



**Buckinghamshire
Council**

2022 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995
Local Air Quality Management

Date: June 2022

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Executive Summary: Air Quality in Our Area

Air Quality in Buckinghamshire Council

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas ^{1,2}.

The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages³, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017⁴.

Buckinghamshire Council is a unitary local authority in England, the area of which comprises most of the ceremonial county of Buckinghamshire equivalent to 1,874 km² with an estimated population of 543,973 (Office for National Statistics, 2019). It was created in April 2020 from the areas that were previously administered by Buckinghamshire County Council including the districts of Aylesbury Vale, Chiltern, South Bucks and Wycombe.

The council was established in April 2020 and work is progressing to harmonise air quality monitoring and action planning. Whilst Covid-19 resulted in the essential re-deployment of staff to support the council response, a review of air monitoring locations, alignment of providers and combined responses to consultations has already commenced.

Buckinghamshire is predominately rural but has several market towns including Amersham, Aylesbury, Beaconsfield, Buckingham, Chesham, Gerrards Cross, High Wycombe, Iver and Marlow. The main source of pollution in Buckinghamshire is from road transportation. There are four motorways which run through the Buckinghamshire Council Area, M4, M25 M40 and the A404(M) and the other main routes of traffic are the A40, A41,

1 Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

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

3 Defra. Air quality appraisal: damage cost guidance, July 2021

4 Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

A412, A413, A418, A421, A4010. There are currently 127 Environmental Permits issued by Buckinghamshire Council to businesses including but not limited to petrol stations, dry cleaners, brickworks, crematoria, foundries, cement batchers, maggot breeders, manufacturers of timber and wood-based products and vehicle refinishers.

Currently nitrogen dioxide (NO₂) is the major pollutant of concern within Buckinghamshire and is monitored using chemiluminescence continuous monitors and passive diffusion tubes.

The majority of Buckinghamshire already meets the Air Quality Objectives (AQOs) (set by the UK Government) for NO₂. The Lockdown in spring 2020 caused by the Covid-19 pandemic had a significant reduction on emissions from transport in Buckinghamshire resulting in approximately 30% reduction in concentrations across the area. In 2021 there was an increase in concentrations at the majority of the monitoring locations of around 10%. A small fraction of monitoring locations had slightly lower concentrations than 2020 and some had significantly higher increases of up to 50%. Concentrations have not returned to the same levels measured before the Covid-19 pandemic.

Since the last Annual Status Report (ASR), no amendments have been made to the existing nine Air Quality Management Areas (AQMA) that have been declared for exceedances of the annual mean nitrogen dioxide objective. For further information visit the UK Air website for each of the legacy areas <https://uk-air.defra.gov.uk/aqma/list>.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy⁵ sets out the case for action, with goals to reduce exposure to harmful pollutants. The Road to Zero⁶ sets out the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMA) are designated due to elevated concentrations heavily influenced by transport emissions.

⁵ Defra. Clean Air Strategy, 2019

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

Clean Air Day 2021

Buckinghamshire Council supported Global Action Plan on Clean Air Day on 17th June 2021 by posting messages on social media such as Twitter and Facebook. Articles were also placed for the attention of the staff on the intranet. Examples of tweets and posts are provided below



Climate Change & Air Quality Strategy

On 15 July 2020, the council passed a Motion to work alongside the government to achieve net-zero for carbon emissions for Buckinghamshire as a whole by 2050.

The Climate Change and Air Quality Strategy sets out what the council will do, and how we will work with partners and residents to achieve their aims. The strategy was developed, in part, using feedback from a public survey carried out in 2020 and was formally adopted in October 2021. The Strategic Environmental Protection Team also work in partnership with the climate change team on joint initiatives.

Vale of Aylesbury Local Plan 2013-2033

The plan was adopted by Buckinghamshire Council as a Development Plan Document on the 15th of September 2021. The plan can be found on the Council's website Local development plans for Buckinghamshire | Buckinghamshire Council.

Buckinghamshire Council Local Plan

Buckinghamshire Council must produce a Local Plan within five years of coming into being: that is, by April 2025. It aims to deliver sustainable development through:

- meeting the social, economic, and environmental needs of Buckinghamshire
- better quality places
- more comprehensive and predictable delivery of all kinds of infrastructure

It is a priority for the Strategic Environmental Protection team that Air Quality is given the attention required to enable the Council to allow future development without compromising Air Quality. The team have responded to all internal and external consultations drawing the attention of planning policy to potential issues.

Buckinghamshire Bus Service Improvement Plan

In response to the National Bus Strategy 'Bus Back Better,' published in March 2021 Buckinghamshire Council developed the Bus Service Improvement Plan (BSIP). It represents the Council's plan to establish buses as a key travel mode in Buckinghamshire, providing connectivity and accessibility to all with safe, reliable, and regular bus services. The plan has been developed in partnership with bus operators and Council Members, with input from the public through an online survey.

Green Wheels in Motion

On Wednesday 10 November 2021, Buckinghamshire Council hosted a prestigious transport and climate event in partnership with a group of businesses and organisations. The Green Wheels in Motion event highlighted sustainable transport solutions and innovative technologies which can help create a greener future for Buckinghamshire. The event demonstrated some of the fantastic initiatives delivered by our Transport Strategy and Innovation Teams, including electric vehicle induction charging pilot schemes, e-scooters, and e-bikes. There were also displays of the excellent work by Lunaz to electrify classic cars and heavy weight class vehicles, as well as highlighting the considerable progress Bosch has made to power vehicles and heat homes with hydrogen.

E-Scooters

Buckinghamshire Council have implemented an Electric Scooter rental trial to help support a 'green' alternative to local travel that is convenient, clean, and affordable. The trial is currently taking place in Aylesbury, High Wycombe, and Princes Risborough. The scheme has been extended until the end of November 2022.

- In the first year of the e-scooter trial (November 2020 – December 2021) there have been more than 100,000 rides covering over 190,000 miles with average journey distance of 2 miles
- The number of E-scooter trips increase during the am and pm peaks. This implies that people are using the e-scooters as an alternative way to commute to and from work.

Cycling

The first e-bike scheme for Buckinghamshire Council met another milestone with the installation of a second docking station at Aylesbury Vale Parkway train station. The scheme enables hirers to ride the e-bikes along the Waddesdon Greenway, a 4km shared cycling and walking route linking Aylesbury Vale Parkway Station with the village of Waddesdon and Waddesdon Manor.

Across Buckinghamshire, journeys by bike increased significantly during the 2020 lockdown. Cycle counts during May 2020 were more than double those in May 2019. Although not as high as those figures recorded in 2020 cycle, counts in 2021 were still generally higher than those recorded in 2019.

Projects funded by the Air Quality Grant Scheme

- In 2018/9 Buckinghamshire along with Spelthorne, Ricardo E&E and Heathrow Airport were awarded a Defra grant of £124,399 to test new real time air quality monitoring sensors including electrochemical and particulate sensors, and electronic diffusion tubes to monitor air pollution around Heathrow Airport. The delay in receiving funding, purchasing multi-pollutant sensors and the arrival of the COVID-19 pandemic prevented these plans from being realised. This, along with the lack of readiness of the EDT solution led to a reorganisation of the original plans. A full copy of the report is available on the Council's website [Air Quality Review and Assessment - Buckinghamshire Council – South Bucks Area](#). In summary, the group concluded that the sensor systems evaluated are not yet “fit and forget;” ongoing quality control is essential to place confidence in measurements. Ongoing operational requirements, reliability, drift, and built-in obsolescence are major limitations to running systems.
- In 2020/21 Buckinghamshire Council received a grant of £97,900. Working with Global Action Plan (GAP) as key delivery partner and local business engagement groups, Buckinghamshire Council will lead a campaign to accelerate the mode shift to electric vehicles and e-bikes in Buckinghamshire aimed at employers and their staff. 30 large employers will receive tailored, high quality, and independent support to implement actions to increase EV and e-bikes in their own operations and to encourage and enable 10,000 of their staff (including staff on low to middle income brackets) to buy or lease EVs and e-bikes taking advantage of attractive incentives on offer. This project will make purchasing cars and bikes a more realistic option for many citizens who live and work in Buckinghamshire, especially those on lower incomes. The initial stages of

the project including research into the provision of EVs were concluded in 2021. Global Action Plan working with Bucks Business First and Globe BID (Business Improvement and Delivery) are now in the process of engaging 30 companies of 100 or more employees.

- In 2021/22 Buckinghamshire Council received Capital funding for the renovation of a 10-year-old Dennis Eagle 26 tonne Refuse Collection Vehicle to include an electric powertrain (and other items required for five years' worth of maintenance).
- In 2021/22 Buckinghamshire Council (working with Spelthorne and Ricardo E&E) also received funding to create toolkits for Local Community Boards and Local schools with materials to enable them to carry out campaigns and to raise awareness of local air quality issues. Included will be monitoring equipment campaign materials, advice, and toolkits.

