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Royal Borough
of Windsor &
Maidenhead

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

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Executive Summary: Air Quality in Our Area

Air Quality in Royal Borough of Windsor and Maidenhead

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year¹.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution².

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})	<p>Particulate matter is everything in the air that is not a gas.</p> <p>Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes.</p> <p>PM₁₀ refers to particles under 10 micrometres. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres.</p>

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

The Council declared five Air Quality Management Areas (AQMAs) for exceedance of the annual mean Air Quality Objective (AQO) for nitrogen dioxide (NO₂) due to emissions from road vehicles: in Windsor (2 areas), Maidenhead, Bray (near the M4) and Wraysbury (near the M25). The details of the AQMAs can be viewed online:

https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315

Air quality across the Borough is generally good and in recent years has markedly improved. Monitoring results in 2023 show a continued compliance with the air quality objectives.

The recorded concentrations within four AQMAs have been below 10% of the objective level of 40 µg/m³ (<36 µg/m³) for a consecutive five-year period. The Imperial Road/ St Leonards Road Junction AQMA has recorded concentrations below 36 µg/m³ for a consecutive seven-year period.

The Council has a programme of measures in place to continue to improve local air quality. These form an integral part of the Local Transport Plan (LTP) which informs the Highways Capital Programme with the Council's efforts to improve air quality. The LTP also implements a suite of 'soft' measures and smarter choices: influencing better travel choices, such as encouraging public transport use, walking and cycling that can all contribute to reduced road traffic emissions.

Active travel has become a more integral part of sustainable travel and improving the public health, not only through the reduction of vehicle trips and air pollution but in encouraging daily exercise. The Council has adopted a Local Cycling and Walking Infrastructure Plan (LCWIP) to help identify how to make improvements supporting cycling and walking, and where investment is needed in the short, medium and long term.

Actions to Improve Air Quality

The Environmental Improvement Plan³ 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

³ Defra. Environmental Improvement Plan 2023, January 2023

Quality Strategy⁴ provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero⁵ 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.

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 Council has extensive measures and plans to continue to improve local air quality.

Maidenhead

The [Maidenhead Town Centre Area Action Plan](#) (AAP), a plan to rejuvenate Maidenhead town centre and the surrounding area includes schemes to reduce congestion and improve air quality.

Maidenhead Station Access scheme, construction of a multi-modal transport interchange for Maidenhead station including facilities for buses, taxis, a new cycle parking hub. The access scheme is required to cater for the predicted increase in passengers and vehicles accessing the station as a result of electrification of the Great Western Main Line, the Elizabeth Line and the Western Rail Link to Heathrow. Parking displaced from the rail station forecourt is provided in the Stafferton Way multi-storey car park.

Maidenhead Missing Links scheme has been completed. This is a cycle route that connects current and future residential areas in the north with the town centre and railway station, making active travel across Maidenhead safer and more convenient.

Maidenhead Housing Sites Enabling Works. The improvements needed to help with additional traffic associated with the regeneration of the town centre and the development of the Maidenhead Golf Course site have now been completed leading to improvements in traffic flow.

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

Improvements to the crossing between the station and town centre and associated changes to the layout of the A308 / Queen Street junction, as well as a new traffic signal scheme have been completed. A two-way traffic operation scheme on Broadway has been completed, this is allowing vehicles to turn left or right out of the Broadway (Nicholsons) car park and left or right onto Frascati Way. Drivers are now able to access the M4, A308 and A4 from the car park without having to travel through the town centre.

Stafferton Way Link Road has been completed for some time, connecting the A4 and A308. The link helps to reduce congestion in front of the rail station and at critical junctions along the A4.

Bray

The M4 Smart Motorway scheme has been completed. This will use the latest technology to improve journeys by monitoring traffic flow and setting speed limits accordingly to keep traffic moving smoothly instead of continually stopping and starting.

A scheme for the widening of the A308 between Holyport Road roundabout and Upper Bray Road has been completed for some time. This has improved traffic flow at the junction and reduced congestion at peak times. There are new proposals to further improve the junction by replacing the mini roundabout with a traffic light system and creating safer and easier crossing points for walking and cycling.

Windsor

The Local Cycling & Walking Infrastructure Plan proposes a suite of prioritised investment across the borough to make walking a natural choice for more of the short, everyday journeys people make to, from and around the town. Stovell Road and Barry Avenue cycling and walking routes received additional 'quietway' route improvements.

Changes to the operation of the traffic signals at the Imperial Road/St Leonards Road and Clewer Hill Road / Winkfield Road junctions were completed in July 2016. The changes have reduced journey times and improved traffic flow at this bottleneck.

Other areas where improvements have been delivered include the Maidenhead Road/Stovell Road junction where traffic signals have been replaced with a roundabout to improve traffic flow and the Arthur Road/Alma Road junction where coaches are banned from turning right onto Arthur Road when leaving the coach park.

Conclusions and Priorities

Monitoring Data

Annual mean values for NO₂ have significantly decreased since 2015. The maximum NO₂ concentrations in 2019 within all five AQMAs, when distance corrected to nearest relevant exposure (i.e. building façade of a residential property), was below 10% the annual mean objective (<36 µg/m³).

The monitoring results in 2023 across the monitoring network show continued compliance with the AQO with concentrations below 36 µg/m³ for five consecutive years. The maximum NO₂ concentration in the Imperial Road/ St Leonards Road Junction AQMA has been below 10% of the objective (<36 µg/m³) for seven consecutive years.

Overall monitoring results in 2023 show a further decrease with levels comparable to that recorded in 2020 during Covid-19. Defra's Technical Guidance LAQM TG22 states that there should not be any declared AQMAs for which compliance with the relevant objective has been achieved for a consecutive five-year period. The decreasing trends in NO₂ concentrations within the Royal Borough have been confirmed in 2023, consequently the council is working towards revoking all five AQMAs in 2024.

The PM₁₀ results remain well below the AQOs with an annual mean concentration of 20.8 µg/m³ in 2023. It should be noted that changes in concentrations can occur from year to year due to weather conditions. The council has installed air quality sensors to monitor PM₁₀ and PM_{2.5} within each of the five AQMAs, monitoring results will be included in the 2025 ASR.

Planned Measures

The regeneration of Maidenhead town centre and the arrival of the Elizabeth Line represent both a challenge and an opportunity in driving forward air quality improvements in the area.

The Royal Borough has appointed Countryside as Joint Venture Partners to redevelop four council owned town centre sites accumulating to approximately 1200 new homes across 6.3 hectares of land, while other developers are independently progressing with plans for other sites within and around the town centre. All these sites are being developed with low levels of on-site parking and include residential and workplace travel plans designed to promote sustainable travel patterns. Opportunities are being taken to review the operation and layout of the town centre road network to reduce unnecessary through traffic and improve provision for active travel modes.

The Local Cycling & Walking Infrastructure Plan was adopted in 2022 and is progressing a new pipeline of capital investment in walking and cycling facilities across the borough. This included delivery of improvements to a key 'quietway' route into Windsor in 2023, and work is underway in Maidenhead town centre to introduce an improved environment for pedestrians and people cycling on King Street.

An Electric Vehicle Chargepoint Implementation Plan outlining how the Royal Borough will bring forward hundreds more charging points for electric vehicles, helping to support the move to greener travel, has been approved in February 2023. In spring 2024, the borough was awarded Local EV Infrastructure funding from the government, to support the accelerated rollout of chargepoints for home charging on-street.

Windsor Visitor Economy scheme has introduced substantial public realm enhancements and the pedestrianisation of Castle Hill in proximity of Windsor Castle, as well as a series of small-scale wayfinding interventions throughout the town. The purpose of the improvements is to improve the environment for pedestrians, with pedestrianisation and enhancement of the area outside Windsor Castle presenting both safety and air quality benefits. Furthermore, the wider wayfinding interventions shall improve visitor routing along main routes within the town centre, primarily between key transport nodes and Windsor Castle.

A no-idling campaign with temporary signs 'No Idling' and 'Back to school, give our kids space' outside schools across the Borough was delivered in April and May 2021. The campaign helped schools manage traffic as they returned to school. Following positive feedback received from residents and local businesses smaller lamppost signs are now display outside schools and near businesses or shops around the borough. The signs will remain in place for the foreseeable future.

The borough has introduced its first, trial 'school street' in April 2024, in Cox Green. The initiative is designed to promote walking and cycling – including 'park and stride' arrangements – for children traveling to school, for cleaner air at the school gate.

New LTP and Air Quality Strategy

The Royal Borough is updating the LTP. This strategic plan will identify how the transport networks and services are performing now, and where changes and investment will be needed in the future. The new LTP will be an overarching document pulling together the progress made in recent years as well as building on recently adopted new strategies, including the Environment and Climate Strategy, and the LCWIP.

In accordance with Defra's Technical Guidance LAQM TG22, following the revocation of the AQMAs the council will draw up a local Air Quality Strategy. The strategy will draw on content from the ASR and form an integral part of the emerging LTP.

Local Engagement and How to get Involved

Public consultations and local residents' surveys are used to inform the Council's decisions and policies.

In 2023/24 the Council consulted on,

- Local Transport Plan: Vision and Themes
- Norfolk Park area consultation
- Supported bus services
- 20mph in Stovell Road area, Windsor
- St Leonards Road, Windsor - Upgraded pedestrian crossing near Bolton Road

In addition to commissioning its own residents' survey, the Council also takes part in the National Highways and Transport (NHT) annual benchmarking survey where residents can give their views on a wide range of transport issues. The results are used to inform future investment programmes. For further information visit,

<https://www.rbwm.gov.uk/home/council-and-democracy/consultations/transport-consultations> or email the Transport team: traffic@rbwm.gov.uk

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of the Royal Borough of Windsor and Maidenhead Council with the support and agreement of the following officers and departments:

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This ASR has been sent to the council's Head of Public Health

If you have any comments on this ASR please send them to Feliciano Cirimele at:

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1 Local Air Quality Management

This report provides an overview of air quality in Royal Borough of Windsor and Maidenhead during 2022. 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 Royal Borough of Windsor and Maidenhead 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 the Royal Borough of Windsor and Maidenhead can be found in Table 2.1. The table presents a description of the five AQMAs that are currently designated within the Royal Borough of Windsor and Maidenhead. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designation(s) are as follows:

- NO₂ annual mean

The Royal Borough of Windsor and Maidenhead will revoke the five AQMAs in 2024.

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
Imperial Road/ St Leonards Road Junction	Declared March 2014	NO2 annual mean	An area encompassing the junction of Imperial Road and Leonards Road	NO	52.5	31.1	7 years	2015 - Update November 2020	https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315
Windsor	Declared February 2005, Amended July 2009	NO2 annual mean	An enlarged area encompassing parts of west Windsor	NO	52	28.9	5 years	2009 - Update November 2020	https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315
Maidenhead	Declared February 2005, Amended July 2009	NO2 annual mean	An enlarged area encompassing the town centre.	NO	51.7	29	5 years	2009 - Update November 2020	https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315
Bray/M4	Declared July 2009	NO2 annual mean	An area encompassing part of Bray around the place where the M4 crosses over the A308 Windsor Road	YES	59.8	28.9	5 years	2015 - Update November 2020	https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315

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
Wraysbury/M25	Declared March 2014	NO2 annual mean	The area runs along the B376 and intersects with the M25 near junction 13	YES	46.9	27.7	5 years	2015 - Update November 2020	https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=315

- Royal Borough of Windsor and Maidenhead confirm the information on UK-Air regarding their AQMA(s) is up to date.
- Royal Borough of Windsor and Maidenhead confirm that all current AQAPs have been submitted to Defra.

2.2 Progress and Impact of Measures to address Air Quality in the Royal Borough of Windsor and Maidenhead

Defra's appraisal of last year's ASR concluded,

The report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

- 1. Air quality trends in RBWM have been presented, with a robust comparison to air quality objectives. Graphs have been provided which clearly illustrate trends.*
- 2. RBWM have referenced the Public Health Outcomes Framework and have reported the latest value for indicator D01. This has been compared to the slightly lower national value.*
- 3. The Council do not monitor for PM_{2.5}, but they have estimated this from monitored PM₁₀ concentrations, as well as reporting concentrations from Defra mapped background concentrations for PM_{2.5}. RBWM has identified some measures from their AQAP which will concurrently address PM_{2.5} concentrations. This demonstrates the Councils commitment to reducing PM_{2.5} emissions and concentrations in the Borough.*
- 4. There are 5 AQMAs in the RBWM, all of which have been compliant for over 3 consecutive years. The Council is strongly encouraged to consider revocation of their AQMAs, especially the Imperial Road/St Leonards Junction AQMA which has been compliant for 6 years. RBWM should provide an update on this in their next ASR.*
- 5. It would be beneficial to clarify compliance within AQMAs has been assessed against distance corrected values, and not the values reported in Table A.4. The data in Table A.4 suggests compliance was only achieved in 2020 for most AQMAs and could therefore be a source of confusion. This could be a footnote or short sentence elaborating on this.*
- 6. The council have applied a local bias adjustment factor derived from both of their co-location studies. This is welcomed. However, it is advisable to also show the national bias adjustment factor for comparison and provide a more detailed discussion of the Councils justification of which factor was ultimately chosen.*
- 7. RBWM had one site with low data capture and therefore required annualisation. The annualisation factor has been calculated using two of the Councils automatic*

sites, WM4 and WM2. WM2 is a roadside site. LAQM.TG(22) states: "These sites should be background (Urban Background, Suburban or Rural) sites to avoid any very local effects that may occur at Urban Centre, Roadside or Kerbside sites. If no background sites are available, and the site to be annualised is itself an Urban Centre, Roadside or Kerbside site, then it is permissible to annualise using roadside or kerbside sites rather than background sites, though this should be clearly stated in the annual report.". RBWM should use a continuous monitoring background site from the Defra AURN network instead of WM2, or at least state there are none within 50-mile radius with a sufficient data capture.

8. *The Borough has referred to the Workplace Analysis Scheme for Proficiency (WASP) programme. This is out of date; the programme is no longer called WASP and has been replaced by the AIR-PT scheme.*
9. *RBWM have include maps of monitoring locations located within their AQMAs, but not any maps of monitoring locations outside of AQMAs. These should be included.*

The Royal Borough of Windsor and Maidenhead has 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. Twenty-six measures are included within Table 2.2, with the type of measure and the progress the Royal Borough of Windsor and Maidenhead 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.

2.2.1 Windsor AQMA

Redesign of Clarence Road roundabout

New roundabout layout significantly improved congestion / air quality

Windsor Parking and Transport Strategy

Car parking includes a ring of small-scale park and ride sites.

Heathrow Bus Funding Agreement

Hybrid and low-emission buses are used on bus services to Heathrow Airport, and bus frequencies have been increased.

Supported bus services

Supported bus services under RBWM contract require bus operators to use Euro V buses or better.

Arthur Road

A signal-controlled roundabout has been replaced with a roundabout, other signals have been upgraded to MOVA operation, and coaches are banned from turning right onto Arthur Road when leaving the coach park.

Windsor 20mph

A 20mph speed limit has been implemented in Windsor town centre which may encourage greater numbers of pedestrians and cyclists and improve air quality.

Cycling

Links between Dedworth and Windsor Town Centre have been improved, including the A308 / Barry Avenue cycle route which has this year received additional 'quietway' cycle route improvements including re-prioritised junctions, path widening and enhanced lighting. Proposals exist for further improvements, derived from the Council's Local Cycling & Walking Infrastructure Plan.

Walking

The Local Cycling & Walking Infrastructure Plan proposes a suite of prioritised investment across the borough to make walking a natural choice for more of the short, everyday journeys people make to, from and around the town. This year, widened footways, side-road entry treatments, accessible crossings and vegetation clearance has created an improved 'quietway' walking route along Stovell Road and Barry Avenue. In the Springfield Road area, a new 20 mph speed has been introduced in part to create a safer and more comfortable walking and cycling environment.

Windsor Visitor Economy Scheme

£1.56 million of Local Growth Deal funding has been secured from the Thames Valley Berkshire Local Enterprise Partnership for the 'Windsor Visitor Economy' scheme. The scheme comprises of public realm enhancements and pedestrianisation of Castle Hill in proximity of Windsor Castle, as well as a series of small-scale wayfinding interventions throughout the town. The purpose of the improvements is to improve the environment for pedestrians, with pedestrianisation and enhancement of the area outside Windsor Castle presenting both safety and air quality benefits. Furthermore, the wider wayfinding

interventions shall improve visitor routing along main routes within the town centre, primarily between key transport nodes and Windsor Castle.

Electric Vehicle Charging Points in Windsor

Public chargepoints have been installed at Shell Windsor (Clarence Road), Albert Street, Alma Road, Park Street, Frances Road and St Leonards Road. The council has adopted a new EV Chargepoint Implementation Plan to extend and accelerate the rollout further, and has been awarded government Local EV Infrastructure funding to accelerate the rollout of EV chargepoints for dwellings without driveways.

2.2.2 Imperial Road/St Leonards Road Junction AQMA

New traffic management schemes

Changes to the operation of the traffic signals at the Imperial Road/St Leonards Road and Clewer Hill Road / Winkfield Road junctions were completed in July 2016. The changes have reduced journey times and improved traffic flow. Repositioning of induction loops to improve reliability of the signals was completed in 2019.

LEGOLAND travel plan and traffic signage

The Borough has secured a travel plan to manage staff, hotel guest and day visitor travel to and from the resort. Improved traffic signage has been introduced to encourage visitors to use alternative routes that avoid congested junctions. The aim is to minimise the impact of visitor traffic on the Windsor AQMAs.

2.2.3 Wraysbury/M25 – Junction 13 AQMA

Motorway Emissions

Monitoring results within the AQMA continue to show compliance with the AQOs. Should future monitoring results indicate that air quality measures may be necessary the Council will engage with Highways England to explore possible schemes for the AQMA.

2.2.4 Bray/M4 AQMA

Motorway Emissions

The M4 Smart Motorway scheme has been completed. This will use the latest technology to improve journeys by monitoring traffic flow and setting speed limits accordingly to keep traffic moving smoothly instead of continually stopping and starting.

