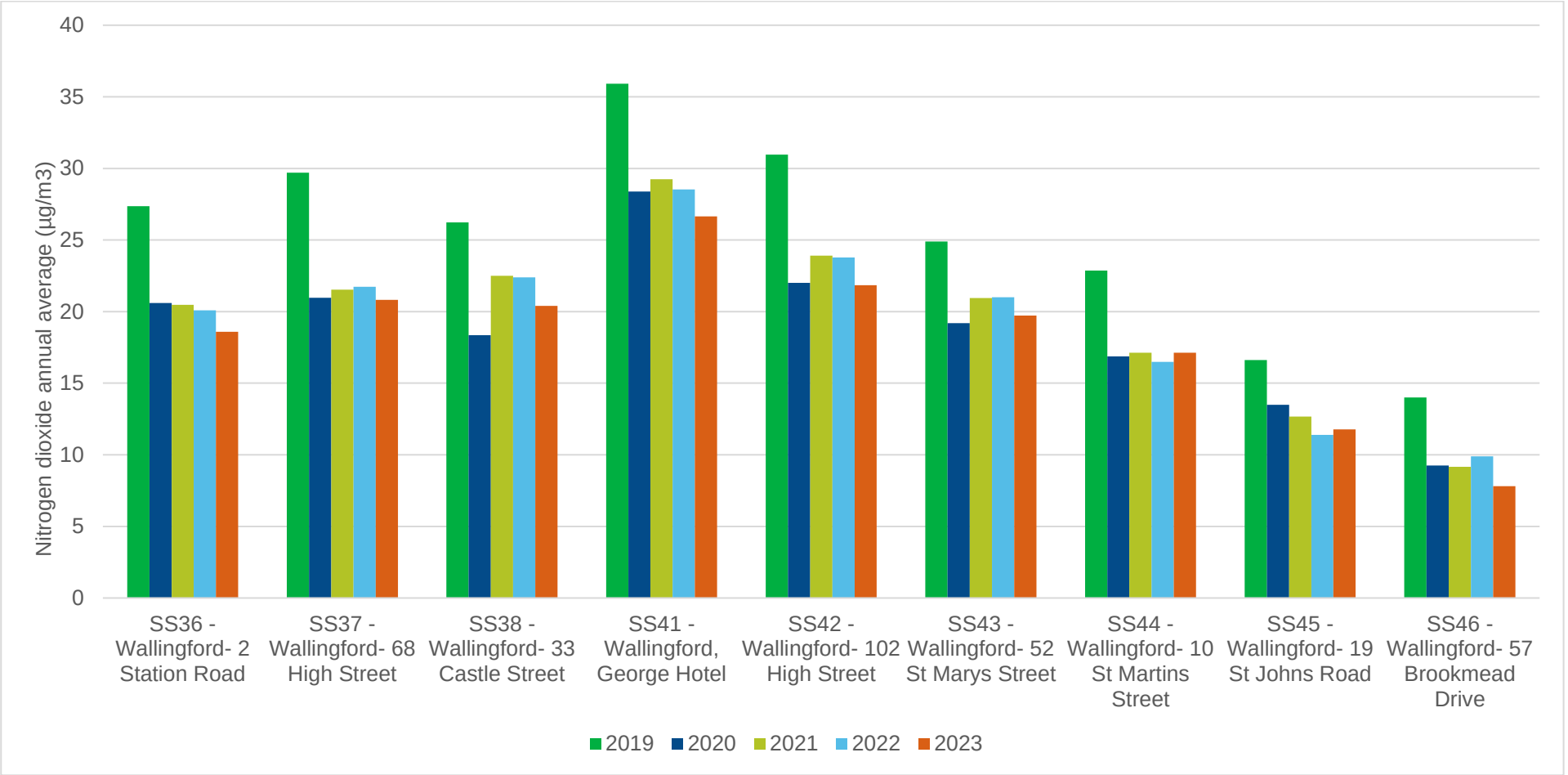


Figure A 7 Trends in Annual Mean NO_2 Concentrations in outer Wallingford and Benson

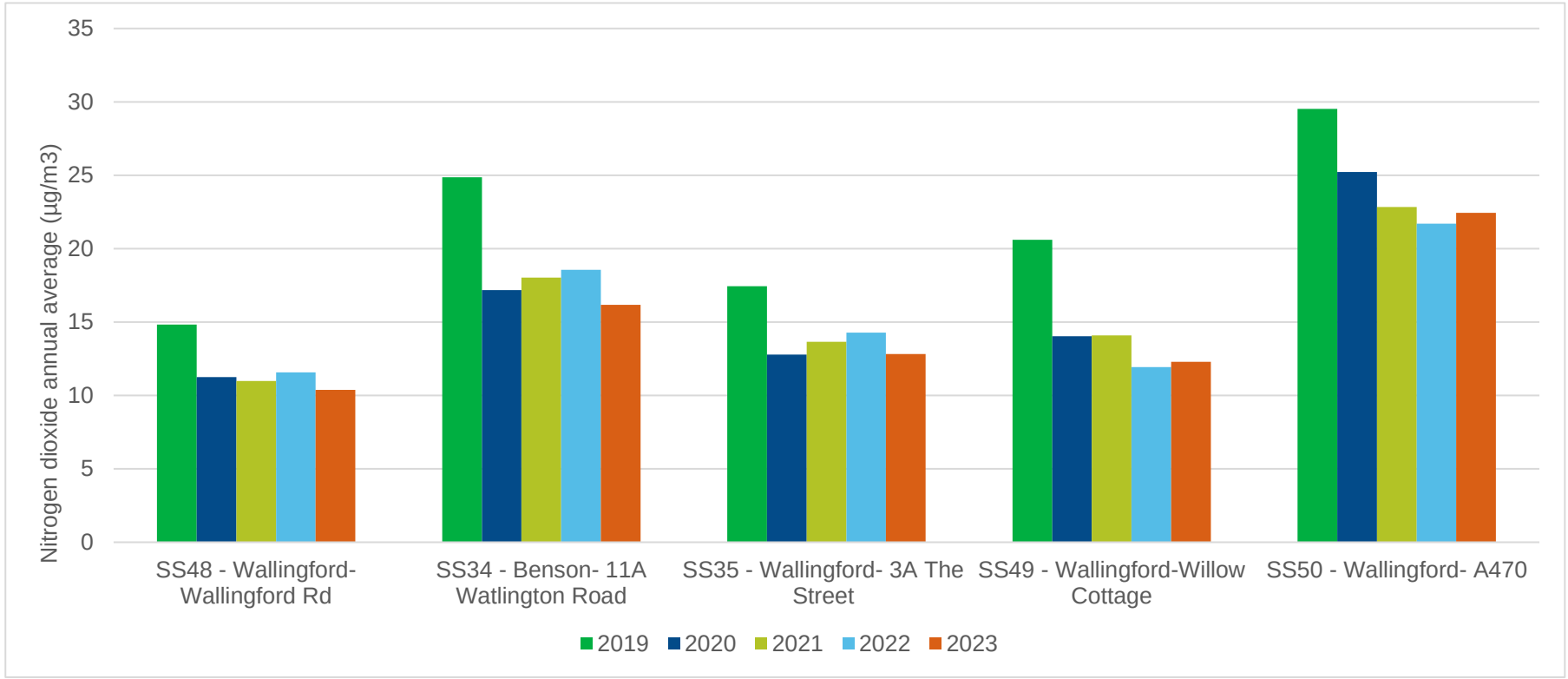


Figure A 8 Trends in Annual Mean NO_2 Concentrations in Watlington

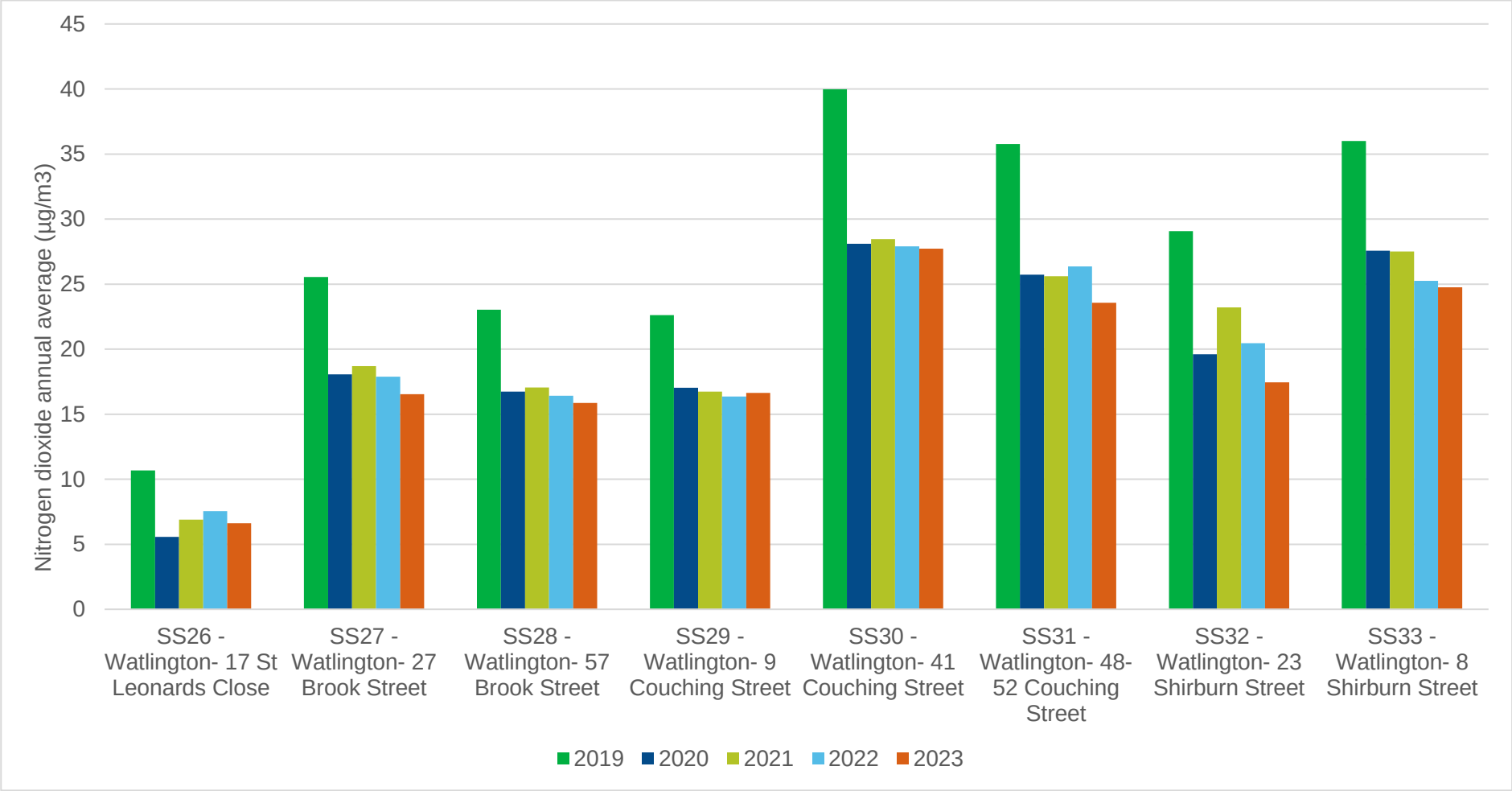


Figure A 9 Trends in Annual Mean NO_2 Concentrations in Wheatley, Horspath and Clifton Hampden