The packs will serve the following purposes:

1. To educate residents, businesses, and visitors to the area on how they can reduce emissions
2. To give a basic understanding on dispersion and how this information can be used to reduce exposure to air pollution.
3. To inform on what the Council are doing to reduce air pollution in their area and how they can help.
4. Co-benefits, increase in wellbeing, reduction in impact on Climate Change.

Conclusions and Priorities

Only one exceedance of the annual mean nitrogen dioxide objective was identified in Buckinghamshire in 2021. This was located in the Stoke Road AQMA in Aylesbury. Once distance corrected to the nearest sensitive receptor, the concentration of NO₂ was found to be just below the objective. Concentrations were measured within 10% of the objective at 6 other locations. These were located within either the Stoke Road AQMA or Wycombe AQMA. All other diffusion tube sites in 2021 reported levels well below the annual mean objective level of 40 µg/m³.

Although the results of the air quality monitoring have not varied significantly in the previous 5 years there was a significant decrease at most monitoring locations in Buckinghamshire in 2020 followed by a slight increase in 2021. Concentrations have not returned to pre-pandemic levels. This is due to the lockdown in January and people continuing to work from home where possible.

This reflects the national trend where in 2021, the annual mean NO₂ concentration at the roadside increased by an average of 1.9 µg/m³, rising by 8% from 2020. This is a result of increased road traffic following the removal of lockdown restrictions. Concentrations are still 20% lower than concentrations in 2019, after falling to the lowest point in the time series in 2020.

In 2021 only 1 monitoring location within the 9 AQMAs was above the annual mean nitrogen dioxide objective. However, in most AQMAs there has not been enough years where concentrations have been significantly below the objective to consider revocation.

In the 2019 ASR it was recommended that the Tring Road AQMA could be revoked if the monitoring data from 2020 illustrated a continuing trend of the recorded NO₂ concentrations being significantly below the annual mean objective. The monitoring data from 2020 has shown this continuing trend. However, as discussed, the data is not representative of usual traffic levels and circumstances were not as they were pre-pandemic with restrictions in place at the beginning of the year. Monitoring will therefore continue in 2022 before any decision is reached in revoking the AQMA.

Buckinghamshire Council's priorities for 2021

Unitary Authority and Better Buckinghamshire programme

Buckinghamshire Council is a relatively new Unitary Council, established in 2020. The Better Buckinghamshire programme of service reviews is the next stage of the process. The programme is about seizing the new opportunities and building a strong outcome-focused organisation. It is also about learning lessons from the COVID-19 crisis and ensuring that this learning drives improvement and change.

In the first three years, all services will go through a review which may include service redesign and new roles. The Housing and Regulatory Services team underwent this process and on 1st August 2021 the Strategic Environmental Protection team was formed. This team administers the LAQM process in Buckinghamshire. The first step was to align suppliers and contracts for air quality monitoring equipment. The next step is to consolidate all Air Quality

Action Plans into one and explore the adoption of a Supplementary Planning document for the whole of Buckinghamshire.

There will also be further work over the next year to harmonise air monitoring contracts and look at the synergies of existing action plans.

Local Plan

Buckinghamshire Council must produce a Local Plan within five years of coming into being: that is, by April 2025. The council are at the beginning of the plan-making process.

In August 2020, the government consulted on a Planning White Paper which proposes significant reforms to the planning system. Until the government has firmed up the detail and timetable for the proposed changes, there is a limit to how much progress can be made. It is a priority for the Strategic Environmental Protection team to ensure that we are able to continue to give Air Quality due regard and attention. The team have responded to all internal and external consultations drawing the attention of planning policy to potential issues.

National Infrastructure Projects

In addition, there are several National Infrastructure Projects (NIPs) currently underway or within the planning/design stage and are due to be constructed within Buckinghamshire over the next few years. If not managed appropriately they have the potential to cause a large and significant impact on local air quality.

Crossrail - The Elizabeth line opened on Tuesday 24 May 2022 with services between Paddington and Abbey Wood. TfL Rail services from Reading and Heathrow to Paddington mainline, and Shenfield to Liverpool Street mainline were also rebranded to the Elizabeth line on this day. When opened, the new Queen Elizabeth line will provide more frequent faster trains from Taplow, Iver and Langley into and across London. It is expected to increase the capacity and therefore the patronage to these stations. Buckinghamshire Council will work with other agencies to promote sustainable travel to these stations so to avoid an increase in pollution.

East West Rail (EWR) - East West Rail is a major railway project. It aims to deliver much-needed transport connections for communities between Oxford and Cambridge. Construction on connection 1 (between Oxford and Milton Keynes) of the project started in 2020 with the aim of having trains running in 2025. Further information on the progress of the project and what measures EWR have in place to reduce disruption on the local community can be found here [Bicester to Bletchley/Milton Keynes - Network Rail](#).

High Speed Rail 2 - Route wide sources of air quality impacts identified include highway construction traffic, highway interventions, and the use of Non-Road Mobile Machinery (NRMM), which may have temporary effects on local air quality. These effects may occur in the vicinity of HS2 construction sites, as well as alongside a number of roads used by the construction traffic moving to and from each site. The effects are mostly from changes in NO₂ concentrations and particulate matter, including PM₁₀ and PM_{2.5}.

The tunnel boring machines have been launched from the south portal near Denham and are travelling towards the north portal at South Heath. Excavation of the vent shafts is almost complete and lorry movements associated with muck away have stopped although concrete deliveries continue.

A mass haul strategy to cope with the movement of excavated material to various locations along the route is in place. HS2 have committed to, wherever practicable, keep the movement of this material within the boundary of the HS2 project thereby reducing the need to use HGVs on the public roads. Internal haul roads have been developed which follow the rail trace through the middle of the earthwork areas (i.e. embankments, cuttings). Substantial activity including digging out the north portal at South Heath and excavating the cutting from there to Wendover has taken place. To connect parts of this area of the route an overhead earth conveyor system is being constructed at the north west of the South Heath Cutting. This approach helps reduce impacts on traffic flow and safety as well as local air quality.

Where possible HS2 are trying to reduce HGV movements by using rail. HS2 has already run more than 500 freight trains into its site at Calvert since the first railhead opened in December 2020 and the opening of a new facility on the Prince's Risborough line, south of Aylesbury, will allow a further 285,000 tonnes of aggregate, needed for construction, to be delivered by this way.

The HS2 environmental statement (as amended) included an assessment of the impacts of the scheme on air quality during both construction and operation. The HS2 Air Quality Strategy and HS2 Phase One Information Paper E31 "Air Quality" summarises the impacts and the project includes a HS2 Air Quality Action Plan which was revised in 2019. More information can be found at Monitoring the environmental effects of HS2 - GOV.UK (www.gov.uk).

Officers will continue to carefully monitor the effects of the project on air quality in the Buckinghamshire Council administrative area, provide challenge where appropriate and seek further mitigation where reasonable to do so.

Upgrade M4 Jct. 4 – 8/9 to a Smart Motorway. - In September 2016, the Secretary of State gave planning consent for this project. The Development Consent Order lists requirements that Highways England and its contractors are obliged to fulfil. This includes monitoring for NO₂ at receptors where modelling has indicated that the objective will fail. Requirement 26 of the Development Consent Order compels Highways England to agree air quality monitoring programme with the Local Authorities. Monitoring locations have been agreed by Highways England.

For each project Buckinghamshire Council have been involved in responding to a wide variety of consultations and attending stakeholder meetings. The council has also attended specific stakeholder meetings relating to air quality, (where established), to ensure that all relevant concerns relating to the potential impact on air quality have been addressed. Whilst many aspects fall outside of the Councils legal ability to control, Code of Construction Practice (CoCPs) documents have also been developed, again with the input from the council, to ensure that many sources of dust and other LAQM pollutants created during the construction and development phases are effectively minimised.

During the construction phase of each of these developments Buckinghamshire Council will continue to work with the relevant agencies and organisations to minimise impacts upon air quality.

Local Engagement and How to get Involved

Emissions from road transportation are the major source of air pollution in Buckinghamshire. Therefore, members of the public can help reduce local air pollution concentrations by choosing to use more sustainable transport options such as walking, cycling, car sharing and/or use public transport. They can also reduce reliance on cars for trips where possible.

There are increasing opportunities within the Buckinghamshire Council area to use sustainable transport options, such as improved walking routes and cycling routes. Information on these routes can be found on the Council's website [Cycling and walking | Buckinghamshire Council](#).

When using a car for trips, emissions can be minimised by ensuring that the vehicle is not over revved, and that the engine is switched off when the vehicle is stationary (parked) or is likely to be stationary for a period.

Air quality monitoring data is hosted on the Air Quality England website (Buckinghamshire Council - Air Quality monitoring service (airqualityengland.co.uk) which allows access to existing and historical air quality levels.