Junction Improvements

A scheme for the widening of the A308 between Holyport Road roundabout and Upper Bray Road has been completed for some time. This has improved traffic flow at the

junction and reduced congestion at peak times. In addition, the completed Stafferton Way Link Road helps to reduce the number of vehicles travelling to Maidenhead turning right into Upper Bray Road. There are new proposals to further improve the junction by replacing the mini roundabout with a higher capacity roundabout and creating safer and easier crossing points for walking and cycling.

2.2.5 Maidenhead AQMA

Travel Plans

The Council requires all major new developments to deliver residential and / or workplace travel plans. This is helping to reduce car trips and encourage more sustainable travel patterns. The Council is also exploring options with developers and providers for expanding a car club in the town centre to serve a number of major new developments in the area. Also, Maidenhead is part of the easitNETWORK, a project to support and encourage businesses in Maidenhead to adopt sustainable transport options with discounts on rail travel and other sustainable travel products and initiatives:

<https://www.easit.org.uk/easitmaidenhead>.

Stafferton Way Link Road

Stafferton Way Link Road has been completed, connecting the A4 and A308 via Oldfield Road and Stafferton Way. The link helps to reduce congestion in front of the rail station and at critical junctions along the A4. The roundabout at the junction of Stafferton Way and A308 Braywick Road has been enlarged with extra traffic lanes to reduce congestion at this point allowing easier access to Stafferton Way and alternative routes.

Chapel Arches

Residential and workplace travel plans have been secured for the Chapel Arches development. Improvements have been secured for local walking and cycling routes as part of the Chapel Arches development. This includes a contra-flow cycle lane on the eastern section of High Street and a raised table to aid pedestrian crossing movements, as well as public realm improvements. The improvements to Chapel Arches area have been completed with the contraflow cycle lane and wider footpaths to encourage increased walking and cycling.

Maidenhead Station Access

£3.75 million of Growth Deal funding was secured from the Thames Valley Berkshire Local Enterprise Partnership for the 'Maidenhead Station Access' scheme. The scheme has delivered a multi-modal transport interchange, including facilities for buses, taxis and

passenger drop-off/pick-up. A new cycle parking hub with capacity for 300 bikes and improvements to the crossing between the station and town centre and associated changes to the layout of the A308 / Queen Street junction have been completed, with CCTV improvements completed this year to give greater confidence to leave cycles at this location. Also a two-way traffic operation scheme on Broadway has been completed, this is allowing vehicles to turn left or right out of the Broadway (Nicholsons) car park and left or right onto Frascati Way. Drivers are now able to access the M4, A308 and A4 from the car park without having to travel through the town centre. Parking displaced from the rail station forecourt has been provided in a new facility on Stafferton Way.

Maidenhead Missing Links

£2.42 million of Growth Deal funding was secured from the Thames Valley Berkshire Local Enterprise Partnership for the 'Maidenhead Missing Links' scheme. This connects North Maidenhead to major development sites in and around Maidenhead town centre and onwards to Maidenhead Station. The scheme completes a new 'inner-ring' for pedestrians and cyclists and will feature crossings of Strand Water and the A4. The scheme is completed.

Maidenhead Housing Sites Enabling Works

£4.21 million Local Growth Deal funding and £1.07 million Business Rates Retention Pilot funding was secured from the Thames Valley Berkshire Local Enterprise Partnership for the 'Maidenhead Housing Sites Enabling Works'. This will deliver capacity improvements at six key junctions around Maidenhead:

- A308(M) / A308 / A330 / The Bingham;
- A4 / A308;
- A4 / B4447 / Market Street;
- A4 / B3028 / Lassell Gardens;
- A4 / A4094 / Guards Club Road;
- A308 / Stafferton Way / Rushington Avenue.

The improvements are needed to cope with additional traffic associated with the regeneration of the town centre and the development of the Maidenhead Golf Course site. They will also enable commercial development to come forward in other parts of Maidenhead. These scheme alterations have now been completed leading to improvements in traffic flow.

Electric Vehicle Chargepoints in Maidenhead

Public chargepoints have been installed at Hines Meadow Car Park, College Road, Cromwell Road, Lower Boyndon Road, Braywick Leisure Centre and Vicus Way car park.

The council has adopted a new EV Chargepoint Implementation Plan to extend and accelerate the rollout further.

2.2.6 Future Priorities

The Royal Borough of Windsor and Maidenhead's priorities for the coming year are:

- The Electric Vehicle Chargepoint Implementation Plan approved in February 2023. In March 2024, the borough was awarded Local Electric Vehicle Infrastructure (LEVI) Capital Fund from the government, to support the accelerated rollout of chargepoints. The implementation plan helps to support the move to greener travel and ensure charging provision for electric vehicles keeps pace with demand. The next steps will involve discussions with the DfT in advance of proceeding to tender to identify suitable project partners. Further project development work and consultation to help identify specific chargepoint locations and roll-out timetable will be carried out once suppliers have been identified.
- The borough is developing capital investment schemes in improved walking and cycling facilities in the Maidenhead and Windsor, for delivery over the next 2 years.
- The borough has introduced its first, trial 'school street' in April 2024, in Cox Green. The initiative is designed to promote walking and cycling – including 'park and stride' arrangements – for children traveling to school, for cleaner air at the school gate.

The Royal Borough of Windsor and Maidenhead has achieved compliance with the AQMAs and anticipates that the measures stated above and in [Table 2.2](#) including the top three key measures will continue to improve air quality.

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
26	Encourage the use of electric vehicles by providing public charging points	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2018	2035	RBWM Transport Dept.	OLEV, CIL LEVI	No	Funded	£500k - £1m	Implementation plan			<p>The borough adopted an EV Chargepoint Implementation Plan in February 2023</p> <p>The borough is targeting c. 600 on-street public chargepoints, c. 125 car park public chargepoints and c. 100 rapid recharge charging sockets at service stations by 2035</p> <p>Currently there are 69 car park public chargepoints, 39 on street chargepoints and 2 rapid recharge points – many of these delivered in 2022- This is supplemented by a wide network of non-public chargepoints and home charging</p>	
9	Pedestrian and Cycling Facilities. New/improved routes and crossing facilities	Transport Planning and Infrastructure	Cycle network	2012	2032	RBWM Transport	Council	NO	Funded		Rolling programme		See measure 2	<p>The borough has 19.5km of traffic-free paths, and an additional 19.6km of footways that can be used by people cycling-</p> <p>The borough adopted a Local Cycling & Walking Infrastructure Plan in 2022 and is progressing a new pipeline of capital investment in walking and cycling facilities across the borough.</p>	
11	Safer routes to schools	Promoting Travel Alternatives	Promotion of cycling and walking	2014	Ongoing	RBWM Transport	Council	NO	Rolling, prioritised capital programme	Rolling, prioritised capital programme	Rolling programme			<p>First school street pilot launched at St Adrian's Close, Cox Green in April 2024</p>	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Awareness Campaigns Organise public events to increase knowledge and understanding of local air quality conditions	Public Information	Via other mechanisms	2012	2026	RBWM Environmental Health	Council	NO	Funded	< £10k	Implementation			Cycle Forum Jul 2016 Windsor Town Forum Feb, Oct 2016, Nov 2019, Nov2020	Public meetings
2	Education Programmes 1. Road safety and cycle training with primary schools. 2. Deployment of Speed Indicator Device (SID) / Speed Limit Reminder (SLR)	Promoting Travel Alternatives	Promotion of cycling	2012	2032	RBWM Transport / BeSpoke Cycling Instruction / Department for Transport. Before April 2022: also Project Centre	Council/Central Government	NO	Funded	£10k - 50k	Implementation	3%	Reduction in car journeys Monitored via survey	Ongoing delivery	The 15% reduction in car journeys To deliver a 3% reduction in emission within AQMAs in combination with measure 3, 9, 11 and 13
3	Travel information & advice - Providing information on available travel options	Public Information	Via other mechanisms	2012	2032	RBWM Transport // Bucks County Council / transport operators	Council	NO	Funded	£10k - 50k	Implementation	3% reduction in emission in combination with measure 2, 9, 11 and 13	Number of local bus passenger journeys originating in the authority area undertaken each year	<p>Bus Service Improvement Plan published, with bid (not funded) submitted to government for funding to grow passenger numbers</p> <p>Funding support for Traveline South East public transport information service</p> <p>Bus operators provide printed at-stop information for commercial bus services</p> <p>RBWM provides at-stop information for supported bus services</p> <p>Joint work with Bucks County Council on real-time passenger information. Real-time information screens have been</p>	<p>Pre-pandemic (FY 2018-19), DfT reported 1.4 million local bus journeys in the borough (source: DfT Table BUS0109a)</p> <p>Local bus journey numbers are yet to fully recover post-pandemic</p> <p>Information to help people plan journeys NHT indicator - RBWM below NHT average</p> <p>Updated passenger information boards ('where to catch your bus') were installed in December</p>

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
														provided at key bus stops and other locations, such as Maidenhead Library and St Mark's Hospital	2020 in town centres stops

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
4	Travel Plans - Promote and monitor travel plans for workplaces, hospitals and schools. Secure Travel Plans through the Planning process. Encourage development of travel plans on a voluntary basis. Produce guidance for all Travel Plans on the web	Promoting Travel Alternatives	Workplace Travel Planning	2012	2032	RBWM Transport & Infrastructure teams	Developers & Council funding	NO	Funded	£10k - 50k	Implementation	3%	Achieve 100% Schools Travel Plans. < 70% driving to work in year 1 <60% by year 3 of the travel plan	east MAIDENHEAD - offers travel incentives to participating organisations, including discounted rail fares, cycle hire, bike discounts, electric car discounts- 100% of state schools and 3 independent schools have travel plans- 4 School Travel Plans were updated / approved in 2018/19 7 new residential / workplace travel plans were approved in 2018/19 2020/21: RBWM signed up for Modeshift STARS/ All schools are being encouraged to upload information onto the Modeshift database taking away the need for paper-based travel plans. First schools applying for Modeshift accreditation expected in 2022- RBWM encourage/facilitate home-working	Travel plans can achieve a reduction in car driver trips. Combining all travel plans a 3% reduction in emission reduction could be achieved
5	Lift sharing - To develop an area-wide lift-sharing. Establishing self-contained lift-sharing schemes	Alternatives to private vehicle use	Car & lift sharing schemes	2014	2032	RBWM Transport.		NO	Not Funded		Implementation			A local lift share scheme was set up in 2014	

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
6	E-services - Providing online services to reduce the need to travel	Promoting Travel Alternatives	Other	2012	2032	RBWM	Council	NO			Implementation			<p>a) Applications: library membership, school admissions, planning applications, parking permits, home to school transport, and on-street EV charge points</p> <p>b) Payments - Council invoices, Council tax, business rates, parking fines, housing benefit repayment</p> <p>c) Reporting - Council complaints, highway maintenance, pollution, abandoned vehicles, rights of way, and benefit fraud</p>	
7	Ticketing solutions - Promoting public transport	Promoting Travel Alternatives	Other	2012	2032	RBWM Transport	Council	NO			Implementation			<p>Bus Service Improvement Plan published, with bid (not funded) submitted to government for funding to improve promotion of buses</p> <p>2 for 1 rail / entry ticket offer available for LEGOLAND</p> <p>Plus Bus tickets provide discounted bus travel in Maidenhead and Windsor for rail users</p> <p>Smart cards and mobile ticketing offered by most local bus operators</p>	<p>Most operators now have mobile tickets but there no unified ticketing system within the borough</p>

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
8	Urban traffic control - Updating and extending the current UTC, in conjunction with better traffic surveys.	Traffic Management	UTC, Congestion management, traffic reduction	2012	2032	RBWM Highways / Project Centre.	Council	NO	Funded		Implementation	3%	Average journey time	<p>MOVA installed at key junctions</p> <p>Variable Message Signs in Maidenhead</p> <p>Alternative routes signed to LEGOLAND to encourage motorists to avoid the most congested routes through Windsor</p> <p>Advisory HGV route signed in Maidenhead</p> <p>Advisory coach route signed in Windsor</p> <p>30 mph speed limit extension on A308 Braywick Road</p>	
9	Pedestrian and Cycling Facilities. New/improved routes and crossing facilities	Transport Planning and Infrastructure	Cycle network	2012	2032	RBWM Transport	Council	NO	Funded		Rolling programme	3%	See measure 2	<p>The borough has 19.5km of traffic-free paths, and an additional 19.6km of footways that can be used by people cycling-</p> <p>The borough adopted a Local Cycling & Walking Infrastructure Plan in 2022 and is progressing a new pipeline of capital investment in walking and cycling facilities across the borough</p>	Reduction of emission of 3% in conjunction with measure 2, 11 and 13

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
10	Junction Improvements - Modifying the layout of junctions experiencing chronic congestion	Traffic Management	UTC, Congestion management, traffic reduction	2015	2021	RBWM Highways / Project Centre	Council	NO	Funded	£1 million - £10 million	Completed	3%	Average journey time	<p>MOVA upgrades at</p> <ul style="list-style-type: none"> - Imperial Rd/ St Leonards Rd Junction (AQMA). - Clarence Road / Alma Road - A308 / Queen Street & A308 /Broadway junctions <p>Junction Improvements, completed:</p> <ul style="list-style-type: none"> -Right-turn lane extension A308/Upper Bray Road junction (AQMA) -Clarence Road / Victoria Street / St Leonards Road – raised table and upgraded signals / pedestrian crossing -Maidenhead Housing Sites Enabling Works' to deliver capacity improvements at six key junctions onthe A4 and A308 <p>- 2022: Existing pedestrian crossing in Clewer Hill Road, Windsor converted to raised crossing as part of traffic speed reduction measures to assist pedestrian flow</p>	
11	Safer routes to schools - Identify priorities for investment through School Travel Plans and take forward priority improvements through capital programmes	Promoting Travel Alternatives	Promotion of cycling and walking	2014	Ongoing	RBWM Transport	Council	NO	Rolling, prioritised capital programme	Rolling, prioritised capital programme	Rolling programme	3%	See measure 2	<p>A refuge island on A4 Bath Rd, Maidenhead was installed in November 2019. Funded from the 2019/20 Safer Routes to School budget</p> <p>2019/20 Courthouse Road / St Marks Road / St Marks Crescent – 3no. Raised Zebra crossings installed</p>	

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
														First school street pilot launched at St Adrian's Close, Cox Green in April 2024	
12	Parking enforcement - Decriminalised parking enforcement	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway												Completed in 2009
13	Pedestrian / Cycling Facilities - New/improved routes & crossing facilities	Transport Planning and Infrastructure	Cycle network	2016	2032	RBWM Transport	Council	NO			completed			The Borough's Big Conversation exercise has led to the development of a Local Cycling & Walking Infrastructure Plan. Adopted by Cabinet in June 2022	Completed, see measure 9
14	Supported bus services - Providing financial support to local bus services	Promoting Low Emission Transport	Other	2015	2032	RBWM Transport	Council	NO	Funded		Ongoing			The borough supports a network of services that are not currently commercially viable	Increasing cost of operating bus services means that although the borough has increased its budget for supported bus services, this will deliver fewer services going forward
15	Public transport infrastructure Improvements - Enhance accessibility and attractiveness of public transport and priority bus routes	Transport Planning and Infrastructure	Bus route improvements	2016	2020	RBWM Transport	Council	NO	Funded		Implementation			Improved public transport information, including real-time. Ongoing programme to upgrade stops to provide raised kerbs to improve accessibility	Limited availability of funding.

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
16	Quality bus partnership - Develop high quality, cross boundary bus services	Transport Planning and Infrastructure	Bus route improvements	2016	2032	RBWM Transport	Council	NO	Funded		Implementation	Borough wide – % target reduction low		The council has adopted a Bus Service Improvement Plan identifying how bus services can be improved and ridership grown	Government funding for delivering the Bus Service Improvement Plan did not materialise
17	Park & Ride - Exploring opportunities for park and ride	Promoting Travel Alternatives	Other	2014	2016	RBWM Transport					Completed		See measure 9 and 2	Services were formerly introduced from: Centrica, Windsor (Easter and summer); Home Park, Windsor; King Edward VII Car Park; Windsor; and LEGOLAND, Windsor	(none)
18	Inter-urban coach services	Transport Planning and Infrastructure	Bus route improvements	2014	2015	RBWM Transport		NO			Aborted			First Group introduced X9 service from Maidenhead to High Wycombe in 2014.	The service was subsequently withdrawn due to lack of use
19	Rail partnerships - Delivering Maidenhead Station Access scheme	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2016	2021	RBWM Transport	Council	NO	Funded	£1 million - £10 million	Completed			Secured £3.048 million for Maidenhead Station Access scheme to fund new multi-modal interchange and improved ped/ cycle links to the town centre	(none)
20	Parking standards - Imposing strict maximum parking standards for new development as identified in the Borough's Parking Strategy	Traffic Management	Other	2019	2032	RBWM Transport and Infrastructure	Council	NO			Implementation			New town centre residential developments have very low levels of parking Travel Plans are required for all major new developments Electric vehicle charge points being sought for new development	(none)

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
21	Public parking regimes - Setting parking charges and permitted length of stay	Traffic Management	Other	2012	2032	RBWM Enforcement	Council	NO			Implementation			Stating parking charges and permitted length of stay in public car parks in town centre locations to favour short-stay parking for shoppers and visitors and encourage use of public transport	
22 and 23	Improve efficiency of Council's own fleet	Vehicle Fleet Efficiency	Other	2018	2032	RBWM Various Service Areas that retain fleet vehicles	Council	NO	Partially Funded		Implementation			The council fleet has been reduced to 9 directly managed vehicles	(none)
24	Hybrid and electrical vehicles. Promoting, where possible, the use of less and non-polluting vehicles	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2018	2032	RBWM Transport	Council	NO			Implementation			New web pages introduced on council website with improved information on the benefits and practicalities of switching to lower emission vehicles, to help more residents and businesses make the switch	(none)
25	Reduction of speed limits to 20mph zone	Traffic Management	Reduction of speed limits, 20mph zones	2016	2032	RBWM Highways and RBWM Transport	Council	NO			Ongoing activity			Ongoing consideration of proposals for 20mph speed limits in areas suited to them, where this can support greater uptake of walking and cycling and where traffic can be encouraged to utilise more capacious arterial roads that are less susceptible to congestion	Additional 20 mph speed limits were introduced in residential areas during 2022

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
26	Electric vehicle charge points	Transport Planning and Infrastructure	Other	2018	2035	RBWM Transport	OLEV, LEVI bid, CIL	NO	Funded		Implementation			<p>The borough adopted an EV Chargepoint Implementation Plan in February 2023</p> <p>The borough is targeting c. 600 on-street public chargepoints, c. 125 car park public chargepoints and c. 100 rapid recharge charging sockets at service stations by 2035</p> <p>Currently there are 69 car park public chargepoints, 39 on street chargepoints and 2 rapid recharge points – many of these delivered in 2022- This is supplemented by a wide network of non-public chargepoints and home charging</p>	

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 Strategy⁶, local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter (PM_{2.5}). There is clear evidence that PM_{2.5} (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases. The Public Health Outcomes Framework local indicator D01 (Fraction of mortality attributable to particulate air pollution) in 2022 for the borough was 6.59%, the average for England was 5.82%.