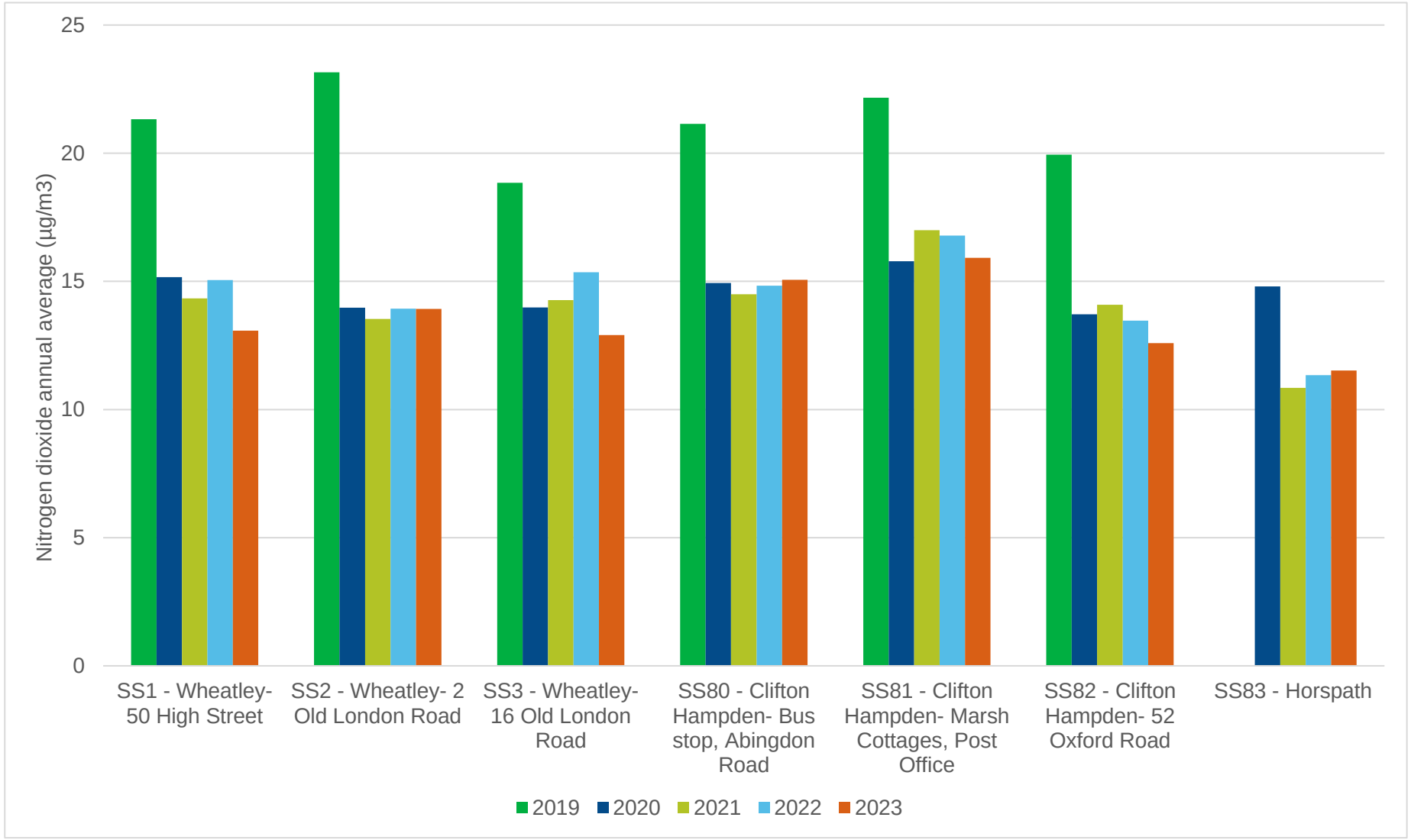


Figure A 10 Trends in Annual Mean NO_2 Concentrations in Thame

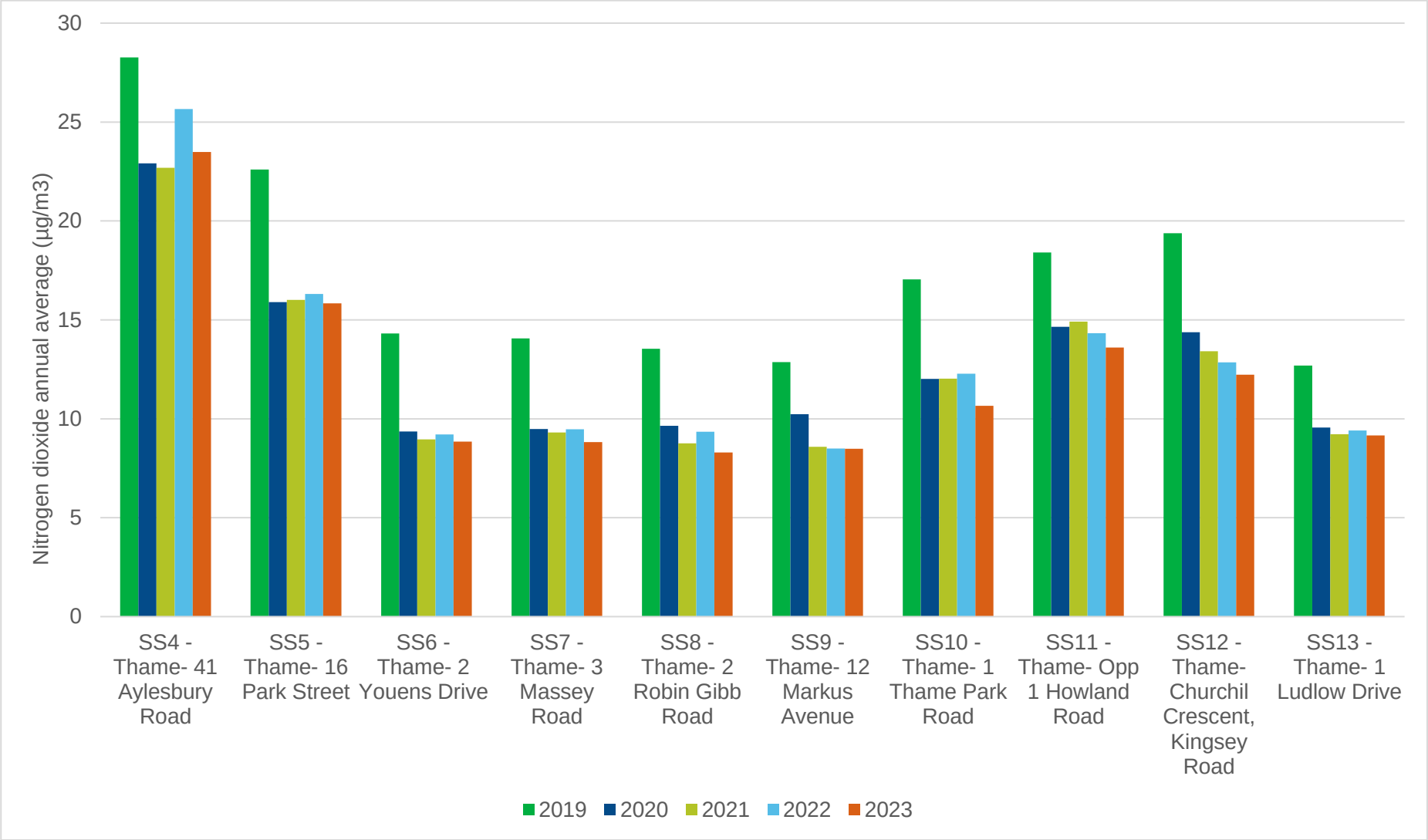


Figure A 11 Trends in Annual Mean NO_2 Concentrations in Chinnor

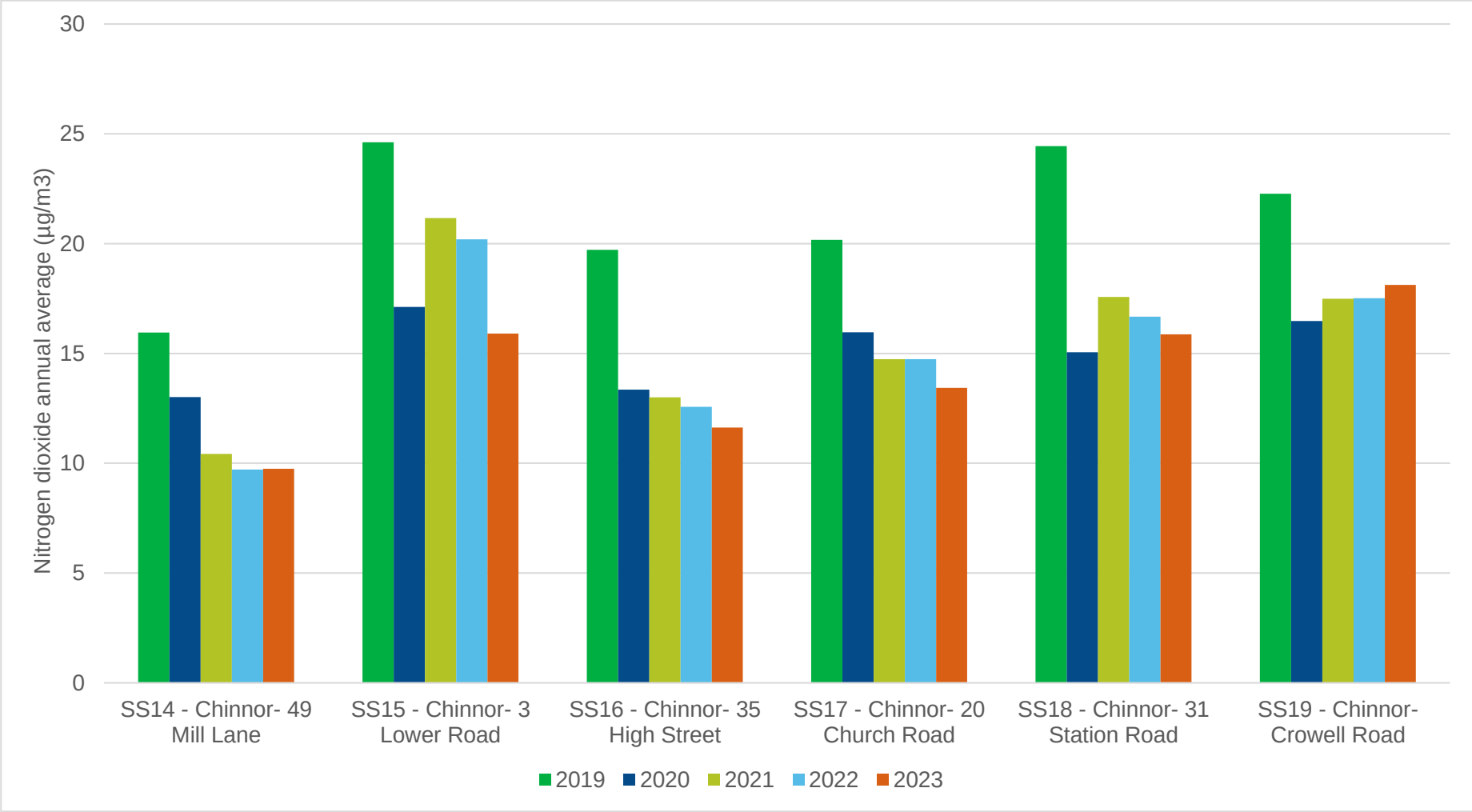


Figure A 12 Trends in Annual Mean NO_2 Concentrations in Whitchurch, Adwell, Little Milton and Stadhampton

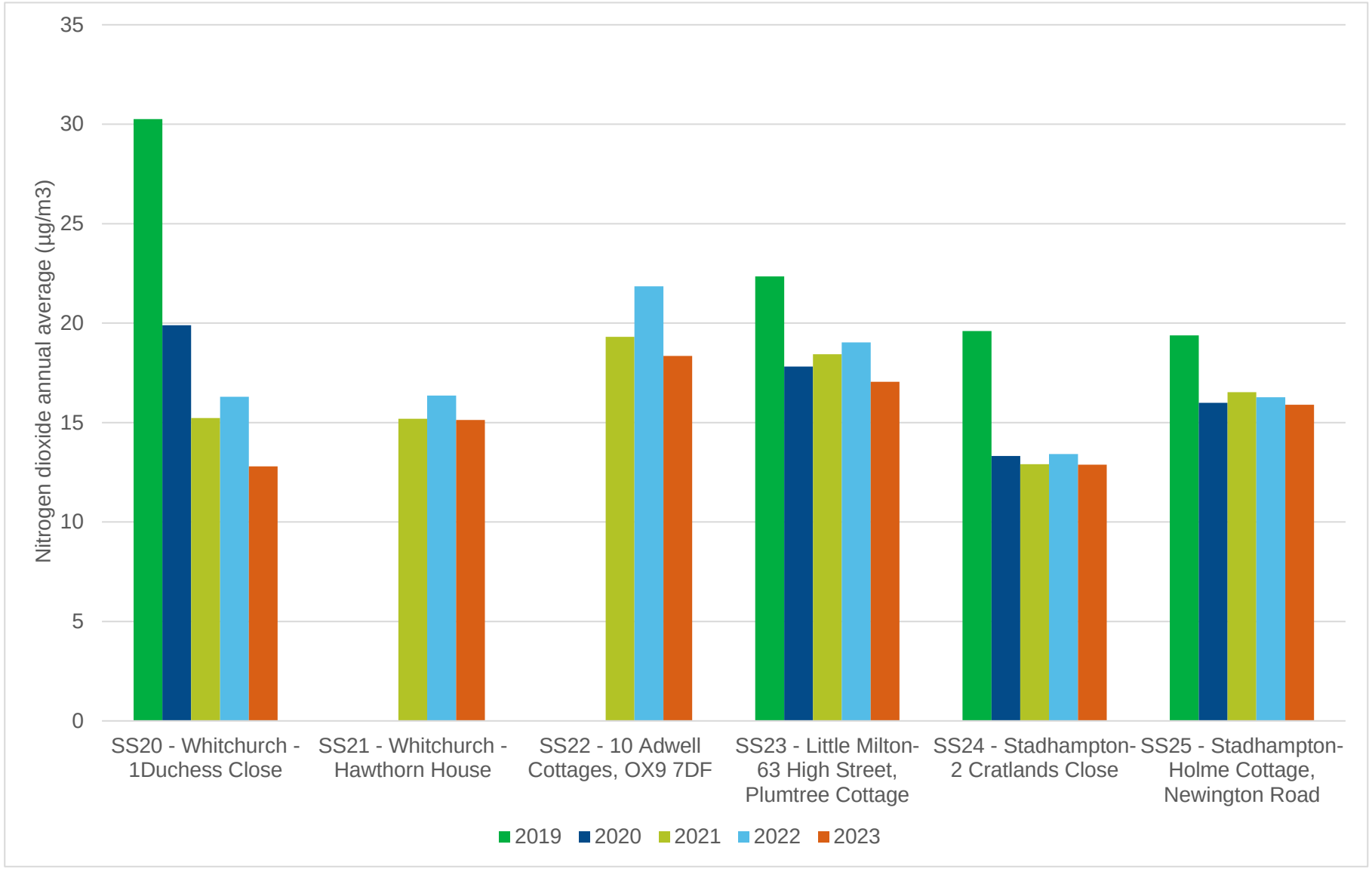


Figure A 13 Trends in Annual Mean NO_2 Concentrations in Didcot

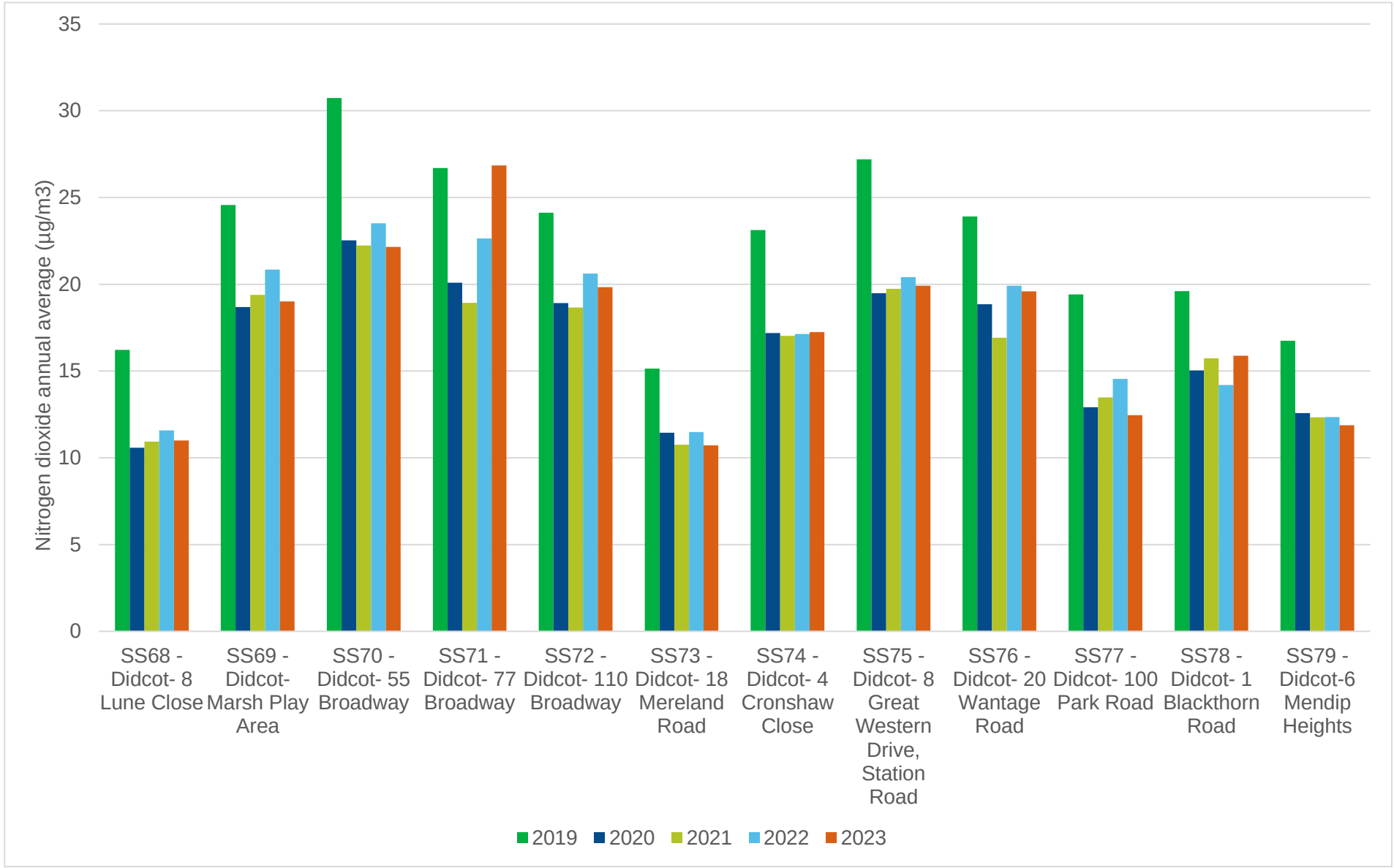


Figure A 14 Trends in Annual Mean NO_2 Concentrations in Shippon, Sutton Courtenay, Kennington, Bessels Leigh, Fyfield and Tubney

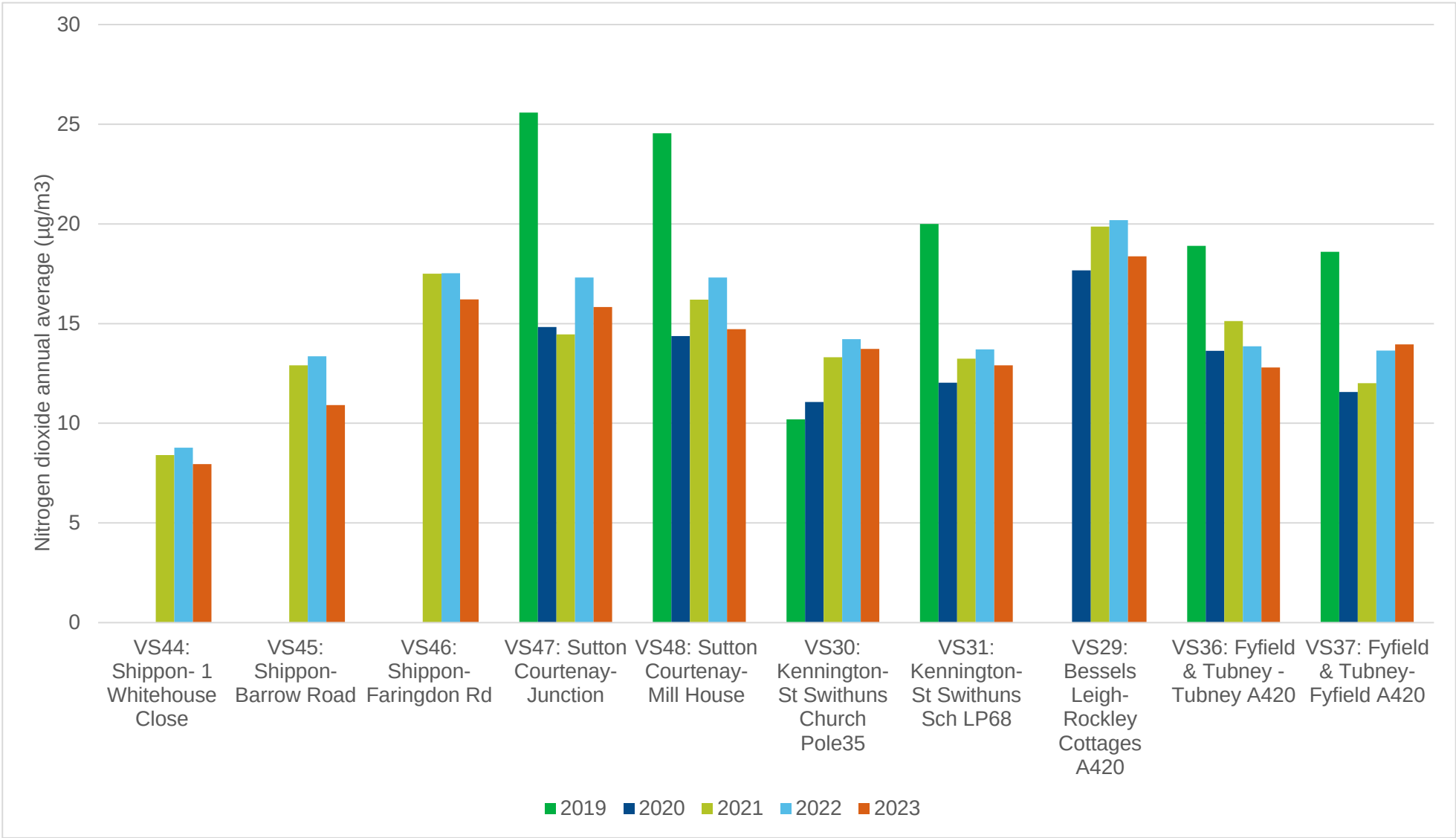


Figure A 15 Trends in Annual Mean NO_2 Concentrations in Wantage, Faringdon and Shrivenham

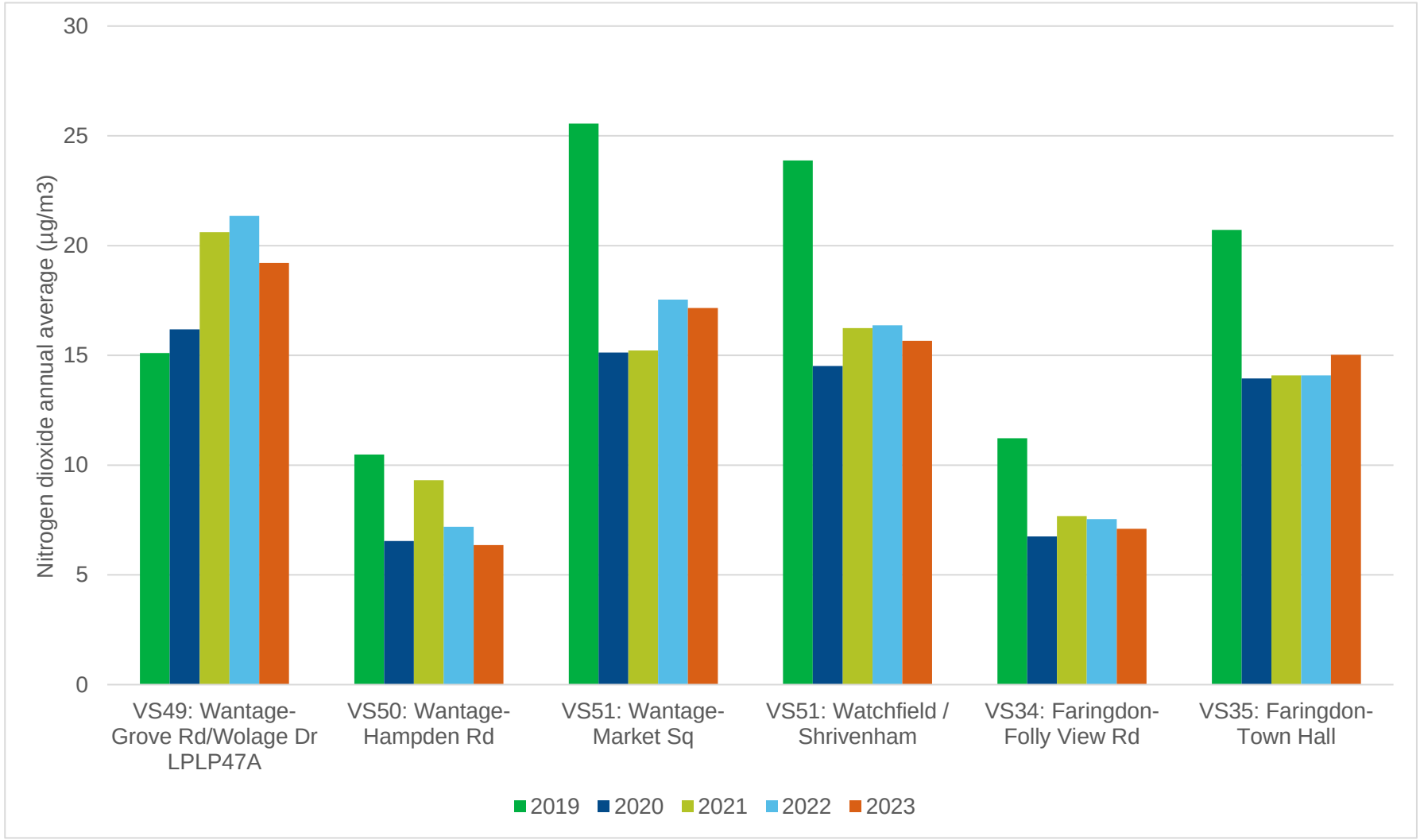


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Abingdon CA	449794	197176	Roadside	99.79	99.77	0	**0**	0	0	0
Henley CA	476116	182531	Roadside	97.31	97.31	0	0	0	0	0
Wallingford CA	189500	189500	Roadside	96.45	95.45	0	0	**1**	0	0
Watlington CA	468973	194487	Kerbside	96.95	96.95	0	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded.