For further information on Air Quality and how to reduce emissions and exposure to pollution please refer to the Clean Air Hub website run by the Charity Global Action Plan.

Clean Air Hub: The UK's go to source for information on clean air and air pollution

Local Responsibilities and Commitment

This ASR was prepared by the Strategic Environmental Protection team of Buckinghamshire Council with the support and agreement of the following officers and departments:

- Transport Strategy Team
- Energy and Climate Change Team

If you have any comments on this ASR, please send them to Cerys Williams or Deborah Ferady at:

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1 Local Air Quality Management

This report provides an overview of air quality in Buckinghamshire during 2021. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) 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 pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Buckinghamshire Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

A summary of AQMA declared by Buckinghamshire Council can be found in Table 2.1. The table presents a description of the nine AQMA that are currently designated within Buckinghamshire Council. Appendix D: Map(s) of Monitoring Locations and AQMA provides maps of AQMA and the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO₂ annual mean

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 National Highways?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Name and Date of AQAP Publication	Web Link to AQAP
Friarage Road AQMA	16 th June 2008	NO ₂ Annual Mean	An area encompassing several properties along the A418 (Friarage Road and Oxford Road) in Aylesbury	NO	44	No Exceedance	Aylesbury Air Quality Action Plan	Air quality management areas Buckinghamshire Council Aylesbury Vale Area
Stoke Road AQMA	16 th June 2008	NO ₂ Annual Mean	An area encompassing the junction of the A413 Wendover Road, Walton St, and the B4443 Stoke Road in Aylesbury	NO	59	No Exceedance	Aylesbury Air Quality Action Plan	Air quality management areas Buckinghamshire Council Aylesbury Vale Area
Tring Road AQMA	4 th July 2005	NO ₂ Annual Mean	An area encompassing a stretch of the A41 Tring Road and properties bordering it between the Oakfield Road/King Edward Avenue junction and Queen Street in Aylesbury	NO	40	No Exceedance	Aylesbury Air Quality Action Plan	Air quality management areas Buckinghamshire Council Aylesbury Vale Area
Broad Street/Berkhampstead Road	Declared 20 th August 2007	NO ₂ Annual Mean	A small part of the A416 including Broad Street and Berkhampstead Road	NO	50	No Exceedance	Air Quality Action Plan (AQAP) 2019	Buckinghamshire Council – Chiltern Area - Review & Assessment

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by National Highways?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Name and Date of AQAP Publication	Web Link to AQAP
South Bucks 1	Declared 2004	NO ₂ Annual Mean	An area surrounding the M25, M40 and M4 motorways	NO	42.8	No Exceedance		Buckinghamshire Council – South Bucks Area - Air Quality Review and Assessment
South Bucks 2	Declared August 2018	NO ₂ Annual Mean	Iver Parish	NO	44	No Exceedance		Buckinghamshire Council – South Bucks Area - Air Quality Review and Assessment
M40 AQMA	Declared 01/08/01 Amended 22/12/17	NO ₂ Annual Mean	Along the M40 Motorway throughout District. Area includes land and property to each side of the carriageway that were modelled to have exceeded national air quality objectives for NO ₂ (annual mean)	YES	n/a	No Exceedance	Wycombe District Air Quality Action Plan	Air quality management

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by National Highways?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Name and Date of AQAP Publication	Web Link to AQAP
Wycombe AQMA	43091	NO2 Annual Mean	Main arterial roads of High Wycombe including West Wycombe Rd, Oxford St, Hughenden Rd, Abbey Way, Marlow Hill, Bridge St, Crendon St, Queen Victoria Rd, Easton St, London Rd, and Amersham Hill (part of). Area also includes properties to the side of these roads where exceedances were modelled to include an area that passed through a significant part of a building or plot of land.	NO	52	No Exceedance	Wycombe District Air Quality Action Plan	Air quality management

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by National Highways?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Name and Date of AQAP Publication	Web Link to AQAP
Marlow AQMA	43091	NO2 Annual Mean	Area incorporates the High Street (between Station Rd / Pound Ln roundabout and West St / Spittal St roundabout), West St (between High St / Spittal St roundabout and Westwood Rd), Spittal St, Chapel St, Little Marlow Rd (between Chapel St and Foxes Piece School), and areas of land to either side of the carriageway on the roads.	NO	52	No Exceedance	Wycombe District Air Quality Action Plan	Air quality management

☒ Buckinghamshire Council confirm the information on UK-Air regarding their AQMA(s) is up to date.

☒ Buckinghamshire Council confirm that all current AQAPs have been submitted to Defra.

2.2 Progress and Impact of Measures to address Air Quality in Buckinghamshire Council

Defra's appraisal of last year's ASR concluded "on the basis of the evidence provided by the local authority the conclusions reached are acceptable for all sources and pollutants. The next step for Buckinghamshire Council is to submit an Annual Status Report in 2022". Detailed comments were as follows:

1. Defra appreciated that the Council has not yet fully harmonised LAQM air quality reporting across the legacy districts, as such, reporting for each of the areas has been highlighted within the 2021 ASR tables. It was requested that future Excel Spreadsheet and ASR tables are consolidated for the Unitary Authority. Where possible, the tables have been consolidated in the 2022 ASR. Three types of Diffusion tubes were used for 2021. Consequently, there will still be 3 diffusion tube tables to accommodate the varying bias adjustment factor.
2. As recommended, appraisals of the existing monitoring strategy and AQMAs were undertaken including consideration of the amendment of the Stoke Road AQMA boundary considering the DT17 exceedance, revocations of the Chiltern, M20 and Tring Road AQMAs, and expansion of the current monitoring regime to help further identify pollution hotspots and further inform future AQAP measures for the Council area.
3. Gaps were identified within the AQAP measure table. As recommended, the council fully populated the measures table, particularly in reference to the measures' KPIs and funding information.
4. The council has continued to use of the Public Health Outcomes Framework to account for the health effects of PM_{2.5} however it is not updated as regularly as it would like.
5. The specific AIR-PT scheme detail has been included within Appendix C for reference.
6. The council have ensured that all collocated Diffusion Tubes are stated to be 'co-located with a continuous analyser' where necessary.
7. The table of measures have been consolidated as an initial step towards developing one AQAP for Buckinghamshire.

Buckinghamshire Council has taken forward several direct measures during the current reporting year of 2021 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 37 measures are included within Table 2.2, with the type of measure and the progress Buckinghamshire Council have made during the reporting year of 2021 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans

- Climate Change and Air Quality Strategy
- Freight Strategy.

Key completed measures are:

Climate Change & Air Quality Strategy - A Draft Climate change and Air Quality strategy was developed over the course of 2020 and published in October 2021.

Air Pollution Monitoring Sensor Trial - The Defra funded multi-Pollutant sensor trial was concluded in early 2021. A full copy of the report is available on the Council's website Air Quality Review and Assessment - Buckinghamshire Council – South Bucks Area. In summary, the group concluded that the sensor systems evaluated are not yet “fit and forget;” ongoing quality control is essential to place confidence in measurements. Ongoing operational requirements, reliability, drift, and built-in obsolescence are major limitations to running systems.

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

- The upgrading of the A418 Oxford Road corridor leading to and including the Friarage Road AQMA.
- Reinstate the NO₂ automatic monitoring station within the Stoke Road AQMA.
- In conjunction with colleagues within the Transport for Buckinghamshire Team, review the urban traffic management system (UTMC) utilised throughout the Aylesbury area, at the Stoke Road gyratory system located within the Stoke Road AQMA, to improve traffic flow and to reduce levels of recorded pollution.

- The Strategic Environmental Protection team will be looking into using the new Buckinghamshire wide transport model to get a better understanding on where monitoring locations may be required in the future.
- Working with Global Action Plan as key delivery partner and local business engagement groups, Buckinghamshire Council will lead a campaign to accelerate the mode shift to electric vehicles and e-bikes in Buckinghamshire aimed at employers and their staff. 30 large employers will receive tailored, high quality, and independent support to implement actions to increase EV and e-bikes in their own operations and to encourage and enable 10,000 of their staff (including staff on low to middle income brackets) to buy or lease EVs and e-bikes taking advantage of attractive incentives on offer. This project will make purchasing cars and bikes a more realistic option for many citizens who live and work in Buckinghamshire, especially those on lower incomes. This project is being funded by a Defra Air Quality Grant.
- Apply for funding from the Air Quality Grant.
- Consolidate the Air Quality Action plans into one document.

Buckinghamshire Council's priorities for the coming year are:

- Continue to gather monitoring data on NO₂ concentrations within the AQMAs.
- To introduce a scheme to reduce the impact of HGVs on local areas, especially Iver. The Strategic Environmental Protection team will consider several measures over the next year with partners and key stakeholders, including improving the vehicle fleet and removing obstacles that prohibit the smooth running of traffic through the villages.
- Buckinghamshire Council are in the process of producing a new local plan for the new authority. It is a priority for the Strategic Environmental Protection team to continue working in partnership with the planning policy team to ensure air quality is included as a key consideration. The team have responded to all internal and external consultations drawing the attention of planning policy to potential issues. The team will also support the work on the development of a Buckinghamshire wide Supplementary Planning document.