PM_{2.5} annual mean concentration for 2023 was estimated using the nationally derived roadside factor (5.9) in accordance with Defra Technical Guidance LAQM.TG22. The PM₁₀ recorded annual mean concentration at MW1, Fracati Way site in 2023 was 20.8µg/m³. The resulting PM_{2.5} estimated annual mean concentration is 14.9µg/m³. It is important to note that changes in PM₁₀ concentrations can occur from year to year due to weather conditions. The borough has installed air quality sensors, one in each AQMA, the PM_{2.5} results will be included in the ASR 2025.

The current Defra 2023 background maps for the borough show that all background concentrations of PM_{2.5} are well below the annual mean objective. The concentration near MW1 site is 10.2µg/m³ (1km x 1km grid square reference 488500, 181500) and the highest concentration is 11.2µg/m³ (reference 499500, 177500).

The Royal Borough of Windsor and Maidenhead is taking the following existing measures in the Action Plan to address PM_{2.5}:

- Promoting workplace, school and personalised travel planning (measure 4)
- Introduced MOVA at signal-controlled junctions (measure 8)
- Improving facilities for cycling and walking (measures 9, 11 and 13)
- Promoting bus services (measure 14, 15 and 16)
- Implemented a scheme for Maidenhead station interchange (measure 19)
- Electric Vehicle Chargepoint Implementation Plan (measure 26)
- Designated Smoke Control Area in West Windsor

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

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

This section sets out the monitoring undertaken within 2023 by The Royal Borough of Windsor and Maidenhead 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

The Royal Borough of Windsor and Maidenhead undertook automatic (continuous) monitoring at 3 sites during 2023. Table A.1 in Appendix A shows the details of the automatic monitoring sites.

The https://www.londonair.org.uk/london/asp/publicbulletin.asp?la_id=35 page presents automatic monitoring results for Royal Borough of Windsor and Maidenhead, 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

Royal Borough of Windsor and Maidenhead undertook non-automatic (i.e. passive) monitoring of NO₂ at 36 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.

3.1.3 Monitoring Strategy Update 2024

The borough has installed air quality sensors to monitoring PM_{2.5} and PM₁₀, within the five AQMAs. The monitoring strategy has been reviewed and a number of sites where the recorded annual mean concentration has been well below the AQOs have been discontinued, this included MW2 and MW4 automatic monitoring sites and 11 non-automatic sites. The reduced monitoring network will still provide meaningful results for the borough when assessing local air quality conditions.

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40µg/m³. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 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 NO₂ hourly mean concentrations for the past five years with the air quality objective of 200µg/m³, not to be exceeded more than 18 times per year.

Over the past five years air quality in the Royal Borough has significantly improved. Monitoring results in 2023 show no exceedances of the annual mean objective of 40 µg/m³ for NO₂ with all concentrations below 36 µg/m³ and not requiring distance correction.

Since 2019 the maximum NO₂ concentration, including distance corrected values, within the five AQMAs has been below 10% the annual mean objective (<36 µg/m³).

The Imperial Road/ St Leonards Road Junction AQMA has recorded concentration below $36 \mu\text{g}/\text{m}^3$ for a consecutive seven-year period. Compliance within AQMAs has been assessed against distance corrected values, and not the values reported in Table A.4. Table A.2 in Appendix B presents the maximum NO_2 concentration within the AQMAs for the past five years. Note that the concentration data presented Table A.2 includes distance corrected values, only where relevant.

The overall reduction in NO_2 concentrations within the Royal Borough has continue in 2023 consequently the council is working towards revoking the AQMAs in 2024.

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of $40\mu\text{g}/\text{m}^3$.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of $50\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times per year.

Over the past five years PM_{10} annual mean and daily mean concentrations remained well below the respective air quality objectives.

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)
MW1	Frascati Way	Roadside	488626	180994	NO2	Y	Chemiluminescent	5	2	1.7
MW1	Frascati Way	Roadside	488626	180994	PM10	Y	BAM	5	2	1.7
MW2	Clarence Road	Roadside	495664	176592	NO2	Y	Chemiluminescent	5	3	1.7
MW4	Aldebury Road	Background	488503	182710	NO2	N	Chemiluminescent	5	20	1.7

Notes:

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

(2) N/A if not applicable

Table A.2 – 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)
WM1	Longmead	Urban Background	494067	176764	NO ₂	No	5.0	1.0	No	3.0
WM2	Priors Way	Suburban	489807	178760	NO ₂	Yes - Bray/M4	10.0	2.0	No	2.0
WM5b	Queen Street	Roadside	488864	180951	NO ₂	Yes - Maidenehad	10.0	2.0	No	2.0
WM10a	Imperial Road	Roadside	495606	176364	NO ₂	Yes - Windsor	8.0	2.0	No	2.0
WM11a	Straight Rd	Kerbside	498232	174916	NO ₂	No	3.5	0.5	No	2.0
WM11b	Straight Rd	Kerbside	498388	174797	NO ₂	No	11.0	1.0	No	1.5
WM13	Wraysbury Road 1	Roadside	502017	172541	NO ₂	Yes - Wraysbury/M25	5.0	2.0	No	2.0
WM13a	Wraysbury Road 2	Roadside	502108	172461	NO ₂	Yes - Wraysbury/M25	5.0	2.0	No	2.0
WM15	Wraysbury Road 3	Roadside	502259	172322	NO ₂	Yes - Wraysbury/M25	5.0	2.0	No	2.0
WM15a	Wraysbury Road 4	Roadside	502257	172333	NO ₂	Yes - Wraysbury/M25	2.0	5.0	No	2.0
WM15b	Wraysbury Road 5	Roadside	502300	172278	NO ₂	Yes - Wraysbury/M25	5.0	2.0	No	2.0
WM18, WM19, WM20	Clarence Road 3	Roadside	495664	176592	NO ₂	Yes - Windsor	5.0	2.5	Yes	1.5
WM21, WM22, WM23	Frascati Way 3	Roadside	488626	180994	NO ₂	Yes - Maidenhead	5.0	2.0	Yes	1.5
WM28	Keate's Lane	Roadside	496604	177866	NO ₂	No	3.0	2.0	No	2.0
WM28a	Eton Wick Road	Roadside	496498	177874	NO ₂	No	3.0	2.0	No	2.0
WM29	M4 Windsor Road 1	Roadside	489975	178721	NO ₂	Yes - Bray/M4	10.0	2.0	No	2.0
WM29a	M4 Windsor Road 2	Roadside	489928	178754	NO ₂	Yes - Bray/M4	10.0	2.0	No	2.0
WM29b	M4 Windsor Road 3	Roadside	490060	178593	NO ₂	Yes - Bray/M4	10.0	2.0	No	2.0
WM30a	Queens Road	Kerbside	498591	177065	NO ₂	No	5.0	1.0	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
WM30b	High Street	Kerbside	498669	176976	NO ₂	No	5.0	1.0	No	2.0
WM30c	The Green	Kerbside	498770	177077	NO ₂	No	3.0	1.0	No	2.0
WM31	Arthur Road 1	Kerbside	495896	176939	NO ₂	Yes - Windsor	10.0	1.0	No	2.0
WM32	Arthur Road 2	Kerbside	496082	176903	NO ₂	Yes - Windsor	2.5	1.0	No	2.0
WM33	Arthur Road 3	Kerbside	496312	176886	NO ₂	Yes - Windsor	0.0	1.0	No	2.0
WM34	Ludlow Road	Urban Background	488417	180554	NO ₂	No	5.0	1.0	No	2.5
WM35	Cookham High St	Kerbside	489581	185346	NO ₂	No	0.0	1.0	No	2.0
WM01	Hythe End Road	Suburban	501366	172377	NO ₂	No	20.0	0.0	No	2.0
WM03	St Leonards Road 1	Kerbside	495331	175569	NO ₂	Yes - Imperial/St Leonards Road Junction	7.0	1.0	No	2.0
WM03a	St Leonards Road 2	Kerbside	495294	175556	NO ₂	Yes - Imperial/St Leonards Road Junction	7.0	1.0	No	2.0
WM03b	St Leonards Road 3	Kerbside	495314	175551	NO ₂	Yes - Imperial/St Leonards Road Junction	5.0	1.0	No	2.0
WM03c	St Leonards Road 4	Roadside	495413	175587	NO ₂	Yes - Imperial/St Leonards Road Junction	5.0	2.0	No	2.0
WM04	Osborne Road 1	Kerbside	496631	175927	NO ₂	No	3.0	1.0	No	2.0
WM04a	Osborne Road 1	Kerbside	496380	176035	NO ₂	No	3.0	1.0	No	2.0
WM013	Bridge Road 1	Roadside	489571	181334	NO ₂	Yes - Maidenhead	15.0	2.0	No	2.0
WM013a	Bridge Road 2	Roadside	489652	181323	NO ₂	Yes - Maidenhead	5.0	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)
WM014a	Stafferton Way	Roadside	489033	180622	NO ₂	Yes - Maidenhead	5.0	1.0	No	2.0

Notes:

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

(2) N/A if not applicable.

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
MW1	488626	180994	Roadside	94	94	35.1	24.7	26.4	26.1	23.2
MW2	495664	176592	Roadside	99	99	32.2	21.8	24.2	27.5	23.8
MW4	488503	182710	Urban Background	99	99	17.4	12.6	14	14.5	11.7

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

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

Where exceedances of the NO₂ annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2023.

Notes:

The annual mean concentrations are presented as µg/m³.

The NO₂ annual mean objective of 40µg/m³ at the location of monitoring has been achieved for five consecutive years.

Concentrations at the location of monitoring are below 36µg/m³ and did not require 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 NO₂ Monitoring Results: Non-Automatic Monitoring (µg/m³)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
WM1	494067	176764	Urban Background	83	83	18.0	12.4	12.9	13.4	11.8
WM2	489807	178760	Suburban	100	100	25.3	17.1	17.1	18.2	16.8
WM5B	488864	180951	Roadside	83	83	28.8	19.3	20.9	22.4	22.1
WM10A	495606	176364	Roadside	83	83	39.9	25.4	31.7	29.9	28.4
WM11A	498232	174916	Kerbside	100	100	37.4	27.4	30.4	32.2	26.8
WM11B	498388	174797	Kerbside	100	100	36.9	25.9	29.4	31.6	26.1
WM13	502017	172541	Roadside	100	100	32.9	26.2	26.4	25.6	23.1
WM13A	502108	172461	Roadside	100	100	36.5	25.7	26.9	26.8	23.3
WM15	502259	172322	Roadside	100	100	39.4	28.6	29.8	30.8	27.9
WM15A	502257	172333	Roadside	100	100	36.2	27.2	27.7	27.9	25.9
WM15B	502300	172278	Roadside	100	100	35.5	26.5	27.3	27.1	23.6
WM18, WM19, WM20	495664	176592	Roadside	100	100	32.8	21.2	23.2	25.5	21.8
WM21, WM22, WM23	488626	180994	Roadside	100	100	35.6	25.2	26.6	27.8	25.2

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
WM28	496604	177866	Roadside	100	100	27.3	20.5	23.5	23.6	20.8
WM28A	496498	177874	Roadside	100	100	29.1	21.4	23.8	25.5	21.4
WM29	489975	178721	Roadside	100	100	43.3	30.6	33.2	33.3	29.0
WM29A	489928	178754	Roadside	100	100	36.9	26.4	29.0	28.5	24.6
WM29B	490060	178593	Roadside	83	83	32.0	22.9	24.8	24.3	22.6
WM30A	498591	177065	Kerbside	100	100	29.0	19.1	22.4	22.0	20.3
WM30B	498669	176976	Kerbside	92	92	32.1	22.4	26.3	25.9	22.7
WM30C	498770	177077	Kerbside	92	92	43.0	29.8	34.6	35.8	31.3
WM31	495896	176939	Kerbside	92	92	40.9	26.2	30.5	29.1	25.1
WM32	496082	176903	Kerbside	92	92	32.2	21.6	23.0	24.4	21.4
WM33	496312	176886	Kerbside	100	100	34.6	24.0	27.8	31.4	29.1
WM34	488417	180554	Urban Background	92	92	19.1	13.7	15.4	15.0	13.0
WM35	489581	185346	Kerbside	92	92					18.9
0-1	501366	172377	Suburban	83	83	16.9	12.4	12.5	13.9	11.3

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
0-3	495331	175569	Kerbside	100	100	37.1	26.7	27.9	26.1	24.0
0-3A	495294	175556	Kerbside	100	100	42.1	30.9	32.1	34.1	29.6
0-3B	495314	175551	Kerbside	100	100	47.4	34.1	35.0	39.1	31.2
0-3C	495413	175587	Roadside	100	100	23.7	16.4	16.7	18.9	16.3
0-4	496631	175927	Kerbside	100	100	30.9	20.7	24.4	23.9	20.2
0-4A	496380	176035	Kerbside	100	100	31.5	20.9	22.6	24.1	20.9
0-13	489571	181334	Roadside	92	92	31.5	22.6	24.0	24.3	20.4
0-13A	489652	181323	Roadside	100	100	41.1	30.6	28.3	31.9	29.1
0-14A	489033	180622	Roadside	100	100	31.4	21.8	22.8	24.5	21.6

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

Diffusion tube data has been bias adjusted.

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

Notes:

The annual mean concentrations are presented as $\mu\text{g}/\text{m}^3$.

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

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

Compliance within AQMAs has been assessed against distance corrected values, and not the values reported in Table A.4.

(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 to A.1.8 – Trends in Annual Mean NO₂ Concentrations

Figure A1 - NO₂ annual mean concentrations for sites MW1, MW2 and MW4 between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

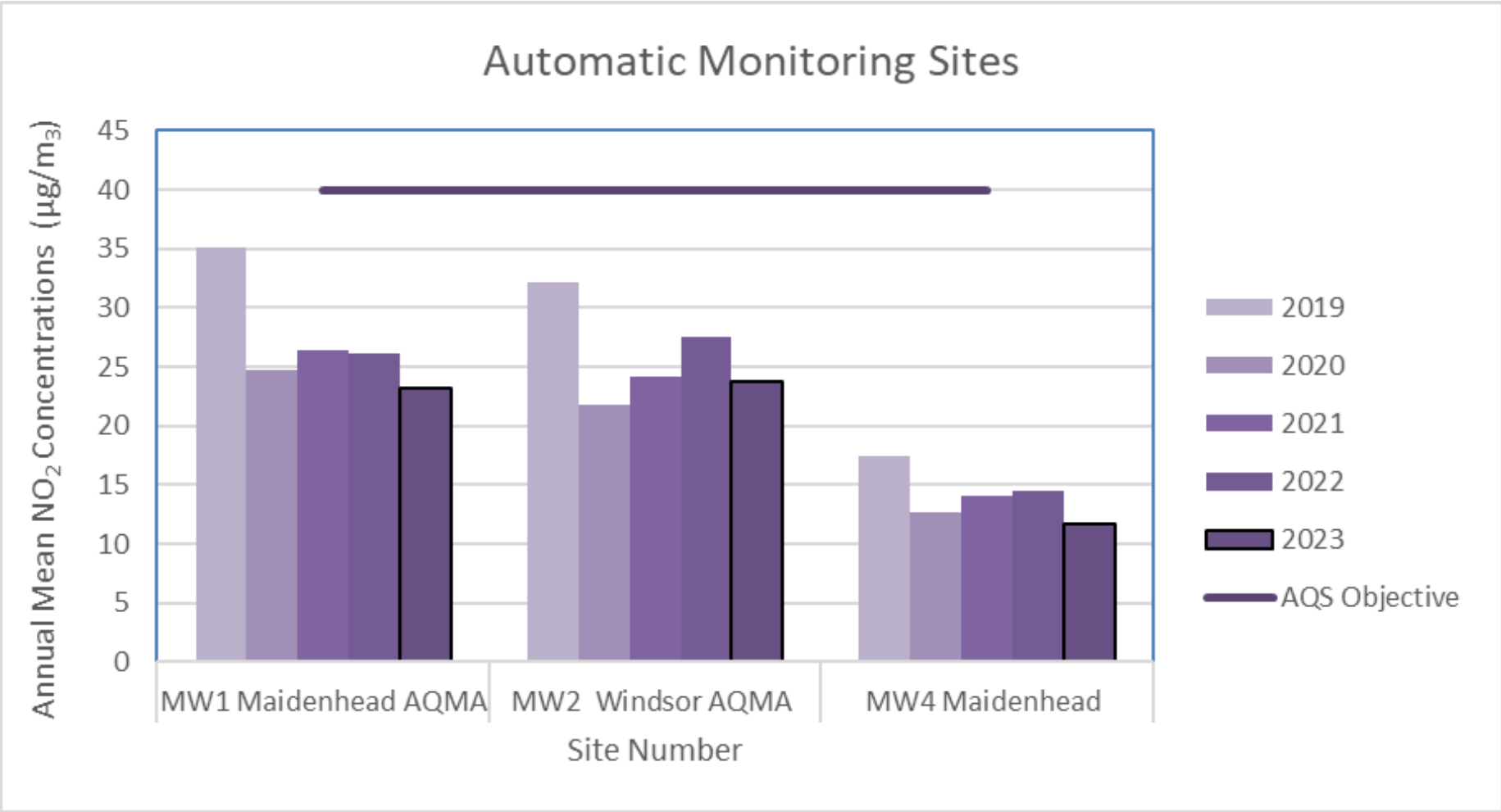


Figure A1.1 - NO₂ annual mean concentrations for diffusion tube sites in Maidenhead AQMA between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