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

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

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <0.81>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS1	459532	205740	22.4	19.3	15.6	20.0	12.0	13.3	11.3	13.3	15.8	18.3	16.6	16.1	16.2	13.1	-	
SS2	460228	205720	25.0	22.3	16.5	18.3	13.2	12.9	10.8	16.5	15.6	18.6	21.5	15.4	17.2	13.9	-	
SS3	460504	205642	21.1	18.0	15.3	18.1	13.5	13.7	10.7	15.4	12.3	16.5	22.9	14.0	16.0	12.9	-	
SS4	470605	206554	40.1	35.4	28.1	30.9	20.2	21.2	21.0	30.3	28.5	22.3	45.2	25.4	29.1	23.5	-	
SS5	471010	205598	26.5	26.9	16.7	21.6	19.8	18.0	10.9	15.7		13.0	30.2	16.2	19.6	15.8	-	
SS6	471103	205107	16.8	15.6	10.2	13.3	8.4	8.9	5.9	8.9	8.1	8.4	17.3	9.5	10.9	8.8	-	
SS7	471155	205016	15.8	15.0	11.1	14.1	7.7	10.0	5.2	8.6	7.0	9.8	17.2	9.4	10.9	8.8	-	
SS8	471078	204851	15.1	13.4	8.4	12.2		9.8	4.7	6.8	7.5	9.4	15.3		10.3	8.3	-	
SS9	470964	204914	16.7	13.9	8.2	11.2	7.9	11.8	5.0	8.1	8.1	9.0	16.3	9.8	10.5	8.5	-	
SS10	471212	205340	20.9	17.7	12.0	14.6	9.8	10.6	7.8	9.8	9.0	10.6	23.2	12.2	13.2	10.7	-	
SS11	471918	204934	24.6	23.0	15.9	17.7	11.2	11.9	10.9	13.7		13.4	29.9	12.9	16.8	13.6	-	
SS12	471695	205806	22.8	19.6	13.0	16.5	7.9	9.8	8.1			10.3	29.0	14.2	15.1	12.2	-	
SS13	471283	205977	18.5	16.9	12.3			7.9	4.4	7.4	7.7	8.5	21.1	8.5	11.3	9.2	-	
SS14	474930	201039	17.3	16.1	10.9	13.3	11.2	10.5	6.9		7.0	10.1	19.8	9.5	12.1	9.7	-	
SS15	475250	201230	27.0	27.8	21.0	23.0	16.4	24.0	14.9	18.8	0.6	20.3	23.1	19.2	19.7	15.9	-	
SS16	475703	201120	19.0	19.6	13.2	15.8	12.5	11.7	8.2		9.8	14.6	19.6	14.2	14.4	11.6	-	
SS17	475720	200930	21.5	24.0	14.5	18.6	13.3	16.8	11.9	12.5	13.4	16.3	19.9		16.6	13.4	-	
SS18	475415	200942	29.6	26.5		22.2		18.7	13.0	15.4	18.9	20.3	17.9	13.7	19.6	15.9	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <0.81>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS19	475001	200196	28.5	28.7	18.2	23.3	20.7	21.7	32.3		14.7	19.0	23.7	15.7	22.4	18.1	-	
SS20	470207	200190	19.8	15.7	18.0	18.3	17.5	16.9	11.0	14.9	6.2	18.0	20.2	13.5	15.8	12.8	-	
SS21	463527	177174	20.0	22.7	17.9	19.2	20.4	19.3	10.0	16.8	18.5	22.3			18.7	15.1	-	
SS22	463555	177099	27.7	26.1		25.2	9.2	19.7	25.1	26.3	31.1	23.6	20.6	15.0	22.7	18.3	-	
SS23	461901	200989		23.9	20.0	20.3		21.0	13.4	18.0	19.4	17.5	38.0	19.4	21.1	17.1	-	
SS24	460279	198618	20.3	23.7	14.8	14.8	11.6	14.4	10.5	14.4	14.0	12.1	27.5	13.1	15.9	12.9	-	
SS25	460163	198398	24.3	17.6	17.7	23.1	25.1	20.5	10.7	16.2	15.7	14.9	36.1	13.9	19.7	15.9	-	
SS26	468562	194779	12.6	10.6	6.6	8.1	4.8	5.5	8.1	4.9	12.4		9.2	7.2	8.2	6.6	-	
SS27	468756	194360	28.2	24.9	19.8	24.3	19.2	17.0	13.0	15.4	19.3	23.2	22.3	18.9	20.5	16.5	-	
SS28	468856	194293	26.5	28.3	17.3	23.5	20.0	17.6	15.1	13.9	16.6	17.5			19.6	15.9	-	
SS29	468852	194343	30.2	26.5	19.4	21.9	19.2	17.0	15.6	17.2	19.0	20.4	23.2	17.3	20.6	16.6	-	
SS30	468951	194457	46.2	41.9	32.4	37.5	31.1	31.2	25.6	31.2	36.0	31.2	38.5	28.5	34.3	27.7	-	
SS31	468962	194458	35.9	32.1	29.8	35.0	25.2	27.6	18.1	24.6	33.9	34.2	29.4	23.9	29.1	23.6	-	
SS32	469061	194590	33.4		21.4	24.1		21.3	19.8		21.9	22.6	10.6		21.9	17.5	-	
SS33	469017	194514	35.1	36.7	31.3	35.2	25.7	29.4	22.7	26.2	34.1	34.1		26.3	30.6	24.8	-	
SS34	461724	191785	26.4	30.1	20.0	20.8	15.2	17.7	11.5	14.8	19.6	23.1	23.1	17.8	20.0	16.2	-	
SS35	461298	189367	23.2	21.5	11.6	15.7	14.4	19.4	10.1	13.3	15.2		18.0	12.0	15.9	12.8	-	
SS36	460389	189498	28.6	30.5	20.8	23.1	15.6	21.7	18.1	19.8	24.4	25.6	26.9	20.8	23.0	18.6	-	
SS37	460640	189483	33.8	34.3	23.5	26.3	19.8	29.3	17.7		23.4	25.7	27.6	21.8	25.7	20.8	-	
SS38	460736	189567	33.3	35.8	31.8		23.9		14.0	17.3	24.2	25.6	24.8	21.6	25.2	20.4	-	
SS39	460799	189500		43.8	33.5	38.8	34.3	37.1	26.4	30.1	30.2	28.5	42.5		-	-	-	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 <0.81>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SS40	460799	189500		43.0	31.7	36.5	34.7	36.2	28.0	30.1	31.1	28.8	34.5	26.0	-	-	-	Triplicate Site with SS39, SS40 and SS41 - Annual data provided for SS41 only
SS41	460799	189500		43.5	32.9	35.9	35.0	36.1	26.0	30.0	29.5	27.7	31.8	26.8	33.0	26.6	-	Triplicate Site with SS39, SS40 and SS41 - Annual data provided for SS41 only
SS42	460938	189496	22.3	37.3	27.2	30.9	27.1	30.4	22.7	24.9	27.7	26.3	23.4	24.0	27.0	21.8	-	
SS43	460713	189279	29.8	35.6	19.7	29.9	24.6	22.8	21.0	19.8	21.9	25.6	20.7	21.4	24.4	19.7	-	
SS44	460679	189281	25.6	26.2	25.1	21.9	20.2		15.6	15.5	18.0	21.5	26.5	17.0	21.2	17.1	-	
SS45	460152	189130	16.0	22.8	9.2	16.5	11.8	15.0	8.2	12.8	13.5	18.2	17.2	13.6	14.6	11.8	-	
SS46	460282	188807		14.8	13.5	10.6	6.8	5.7	3.9	7.3	7.9	12.1	13.9	9.8	9.7	7.8	-	
SS47	460470	188224	21.5	20.1	18.5	16.6	14.5	14.5	10.8	11.5	17.0	18.6	21.3	13.6	16.5	13.4	-	
SS48	460110	187862	15.0	16.1	15.2	12.3	12.0	11.5	7.4	18.8	9.1	12.6	14.2	9.8	12.8	10.4	-	
SS49	459805	187574	17.2	18.0	11.8	17.0	12.2	15.9		13.4	13.4	18.2	17.5	12.6	15.2	12.3	-	
SS50	461916	188424	35.7	34.4				29.0	20.4	23.0	28.4	29.3	27.6		28.5	22.4	-	
SS51	475869	183217	25.0	25.1	20.0	20.3	16.9	19.1	11.2	16.4	18.5	21.5	19.0		19.4	15.7	-	
SS52	475878	182760	22.2	21.1	18.5	17.2	11.0	14.9	10.2	12.2	16.0	21.2	23.8	16.8	17.1	13.8	-	
SS53	476103	182506	32.9	28.0	29.2	30.7	20.9	29.4	23.3	21.9	30.1	30.6	31.9	26.1	27.9	22.6	-	
SS54	476174	182396	25.7	28.0	25.9	22.0	23.0	24.5	12.3	17.3	22.1	24.3	35.1	18.3	23.2	18.8	-	
SS55	476286	182290	22.7	22.2	20.3	22.0	14.0	21.5	11.5	16.2	20.3	22.2	23.8	13.0	19.1	15.5	-	
SS56	476115	182532	22.1	23.5	21.0	25.1	22.8	24.6	13.1	17.9	23.7	23.4	24.0	19.6	-	-	-	Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS57	476115	182532	23.4	25.4	24.7	27.5	22.2	22.7	11.2	21.8	22.8	22.6	20.9	19.2	-	-	-	Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS58	476115	182532	23.0	25.4	24.1	25.0	22.6	24.2	12.5	22.5	23.1	24.1	22.7	19.4	22.1	17.8	-	Triplicate Site with SS56, SS57 and SS58 - Annual data provided for SS58 only
SS59	476071	182612	43.8	41.2	40.2			36.8	34.3	32.5	42.8	37.3	38.6	35.4	38.3	31.0	-	

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SS60	475997	182614	22.4	22.6	19.9	19.6	13.0	19.6	10.1	17.5	16.0	20.9	20.3	15.0	18.1	14.6	-	
SS61	476080	182951	28.9		27.9	29.5	24.2			20.8	25.6	26.2	29.1	21.4	26.0	21.0	-	
SS62	476209	182831	26.1	24.3	18.5	21.5	16.1	19.7	12.3	17.5	18.8	22.1	22.1	19.0	19.8	16.0	-	
SS63	476308	182760	35.9	28.7	35.3	32.4	17.9	34.4	24.1	26.5	30.5	29.3	32.4	27.9	29.6	23.9	-	
SS64	476288	182078	38.6	28.6	26.1	25.5	15.8		17.1	22.8	28.7	27.5	27.7	23.7	25.6	20.7	-	
SS65	476223	182652	24.0	22.4	17.6	19.7	13.5	17.0	11.6		19.1	20.3	27.4		19.3	15.6	-	
SS66	476547	181735	27.9	28.7	19.7	20.2	12.7	17.8	15.1	17.8	19.0	22.1	25.0	22.3	20.7	16.7	-	
SS67	475104	181557			8.3	12.6	6.4		4.2	6.2	6.8	10.5	10.2	8.3	8.2	6.6	-	
SS68	453499	190384	13.8	22.9	10.7	25.1	8.8	5.2	8.0	10.6	13.2		18.3	13.0	13.6	11.0	-	
SS69	453357	190030	20.5	35.7	17.7	28.4	18.1	26.8	18.4	23.2	23.8		26.0	20.1	23.5	19.0	-	
SS70	453099	190031	23.6	43.8	24.1	33.1	20.0	23.7	18.1	18.9	33.7		33.9	28.4	27.4	22.1	-	
SS71	453023	189999	27.4	47.6	30.4	43.1	21.2		22.0		36.6		40.4	30.1	33.2	26.8	-	
SS72	452865	189979	20.9	40.2	18.7	32.7	26.2	25.5	13.8	20.7	20.7		33.0	17.4	24.5	19.8	-	
SS73	452753	189729	12.9	23.0	9.8	16.4	11.7	11.5	7.2	9.9	11.6		18.5		13.3	10.7	-	
SS74	452358	190521	17.9	38.8	18.5	31.9	25.2	21.5	8.8	18.5	18.0		23.4	12.0	21.3	17.2	-	
SS75	452084	190694	21.5	40.3	21.9	31.4	24.1	27.1	14.8	25.4	18.7		28.5	17.3	24.6	19.9	-	
SS76	451780	189920	23.9	42.3	21.6	28.6	19.2	22.5	14.7	17.6	22.5		33.0	20.6	24.2	19.6	-	
SS77	451643	189369	16.8		14.3	21.4	11.5	12.1		12.1	17.5		20.0	13.0	15.4	12.5	-	
SS78	450870	190495	18.6	31.1	15.1	20.4	15.9	20.3	11.2	<0.5	15.3		28.8		19.6	15.9	-	
SS79	451424	190943	11.5	26.4	13.2	19.8	15.1	16.7	5.1	10.5	11.8		19.4	12.1	14.7	11.9	-	
SS80	454637	195614	22.4	20.6	18.2	20.0	12.5	21.5	12.9	14.8	20.5	22.8			18.6	15.1	-	

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SS81	454710	195562	25.8	26.7	15.8	23.7	18.2		11.9	17.4	19.5	21.8	22.0	13.7	19.7	15.9	-	
SS82	454760	195794	24.0	20.1	16.5	14.7	10.4	12.4	8.7	13.2	12.4	21.7	20.3	12.5	15.6	12.6	-	
SS83	457228	204708	22.0	16.5	13.5	14.3	7.3	9.6	8.2	10.3		18.0	22.7	14.3	14.2	11.5	-	
VS1	449452	197047	33.5	27.5	22.6		23.1	25.3	16.7	24.9	24.1	27.3	27.4	21.8	24.9	20.2	-	
VS2	449585	197273	27.3	26.0	28.0		23.0	20.1	14.4	20.3	22.6	26.8	25.1	17.5	22.8	18.5	-	
VS3	448364	197836	32.7	31.0	25.1		27.3	22.7	16.6	25.6	22.3	28.1	29.1	23.3	25.8	20.9	-	
VS4	448442	196953	35.2	37.4	31.9		25.7	33.1	26.6	28.8	33.6	35.2	35.3	24.8	31.6	25.6	-	
VS5	449695	197049	39.4	34.8	20.5		20.6	26.9	14.3	29.2	35.5	37.5	36.8	29.7	29.6	23.9	-	
VS6	448791	196725	35.0	29.3	27.8		29.5	34.6	19.1	28.3	25.8	29.2	32.6		29.1	23.5	-	
VS7	448738	196967	41.2	42.5	35.6		29.8	32.6	24.8	55.2	46.5	35.1	32.3	23.7	36.3	29.4	-	
VS8	449794	197176	28.9	25.6	23.8		12.0	20.6	13.4	18.4	20.9	24.6	24.1	18.4	-	-	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS9	449794	197176	28.1	26.3	23.1		20.0	21.9	12.3	21.3	18.0	25.5	28.3	17.0	-	-	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS10	449794	197176	28.5	26.0	21.5		19.0	21.5	13.3	16.4	21.7	24.8	26.4	18.7	21.5	17.4	-	Triplicate Site with VS8, VS9 and VS10 - Annual data provided for VS10 only
VS11	448828	196966	35.5	31.7	27.3			28.2	20.9	30.0	21.8	31.1		1.3	25.3	20.5	-	
VS12	449225	196992	33.6		25.6		25.1	24.9		22.0		27.4	29.8	21.0	26.2	21.2	-	
VS13	449452	197047	41.9	41.5	33.4		27.3	36.0		33.3	37.2	36.0	52.2	34.1	37.3	30.2	-	
VS14	448869	196180	17.5	11.0	4.8		6.4	7.9	5.5	9.8	8.2	14.5	15.9	9.7	10.1	8.2	-	
VS15	449518	197160	17.9	19.6	18.5			14.3	11.6	14.9	17.8	19.2	15.0	13.1	16.2	13.1	-	
VS16	449008	205729									50.0	48.8	45.5		48.1	36.2	25.0	
VS17	449003	205724	68.7	78.2	60.8		42.5	48.4	58.9		66.0	67.6	69.7	51.3	61.2	**49.5**	33.0	
VS18	448894	205826	30.3	36.0	24.5		15.2	25.3	26.5	28.1	31.5	31.6	29.0	23.7	27.4	22.2	-	