- The Strategic Environmental Protection team will be looking into using the new Buckinghamshire wide transport model to get a better understanding on where monitoring locations will be required in the future.

Buckinghamshire Council worked to implement these measures in partnership with the following stakeholders during 2021:

- Heathrow Air Quality Working Group
- Global Action Plan
- Bucks Business First
- Globe BID

The principal challenges and barriers to implementation that Buckinghamshire Council anticipates facing are:

- To use current policies and procedures to minimise the impact of National infrastructure plans and Local development on air quality.
- Two of the AQMAs are surrounding motorways which are predominantly used to travel long distances. Therefore, the Council has little control over who uses them and when.
- There are several National Infrastructure Projects being developed in the area. The extent to which the council can further influence these locally is in some cases very limited.
- There are several barriers to HGV movement on the road network in the Iver area, including width and weight restrictions and low bridges which mean that HGV flows are restricted to certain routes, further focussing their impact on particular locations. This prevents the diversion of HGVs to more appropriate roads in terms of environment and place.
- The Covid-19 pandemic and the transformation processes involved in the establishment of the Unitary Authority continued to impact upon projects in 2021. Work on Consolidation of the Air Quality Action Plans therefore continues.

Buckinghamshire Council anticipates that the measures stated above and in Table 2.2 will achieve compliance in all 9 AQMAs

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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	Introduce new planning policy to include electric charging points within large and commercial developments	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2017	2021	Local Authority Strategic Environmental Protection Team and Planning Departments	Local Authority	NO	Funded	£10k - 50k	Completed	Reduced tailpipe emissions	NOx	The VALP has been published and policy on EVs included.	
2	Improvement of A418 Oxford Road corridor leading to and including Friarage Road AQMA	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2018	2021	Local Authority Transport Department and Buckinghamshire's Local Enterprise Partnership	DfT's National Productivity Investment Fund (NPIF) and Developer Funding	NO	Funded	£1 million - £10 million	Completed	Improved traffic flow and reduced vehicle emissions	NOx	Scheme completed in February 2021	
3	Low Emission Strategy for Buckinghamshire	Policy Guidance and Development Control	Low Emissions Strategy	2018	2021	Local Authority Environmental Health and Energy and Climate Change Departments	Local Authority	NO	Funded	< £10k	Completed	Reduced emissions	NOx	Climate Change and Air Quality Strategy has been published	
4	Encourage the uptake of Electric cars and Bikes	Public Information	Other	2020	2022	Local Authority Environmental Protection, Local Authority Economic Development, Global action Plan and Business Engagement Groups	Defra and Local Authority	YES	Funded	£50k - £100k	Planning	Reduced vehicle emissions	Increase in the uptake of Electric Cars and Bikes	The initial stages of the project including research into the provision of EVs were concluded in 2021. Global Action Plan working with Bucks Business First and Globe BID are now in the process of engaging 30 companies of 100 or more employees.	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
5	Implementation of a Freight Strategy	Freight and Delivery Management	Route Management Plans/ Strategic routing strategy for HGV's	2018	2032	Local Authority Strategic Environmental Protection Team and Transport Departments	Local Authority	NO	Not Funded	£10k - 50k	Planning	Reduced vehicle emissions	Improved HGV fleet	A pilot scheme is being run within Ivinghoe where a 7.5 tonne weight restriction is being applied, giving access for local needs. The Ivinghoe Area Freight Zone is due to be in effect by Spring 2021	Delays on projects in areas around Ivinghoe, Waddesdon and Buckingham due to Covid-19 resulting in resource issues and workload demands
6	Working with key stakeholders and appointed consultants to ensure that any impacts associated with National Planning Infrastructure (NPI) projects.	Transport Planning and Infrastructure	Other	2006	Various	Local Authority Strategic Environmental Protection Team, High Speed 2 (HS2), East West Rail (EWR) and London Luton Airport Ltd (LLAL)	HS2 and EWR	NO	Funded	£10k - 50k	Implementation	Limited short-term increase in emissions	NOx and PM	During the construction phase of each of these developments Buckinghamshire Council will continue to work with the relevant agencies and organisations to minimise impacts upon air quality.	
7	Electric Scooter Rental Trial within Aylesbury, Wycombe, and Princes Risborough	Alternatives to private vehicle use	Other	2020	2022	Local Authority, Department for Transport, Zipp Mobility	Department for Transport	NO	Funded	£50k - £100k	Implementation	Reduced vehicle emissions	No of Scooters Hired	In the first year of the e-scooter trial (November 2020 – December 2021) there have been more than 100,000 rides covering over 190,000 miles with average journey distance of 2 miles	The scheme has been extended until the end of November 2022.
8	Implementation of Environmental Permitting Regulations	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2016	Ongoing	Local Authority Environmental Health Department	Local Authority and Permitting Fees	NO	Funded	< £10k	Implementation	PM10	No of Permitted Processes with Environment Management schemes	Permitting officer encourages the uptake of Environmental Management schemes to reduce emissions	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
9	Community/public engagement to promote and educate on sources of air pollution, impacts on health and how concentrations can be reduced	Public Information	Via other mechanisms	2021	2023	Local Authority Strategic Environmental Protection Team and Communications Departments	Local Authority	NO	Funded	< £10k	Implementation	Not measurable	Uptake of toolkits	Posts on social media accounts	
10	Publication of Electric Vehicle Charging Point Strategy	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2022	Local Authority Environmental Health and Transport Strategy Departments	Local Authority	NO	Funded	< £10k	Development	Reduced vehicle emissions	NOx and PM	Strategy delivery: working towards public consultation in 2021 Q4, with adoption in 2022 Q1.	
11	Increase number of cycling networks within the district	Transport Planning and Infrastructure	Cycle network	2020	2020	Local Authority Environmental Health and Transport Departments	Government's Emergency Active Travel Fund	NO	Funded	£500k - £1 million	Completed	Reduced vehicle emissions	NOx and PM	Government funding enabled pop-up bike lanes to be created during the Covid-19 pandemic	
12	E-Bike rental scheme at Waddesdon Greenway	Transport Planning and Infrastructure	Public cycle hire scheme	2020	2023	Local Authority, Aylesbury Garden Town, Waddesdon Manor and Chiltern Railways	Department for Transport	NO	Funded	£10k - 50k	Implementation	Reduced vehicle emissions	NOx and PM	Installation of a second docking station at Aylesbury Vale Parkway train station	
13	Installation of electric charging points at Council Offices	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2015	2015	Local Authority Strategic Environmental Protection Team and Department for Transport	OLEV funding (75%) and private companies	NO	Funded	£10k - 50k	Completed	Reduced vehicle emissions	NOx and PM		
14	Retrofit Polluting Buses with Clean Technology	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2017	2017-2019	Local Authority Strategic Environmental Protection Team and Arriva	Clean Bus Technology Fund 2017	NO	Not Funded	£100k - £500k	Aborted	Reduced vehicle emissions	NOx and PM	Application for funding unsuccessful as Buckinghamshire Council not a Local Authority with	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
15	Participate in and support Clean Air Day	Public Information	Via other mechanisms	2017	Annually	Local Authority Strategic Environmental Protection Team and Communications Departments	N/A	NO	Not Funded	< £10k	Completed	Not measurable	Shares and Retweets		
16	Tree planting	Transport Planning and Infrastructure	Other	2019	2019	Local Authority Ecology Department and Voluntary Groups	Local Authority	NO	Partially Funded	< £10k	Completed	Not measurable	KPI not developed	Trees planted within a number of parks and open spaces	The team acknowledges publication of the AQEG report Impacts of Vegetation on Urban Air Pollution the Council and limitations of Tree planting as a method of reducing exposure to NO2. However due to wider benefits and climate benefits will continue to support local communities and schools in planting trees for other reasons.
17	Green Wall	Transport Planning and Infrastructure	Other	2012	2022	Buckinghamshire Council and Chesham Town Council	Defra and LA	NO	Funded	< £10k	Completed	Not measurable	KPI not identified	The maintenance of the green wall is ongoing.	
18	Taxi policy to encourage LPG/low emission vehicles	Promoting Low Emission Transport	Taxi emission incentives	2019	2015	Local Authority Strategic Environmental Protection Team and Taxi Licensing.	Local Authority	NO	Not Funded	< £10k	Completed	Not measurable	Increase in the number of EV taxis	The council adopted this policy on 24th February 2021	The council aims to improve our environment and air quality by encouraging the use of low and ultra-low emission (such as electric, hybrid or liquefied petroleum gas [LPG]) taxi and private hire vehicles. From the date of the implementation of this policy we will not issue new vehicle