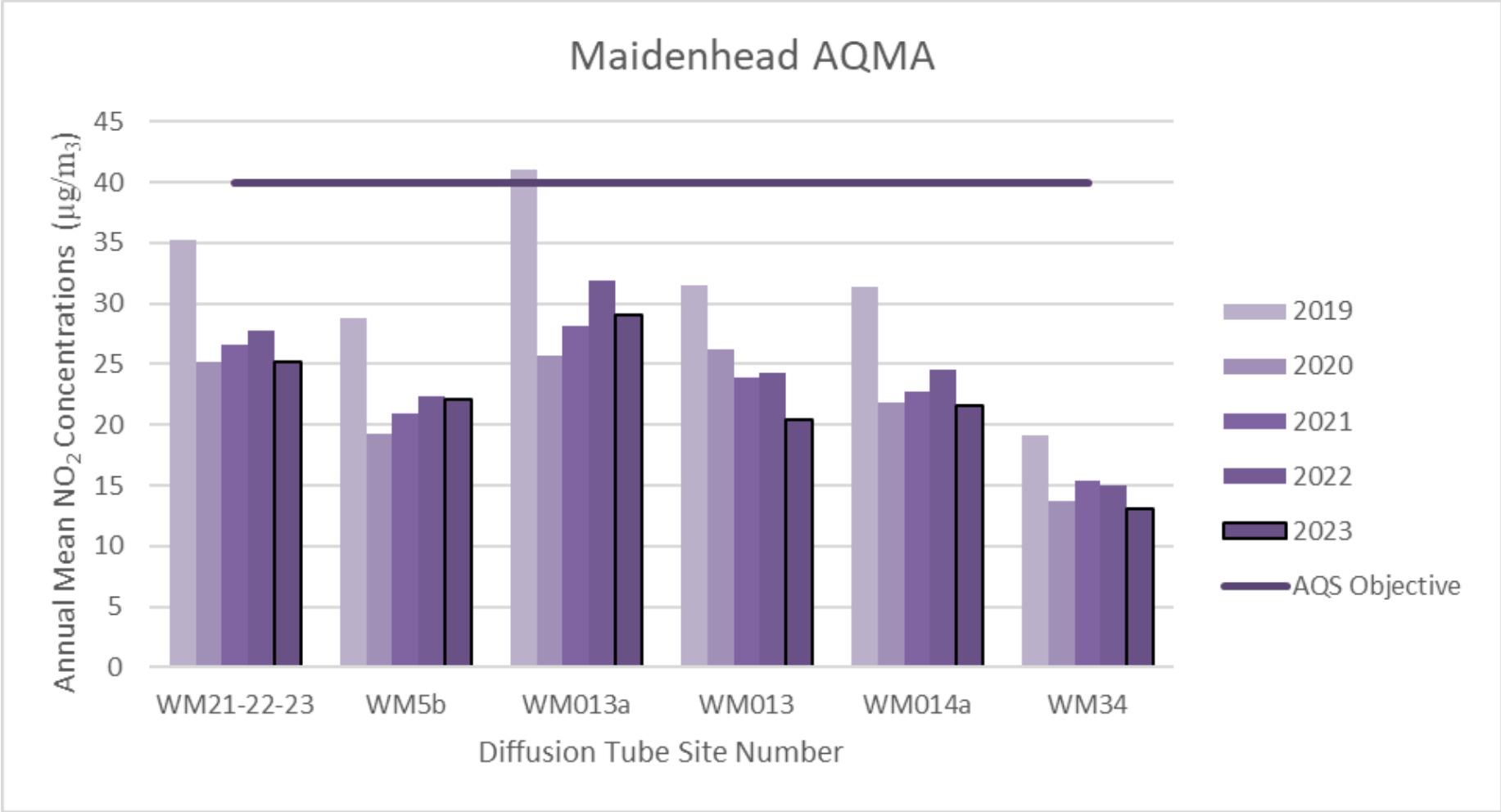


Figure A1.2 - NO₂ annual mean concentrations for diffusion tube sites in Bray AQMA between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

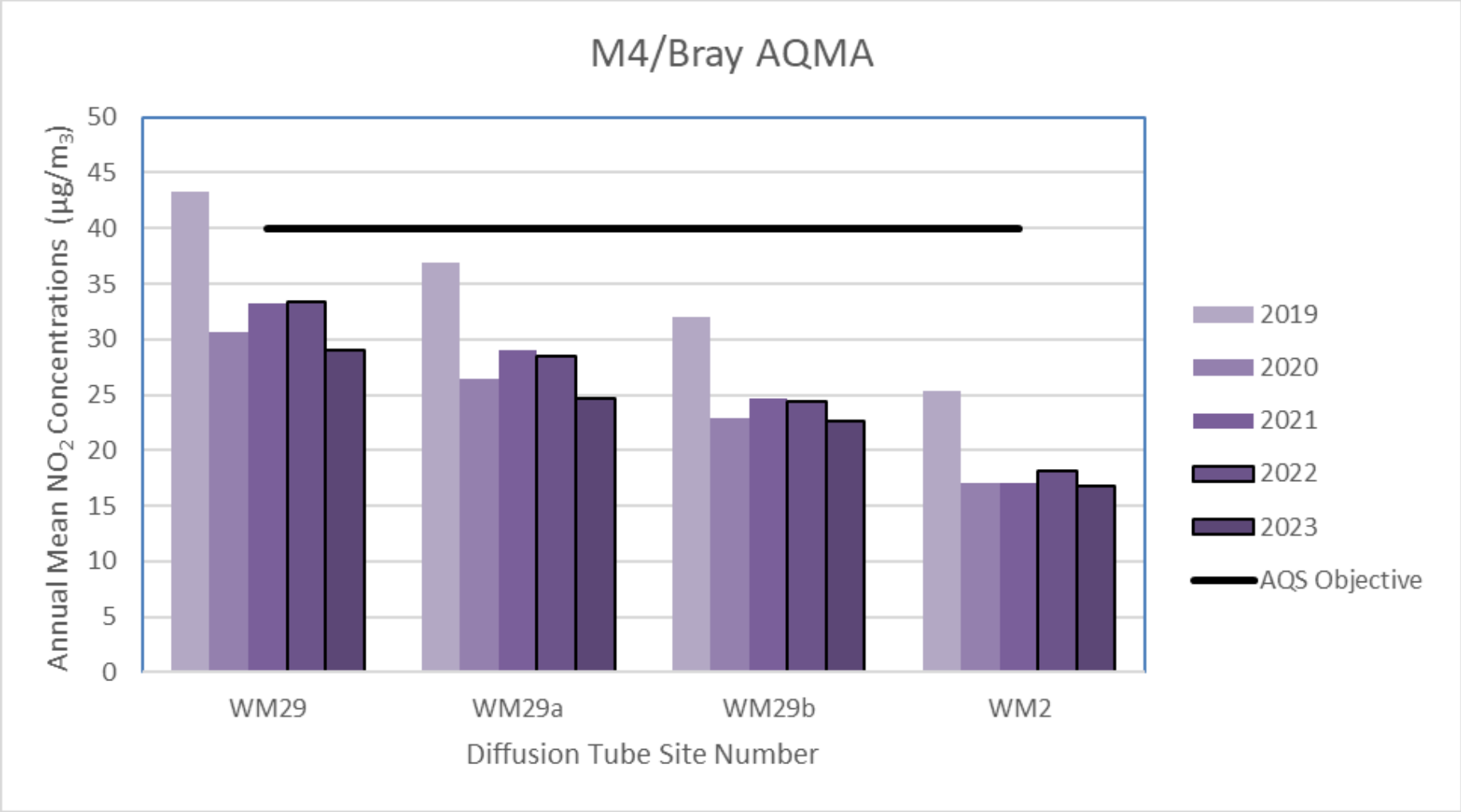


Figure A1.3 - NO₂ annual mean concentrations for diffusion tube sites in Windsor AQMA between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

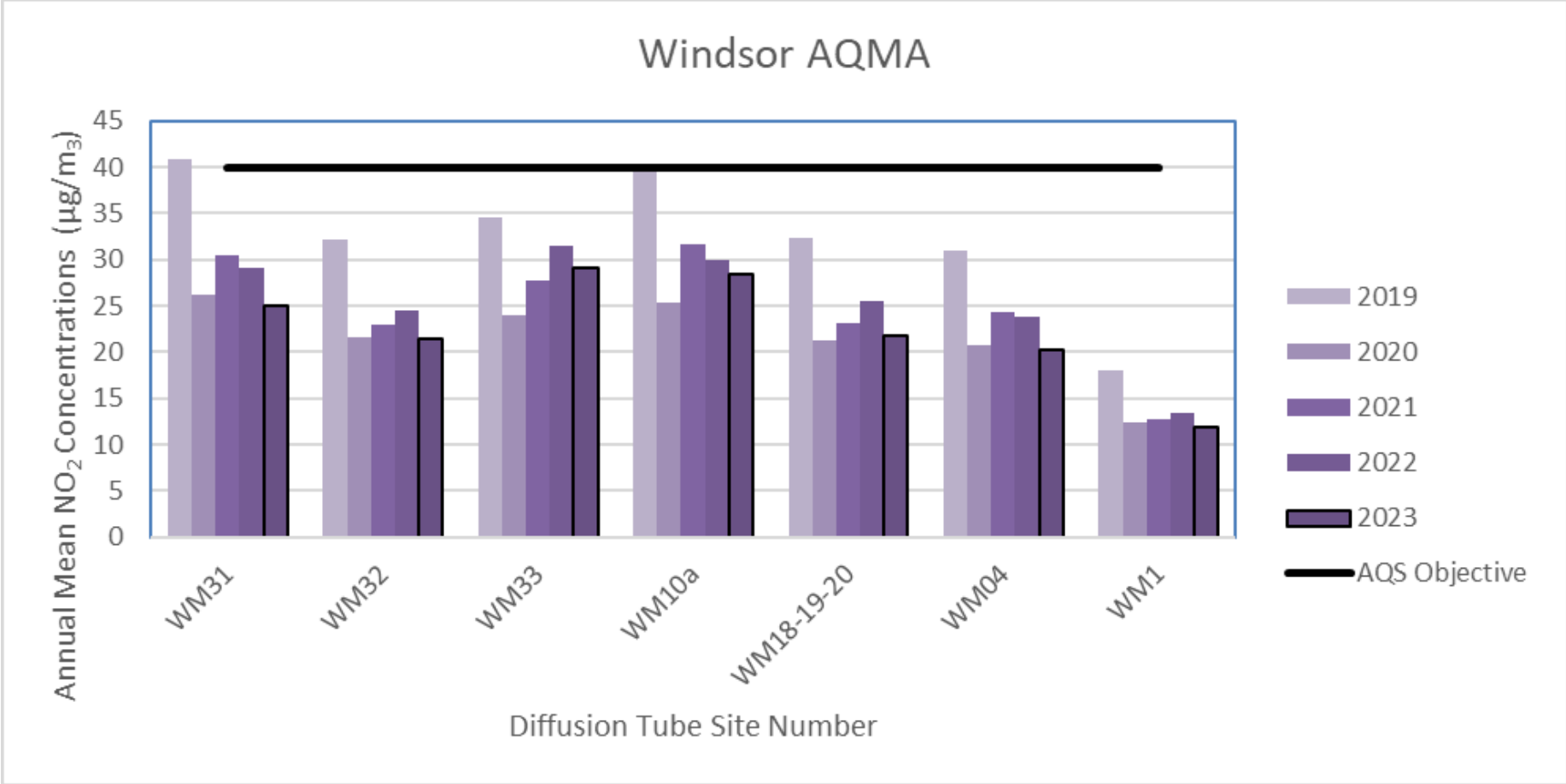


Figure A1.4 - NO₂ annual mean concentrations for diffusion tube sites in Imperial/St Leonards Road Junction AQMA between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

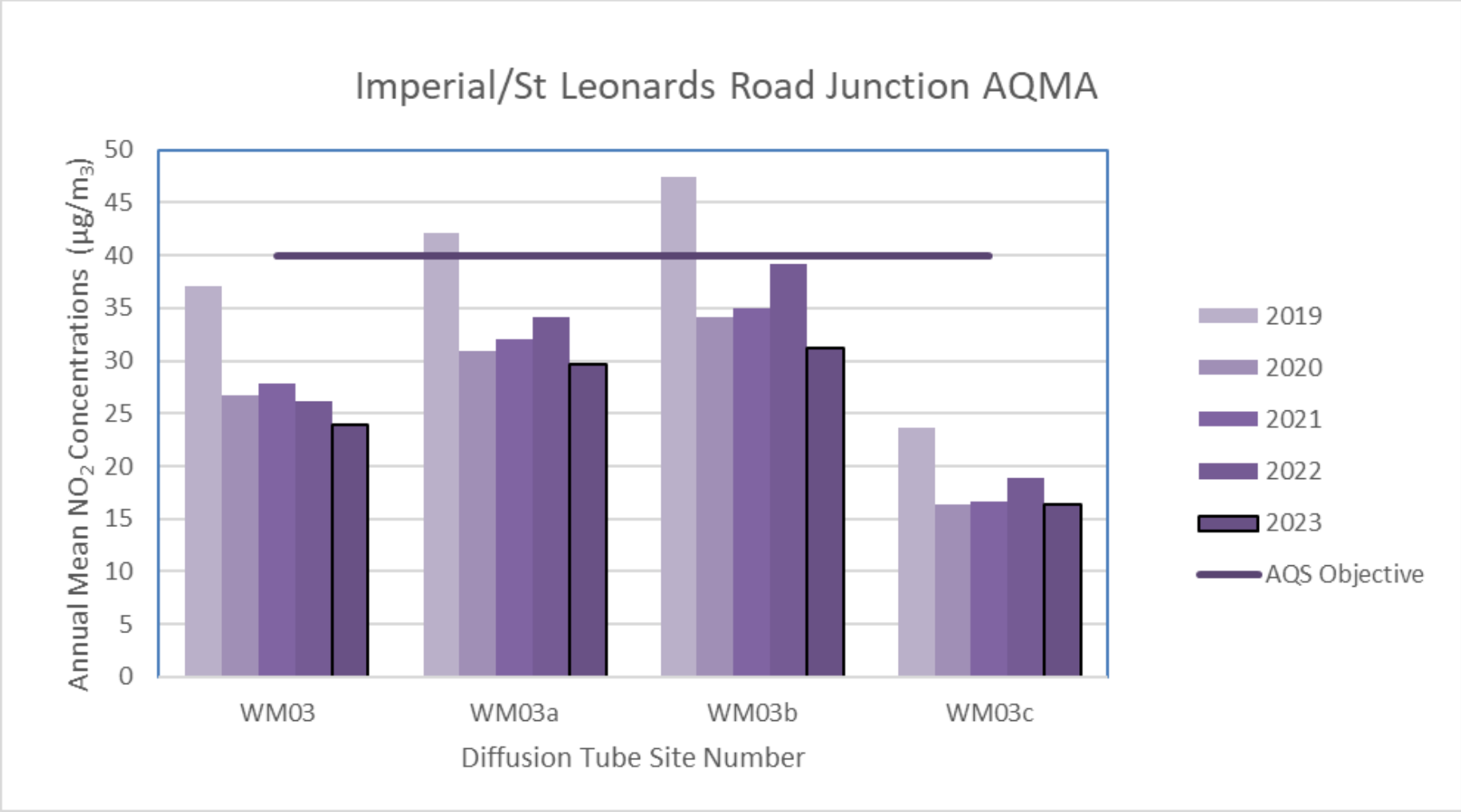


Figure A1.5 - NO₂ annual mean concentrations for diffusion tube sites in Wraysbury Road AQMA between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