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VS19	448917	205804	36.0	34.9	21.9		14.3	21.7	24.9	27.4	41.2	30.2	12.3	22.1	26.1	21.1	-	
VS20	448914	205798	64.1	67.7	55.1		35.9	54.7	50.6	61.9	66.6	64.5	59.7	39.0	56.3	**45.6**	31.4	
VS21	448946	205780	29.3	30.7	23.3		14.7	21.2		25.5	26.5	27.9	28.9	18.0	24.6	19.9	-	
VS22	448991	205745	34.7	31.2	23.9		13.6	21.0	21.3		30.8	30.6	37.1	24.1	26.8	21.7	-	
VS23	448403	205709	14.5	13.5	10.5		8.2	8.1	5.4		8.0	22.9	0.8	8.4	10.0	8.1	-	
VS24	449558	199016	29.7	24.3	19.8		17.8	20.2	14.3	21.3	22.4		21.6	15.2	20.7	16.7	-	
VS25	450222	199464	31.1	31.6	19.4		20.1	18.8	16.0	23.3	24.5	23.7	29.5	22.1	23.6	19.1	-	
VS26	450764	204105	27.2	26.9	16.7			19.7	20.0	21.6	24.0	26.8	25.3	18.0	22.6	18.3	-	
VS27	449404	205422		20.7	15.5		10.3	17.2	13.6	17.4	22.0	22.9	22.4	16.7	17.9	14.5	-	
VS28	448610	206289	21.5	55.0			24.0	19.3	10.0	20.7	19.2	18.2	17.1	14.2	21.9	17.7	-	
VS29	446273	202333	31.4	26.3	20.3		19.5	20.1	17.4	20.9	23.5	26.0	25.4	19.1	22.7	18.4	-	
VS30	452253	202255	22.5	17.7	14.2		13.1	14.3	11.3	14.6	17.5	19.8	24.8		17.0	13.7	-	
VS31	452290	201912	22.0	17.1	14.1		12.4	14.6	8.4		15.6	18.5	22.1	14.8	16.0	12.9	-	
VS32	448913	205813	45.2	42.3	30.5		29.7		36.6	33.8	43.5	40.2		30.2	36.9	29.8	-	
VS33	448913	205813	30.7	37.2	34.6		20.0	28.5	16.3	31.1	29.6	32.5	32.5	20.3	28.5	23.0	-	
VS34	428823	195554	13.7	9.5	8.5		6.4	6.7	6.1	6.8	7.1	9.8	12.6	9.3	8.8	7.1	-	
VS35	450886	194359	22.9	21.5	18.3		14.4	14.7	14.6			22.2	22.3	16.3	18.6	15.0	-	
VS36	442239	198622	24.3	17.2	14.4		8.6	14.3	12.6	12.9	15.7	19.7	18.6		15.8	12.8	-	
VS37	443526	199184	19.6	20.1	16.4		14.4	16.8	8.2	18.2	17.6	18.8	22.5		17.3	14.0	-	
VS38	445552	196639	41.8	40.2	36.8			37.0	23.9	32.0	36.6	46.6			36.9	29.8	-	
VS39	445571	196675	36.7	29.7	30.5		24.1	27.4	22.5	24.6	28.9	36.5	37.1		29.8	24.1	-	

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VS40	445522	196470	4.3	6.4			5.7	6.1	4.4	7.4	6.1	10.2	16.9		7.5	6.1	-	
VS41	445456	196623	39.0	30.7	34.2		30.0	29.1	19.8	30.0	27.2	38.5	34.2		31.3	25.3	-	
VS42	445528	196628	29.4	25.4	21.9		19.7	20.1	12.9	19.5	19.2	24.4	27.3		22.0	17.8	-	
VS43	445875	196657	29.4	24.4	23.5		20.9	25.2	16.1	23.3	22.4	28.1	32.8		24.6	19.9	-	
VS44	448150	198190	14.4	12.0	9.9		6.0	7.5	4.4	7.0	9.9	14.4	12.9		9.8	8.0	-	
VS45	448092	198055			13.9		11.8	13.6	7.4	12.0	13.5	18.3	18.1	12.8	13.5	10.9	-	
VS46	448349	198086	26.6	25.4	15.3		13.7	18.0	17.8	18.3	22.2	23.0	23.7	16.6	20.1	16.2	-	
VS47	450886	194359	25.9	21.8	21.0		17.6	17.0	11.7	18.8	17.3	22.8	24.1	17.3	19.6	15.8	-	
VS48	450588	194391	23.5	22.8	20.9		16.1	18.7	15.2	15.3	13.9	19.9	20.1	13.9	18.2	14.7	-	
VS49	440068	189087	31.7		22.8		18.8	26.1	18.9	20.4		22.6	25.5		23.4	19.2	-	
VS50	440409	188319	12.6	8.9	8.2		5.1	5.1	4.6	5.8		8.6	11.8		7.9	6.4	-	
VS51	439807	187941	27.1	24.5	21.3		17.4	20.4	16.2	19.0		20.0	25.1		21.2	17.2	-	
VS52	424275	190640	26.7	16.3	20.9		20.3	20.0	11.3	19.5	17.3	17.9	25.6	17.3	19.4	15.7	-	

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

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

☒ **Local bias adjustment factor used**

☐ **National bias adjustment factor used**

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

☒ **South Oxfordshire and Vale of White Horse District Councils confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within South Oxfordshire and Vale of White Horse District Councils During 2023

South Oxfordshire and Vale of White Horse District Councils have not identified any new sources relating to air quality within the reporting year of 2023.

Additional Air Quality Works Undertaken by South Oxfordshire and Vale of White Horse District Councils During 2023

South Oxfordshire and Vale of White Horse District Councils have not completed any additional works within the reporting year of 2023.

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.

- Tube Type: 50% TEA : 50% Acetone/ 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 2023 ~8100 QC samples were analysed, achieving a relative standard deviation of 0.98%
- Confidence Intervals: 2σ ±2.18% 3σ ±3.27%
- Limit of Detection: The analytical limit of detection is 0.03µg NO2.
  Over a 4-week exposure this would equate to 0.6µg/m3, or 0.3ppb
- Quality Assurance: The manufacture and analysis of NO2 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 2023, SOCOTEC had an average z-score of 0.20

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 the following non-automatic sites required annualisation since its data capture less than 75% but greater than 33%:

- SS32 - Watlington- 23 Shirburn Street
- SS50 - Wallingford- Newnham Manor Farm, A407
- SS71 - Didcot- 77 Broadway
- VS12: Abingdon- Ock Street Lamp Post 12
- VS16: Botley - 71 Southern Bypass Fence (temp
- VS32: Botley- Stanley Close
- VS38: Marcham- 10 Packhorse Lane
- VS49: Wantage- Grove Rd/Wolage Dr LPLP47A

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/m^3)

Site ID	Annualisation Factor Abingdon	Annualisation Factor Henley	Annualisation Factor Wallingford	Annualisation Factor Watlington	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
SS32	0.9847	0.9752	0.9948	0.9897	0.9861	21.9	21.6
SS50	0.9730	1.0012	0.9587	0.9663	0.9748	28.5	27.8
SS71	0.9558	0.9838	0.9764	0.9897	0.9764	33.2	-

Site ID	Annualisation Factor Abingdon	Annualisation Factor Henley	Annualisation Factor Wallingford	Annualisation Factor Watlington	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
VS12	1.0011	0.9783	1.0254	1.0020	1.0017	26.2	26.2
VS16	0.8410	0.9028	0.9917	0.9860	0.9304	48.1	44.8
VS32	1.0140	1.0440	1.0178	0.9904	1.0166	36.9	-
VS38	1.0279	1.0293	0.9757	0.9699	1.0007	36.9	36.9
VS49	1.0444	1.0074	1.0195	0.9989	1.0175	23.4	23.8

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2023 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

South Oxfordshire and Vale of White Horse District Councils have applied a combined local bias adjustment factor (derived from the data of the 3 co-locations in the districts) of 0.81 to the 2023 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 03/24 National Diffusion Tube Bias Adjustment Factor Spreadsheet provided the following bias adjustment factors for the councils' co-locations: 0.75 and 0.86 for South Oxfordshire co-locations (Henley and Wallingford) and 0.83 for the Vale of White Horse co-location (Abingdon). Similarly, the DT Data Processing Tool provided very similar BAF derived from the local co-locations, see Table C3 below, and a combined local BAF of 0.81.

The 2023 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 co-locations in the districts, and therefore benefits from the combined data capture of all the

co-location sites (gaps in data capture have happened a different dates/times at different sites).

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local		0.81
2022	Local		0.80
2021	Local		0.79
2020	Local		0.88
2019	Local		0.86

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1 (Abingdon)	Local Bias Adjustment Input 2 (Henley)	Local Bias Adjustment (Wallingford)
Periods used to calculate bias	9	12	9
Bias Factor A	0.83 (0.74 - 0.93)	0.75 (0.71 - 0.8)	0.85 (0.8 - 0.91)
Bias Factor B	21% (7% - 35%)	33% (25% - 41%)	17% (10% - 25%)
Diffusion Tube Mean (µg/m^3)	22.4	22.1	33.8
Mean CV (Precision)	5.4%	5.0%	3.6%
Automatic Mean (µg/m^3)	18.5	16.6	28.8
Data Capture	99%	97%	95%
Adjusted Tube Mean (µg/m^3)	19 (17 - 21)	17 (16 - 18)	29 (27 - 31)

Notes:

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

The results from the following non-automatic sites required distance correction:

- VS16: Botley - 71 Southern Bypass Fence (temp)
- VS17: Botley - 4 Yarnells Rd (Fence)
- VS20: Botley - 63 Southern Bypass Fence

Table C.4 – Non-Automatic NO_2 Fall off With Distance Calculations (concentrations presented in µg/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
VS16	3.0	13.0	36.2	8.1	25.0	
VS17	3.0	13.0	49.5	8.1	33.0	
VS20	2.0	10.0	45.6	8.1	31.4	

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 2021. Further historical data can be accessed here: https://www.oxonair.uk/.