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
															licences to vehicles unless they comply with Euro 5 or 6 emissions standards. We also aim to only issue licences to ultra-low or zero emission vehicles by 2030.
19	Highway improvements to traffic flow	Traffic Management	Other	2010	2030	Local Authority Environmental Health and Local Authority Urban Transport Management	LA	NO	Not Funded	£10k - 50k	Planning	Reduced vehicle emissions	Smoother running traffic	No progress to date	
20	Parking Enforcement	Traffic Management	Anti-Idling enforcement	2011	2025	Local Authority Environmental Health	LA	NO	Not Funded	< £10k	Planning	Reduced vehicle emissions		No progress to date	Waiting for the Transport Secretary to increase fines,
21	Review of parking restrictions in AQMA	Traffic Management	Other	2010	2016	Local Authority Parking	LA	NO	Funded	< £10k	Completed	Reduced vehicle emissions	Smoother running traffic		
22	Planning Policy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2016	2022	Local Authority Strategic Environmental Protection Team and Local Authority Planning Policy and Local Authority Development Management	LA	NO	Partially Funded	< £10k	Planning	Not measurable	Buckinghamshire Council SPD published	Research into SPD currently used in England by other authorities	Consideration will be given for the Wycombe SPD to be applied Buckinghamshire wide.
23	Working with Local Community to reduce air pollution	Public Information	Via other mechanisms	2009	2030	Local Authority and Community Boards	LA and Community Board	NO	Not Funded	< £10k	Planning	Reduced vehicle emissions			Work with community boards on projects to improve air quality in their area.

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
24	Develop a business case to obtain funding to deliver a Relief Road for Iver Village	Traffic Management	Other	2019	2021	Local Authority Transport Strategy	S106	NO	Not Funded	> £10 million	Planning	Reduced vehicle emissions	Reduction in congestion	Draft Business Case	Further analysis of additional scope options has demonstrated that the cost of delivering a Relief Road for Iver remains prohibitively high. The proposed Iver Neighbourhood Plan does not include provision for a relief road, reflecting concerns about deliverability. In all proposed iterations, the relief road does not directly benefit all of the Ivers. The Neighbourhood Plan does not support delivery of a major transport intervention which cannot directly benefit all of the Ivers. The Council respects the views of the Parish Council and local people and as such will not be making representations to the Planning Inspector to include a relief road for the Ivers within the proposed Neighbourhood Plan.

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
25	Carry out a feasibility study to ascertain whether a Clean Air Zone/Low Emission Zone is the best method for reducing NOx in Iver and Marlow	Promoting Low Emission Transport	Company Vehicle Procurement – prioritising uptake of low emission vehicles	2019	2030	Local Authority Environmental Health	CIL and s106	No	Partially Funded	£50k - £100k	Implementation	Reduced vehicle emissions	Improved vehicle fleet	Feasibility study completed for Marlow	
26	Set up a working group to explore options to provide off road parking on Iver High Street to enable parking restrictions to be placed on Iver High Street.	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	2019	2025	Local Authority Environmental Health, Local Authority Parking, Community Board	Community Board/S106	NO	Not Funded	£10k - 50k	Planning	Reduction in Emissions on Iver High Street	Reduction in congestion	Scheme developed and subjected to public consultation	Objected to by residents for safety reasons. The parked cars slow down the HGVs making it safer for pedestrians. Consider adding other measures.
27	Work with local schools and business to develop Green Travel Plans. Identify good examples and use as champions	Promoting Travel Alternatives	Workplace Travel Planning	2019	2025	Local Authority Strategic Environmental Protection Team, Local Authority Travel Planning	Local Authority	NO	Not Funded	< £10k	Planning	Not measurable	Increase in Active travel to school and work	Buckinghamshire Council are currently in 2nd place in the Modeshift STARS league table for the country, with a total of 62 accredited travel plans across the county. Buckinghamshire have 3 platinum schools.	The Travel to School team delivers initiatives such as the Footsteps training scheme, bikeability training and Living Streets' Walk Once a Week (WOW) incentive scheme.
28	Promote Vehicle retrofitting programmes, and where possible explore financial incentives to encourage uptake.	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2019	2024	Local Authority Environmental Health, Local Authority Energy and Climate Change, Local Authority Transport strategy	Local Authority /Grants/s106	NO	Not Funded	£10k - 50k	Planning	Not measurable	Improved HGV fleet	No progress to date	Funding

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
29	Promote driver training and ECO aids	Vehicle Fleet Efficiency	Driver training and ECO driving aids	2019	2025	Local Authority Environmental Health, Local Authority Energy and Climate Change, Local Authority Transport strategy	Local Authority /Grants/s106	NO	Not Funded	£10k - 50k	Planning	Not measurable	No of Eco-Driving raining and eco aids taken up	No progress to date	Funding
30	Work with Local Industrial Estates and explore the provision of alternative Fuel Infrastructure to promote Low Emission HGVs	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2026	Local Authority Environmental Health, Local Authority Energy and Climate Change, Local Authority Transport strategy	Grants/s106	NO	Not Funded	< £10k	Planning	Not measurable	Availability of alternative fuel	No progress to date	Funding
31	Investigate various cycle hire schemes available and identify a scheme that may be suitable	Alternatives to private vehicle use	other	2019	2025	Local Authority Strategic Environmental Protection Team, Local Authority Energy and Climate Change, Local Authority Transport strategy	Grants/s106	NO	Not Funded	< £10k	Planning	Not measurable	Cycle Hire Scheme	No progress to date	Focus is on suitable infrastructure to enable an increase in cycling participation
32	Working with the bus and rail operating companies, we will endeavour to develop new ways of making public transport more attractive to the public.	Alternatives to private vehicle use	Other	December 2018	n/a	Buckinghamshire Council	Grants/s106	NO	Funded	£500k - £1 million	Implementation	Not measurable	KPI not set within AQAP	Contactless payment has been rolled out across Carousel and Arriva's bus fleets. Mobile applications, allowing bus users to track buses and to buy tickets online, are available for both Arriva and Carousel fleets. Joint ticketing, allowing bus users to buy a ticket that can be used across multiple bus	Lengthy Timescale

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
															companies, is in the process of being rolled out. Currently only the High Wycombe to Amersham bus route allows you to use the same ticket across different bus companies.
33	Raise awareness of Park & Ride facilities at Handy Cross in order to increase public usage.	Alternatives to private vehicle use	Bus based Park & Ride	December 2018	n/a	Buckinghamshire Council	Existing communications budgets	NO	Funded	< £10k	Implementation	Not measurable	Numbers of people using the P&R	Wycombe Park & Ride has continued to be provided free, and well publicised, for in excess of a year and a half (extended beyond being provided free whilst major roadworks are in the town centre).	First phase successful, second phase on-going
34	We will continue to lobby government to provide meaningful legislation, standards and guidance that will assist with reducing Nitrogen Dioxide and Particulate Matter concentrations.	Policy Guidance and Development Control	Other policy	December 2018	n/a	Buckinghamshire Council	n/a	NO	Not Funded	< £10k	Implementation	Not measurable	KPI not set within AQAP	Buckinghamshire Council have responded to several government consultations that relate entirely, or in part, to air quality over the last year.	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
35	Council will work with the Highway Authority to identify and agree Information displays at strategic positions as drivers are entering the Air Quality Management Areas to inform them that they are entering such.	Transport Planning and Infrastructure	Other	December 2018	2023	Highway Authority	Community Infrastructure Levy grants	NO	Funded	< £10k	Completed	Not measurable	KPI not set within AQAP	Signs erected across AQMAs in Wycombe. These have been supplemented with Corex signs in strategic positions such as car parks.	
36	Businesses will be engaged on a regular basis to encourage ways they can contribute to reducing emission levels. We will encourage more working from home, greener vehicle procurement, electric vehicle charging point roll out within their car parks, amongst other initiatives.	Promoting Travel Alternatives	Workplace Travel Planning	December 2018	2025	Buckinghamshire Council	Local Authority/S106/Grants	NO	Not Funded	< £10k	Implementation	Not measurable	Businesses engaged	The work with Global Action Plan to accelerate the uptake of EV in businesses as enabled the Strategic Environmental Protection team to engage with local businesses	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	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
37	Policy DM2 of former WDC's Development Plan requires all developments that require the submission of a Transport Assessment should contribute to a number of sustainable travel measures, including putting in place a Travel Plan in line with Buckinghamshire Council guidance on Travel Plans 4. occupancy car use by 10%.	Promoting Travel Alternatives	Other	December 2018	n/a	Buckinghamshire Council	n/a	NO	Not Funded	< £10k	Implementation	Not measurable	KPI not set within AQAP	Travel plans have been submitted for all major developments since the publication of the Air Quality Action Plan.	

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

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

Continue to attend the Health Protection Assurance Committee and use this platform to highlight the importance of reducing PM_{2.5} concentrations on public health and to further engage with Public Health and other departments in Buckinghamshire Council to work with the team to improve air quality.