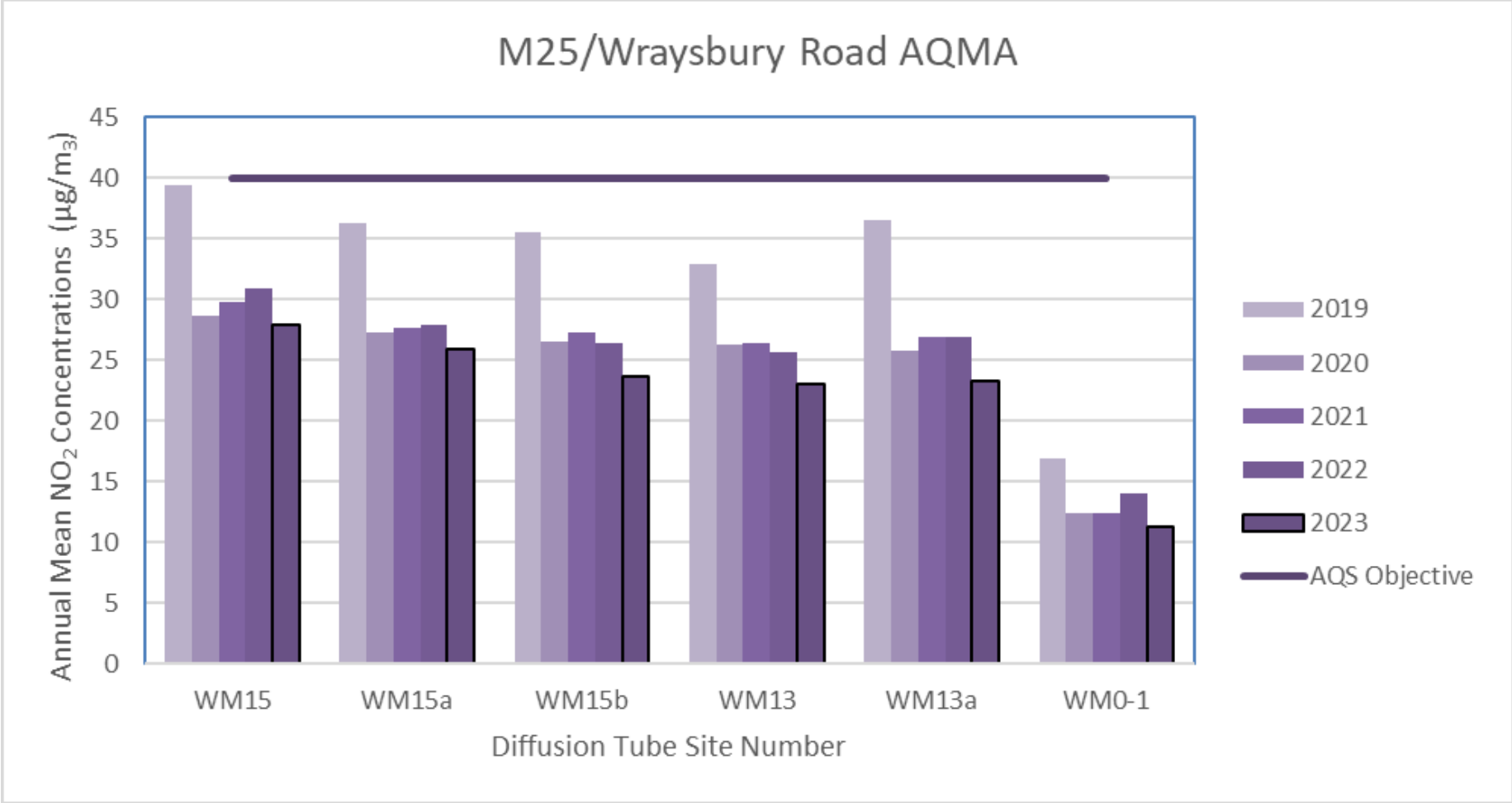


Figure A1.6 - NO₂ annual mean concentrations for diffusion tube sites in Datchet between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

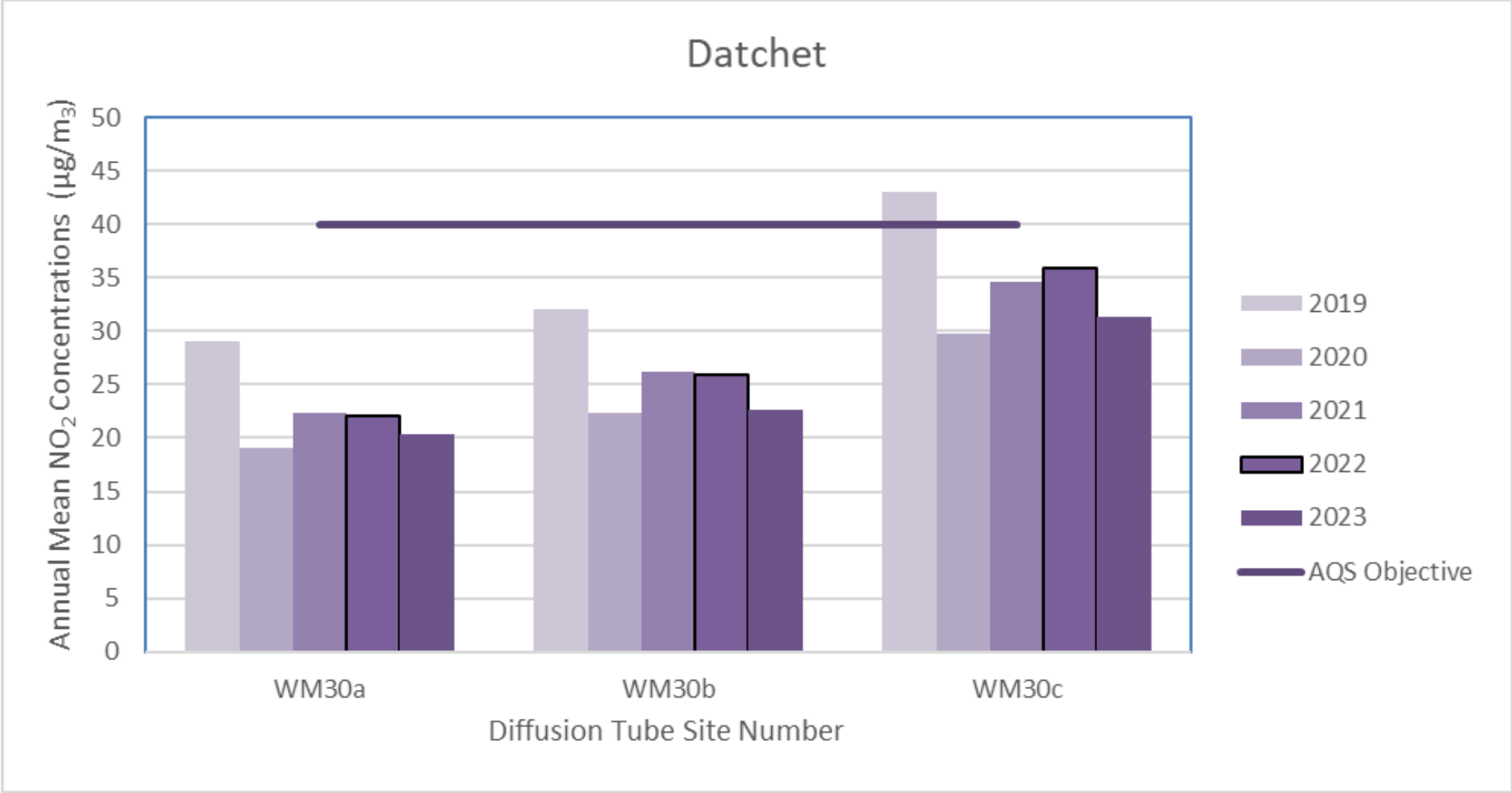


Figure A1.7 - NO₂ annual mean concentrations for diffusion tube sites in Eton between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

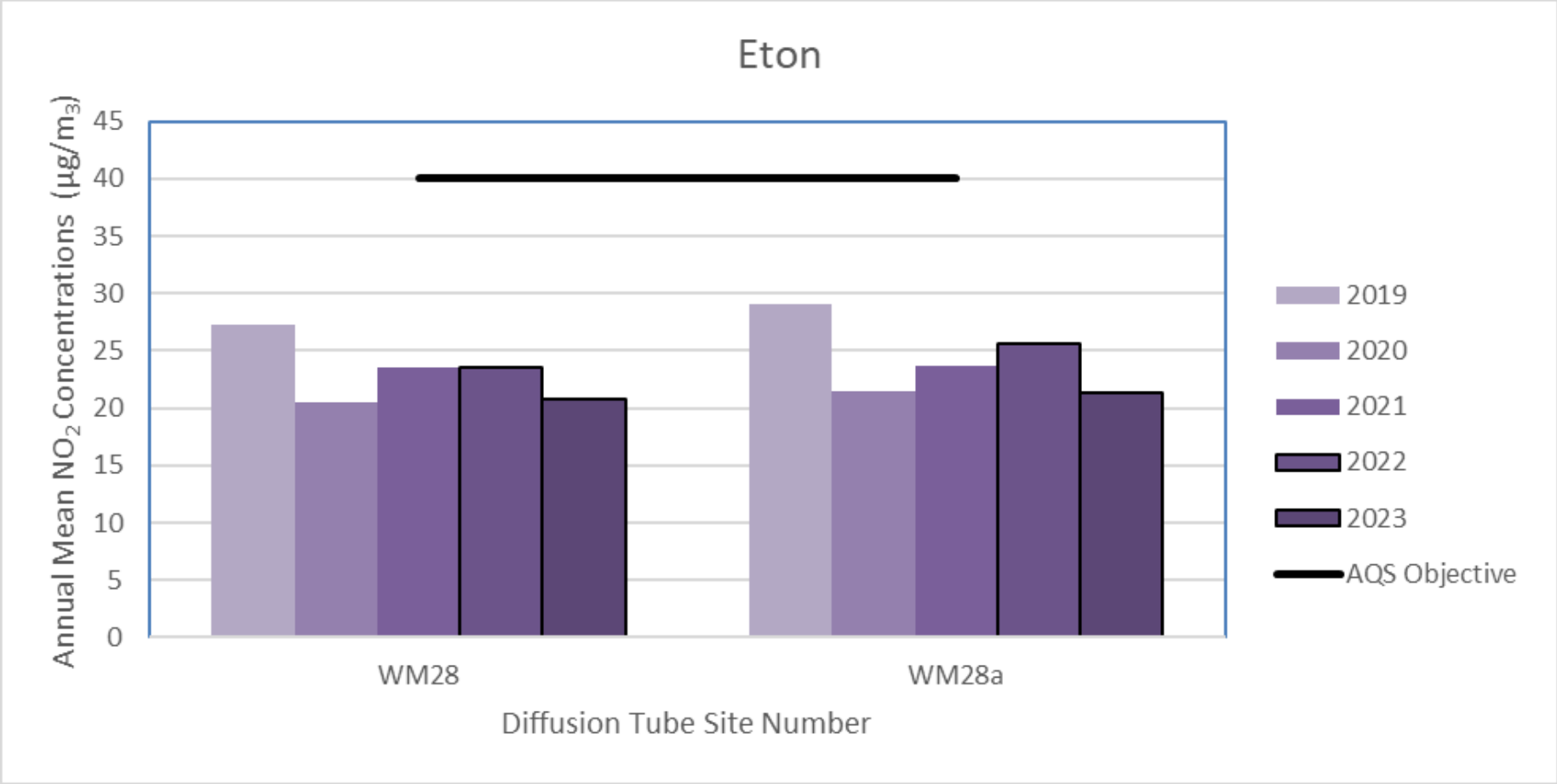


Figure A1.8 - NO₂ annual mean concentrations for diffusion tube sites in Old Windsor between years 2019 to 2023. There are no exceedances of the annual mean objective in 2023 and considering the lower concentrations recorded during Covid-19 there is a general trend of reduction experienced across the sites.

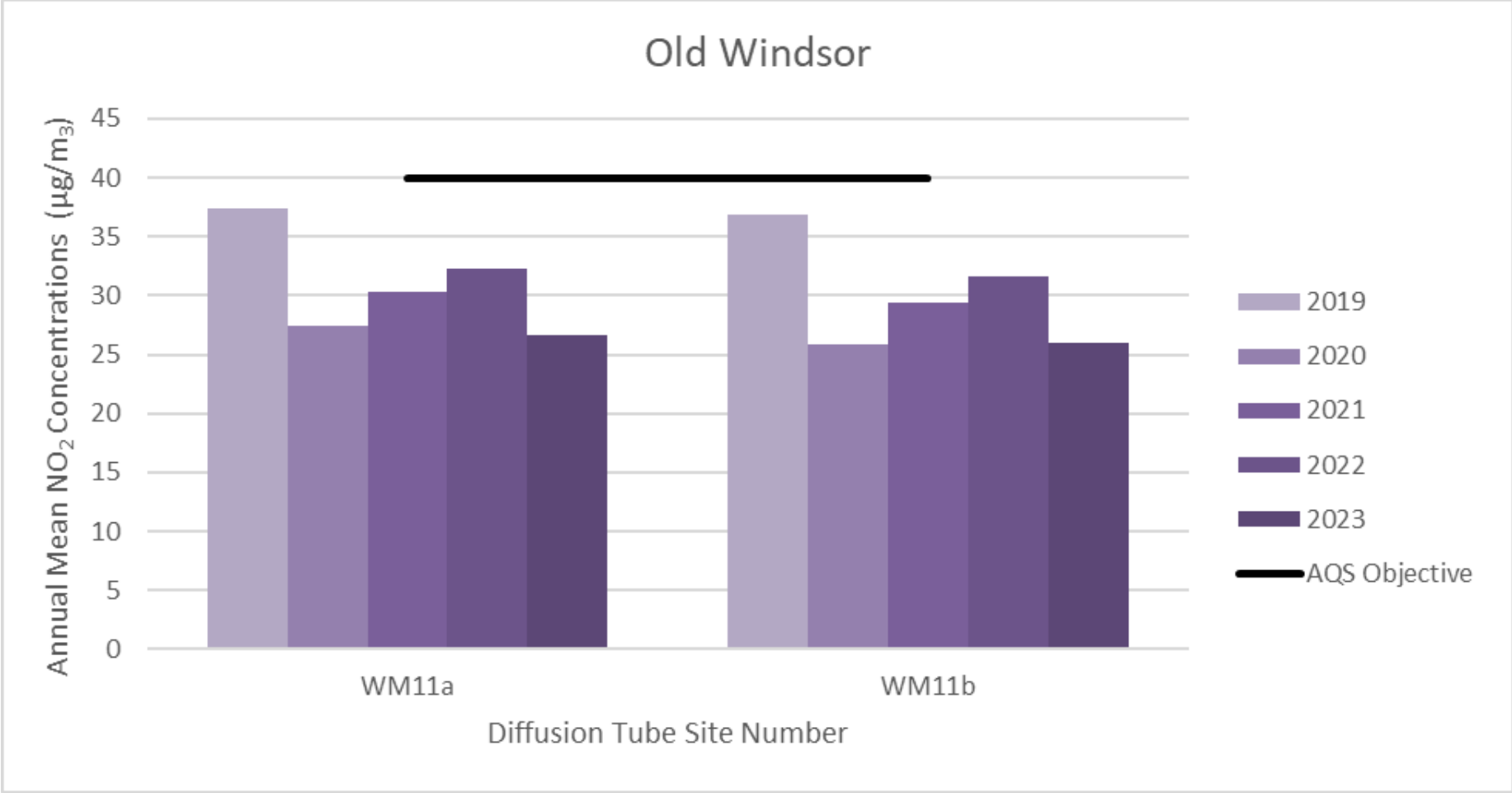


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
MW1	488626	180994	Roadside	94	94	0	0	0	0	0
MW2	495664	176592	Roadside	99	99	0	1	0	0	0
MW4	488503	182710	Urban Background	99	99	0	0	0	0	0

Notes:

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

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

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

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

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

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
MW1	488626	180994	Roadside	96	96	22.8	18.8	19.2	23	20.8

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

Notes:

The annual mean concentrations are presented as µg/m³.

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

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

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

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

Figure A.2 – Trends in Annual Mean PM₁₀ Concentrations

PM₁₀ annual mean concentrations in Maidenhead between years 2016 to 2023. There are no exceedances of the annual mean objective in 2023.

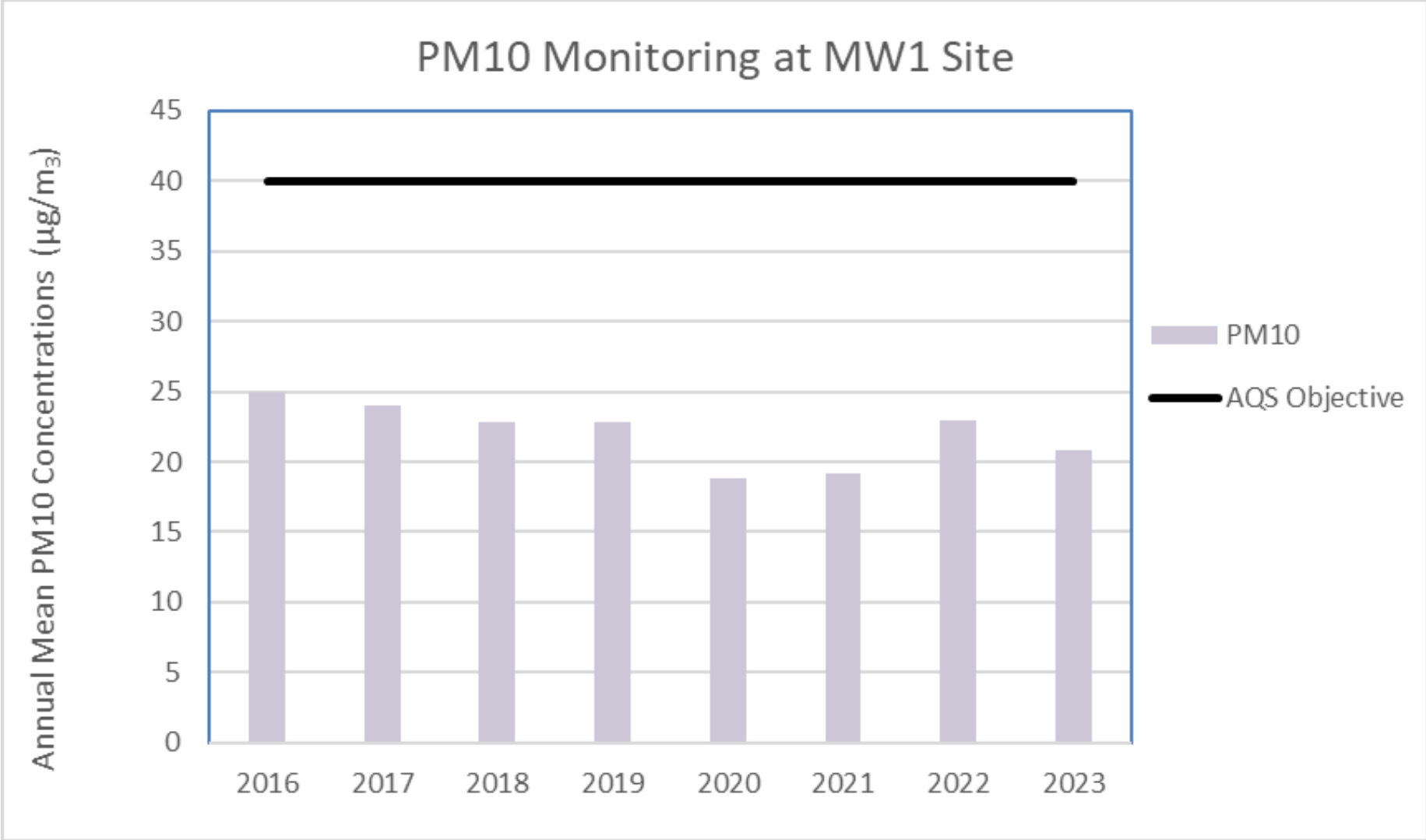


Table A.7 – 24-Hour Mean PM₁₀ Monitoring Results, Number of PM₁₀ 24-Hour Means > 50µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
MW1	488626	180994	Roadside	96	96	8	3	2	6	7