Figure C. 1 Abingdon Continuous Analyser - Annual Graph

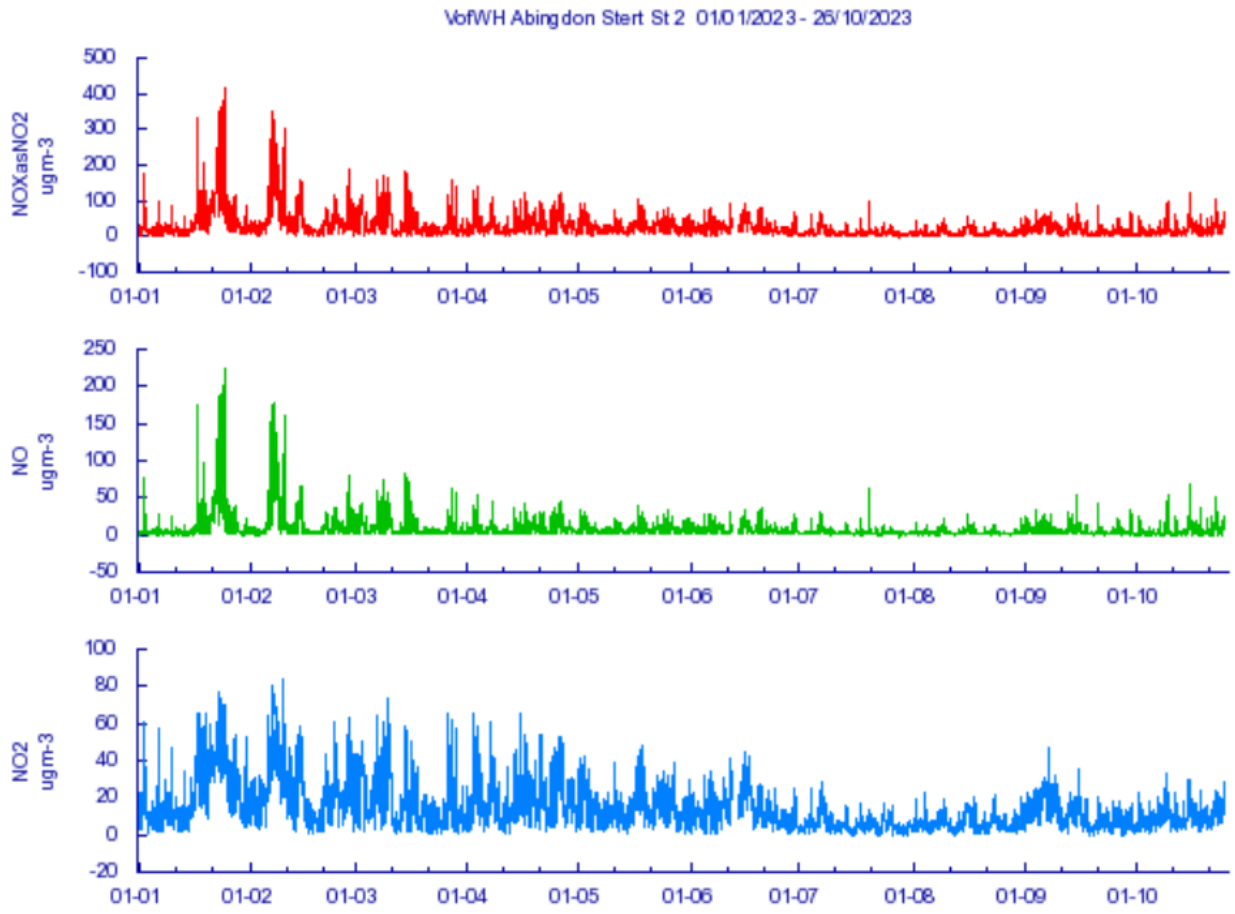


Figure C. 2 Henley Continuous Analyser - Annual Graph

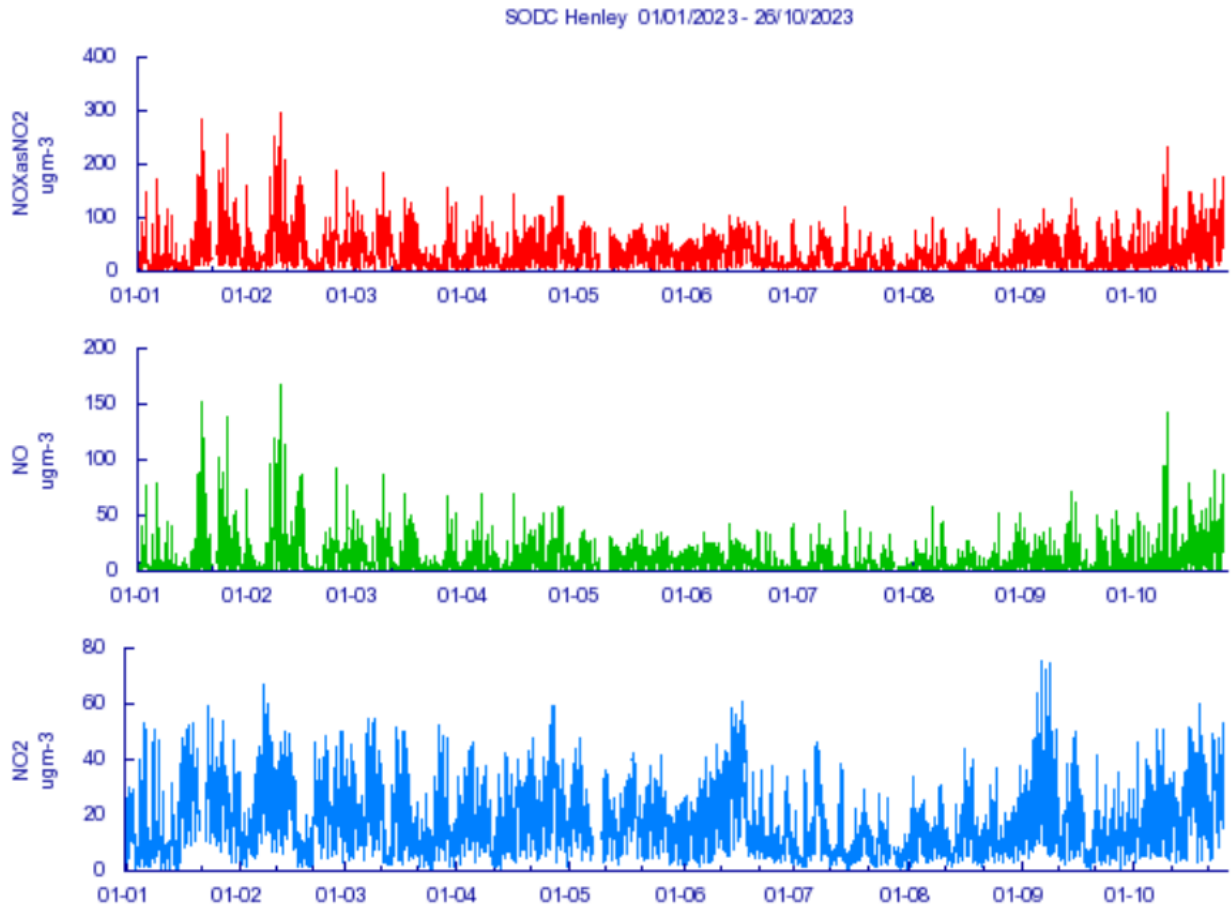


Figure C. 3 Wallingford Continuous Analyser - Annual Graph

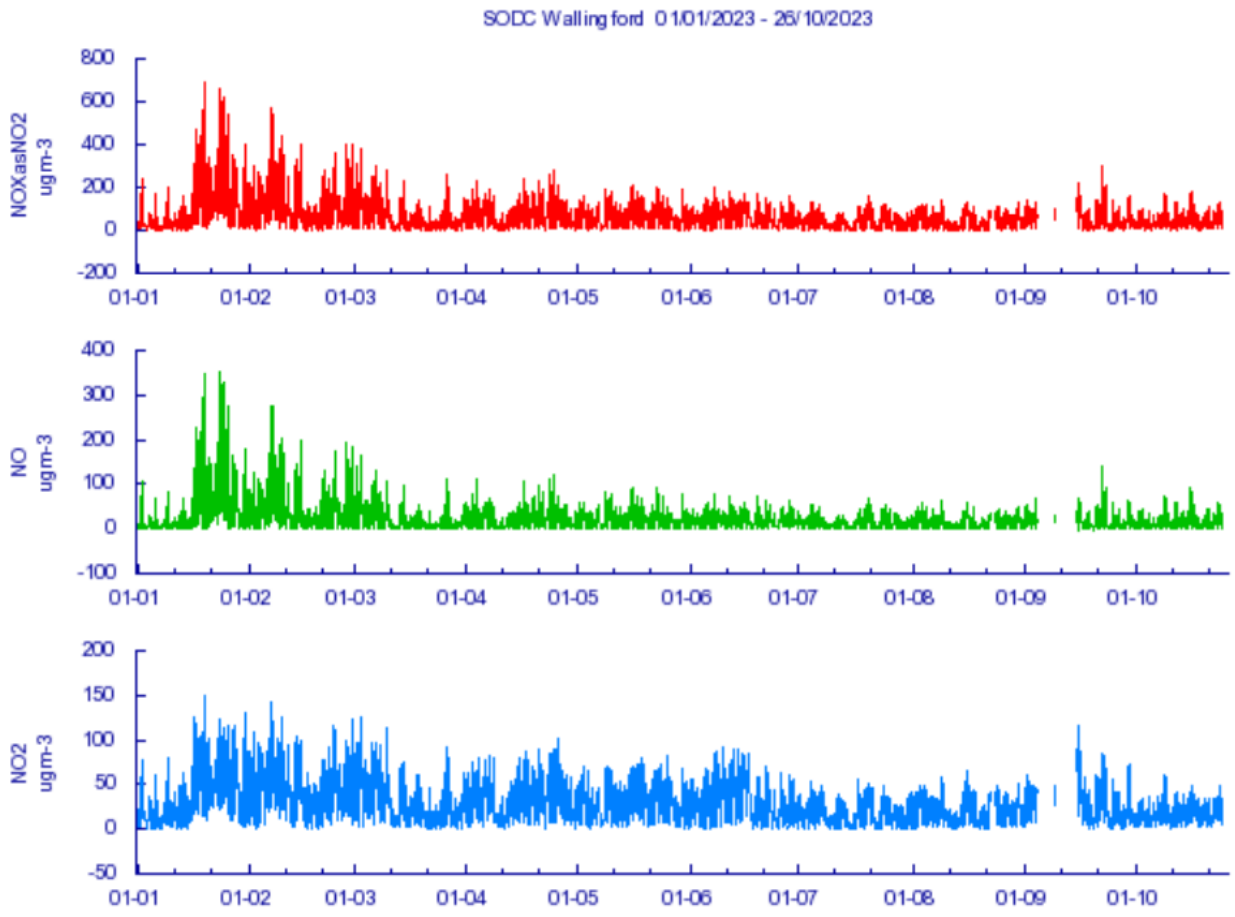
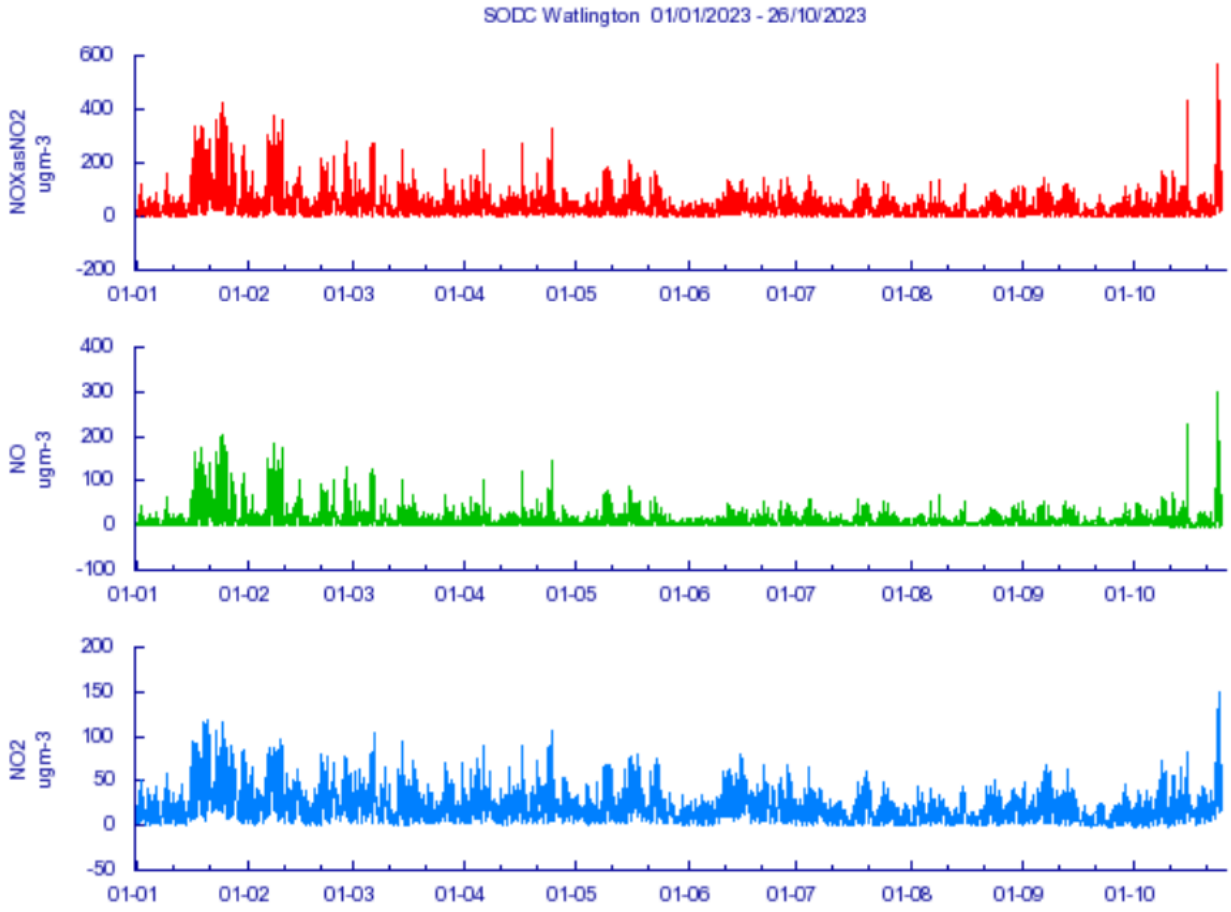


Figure C. 4 Watlington Continuous Analyser - Annual Graph



NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within South Oxfordshire and Vale of White Horse District Councils required distance correction during 2023.

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

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

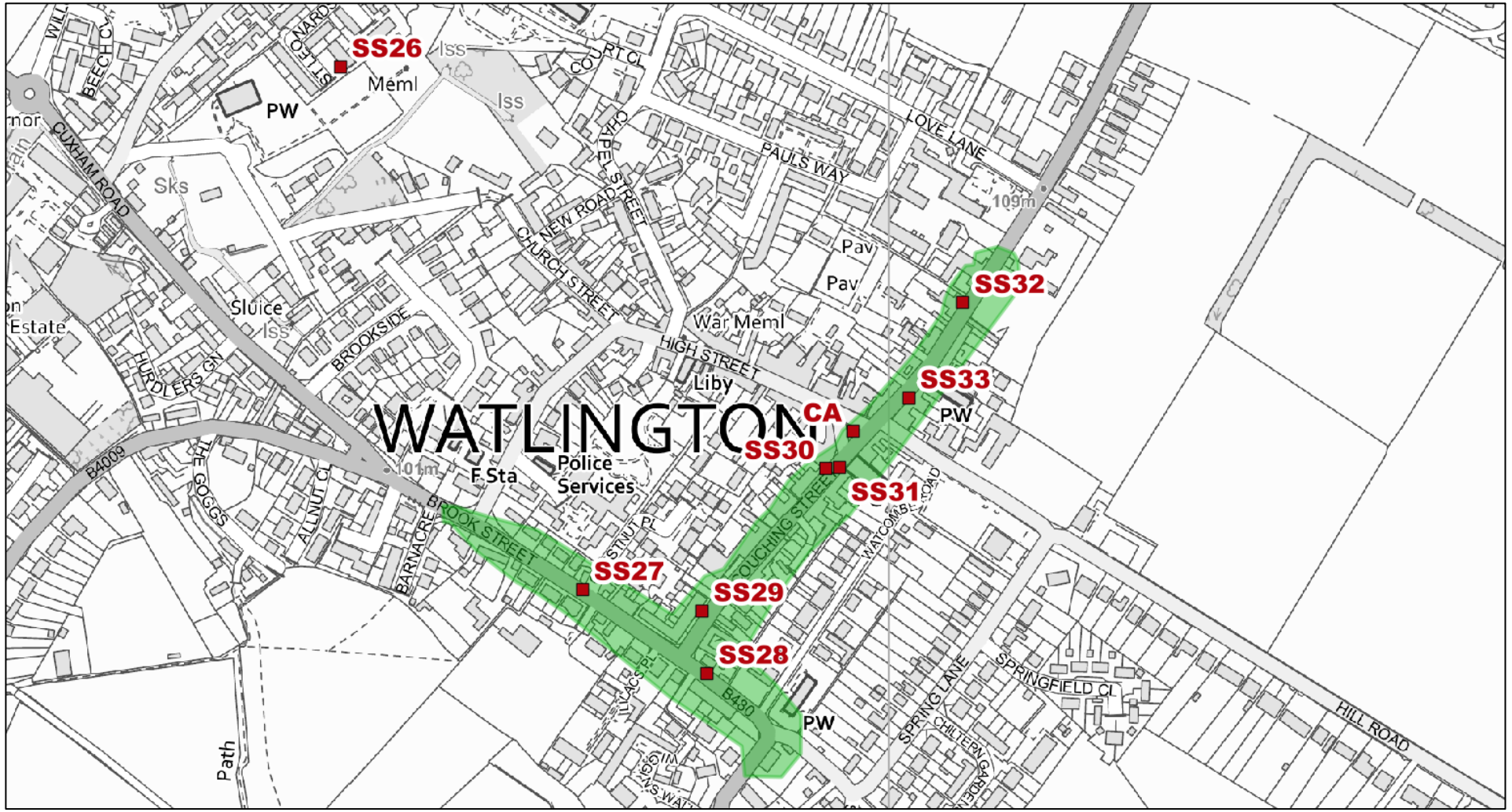
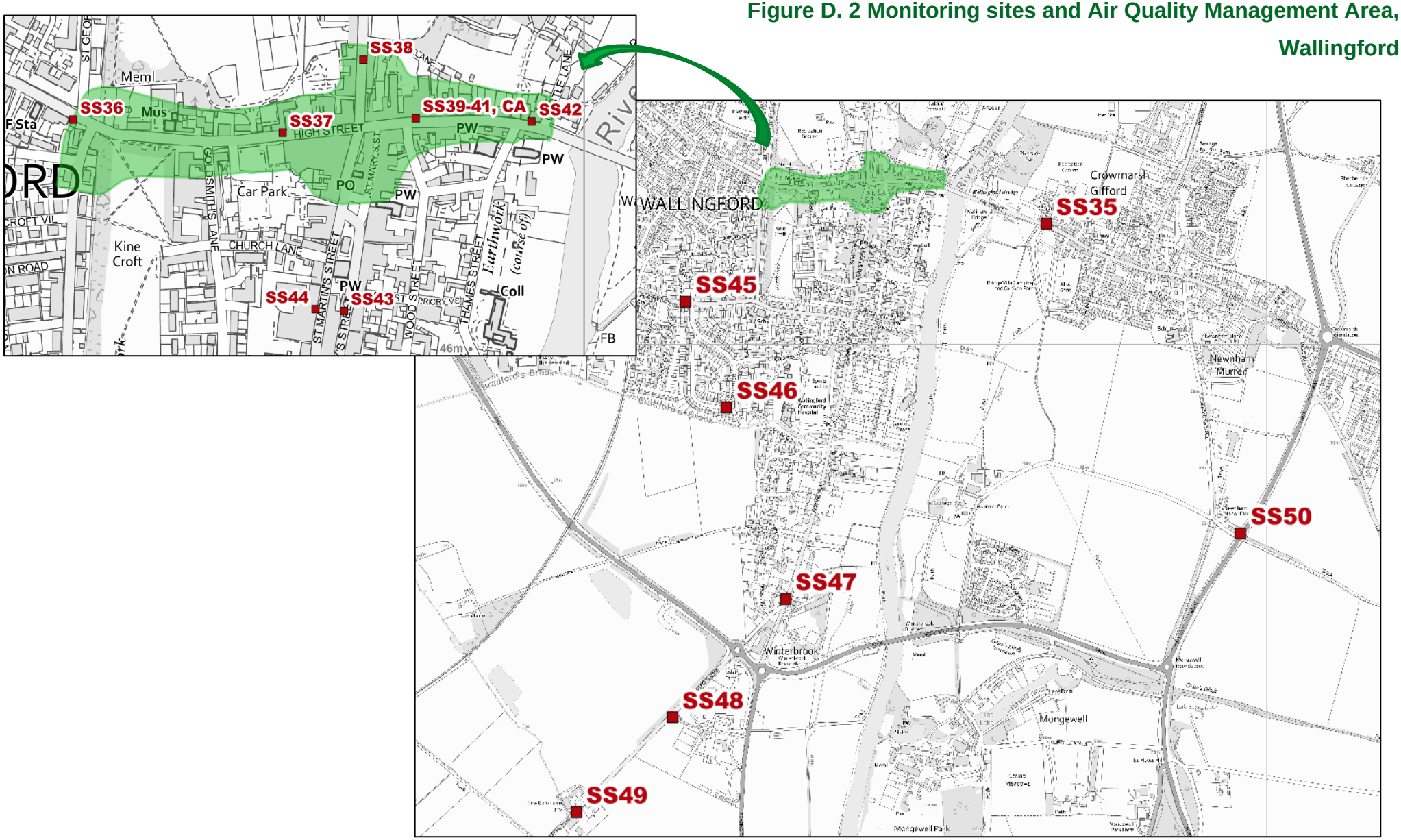