Measures outlined in the action planning section above should also reduce the emissions of PM_{2.5} in the area. However, some measures to be included in the new action plan such as ensuring compliance with Permitting regulations and promoting the use of cleaner fuels for wood burning stoves may have minor impact on NO₂ but would have a greater impact on the reduction of PM_{2.5}. The Council will also compel applicants of NIPs and other local developments to follow good construction practice to minimise fugitive dust.

Buckinghamshire Council has four smoke control areas three of which are located within Aylesbury and a fourth that covers the central area of High Wycombe. A map showing the locations of the smoke control areas can be found at [Smoke control areas |](#)

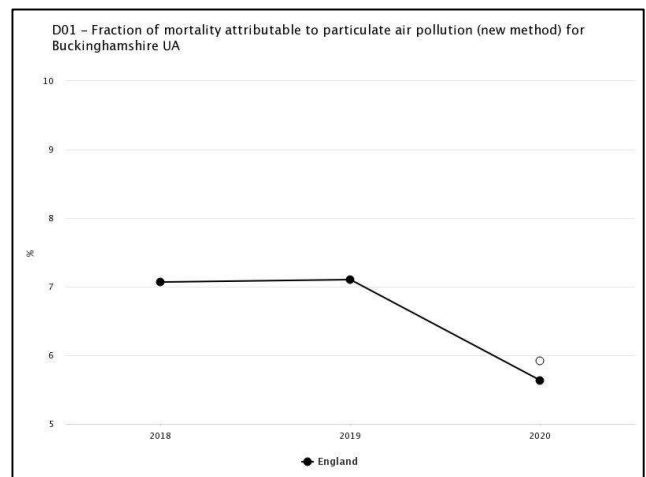
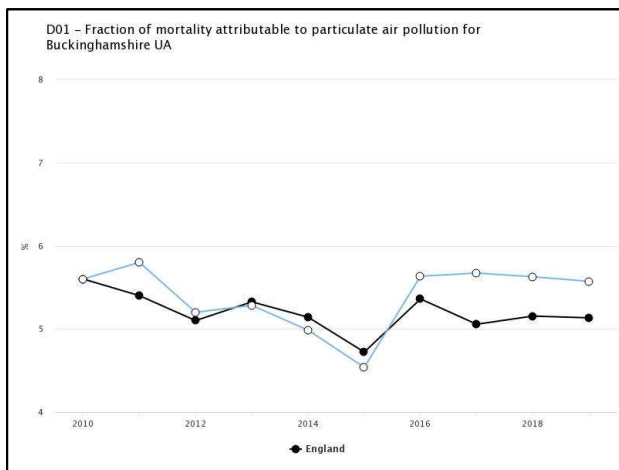
Buckinghamshire Council | Aylesbury Vale Area (aylesburyvaledc.gov.uk) or for the High Wycombe area use My Wycombe [Smoke chs2ontrol areas \(wycombe area\)](#). Smoke control areas are areas where smoke cannot be emitted from a domestic chimney unless an authorised fuel is burnt, or an exempt appliance is used. The main aim of such areas is to reduce the amount of pollution, in particular PM pollutants, emitted into the atmosphere from domestic burning.

The Public Health Outcomes Framework has been set up by Government to get a better understanding of trends in public health to enable them to fulfil their vision of improving the nation's health and to improve the health of the poorest fastest. Included within the framework is an indicator for PM_{2.5}. Indicator D.01 can be found in Section D know as Health Protection. The objective of section D is to protect the population's health from

major incidents and other threats, whilst reducing health inequalities. The figures below show the latest data available on the Public Health England Website Public Health Outcomes Framework - PHE. The fraction of mortality attributable to particulate air pollution is very slightly higher in Buckinghamshire than most of its neighbours and although over the last 9 years it has been both above and below the national average for England it does follow a similar trend.

D01 - Fraction of mortality attributable to particulate air pollution (new method) New data 2020 Proportion - %

Area	Recent Trend	Count	Value		95% Lower CI	95% Upper CI
England	--	-	5.6	<div style="width: 56%;"></div>	-	-
South East region	--	-	6.0	<div style="width: 60%;"></div>	-	-
Medway	--	-	7.1	<div style="width: 71%;"></div>	-	-
Portsmouth	--	-	6.9	<div style="width: 69%;"></div>	-	-
Slough	--	-	6.8	<div style="width: 68%;"></div>	-	-
Reading	--	-	6.8	<div style="width: 68%;"></div>	-	-
Wokingham	--	-	6.3	<div style="width: 63%;"></div>	-	-
Southampton	--	-	6.3	<div style="width: 63%;"></div>	-	-
Bracknell Forest	--	-	6.3	<div style="width: 63%;"></div>	-	-
Windsor and Maidenhead	--	-	6.3	<div style="width: 63%;"></div>	-	-
Surrey	--	-	6.2	<div style="width: 62%;"></div>	-	-
Milton Keynes	--	-	6.1	<div style="width: 61%;"></div>	-	-
Kent	--	-	6.0	<div style="width: 60%;"></div>	-	-
Brighton and Hove	--	-	6.0	<div style="width: 60%;"></div>	-	-
Buckinghamshire UA	--	-	5.9	<div style="width: 59%;"></div>	-	-
Hampshire	--	-	5.9	<div style="width: 59%;"></div>	-	-
Oxfordshire	--	-	5.8	<div style="width: 58%;"></div>	-	-
West Sussex	--	-	5.8	<div style="width: 58%;"></div>	-	-
West Berkshire	--	-	5.8	<div style="width: 58%;"></div>	-	-
East Sussex	--	-	5.5	<div style="width: 55%;"></div>	-	-
Isle of Wight	--	-	5.5	<div style="width: 55%;"></div>	-	-



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

This section sets out the monitoring undertaken within 2021 by Buckinghamshire Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2017 and 2021 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Buckinghamshire Council undertook automatic (continuous) monitoring at 2 sites during 2021. Table A.1 in Appendix A shows the details of the automatic monitoring sites. NB: Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The Air Quality England - Buckinghamshire page presents automatic monitoring results for Buckinghamshire Council.

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

Buckinghamshire Council undertook non-automatic (i.e., passive) monitoring of NO₂ at 146 sites during 2021. Table A.2 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g., annualisation and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

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

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 and 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 2021 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.

The results from the diffusion tube monitoring undertaken over the last five years indicates that levels of NO₂ have continually reduced throughout Buckinghamshire during this period. However, a reduction in traffic because of COVID-19 restrictions resulted in a significant decrease of around 30% at most monitoring locations in 2020. In 2021 there was a slight increase (approximately 10%) at most of the sites with few exceptions. It is evident from the graphs in Appendix A, that concentrations of NO₂ have yet to return to pre-pandemic levels.

The COVID-19 pandemic continued to have an impact on the accessibility of the diffusion tube monitoring sites, at Abbey School and Stokenchurch due to them being located on private properties. Consequently, these sites have been removed from the data set.

One exceedance of the annual mean nitrogen dioxide objective was recorded within Buckinghamshire during 2021. This was located at Site ID number AV14 located within the Stoke Road AQMA. Once distance corrected to the nearest sensitive receptor, the concentration of NO₂ was found to be just below the average annual mean objective.

Six additional locations, Site ID numbers AV14,17,18, 23 and 34 within the Aylesbury Vale area and site ID numbers W34 and W51 within the Wycombe area, recorded concentrations within 10% of the annual mean objective. This required a fall off with distance calculation and the inputs used to calculate these fall-off with distance values are shown in table C.4. Once the calculation had been completed the concentration of NO₂ was found to be significantly below the average annual objective at all sites apart from site ID AV34 which remained within 10% of the annual mean objective.

All other diffusion tube sites in 2021 reported levels well below the annual mean objective concentrations of 40 µg/m³.