Notes:

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

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

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

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

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

Appendix B: Full Monthly Diffusion Tube Results for 2023 / Maximum Concentration within the AQMAs

Table B.1 – NO₂ 2023 Diffusion Tube Results (µg/m³)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(0.9)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
WM1	494067	176764	18.9	18.3		14.4	8.9		6.4	9.6	11.6	16.0	15.0	10.8	13.0	11.8	-	
WM2	489807	178760	26.0	24.6	18.9	19.8	12.4	13.2	13.3	16.9	18.9	21.6	23.6	14.2	18.6	16.8	-	
WM5B	488864	180951		31.9	26.3		21.4	21.6	19.3	23.5	23.6	26.4	29.2	20.7	24.4	22.1	-	
WM10 A	495606	176364	23.5	41.0	31.5	35.0	31.6	30.3		26.4	34.2	32.0	27.9		31.4	28.4	-	
WM11 A	498232	174916	29.1	34.8	29.9	34.9	25.7	31.8	23.3	30.3	33.2	30.2	28.8	23.4	29.6	26.8	-	
WM11 B	498388	174797	29.4	38.1	26.5	28.8	32.0	29.1	20.7	32.0	31.1	28.7	29.0	20.6	28.8	26.1	-	
WM13	502017	172541	27.9	31.6	25.3	30.2	26.6	25.2	18.5	23.2	28.5	28.9	23.5	16.1	25.5	23.1	-	
WM13 A	502108	172461	24.6	32.5	27.9	29.3	27.9	30.5	15.8	23.2	27.5	27.5	24.5	17.9	25.8	23.3	-	
WM15	502259	172322	37.0	42.9	32.1	30.2	27.2	26.5	25.8	26.1	31.5	32.4	33.5	24.4	30.8	27.9	-	
WM15 A	502257	172333	35.8	35.7	29.9	26.9	27.3	24.8	24.5	26.1	27.4	29.9	33.5	21.7	28.6	25.9	-	
WM15 B	502300	172278	32.3	35.3	26.3	25.3	26.1	23.2	20.3	23.6	26.6	26.0	26.9	20.6	26.1	23.6	-	
WM18	495664	176592	27.0	29.3	25.1	27.5	21.9	23.5	17.2	23.3	28.5	27.7	23.9	16.7	-	-	-	Triplicate Site with WM18, WM19 and WM20 - Annual data provided for WM20 only
WM19	495664	176592	25.0	30.2	24.8	26.7	21.6	23.7	18.7	23.1	27.4	26.5	21.2	18.4	-	-	-	Triplicate Site with WM18, WM19 and WM20 - Annual data provided for WM20 only
WM20	495664	176592	22.9	30.2	25.4	26.7	22.2	22.9	18.6	22.5	29.3	26.4	24.2	18.8	24.1	21.8	-	Triplicate Site with WM18, WM19 and WM20 - Annual data provided for WM20 only
WM21	488626	180994	32.2	35.2	27.1	28.4	24.8	24.8	24.1	25.7	30.3	32.0	31.1	22.1	-	-	-	Triplicate Site with WM21, WM22 and WM23 - Annual data provided for WM23 only
WM22	488626	180994	31.2	34.9	27.6	28.5	24.1	22.1	22.4	24.4	28.2	31.8	30.3	24.2	-	-	-	Triplicate Site with WM21, WM22 and WM23 - Annual data provided for WM23 only
WM23	488626	180994	32.3	35.2	28.5	28.0	24.5	23.6	21.5	25.2	30.5	32.5	29.9	23.4	27.8	25.2	-	Triplicate Site with WM21, WM22 and WM23 - Annual data provided for WM23 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 <(0.9)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
WM28	496604	177866	24.4	30.7	22.4	25.7	25.5	22.0	13.7	18.7	24.2	25.2	24.9	17.6	22.9	20.8	-	
WM28 A	496498	177874	27.5	28.6	23.0	25.2	23.6	23.2	17.3	20.5	27.3	26.0	24.1	17.4	23.6	21.4	-	
WM29	489975	178721	32.1	38.8	32.5	34.8	29.9	33.1	28.7	32.5	37.9	40.2	21.3	23.2	32.1	29.0	-	
WM29 A	489928	178754	28.6	34.7	27.3	26.6	27.1	26.7	22.8	22.8	32.0	30.9	26.0	21.2	27.2	24.6	-	
WM29 B	490060	178593	25.0	36.0	23.6		29.7	26.5	15.3		25.0	24.7	27.4	16.7	25.0	22.6	-	
WM30 A	498591	177065	26.7	27.4	22.3	26.3	23.8	22.5	14.1	18.7	24.1	24.7	21.1	18.3	22.5	20.3	-	
WM30 B	498669	176976	27.4	35.6	25.3	27.9	28.2		16.2	21.9	26.8	23.2	27.1	16.2	25.1	22.7	-	
WM30 C	498770	177077	36.0	48.6	33.7	38.7	39.1	36.3	24.2		36.6	28.7	35.5	23.5	34.6	31.3	-	
WM31	495896	176939	28.6	35.8	27.1	31.8	31.7	26.2	17.5	26.9	31.8	27.0		20.5	27.7	25.1	-	
WM32	496082	176903	28.0	31.3	24.1	24.7	18.0		16.4	22.4	26.2	23.8	25.3	20.4	23.7	21.4	-	
WM33	496312	176886	34.5	37.5	28.9	35.5	36.6	31.7	23.1	30.6	34.0	35.0	34.6	23.8	32.2	29.1	-	
WM34	488417	180554	18.6		15.8	17.2	13.2	13.4	7.6	10.3	13.8	17.6	19.1	12.1	14.4	13.0	-	
WM35	489581	185346	25.3	27.6	19.0	22.0	22.1	18.5	13.1	17.8	23.8	20.2	19.9		20.8	18.9	-	
0-1	501366	172377	14.6	15.4	13.4	13.9		11.4	5.9	10.1	12.3	14.5	13.4		12.5	11.3	-	
0-3	495331	175569	29.1	33.4	27.0	28.0	27.5	25.4	19.9	25.8	28.4	27.1	26.0	20.5	26.5	24.0	-	
0-3A	495294	175556	34.9	42.5	33.0	34.4	35.3	32.1	26.4	30.7	32.4	34.5	31.8	24.7	32.7	29.6	-	
0-3B	495314	175551	36.9	42.7	37.7	37.8	33.9	25.4	32.4	33.1	35.9	36.9	33.0	28.5	34.5	31.2	-	
0-3C	495413	175587	24.8	20.3	18.2	17.9	13.7	16.0	13.3	16.5	17.4	20.0	23.8	14.5	18.0	16.3	-	
0-4	496631	175927	26.5	31.4	22.3	26.1	20.0	21.9	13.5	21.4	21.8	25.2	21.7	16.2	22.3	20.2	-	
0-4A	496380	176035	26.5	31.1	23.7	23.5	19.2	21.4	16.0	21.2	26.1	27.2	22.7	18.0	23.0	20.9	-	
0-13	489571	181334	30.2		25.1	22.3	15.0	17.3	17.1	19.1	25.4	27.3	28.8	19.8	22.5	20.4	-	

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 <(0.9)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
0-13A	489652	181323	38.2	38.6	35.6	32.2	24.3	27.3	29.4	28.5	35.8	38.5	33.8	23.9	32.2	29.1	-	
0-14A	489033	180622	29.8	30.4	24.6	24.3	24.4	22.5	17.1	22.4	27.0	23.1	21.6	19.5	23.9	21.6	-	

- All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table B.1.
- Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.
- Local bias adjustment factor used.
- National bias adjustment factor used.
- Where applicable, data has been distance corrected for relevant exposure in the final column.
- Royal Borough of Windsor and Maidenhead confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

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

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Table B.2 – Maximum NO₂ concentration within the AQMAs for the past five years (µg/m³)

AQMA Name (description)	Sites, Pollutants and Air Quality Objectives	Is air quality in the AQMA influenced by roads controlled by Highways England?	Maximum monitored concentration (µg/m ³). (*) fall-off with distance adjusted values				
			2019	2020	2021	2022	2023
Imperial/St Leonards Road Junction, Windsor (An area encompassing a number of properties at the junction of Imperial Road and Leonards Road)	WM03B - NO ₂ annual mean	NO	35.1*	33.9	34.9	32.1*	31.1
Windsor (An enlarged area encompassing parts of West Windsor)	WM31, WM33 - NO ₂ annual mean	NO	35.8*	26.1	30.4	31.4	28.9
Maidenhead (An enlarged area encompassing the town centre)	WM013A - NO ₂ annual mean	NO	35.1	30.5	28.2	31.9	29
Bray/M4 (An area encompassing part of Bray around the place where the M4 crosses over the A308 Windsor Road)	WM29 - NO ₂ annual mean	Yes	35.7*	30.4	33.2	33.3	28.9
Wraysbury/M25 (The area runs along the B376 and intersects with the M25 near junction 13)	WM15 - NO ₂ annual mean	Yes	34.3*	28.5	29.8	30.8	27.7

Notes:

(*) Where applicable, data has been distance corrected for relevant exposure.

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

New or Changed Sources Identified Within Royal Borough of Windsor and Maidenhead During 2023

The Royal Borough of Windsor and Maidenhead has not identified any new sources relating to air quality within the reporting year of 2023.

Additional Air Quality Works Undertaken by Royal Borough of Windsor and Maidenhead During 2023

The Royal Borough of Windsor and Maidenhead has not completed any additional works within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Diffusion Tubes are supplied by Gradko International Ltd. The preparation method is TEA 50% acetone. Nitrogen dioxide is determined by U.V. Spectrophotometry.

The Laboratory Performance in AIR NO₂ Proficiency Testing Scheme rounds AR046 to AR059 (September 2021 – October 2023) show a percentage of results submitted with satisfactory score of 100%.

[Laboratory Performance in AIR NO₂ Proficiency Testing Scheme \(defra.gov.uk\)](https://www.defra.gov.uk)

The monitoring has been completed in adherence with Defra 2022 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within the Royal Borough of Windsor and Maidenhead recorded data capture greater than 75% therefore it was not required to annualise any monitoring data.

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/NO₂ continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

The Royal Borough of Windsor and Maidenhead have applied a local bias adjustment factor of 0.9 to the 2023 monitoring data. A summary of bias adjustment factors used by The Royal Borough of Windsor and Maidenhead over the past five years is presented in Table C.1. Two co-location studies at sites MW1 and MW2 have been utilised to derive the local factor. The local factors data has good precision and accuracy. The Royal Borough of Windsor and Maidenhead co-location data has been added to National Bias Adjustment Spreadsheet, the 2023 national bias adjustment factor was 0.83. The local factor is closer to 1 and has been chosen as it represents a more conservative approach.

The local factor in accordance with the guidance LAQM.TG22 is derived by averaging the B values of the two studies: 20% for MW1 and 1% for MW2 = 11.1%. This is then expressed as a factor, 0.111. Next, 1.00 is added to this value = 1.11. The inverse is taken to give the bias adjustment factor: $1/1.11 = 0.9$.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local	-	0.9
2022	Local	-	0.94
2021	Local	-	0.92
2020	Local	-	0.87
2019	Local	-	0.94

Table C.2 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12	11			
Bias Factor A	0.99 (0.91 - 1.09)	0.84 (0.77 - 0.92)			
Bias Factor B	1% (-8% - 10%)	20% (9% - 31%)			
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	24.1	27.5			
Mean CV (Precision)	3.5%	2.9%			
Automatic Mean ($\mu\text{g}/\text{m}^3$)	23.9	23.0			
Data Capture	99%	96%			
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	24 (22 - 26)	23 (21 - 25)			

Notes:

A combined local bias adjustment factor of 0.9 has been used to bias adjust the 2023 diffusion tube results.

NO₂ Fall-off with Distance from the Road

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

No diffusion tube NO₂ monitoring locations within the Royal Borough of Windsor and Maidenhead required distance correction during 2023.

QA/QC of Automatic Monitoring

During 2023 Automatic Monitoring sites MW1, MW2 and MW4 have been part of the London Air Quality Network (LAQN) which is operated and managed by the Environmental Research Group (ERG) at Imperial College London. ERG was responsible for data management and ratification process. QA/QC audits were completed by the National Physical Laboratory (NPL). Data have traceability to national standards and operational procedures defined for LAQN. Audit and servicing of the sites is completed six monthly. The NO₂ monitoring data presented within the ASR is fully ratified. Historic data up to March 2024 is available through the London Air Quality website. Data management and ratification process for 2024 is undertaken by Ricardo and live data is available through the Air Quality England website: https://www.airqualityengland.co.uk/site/latest?site_id=RBWM001

Local Site Operator (LSO) duties for all automatic monitoring sites are completed by the Council's Environmental Protection Officer.

Automatic Monitoring Annualisation

All automatic monitoring locations within the Royal Borough of Windsor and Maidenhead recorded data capture greater than 75% therefore it was not required to annualise any monitoring data.

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO₂ concentrations corrected for distance are presented in Table A.3.

No automatic NO₂ monitoring locations within the Royal Borough of Windsor and Maidenhead recorded required distance correction during 2023.