Figure D. 2 Monitoring sites and Air Quality Management Area, Wallingford



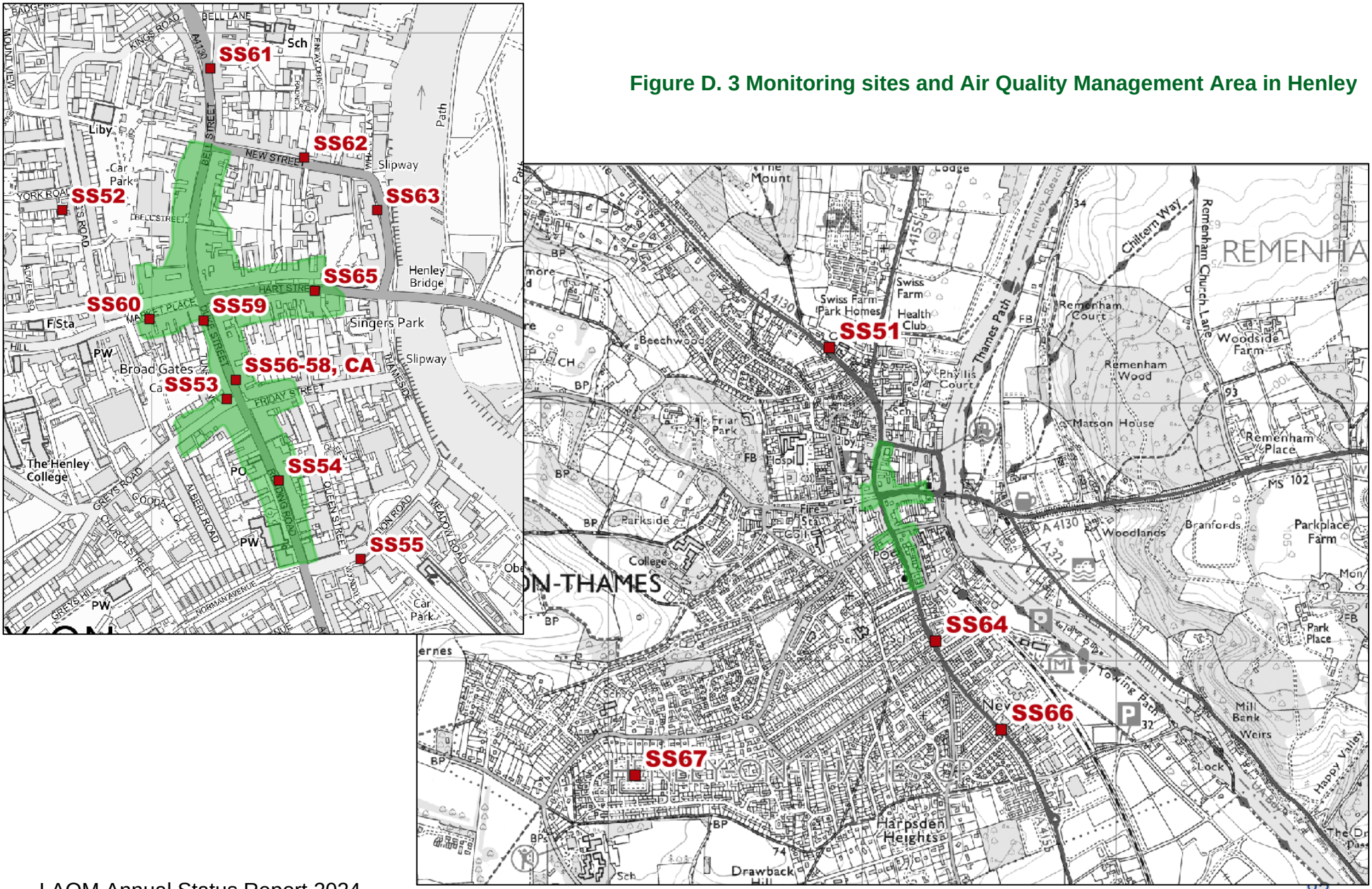


Figure D. 3 Monitoring sites and Air Quality Management Area in Henley

Figure D. 4 Monitoring sites and Air Quality Management Area in Marcham

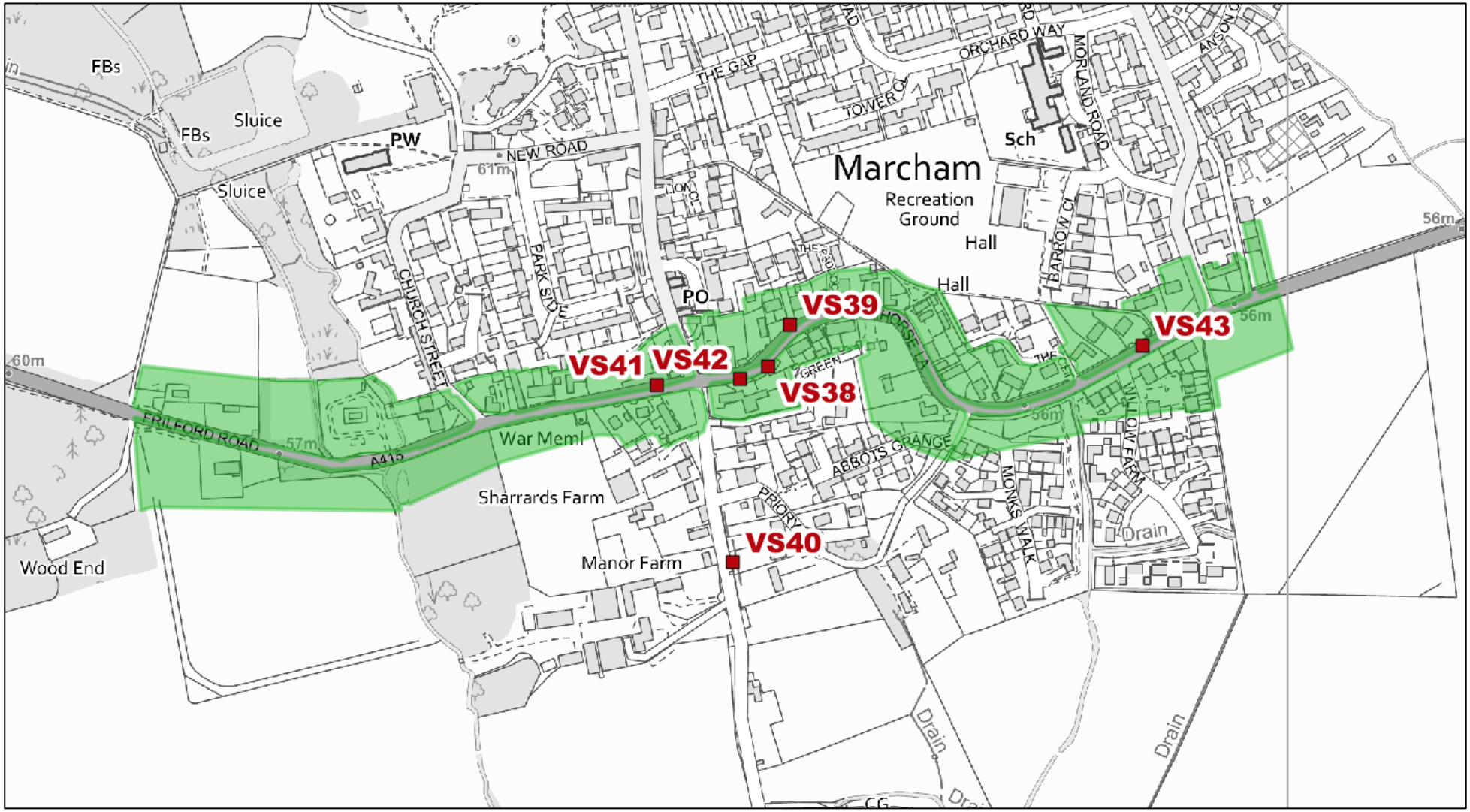


Figure D. 5 Monitoring sites and Air Quality Management Area in Abingdon

Figure D. 6 Monitoring sites in outer Abingdon

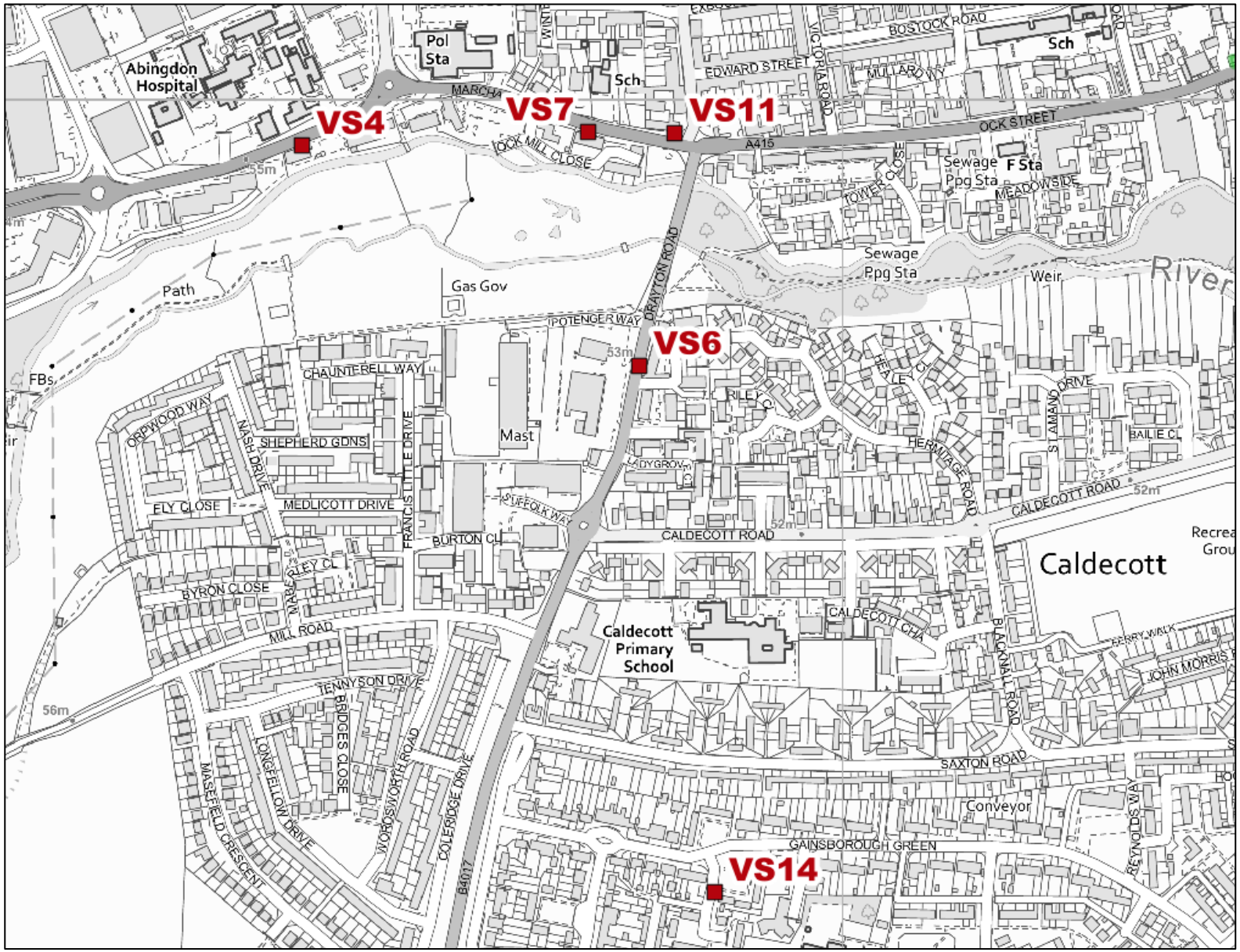


Figure D. 7 Monitoring sites in north Abingdon