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)
CM1	Stokenchurch	Suburban	476604	195436	NO ₂	Yes, M40 AQMA	Chemiluminescent;	1.5	23	1.5
CM2	Wycombe Abbey 5	Roadside	486352	192478	NO ₂	Yes Wycombe AQMA	Chemiluminescent	45.9	7.5	2

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)
AV1	West Street, Buckingham	Roadside	469518	234006	NO2	No	0.0	1.5	No	3
AV2	3 Bridge Street, Buckingham	Roadside	469587	233939	NO2	No	0.0	2.0	No	3
AV3	Well Street, Buckingham	Roadside	469601	233858	NO2	No	0.0	1.0	No	3
AV4	Candleford Court, Bridge Street, Buckingham	Roadside	469672	233862	NO2	No	0.0	5.0	No	3
AV5	Oxfam, Market Square, Buckingham	Roadside	469610	233982	NO2	No	0.0	8.0	No	3
AV6	16 Market Sq, Buckingham	Roadside	469597	233999	NO2	No	1.0	2.0	No	3
AV7	6 High Street, Buckingham	Roadside	469727	234117	NO2	No	0.5	3.0	No	3
AV8	29 High Street, Winslow	Roadside	476979	227698	NO2	No	0.0	2.5	No	3
AV9	27 Elmhurst Road, Aylesbury	Roadside	481891	214979	NO2	No	11.0	2.0	No	3
AV10	181 Aylesbury Road, Bierton	Roadside	483948	215645	NO2	No	1.0	2.0	No	3
AV11	Cambridge Street, Aylesbury	Roadside	482177	214093	NO2	No	1.0	1.0	No	3
AV12	87 Tring Road, Aylesbury	Roadside	483128	213637	NO2	Yes - Tring Road AQMA	2.5	3.0	No	3

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)
AV13	183 Tring Road, Aylesbury	Roadside	483601	213590	NO2	No	13.0	3.0	No	3
AV14	25 Wendover Road, Aylesbury	Roadside	482436	213121	NO2	Yes - Stoke Road AQMA	1.0	2.5	No	3
AV15	2 Stoke Road, Aylesbury	Roadside	482444	213090	NO2	Yes - Stoke Road AQMA	1.0	1.0	No	3
AV16	31 Stoke Road, Aylesbury	Roadside	482376	213039	NO2	Yes - Stoke Road AQMA	3.0	2.5	No	3
AV17	Viridian Square, Walton Street, Aylesbury	Roadside	482278	213271	NO2	No	4.0	2.0	No	3
AV18	1 -5 Wendover Road, Aylesbury	Roadside	482374	213170	NO2	Yes - Stoke Road AQMA	2.0	1.0	No	3
AV19	Exchange Street, Aylesbury	Roadside	482237	213717	NO2	No	2.5	0.5	No	3
AV20	Friarage Road/Oxford Road Roundabout, Aylesbury	Roadside	481451	213588	NO2	Yes - Friarage Road AQMA	7.0	2.0	No	3
AV21	Oxford Road, Aylesbury	Roadside	481381	213823	NO2	No	8.5	5.0	No	3
AV22	10 Gatehouse Road, Aylesbury	Roadside	481408	213940	NO2	No	12.5	0.5	No	3
AV23	Moorlands House, Friarage Road, Aylesbury	Roadside	481514	213860	NO2	No	4.0	2.0	No	3
AV24	Stonehaven Road/Bicester Road, Aylesbury	Roadside	480710	214576	NO2	No	12.0	3.0	No	3

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)
AV25	Buckingham Road, Aylesbury	Roadside	481768	214276	NO2	No	5.0	3.0	No	3
AV26	High Street, Wendover	Roadside	486811	207795	NO2	No	1.0	3.0	No	3
AV27	91 Leighton Road, Wing	Roadside	488573	222902	NO2	No	2.5	1.5	No	3
AV28	133 Tring Road, Aylesbury	Roadside	483337	213644	NO2	Yes - Tring Road AQMA	4.5	2.5	No	3
AV29	149 Tring Road, Aylesbury	Roadside	483394	213646	NO2	Yes - Tring Road AQMA	10.0	3.0	No	3
AV30	Oakfield Road, Aylesbury	Roadside	483488	213729	NO2	No	1.5	3.0	No	3
AV31	41 Aston Clinton Road, Aylesbury	Roadside	484902	213138	NO2	No	6.5	2.4	No	3
AV32	Mandeville Road, Aylesbury	Roadside	482157	212768	NO2	No	3.7	1.6	No	3
AV33	Weedon Road, Aylesbury	Roadside	481743	214967	NO2	No	0.2	4.2	No	3
AV34	New Street, Aylesbury	Roadside	481766	214182	NO2	No	0.3	3.3	No	3
AV35	Long Meadow, Aylesbury	Urban Background	483660	212602	NO2	No	13.3	0.9	No	3
CDC1, CDC1a	Ashley Green Bus Stop	Roadside	497640	205271	NO2	No	26.8	3.2	No	1.5
CDC2, CDC2a	Ashley Green Speed Camera	Roadside	497622	205191	NO2	No	17.6	0.7	No	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
CDC3	Petrol St Nashleigh Hill	Roadside	496326	202932	NO2	No	18.6	1.4	No	1.5
CDC4	St Columbas Church Berkhamstead Road	Roadside	496305	202884	NO2	No	11.1	1.5	No	1.5
CDC5, CDC5a	Berkhamstead Road Chesham 305	Roadside	496261	202656	NO2	No	12.9	1.5	No	1.5
CDC6, CDC6a	Berkhamstead Road 336	Roadside	496272	202699	NO2	No	5.6	1.3	No	1.5
CDC7, CDC7a	Dentist Chesham	Roadside	496278	202743	NO2	Chesham AQMA	4.0	1.7	No	1.5
CDC8, CDC8a	Jolly Sportsman PH	Roadside	496247	202328	NO2	Chesham AQMA	2.0	1.9	No	1.5
CDC9, CDC9a	Broad Street 170	Roadside	496215	202300	NO2	Chesham AQMA	5.8	1.6	No	1.5
CDC10	Cemetery Broad Street	Roadside	496233	202330	NO2	Chesham AQMA		2.0	No	1.5
CDC11, CDC11a	Uplands Court Broad Street	Roadside	496133	202072	NO2	Chesham AQMA	6.0	3.7	No	1.5
CDC12, CDC12a	Police St Broad Street	Roadside	496107	202033	NO2	Chesham AQMA	6.6	2.1	No	1.5
CDC13, CDC13a	St Marys Way	Roadside	495850	201510	NO2	No	7.5	1.4	No	1.5
CDC14, CDC14a	St Marys roundabout Outside New Flats	Roadside	495869	201436	NO2	No	1.2	1.3	No	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
CDC15	High Street Great Missenden 75	Roadside	489484	201234	NO2	No	1.5	0.9	No	1.5
CDC16	Wycombe Road Prestwood 10	Roadside	487002	200812	NO2	No	11.4	1.3	No	1.5
CDC17	Broombarn Lane Little Missenden	Roadside	487991	200978	NO2	No	15.4	3.4	No	1.5
CDC18	Speed bumps Old Amersham	Roadside	495298	197520	NO2	No	7.8	2.3	No	1.5
CDC19	Amersham Hosp Old Amersham	Roadside	495446	196797	NO2	No	17.4	2.0	No	1.5
CDC20	Stanley Hill	Roadside	496760	197100	NO2	No	27.5	1.3	No	1.5
CDC21, CDC21a	Gore Hill	Roadside	495960	196940	NO2	No	8.3	0.9	No	1.5
CDC22	Station Rd Amersham Opp 76	Roadside	494450	197647	NO2	No	20.6	2.2	No	1.5
CDC23	Hervines Park Amersham	Urban Background	495708	198806	NO2	No	n/a	n/a	No	1.5
CDC24, CDC24a	Rickmansworth Road Amersham	Roadside	496550	198720	NO2	No	24.3	2.2	No	1.5
CDC25	Nightingales Lane Little Chalfont	Roadside	499260	197452	NO2	No	29.8	1.9	No	1.5
CDC27	High street Chalfont St Peter	Roadside	500050	190810	NO2	No	9.0	3.6	No	1.5
CDC28, CDC28a	Vets Chalfont St Giles	Roadside	499250	193750	NO2	No	6.4	1.1	No	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
SB1	Iver Old Slade Lane	Roadside	503696	178533	NO2	SBDC AQMA 2	13.0	1.0	No	2.5
SB2	Iver, Victoria Cescent	Roadside	504056	180901	NO2	SBDC AQMA 2	7.0	1.0	No	2.6
SB3	Iver High Street Police Station	Roadside	503716	181218	NO2	SBDC AQMA 2	12.0	2.0	No	3.7
SB4	Iver Heath, Uxbridge Road	Roadside	502072	182753	NO2	SBDC AQMA 2	11.0	2.5	No	2.3
SB5	New Denham Oxford Road/Knighton-Way Lane	Roadside	504754	185138	NO2	No	9.0	2.0	No	2.4
SB8	Gerrads Cross/Packhorse Rd	Roadside	500259	188613	NO2	No	8.0	2.0	No	2.5
SB12	Farnham Common Beaconsfield Road	Roadside	496095	185599	NO2	No	25.0	3.0	No	2.4
SB13	Beaconsfield, Station Rd	Roadside	493873	191040	NO2	No	20.0	2.0	No	2.2
SB14	Beaconsfield North Drive	Roadside	584728	192313	NO2	No	20.0	3.0	No	2.0
SB15	Beaconsfield Shepherds Lane	Roadside	494600	190081	NO2	No	18.0	2.0	No	2.6
SB16	Burnham High St	Roadside	493136	182503	NO2	No	0.0	1.0	No	2.6
SB17	Bath Road, Taplow	Roadside	491668	181187	NO2	No	20.0	1.0	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
SB21	47 Richings Way, Iver	Roadside	503690	179278	NO2	SBDC AQMA ₂	18.0	2.0	No	2.1
SB22	29 Thorney Lane South	Roadside	503972	179701	NO2	SBDC AQMA ₂	25.0	1.6	No	2.3
SB23	82 Thorney Lane North	Roadside	503936	180547	NO2	SBDC AQMA ₂	10.0	2.6	No	1.8
SB24	Langley Park Road, Iver	Roadside	503050	181176	NO2	SBDC AQMA ₂	17.0	1.8	No	2.4
SB25	Bangors Road South, Iver	Roadside	503604	181378	NO2	SBDC AQMA ₂	9.0	1.7	No	2.1
SB26	Wood Lane, Iver	Roadside	502100	182473	NO2	SBDC AQMA ₂	9.0	3.3	No	2.2
SB27	Church Road, Iver	Roadside	502520	183456	NO2	SBDC AQMA ₂	10.0	3.1	No	2.3
SB28, SB29	Swan Pub, High Street, Iver	Roadside	503899	181199	NO2	SBDC AQMA ₂	0.4	2.1	No	2.2
SB30, SB31	Colne Cottage, 6 Thorney Lane North, Iver	Roadside	503924	181127	NO2	SBDC AQMA ₂	0.6	1.5	No	1.5
SB32, SB33	Tower Arms, Thorney Lane South, Iver	Roadside	504047	179475	NO2	SBDC AQMA ₂	2.1	2.1	No	2.1
SB34, SB35	Wood Cottages, 2 Slough Road, Iver	Roadside	502217	182870	NO2	SBDC AQMA ₂	3.7	1.9	No	2.2
SB36	Black Horse Pub, 95 Slough Road, Iver	Roadside	503022	183070	NO2	SBDC AQMA ₂	1.0	n/a	No	2.0
SB37	Beaconsfield, Aylesbury End	Roadside	494478	190142	NO2	No	1.0	3.5	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
SB38	Grand Union House, Iver	Roadside	503618	180518	NO2	No	30.0	5.0	No	2.0
SB39, SB40	Fulmer	Roadside	501652	187168	NO2	No	18.0	3.0	No	1.5
SB41	Iver Village Junior School	Roadside	503256	181272	NO2	No	27.0	3.2	No	1.5
SB42	Belle Farm Lodge, Seven Hills Road	Roadside	502477	184784	NO2	SBDC AQMA 2	16.0	1.0	No	1.5
SB44	Burnham Beeches	Roadside	496099	185047	NO2	SBDC AQMA 2	n/a	n/a	No	1.5
SB45	South Drive	Roadside	495776	185762	NO2	No	30.0	25.0	No	1.5
SB46	Aldbourn Cottage	Roadside	501568	186763	NO2	No	55.0	34.0	No	1.5
SB47	Wilton Lodge	Roadside	494862	190156	NO2	SBDC AQMA 1	11.2	2.2	No	1.5
W1	High Street Crossing, Marlow	Urban Centre	485012	186444	NO2	No	0.0	1.0	No	2.1
W2	Solicitors, Chapel Street, Marlow	Roadside	484966	186773	NO2	Yes - Marlow AQMA	0.0	2.3	No	2.4
W3	Barber Shop, Cambridge Road, Marlow	Roadside	484753	186888	NO2	No	4.3	6.0	No	2.4
W4	Abbey Accommodation, Abbey School, Marlow Hill, High Wycombe	Roadside	486384	192513	NO2	Yes - Wycombe AQMA	0.0	4.8	No	2.4