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

Figure D.1 – AQMAs in the Royal Borough of Windsor and Maidenhead

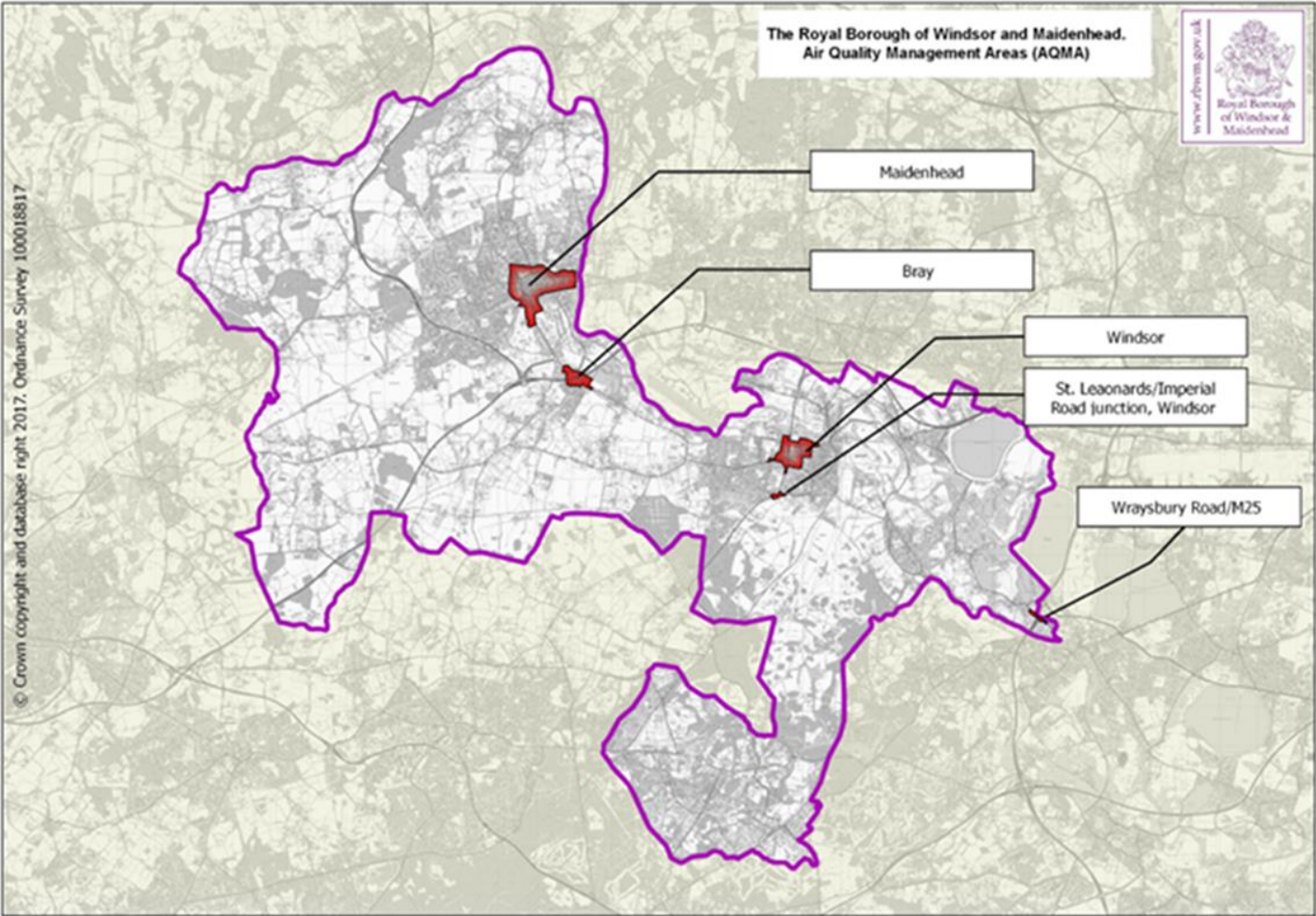


Figure D.2 – Map Monitoring Sites Windsor AQMA

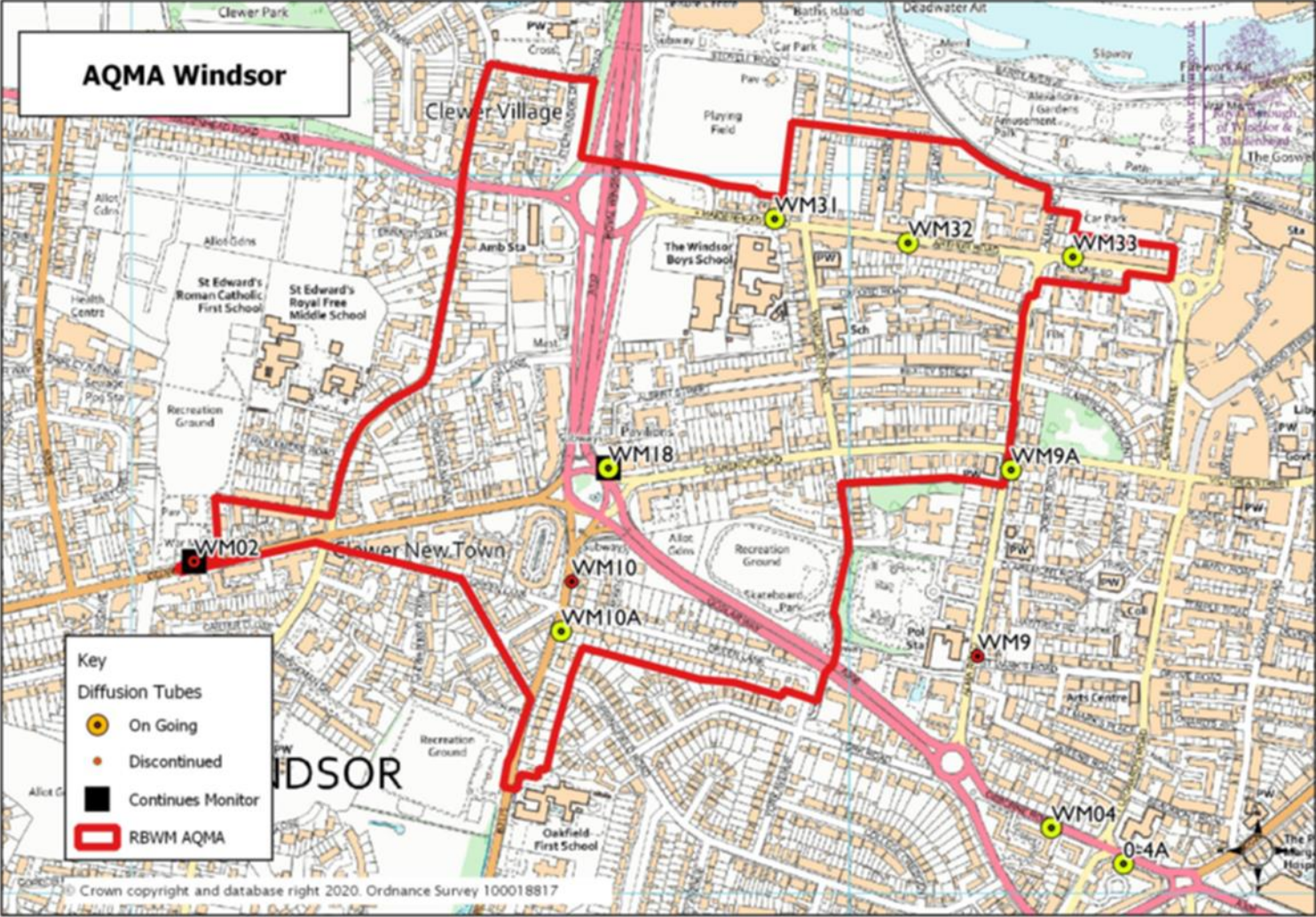


Figure D.3 – Map Monitoring Sites St Leonards/Imperial Road Junction AQMA

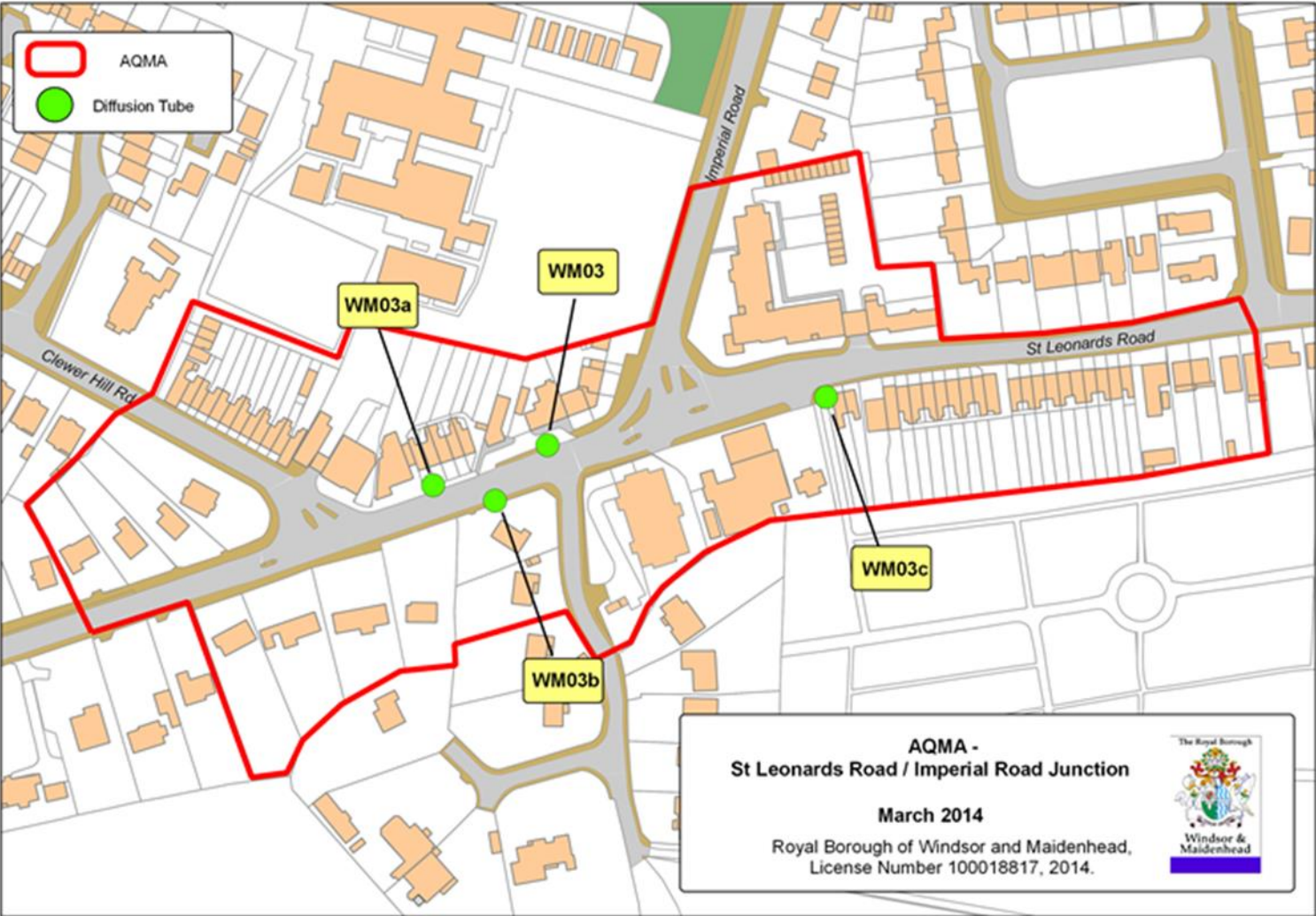


Figure D.4 – Map Monitoring Sites Maidenhead AQMA

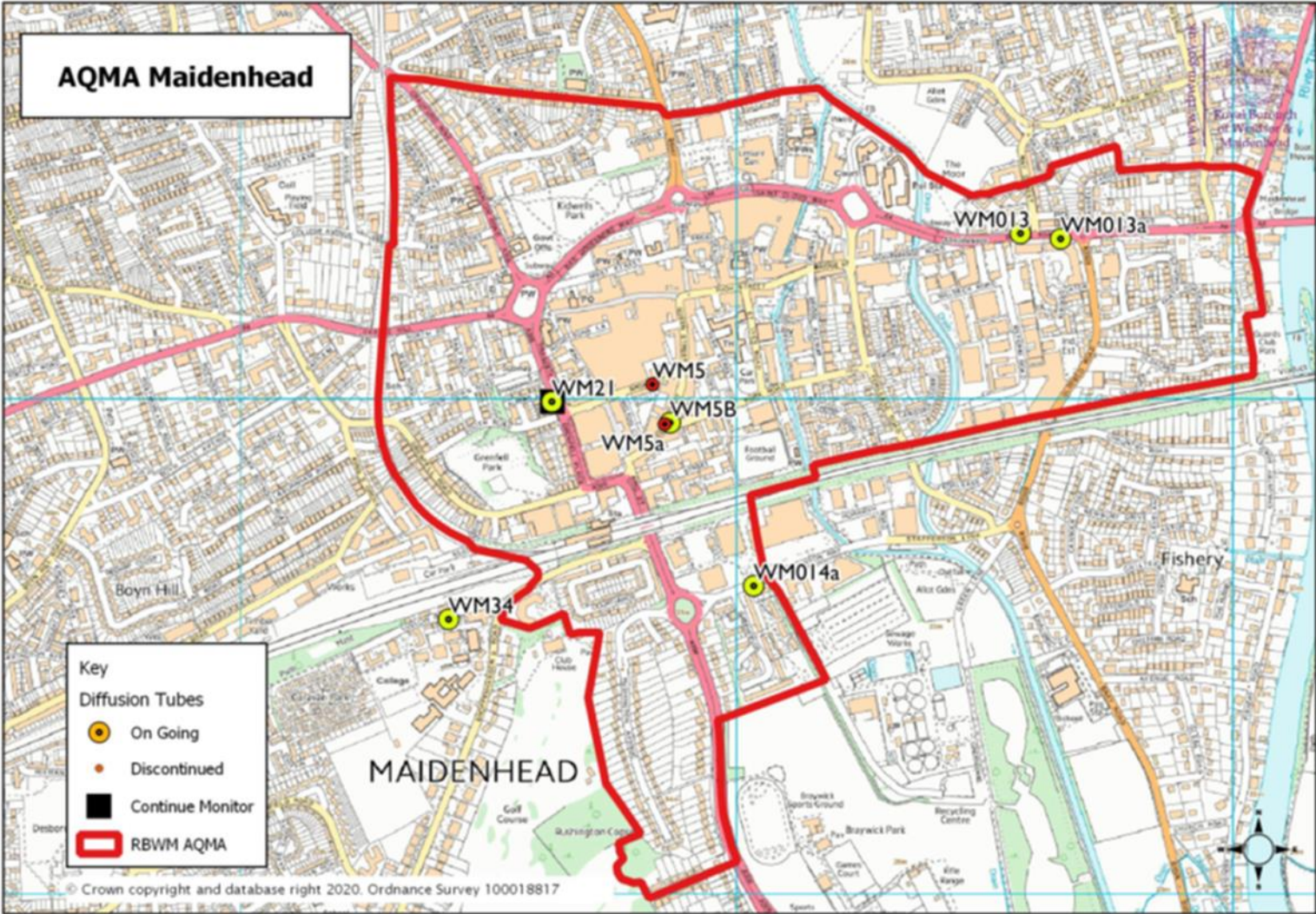


Figure D.5 – Map Monitoring Sites Bray/M4 AQMA

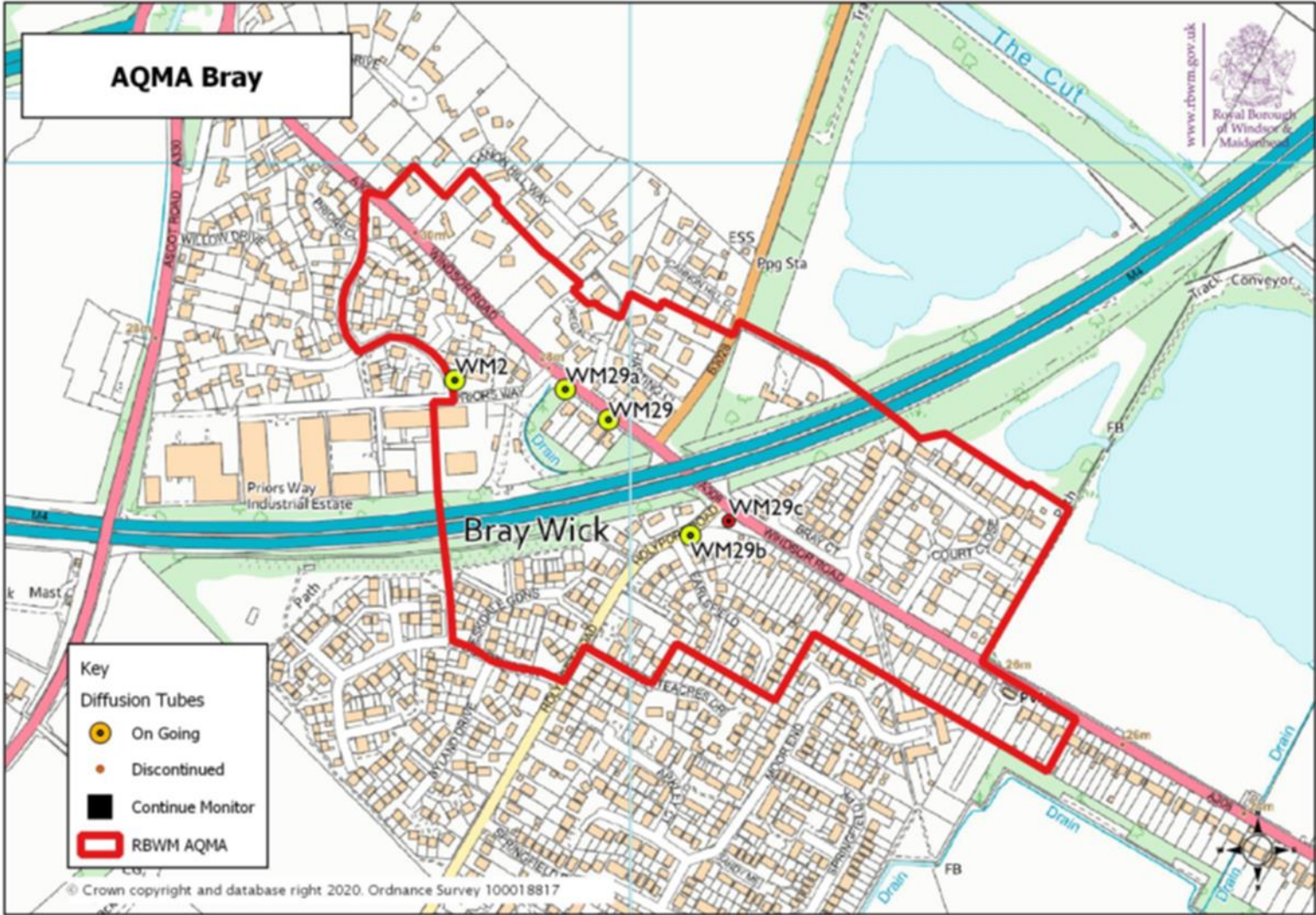


Figure D.6 – Map Monitoring Sites Wraysbury/M25 AQMA

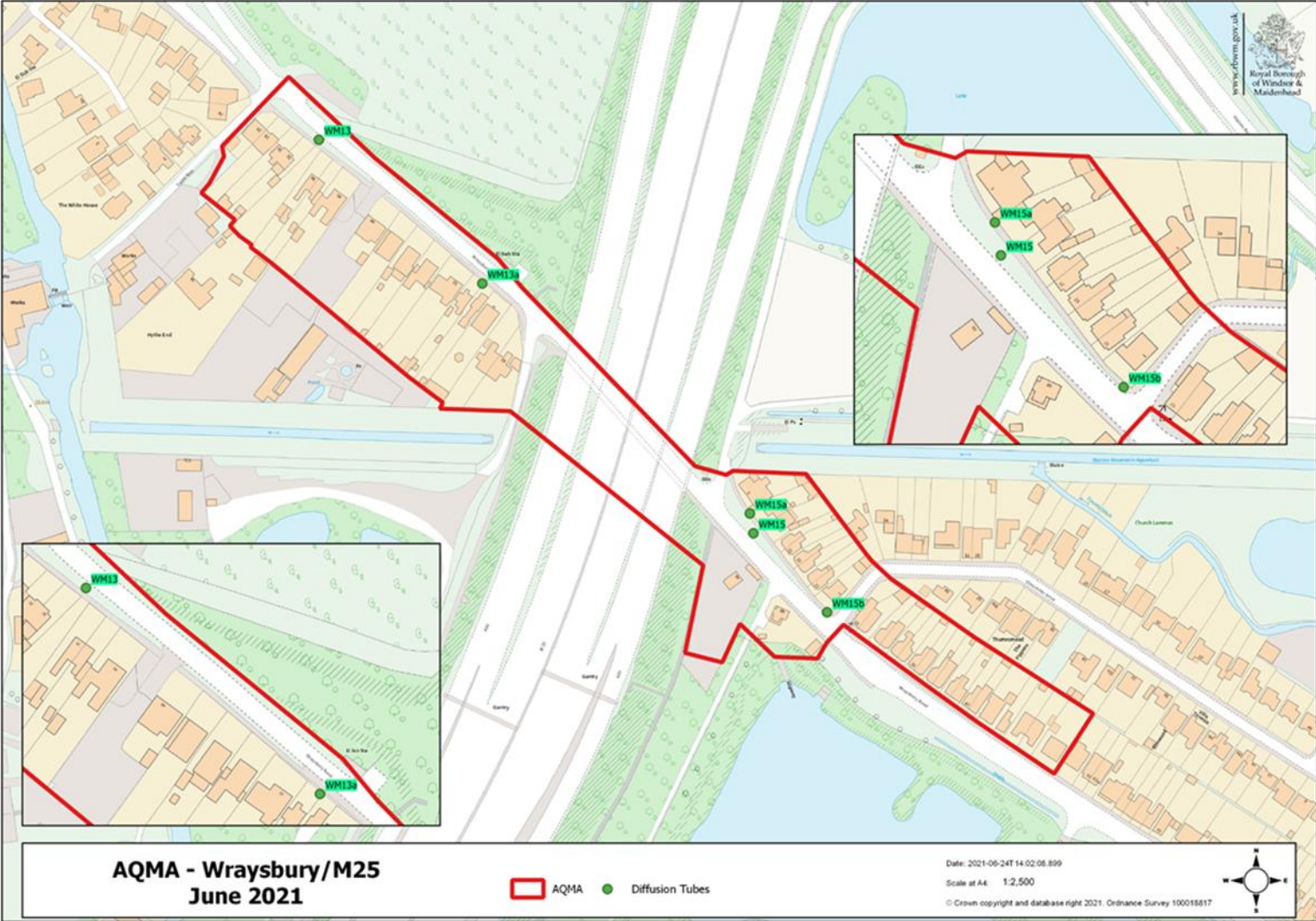


Figure D.7 – Map Monitoring Sites Datchet

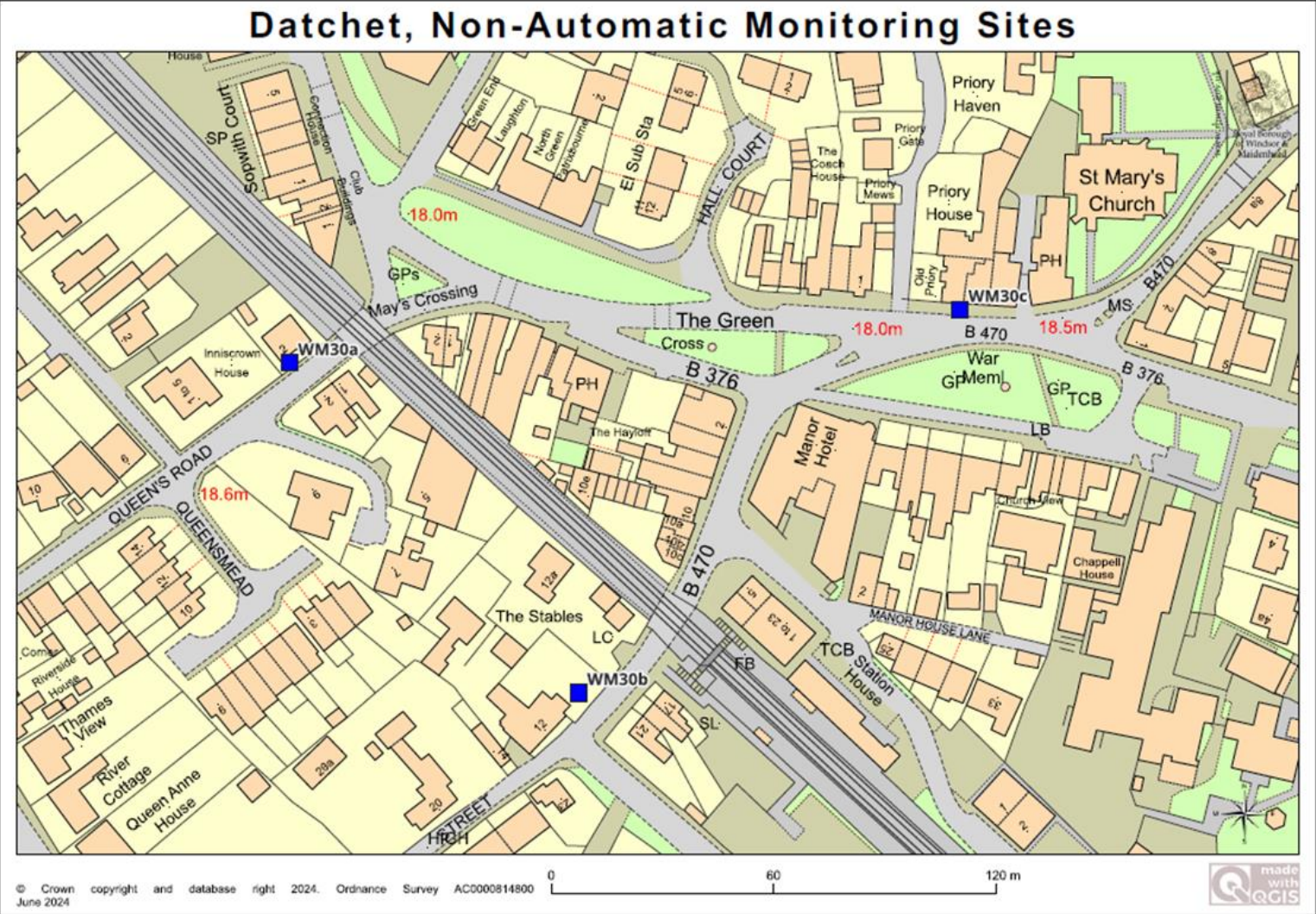


Figure D.8 – Map Monitoring Sites Eton

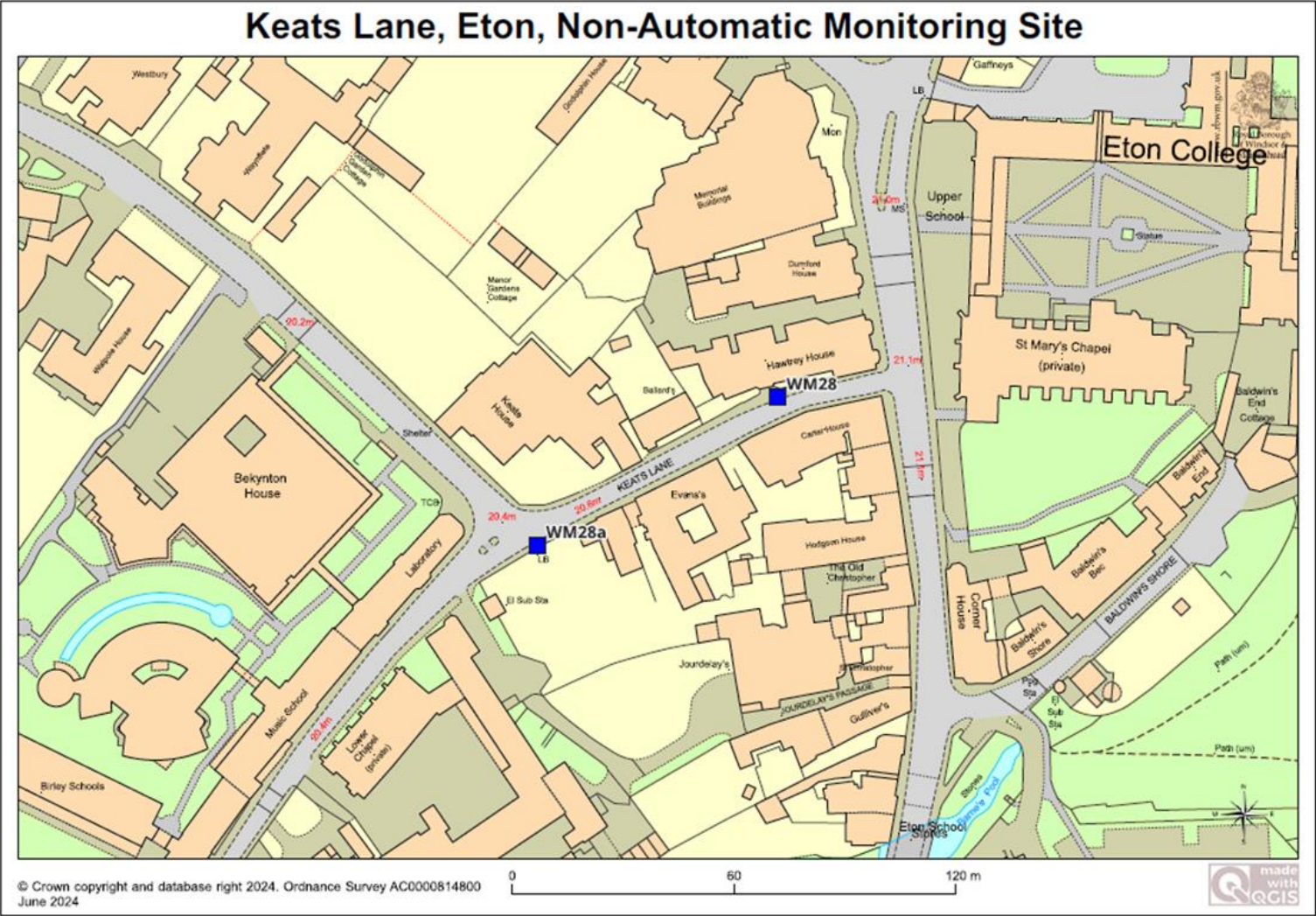


Figure D.9 – Map Monitoring Sites Old Windsor

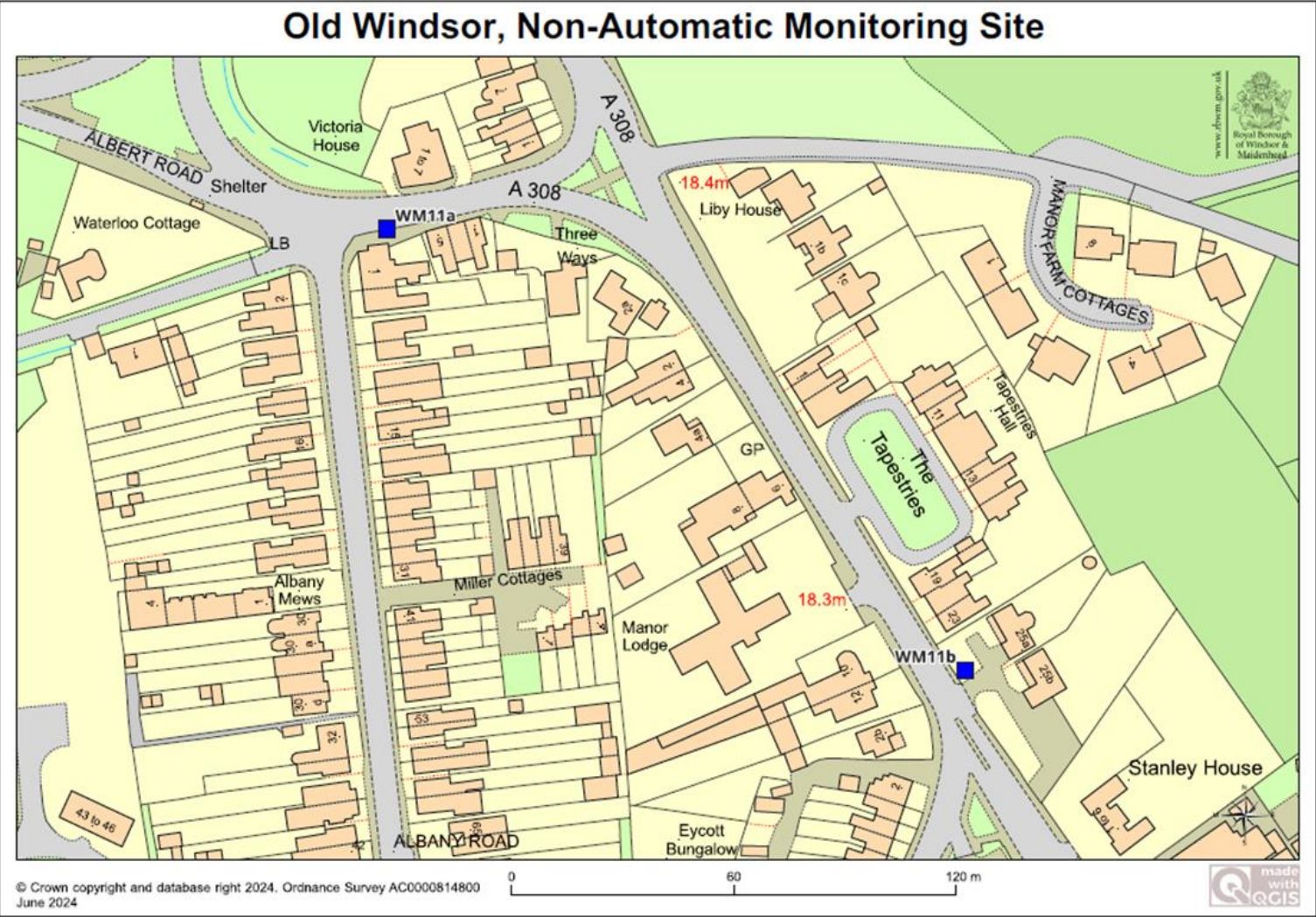
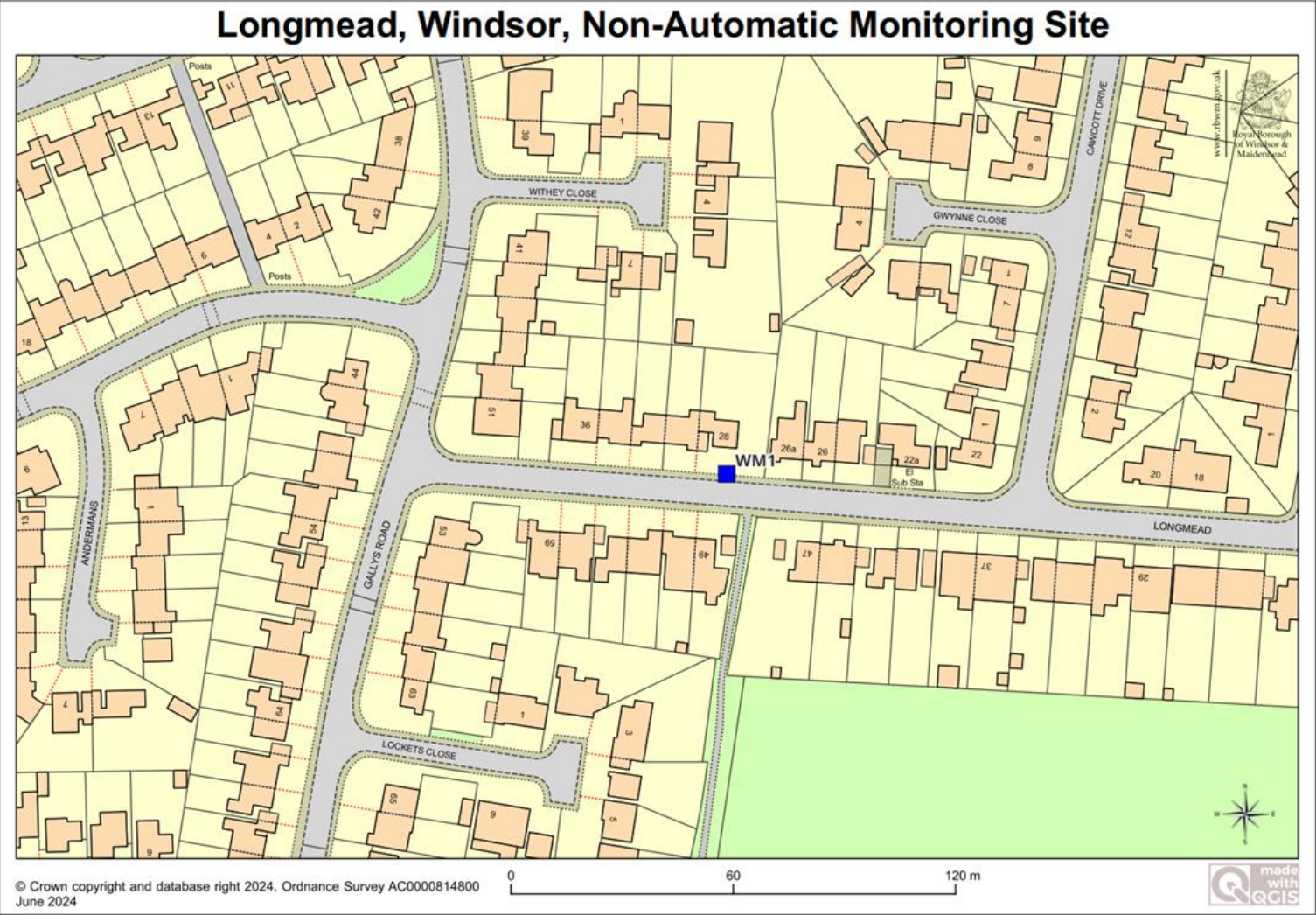


Figure D.10 – Map Monitoring Sites West Windsor



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England⁷

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

⁷ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
BAM	Beta Attenuation Mass – PM10 monitor
BSIPs	Bus Service Improvement Plans