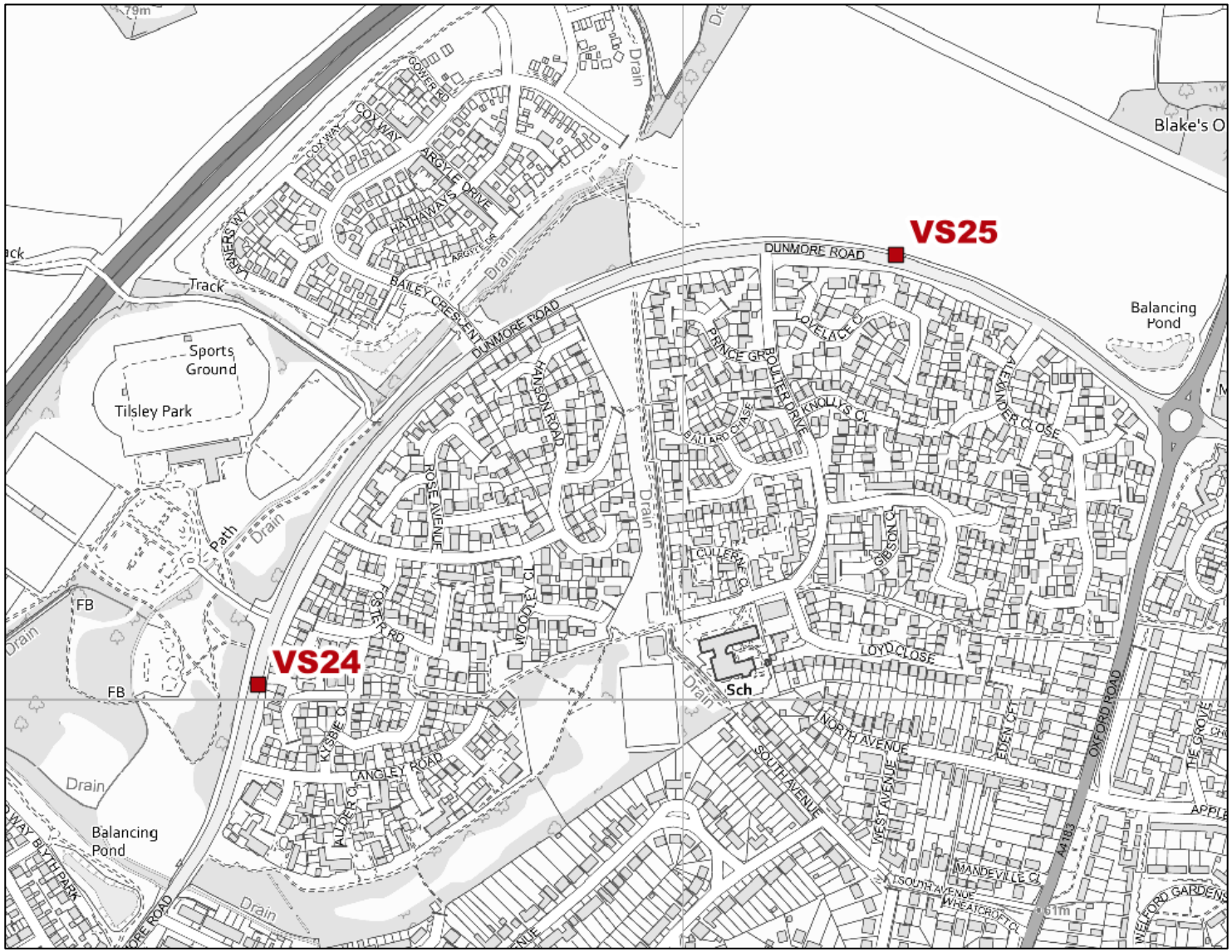


Figure D. 8 Monitoring sites in Shippon

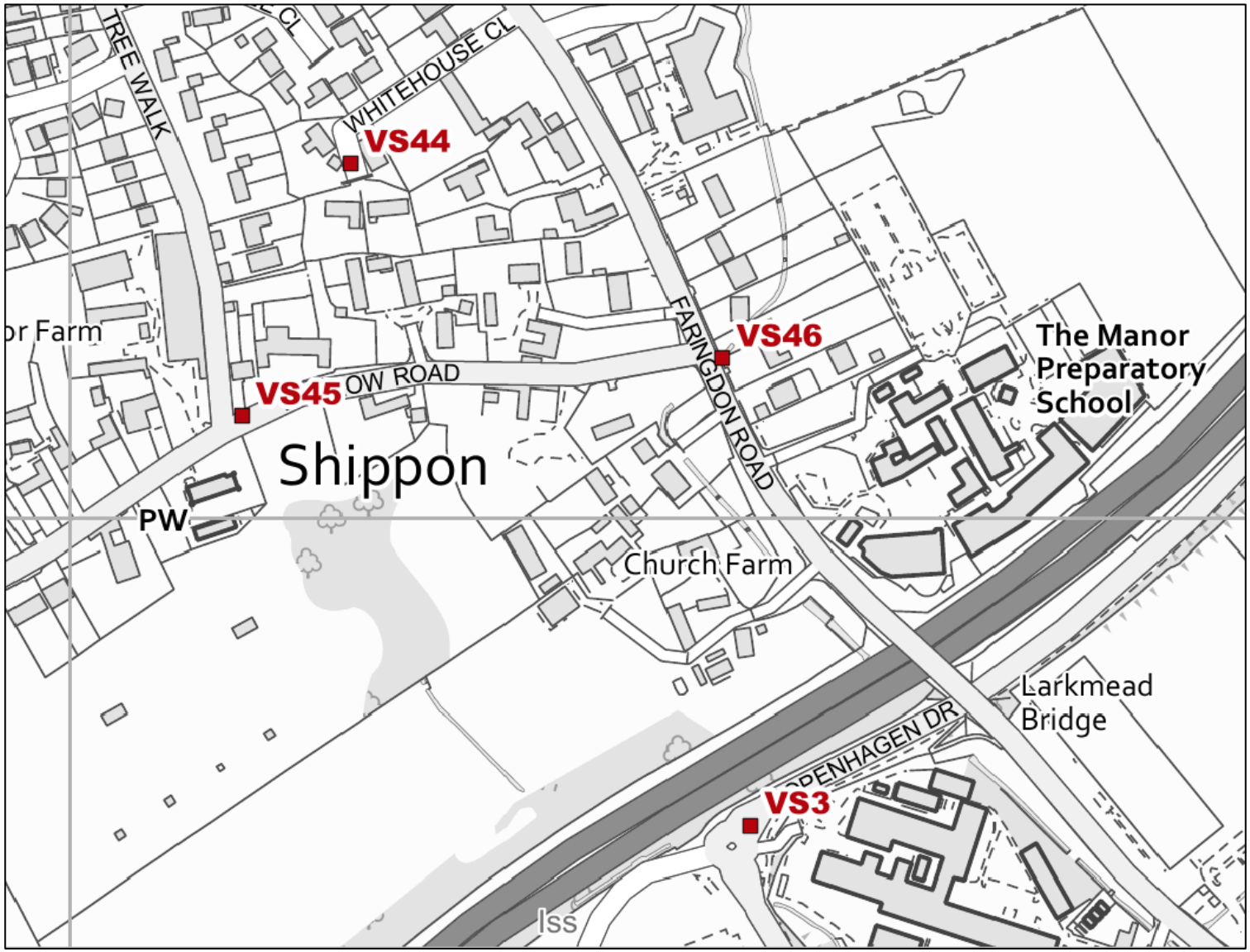


Figure D. 9 AQMA and monitoring sites in outer Botley

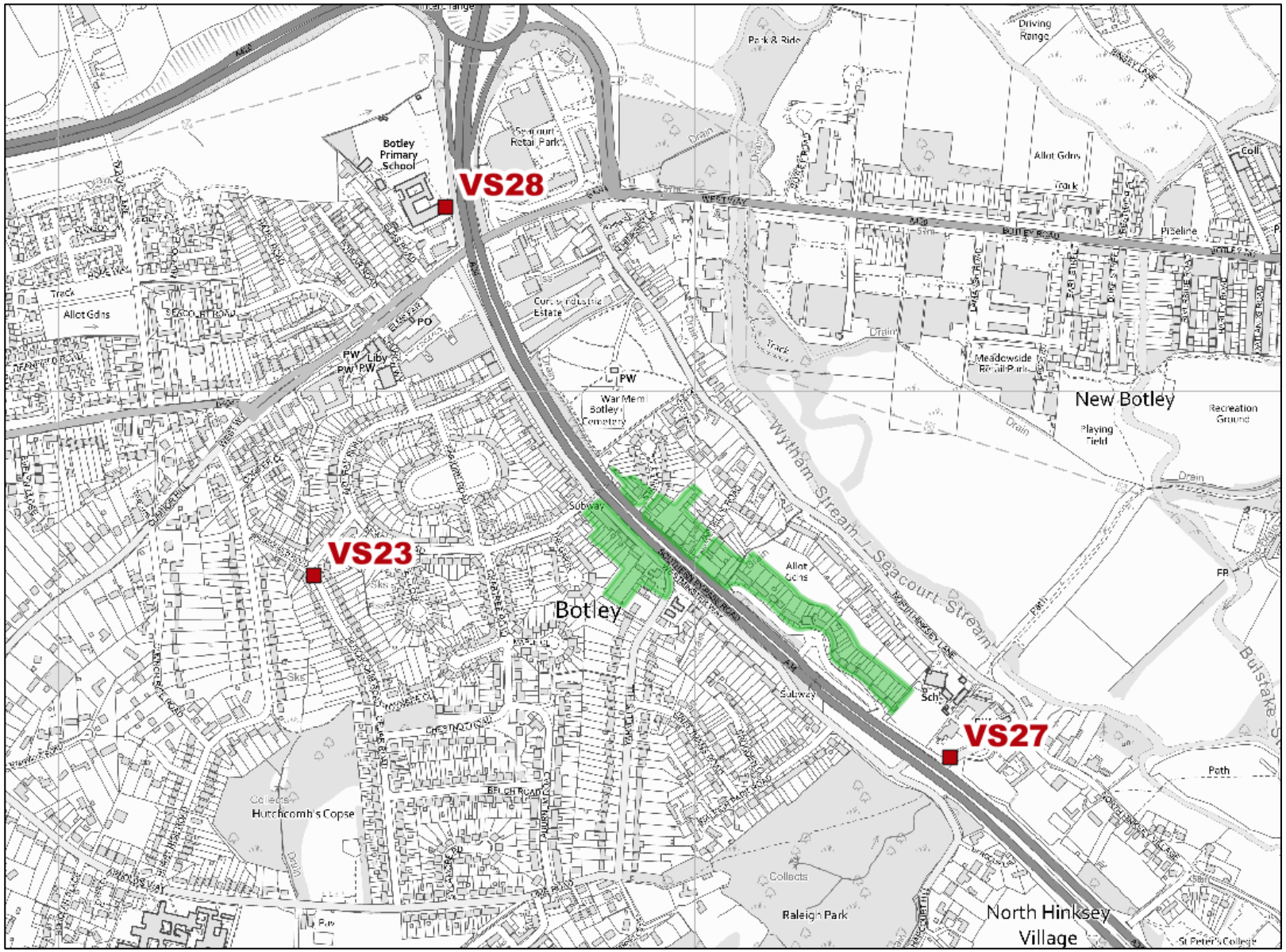


Figure D. 10 AQMA and monitoring sites in inner Botley

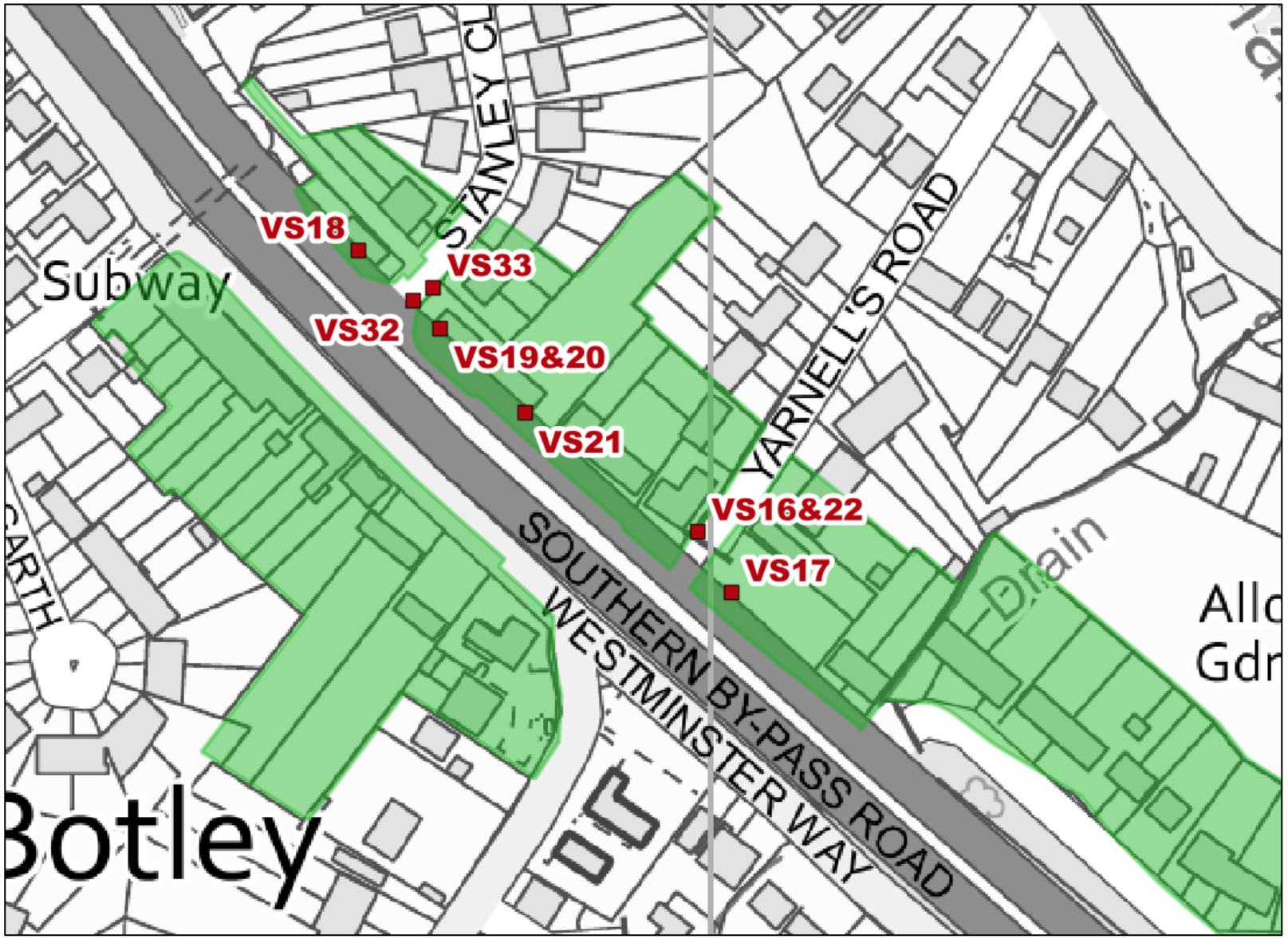


Figure D. 11 Close up map of Botley monitoring sites

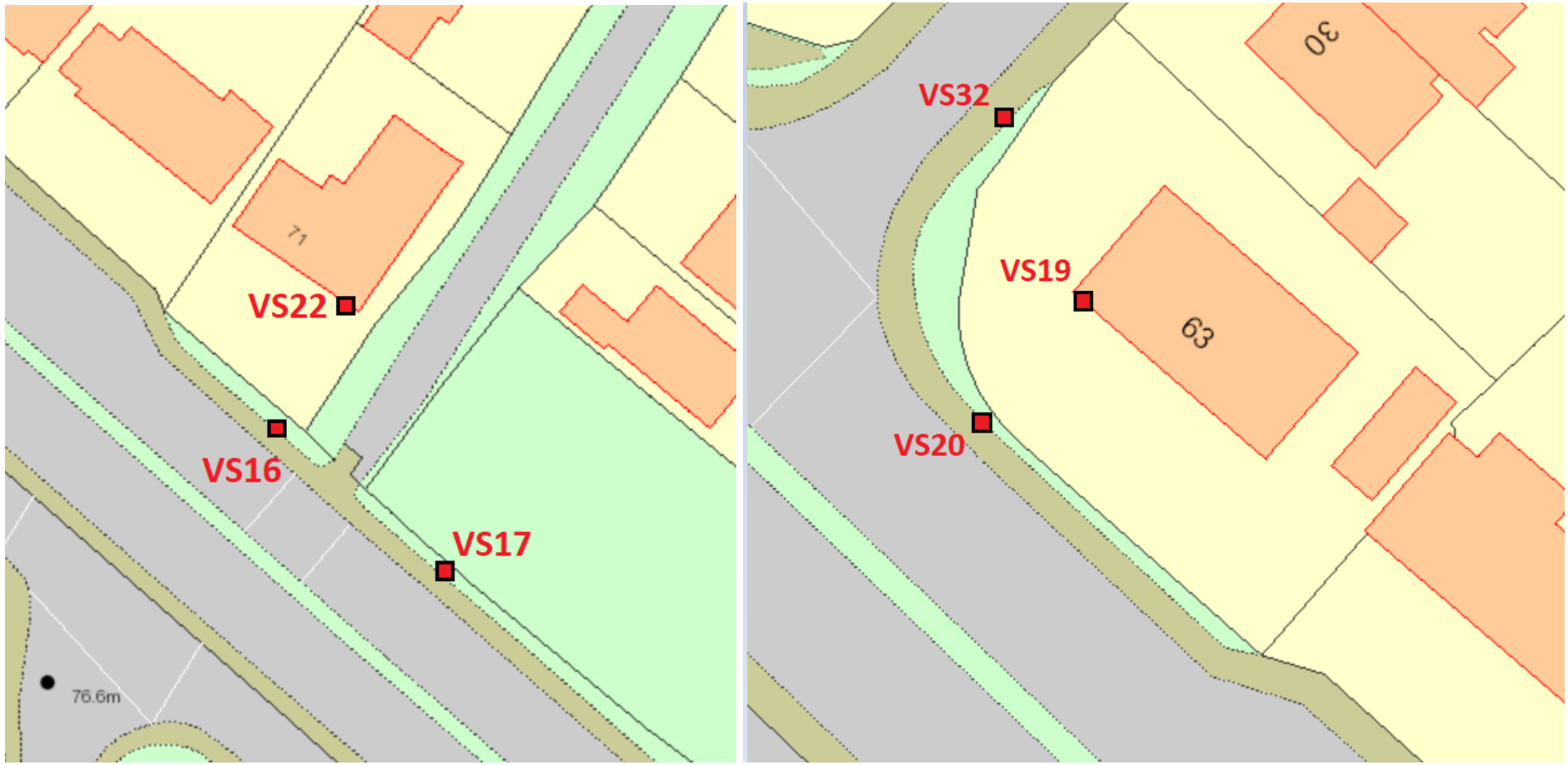


Figure D. 12 Monitoring sites in Thame

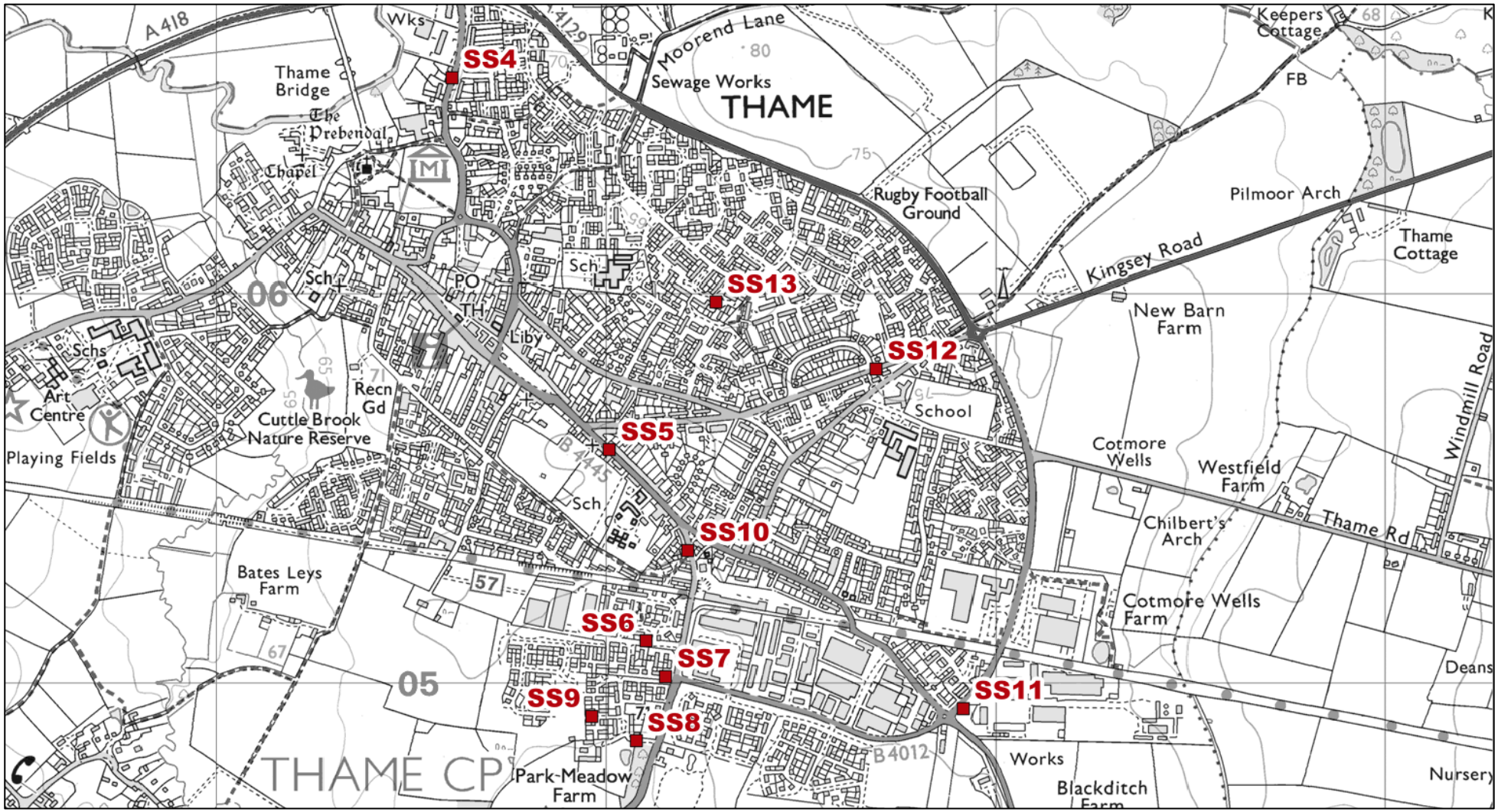
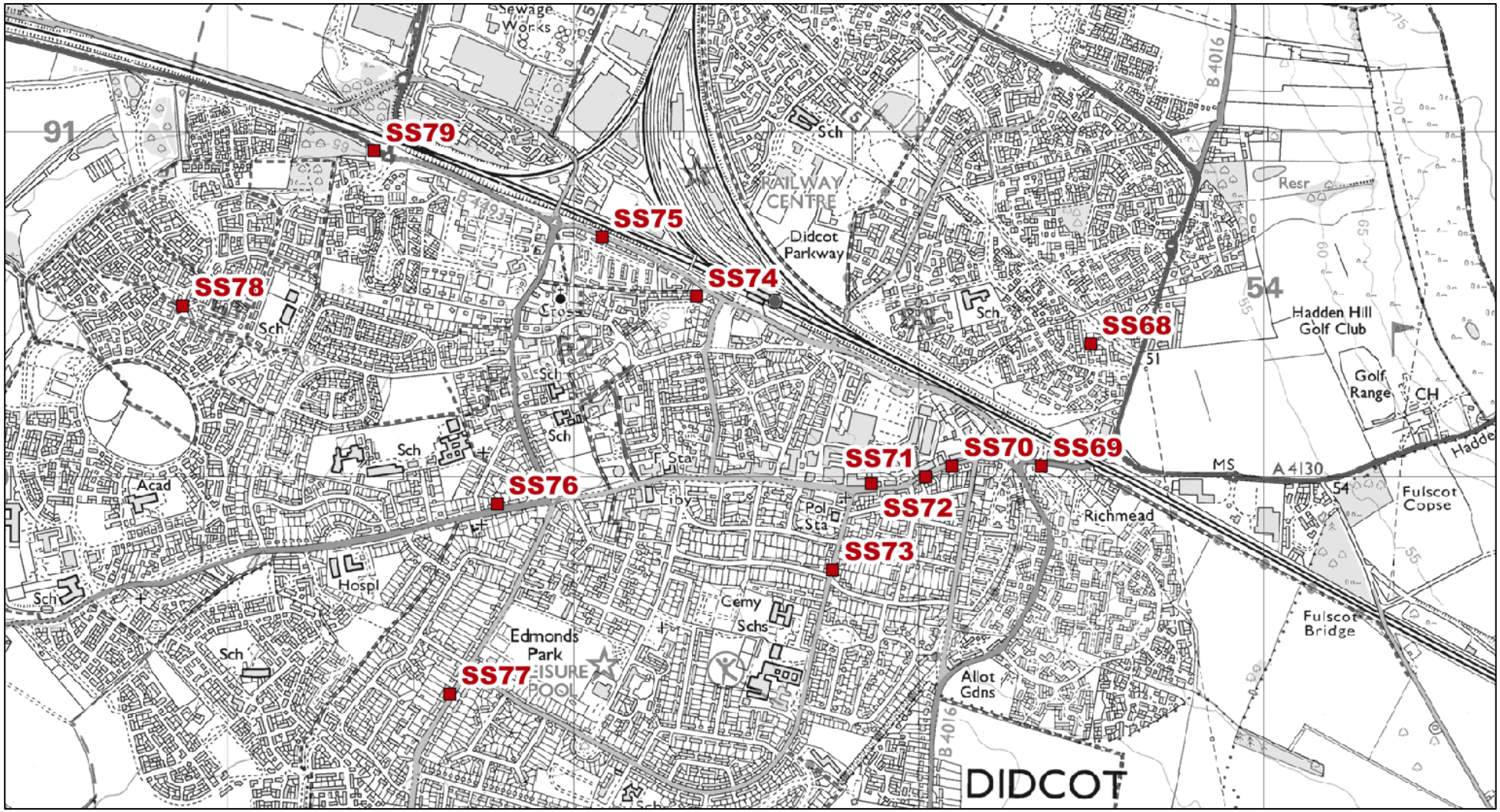