LAQM	Local Air Quality Management
LCWIP	Local Cycling & Walking Infrastructure Plan
LTP	Local Transport Plan
$\mu\text{g}/\text{m}^3$	Microgram per cubic metre
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10 μm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5 μm or less
QA/QC	Quality Assurance and Quality Control
RBWM	Royal Borough of Windsor & Maidenhead

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.
- ENTEC (2004): LAQM Detailed Assessment for the Royal Borough of Windsor and Maidenhead, ENTEC. Report, August 2004.
- ENTEC (2008): LAQM Detailed Assessment for the Royal Borough of Windsor and Maidenhead, ENTEC. Report, November 2008.
- RBWM: Local Transport Plans (LTPs), https://www.rbwm.gov.uk/sites/default/files/2020-04/transport_local_transport_plan_part1_2012_07_24.pdf
- RBWM (2010): LAQM Detailed Assessment, Royal Borough of Windsor and Maidenhead. Report, April 2011.
- RBWM (2015): LAQM Updating and Screening Assessment, Royal Borough of Windsor and Maidenhead. Report, June 2015.
- RBWM (2020): Air quality Action Plan Update, Royal Borough of Windsor and Maidenhead. Report, November 2020.
- RBWM (2023): Annual Status Report (ASR), Royal Borough of Windsor and Maidenhead. Report, June 2023.