Figure D. 13 Monitoring sites in Chinnor

Figure D. 14 Monitoring sites in Didcot



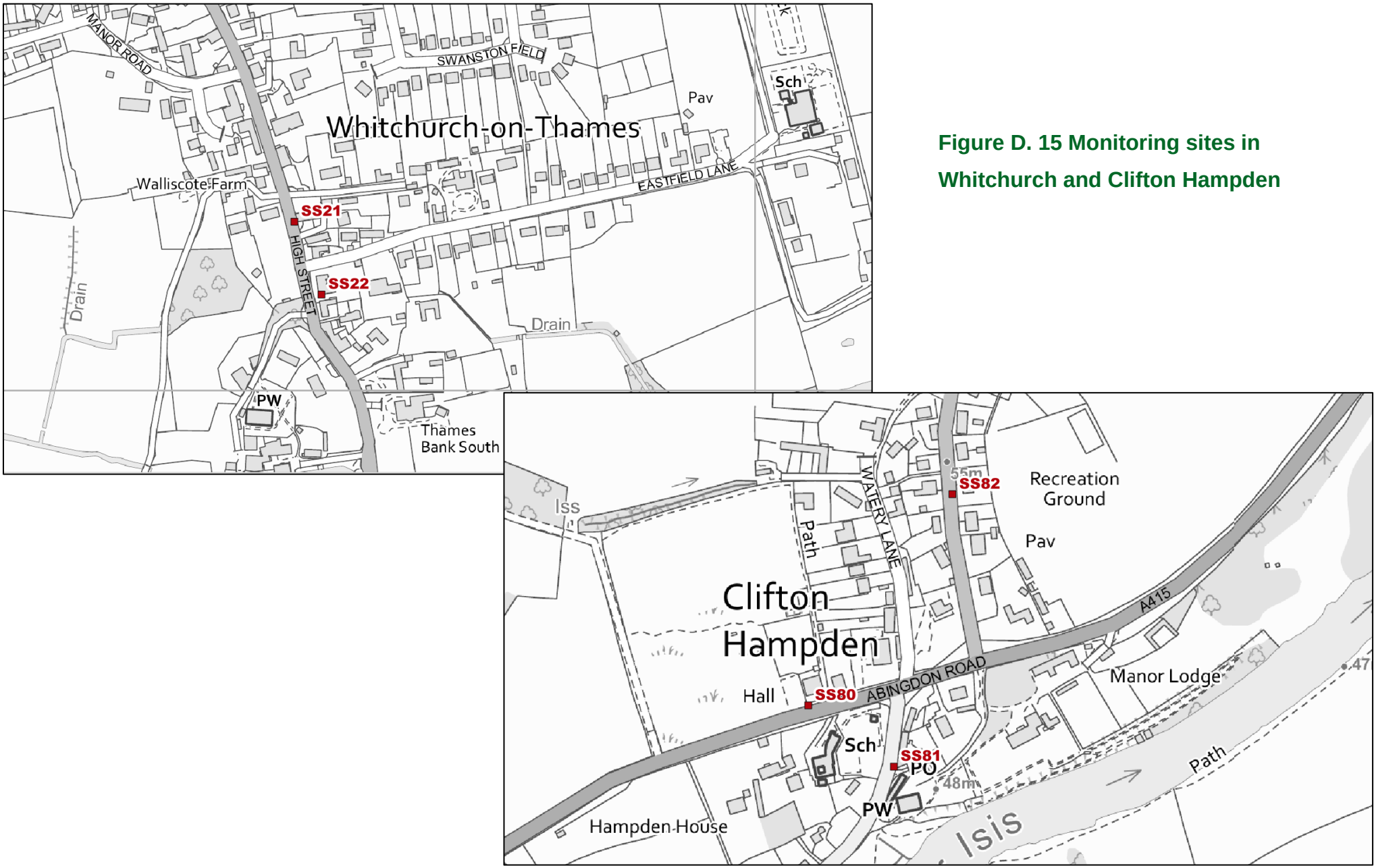


Figure D. 15 Monitoring sites in Whitchurch and Clifton Hampden

Figure D. 16 Monitoring sites in Wheatley and Horspath

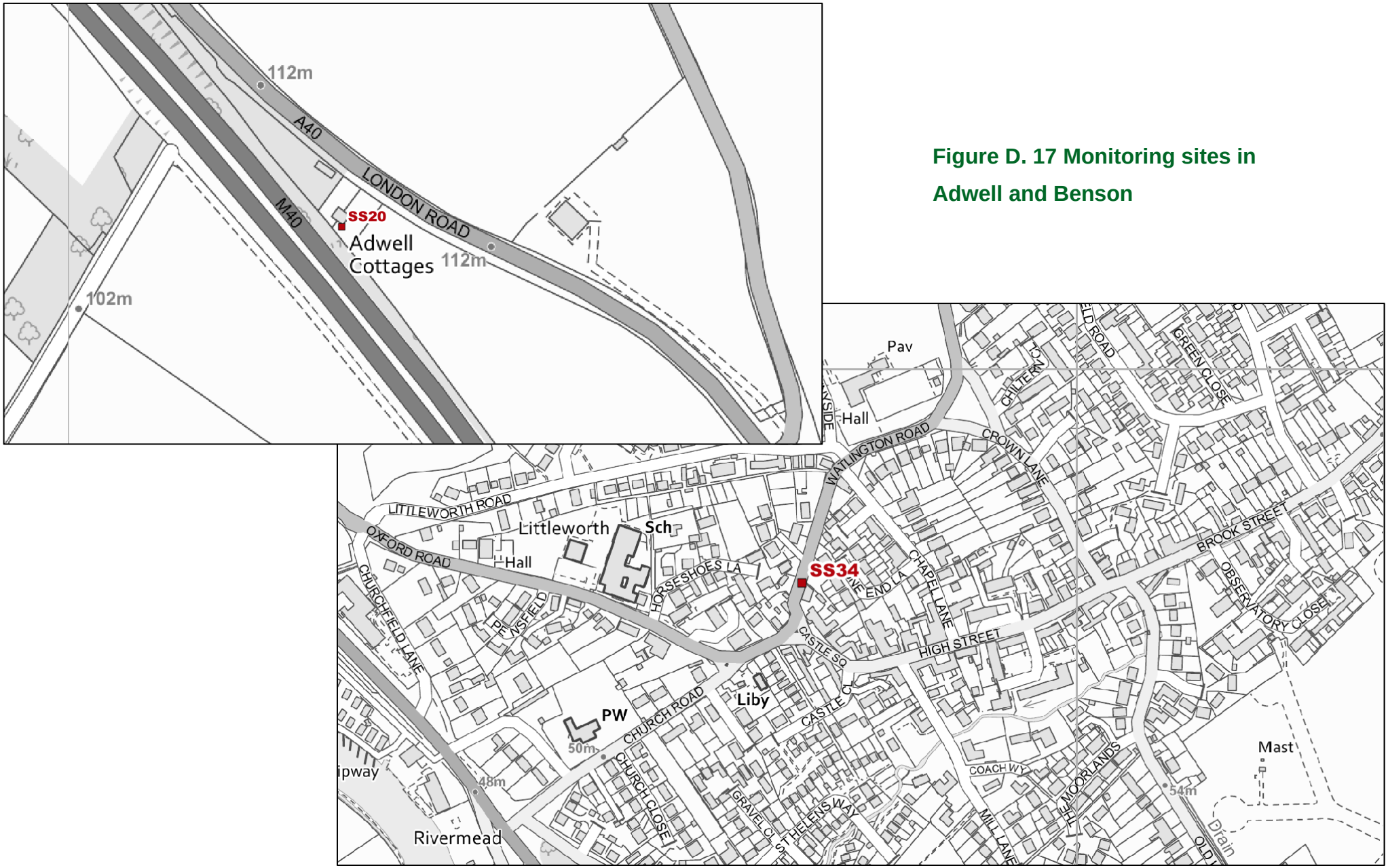


Figure D. 17 Monitoring sites in Adwell and Benson

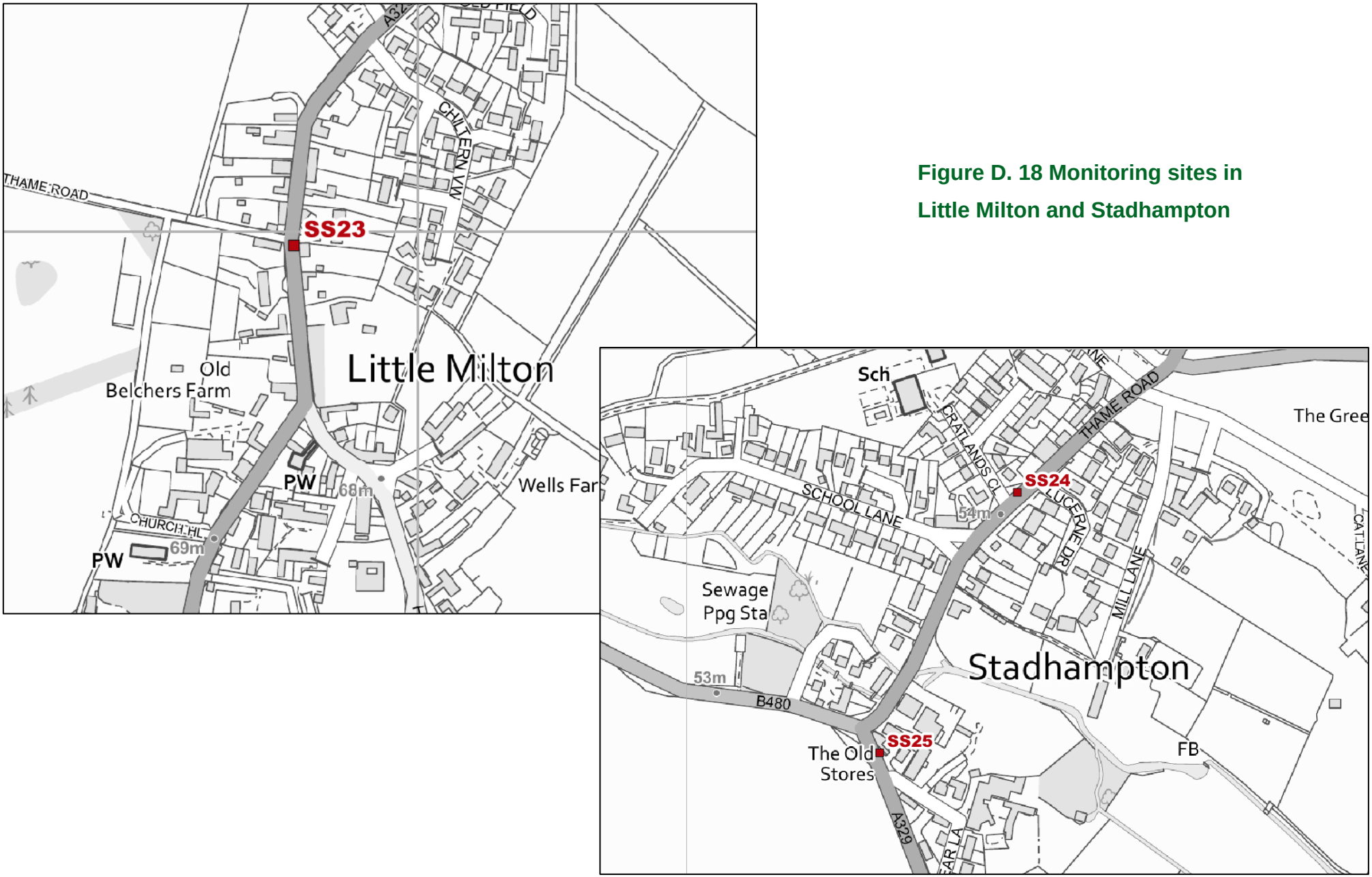


Figure D. 18 Monitoring sites in Little Milton and Stadhampton

Figure D. 19 Monitoring sites in Kennington and South Hinksey

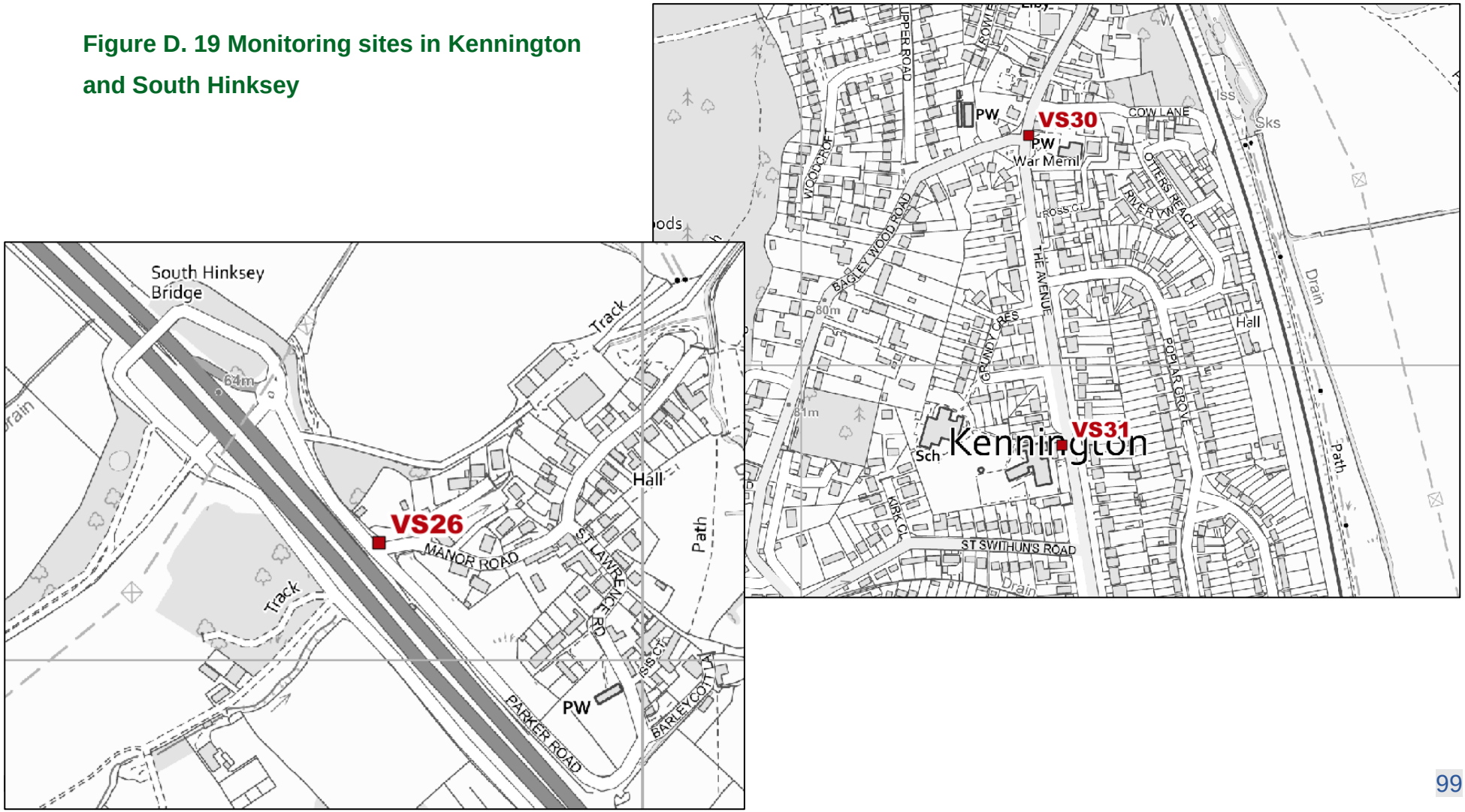


Figure D. 20 Monitoring sites in Fyfield, Tubney and Bessels Leigh

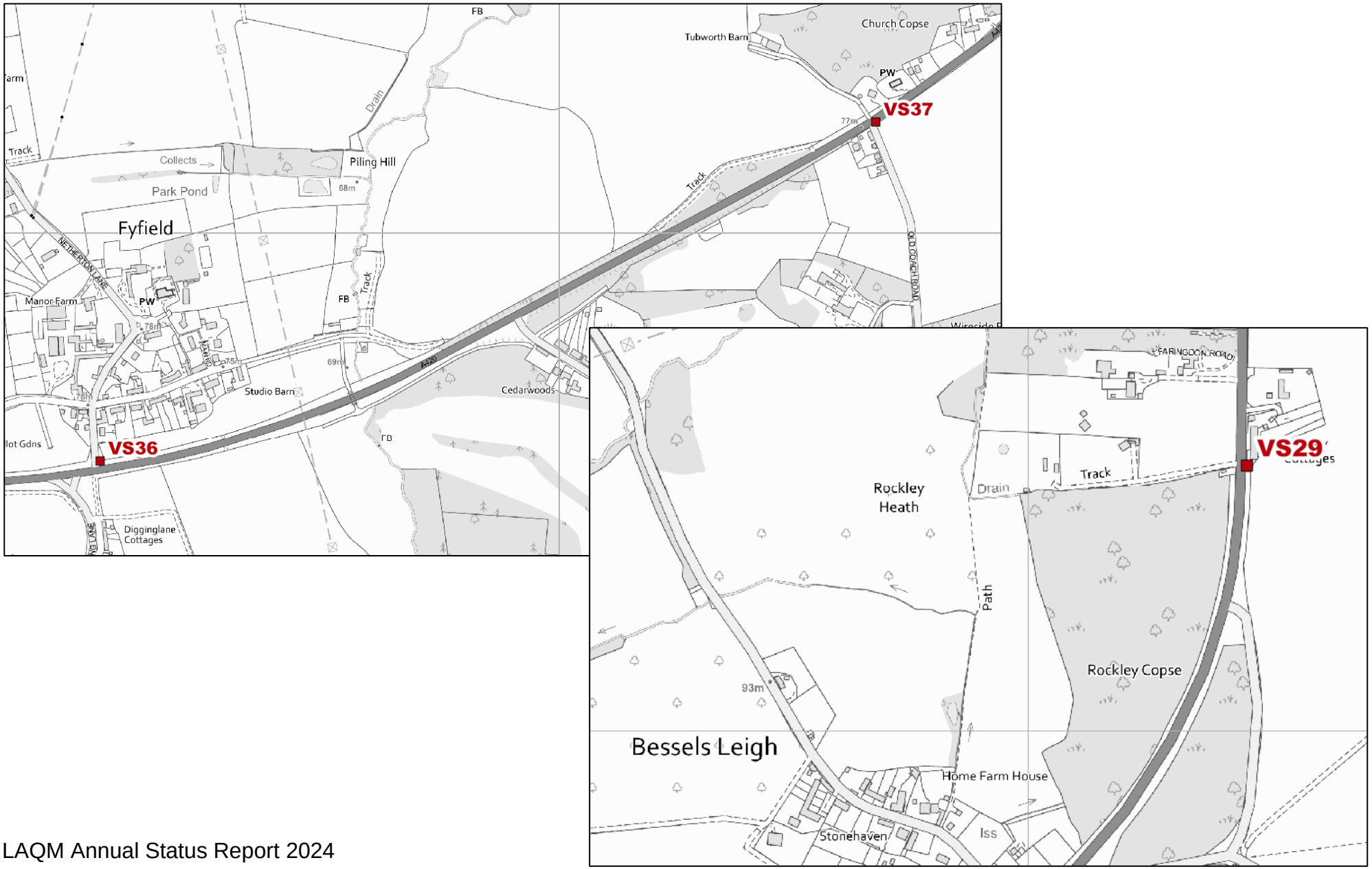
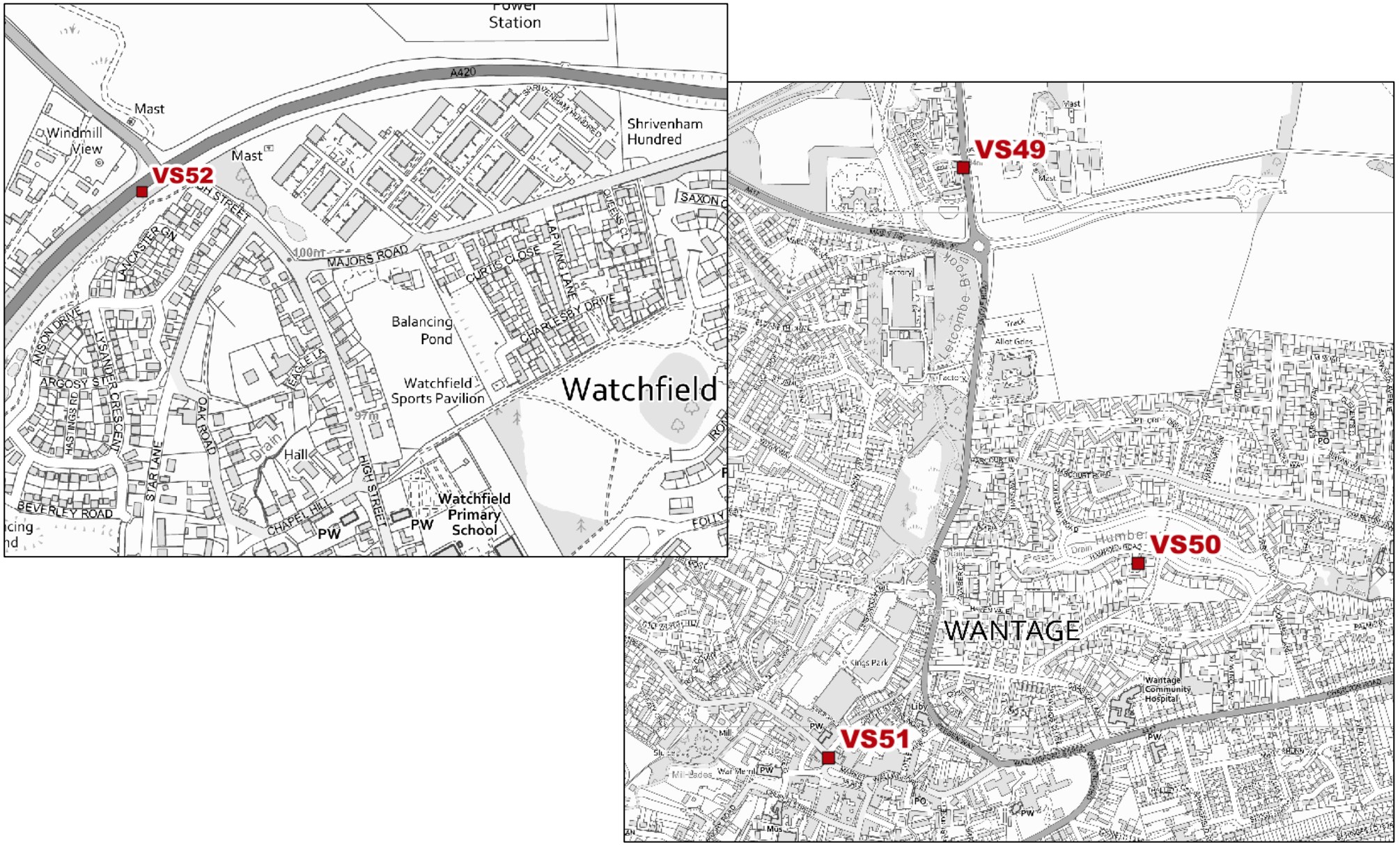


Figure D. 21 Monitoring sites in Wantage and Watchfield



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[8]

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

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
Diffusion tubes	Diffusion tubes are passive pollution samplers. They consist of small plastic tubes containing a chemical reagent to absorb the pollutant to be measured directly from the air. For further information please see https://laqm.defra.gov.uk/air-quality/air-quality-assessment/diffusion-tubes-overview/
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

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