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)
W5	Morrisons, Hughenden Road, High Wycombe	Roadside	486471	193665	NO2	Yes - Wycombe AQMA	2.0	1.5	No	2.1
W6	Desborough Avenue, High Wycombe	Roadside	485869	193231	NO2	No	0.0	3.0	No	2.4
W7	Suffield Road 1, High Wycombe	Roadside	486116	192890	NO2	No	11.8	1.3	No	2.1
W8	London Road, High Wycombe	Roadside	487101	192766	NO2	Yes - Wycombe AQMA	0.0	3.5	No	2.1
W9	Marlow Road, High Wycombe	Roadside	485353	191416	NO2	No	12.6	3.7	No	2.1
W10	White Horse, West Wycombe Road, High Wycombe	Roadside	485514	193658	NO2	No	1.2	2.0	No	2.1
W11	Lilys Walk, High Wycombe	Urban Centre	486214	192992	NO2	No	25.0	1.0	No	2.1
W12	Dovecot Road, High Wycombe	Roadside	486364	193266	NO2	No	0.0	13.0	No	2.1
W13	School Close, High Wycombe	Roadside	485891	191788	NO2	No	15.0	17.0	No	2.1
W14	Amersham Hill (School), High Wycombe	Roadside	487048	193473	NO2	No	0.0	16.0	No	2.4
W18	Crendon Street, High Wycombe	Roadside	486785	192987	NO2	Yes - Wycombe AQMA	2.0	3.0	No	2.1
W19	Rail Bridge, Amersham Hill, High Wycombe	Roadside	486842	193144	NO2	No	2.0	7.0	No	2.4

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)
W20	Marsh Retail Park, London Road, High Wycombe	Roadside	488858	191923	NO2	Yes - Wycombe AQMA	0.0	3.5	No	2.1
W21	Chapel Street Crossing, Marlow	Roadside	485070	186871	NO2	Yes - Wycombe AQMA	0.0	1.0	No	2.4
W22	West Wycombe Road, High Wycombe	Roadside	485665	193586	NO2	No	0.0	1.5	No	2.4
W23	Amersham Hill, High Wycombe	Roadside	487787	194657	NO2	No	0.3	0.1	No	2.1
W24	Hughenden Road, High Wycombe	Roadside	486485	193803	NO2	No	4.8	2.0	No	2.1
W25	Suffield Road 2, High Wycombe	Urban Background	486079	192883	NO2	No	3.7	1.7	No	2.1
W29	Wedding Centre, Little Marlow Road, Marlow	Roadside	485217	187010	NO2	No	0.1	7.2	No	2.1
W30	Butchers Tap, Spittal Street, Marlow	Roadside	484868	186656	NO2	No	0.0	1.7	No	2.1
W31	Marlow High Street	Urban Centre	484888	186571	NO2	No	1.5	3.0	No	2.4
W32	Knave's Beech, Loudwater, High Wycombe	Roadside	490784	190216	NO2	No	0.0	23.0	No	2.4
W33	Dentist, London Road, Loudwater, High Wycombe	Roadside	490247	190768	NO2	No	19.9	2.4	No	2.1
W34	Pedestal Roundabout, West	Roadside	483442	194645	NO2	Yes - Wycombe AQMA	11.6	6.0	No	2.1

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)
	Wycombe Road, High Wycombe									
W35	West Street 1, Marlow	Roadside	484749	186496	NO2	No	0.0	2.3	No	2.4
W36	West Street 2, Marlow	Roadside	484643	186436	NO2	No	0.3	2.0	No	2.4
W37	West Wycombe Village, High Street, West Wycombe	Roadside	482896	194659	NO2	No	0.0	1.5	No	2.4
W38	Kwik Fit, London Road, High Wycombe	Kerbside	487561	192616	NO2	Yes - Wycombe AQMA	6.1	0.9	No	2.1
W39	Chapel Lane, High Wycombe	Kerbside	484421	194179	NO2	Yes - Wycombe AQMA	23.4	0.1	No	2.4
W40	Handy Cross Roundabout, Marlow Road, High Wycombe	Suburban	485290	191280	NO2	No	0.0	19.0	No	2.1
W41	55 Chapel Street, Marlow	Roadside	485024	186825	NO2	No	0.0	2.4	No	2.4
W42	Tanning Centre, High Street, Marlow	Urban Centre	485028	186327	NO2	No	6.0	3.5	No	2.4
W43	Glade View, Little Marlow Road, Marlow	Roadside	485182	186974	NO2	No	0.0	4.8	No	2.4
W44	Daws Hill Lane, High Wycombe	Roadside	486607	191725	NO2	No	23.5	1.5	No	2.4
W45	Church Street, High Wycombe	Urban Centre	486520	193110	NO2	No		0.5	No	2.4

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)
W46	Chiltern Shopping Centre, Church Street, High Wycombe	Urban Centre	486474	193121	NO2	No	4.7	0.5	No	2.1
W47	Castle Street, High Wycombe	Roadside	486766	193065	NO2	No	1.4	2.2	No	2.1
W48	Oxford Street, High Wycombe	Urban Centre	486381	193179	NO2	No	6.0	1.0	No	2.1
W49	Waitrose, Chapel Street, Marlow	Roadside	484958	186748	NO2	Yes - Marlow AQMA	0.2	1.0	No	2.4
W50	Zabida Court, Green Street, High Wycombe	Roadside	485462	193384	NO2	No	2.0	2.0	No	2.1
W51	Bridge Street, High Wycombe	Roadside	486144	193271	NO2	Yes - Wycombe AQMA	0.5	2.0	No	2.1
W52	West Street 3, Marlow	Roadside	484830	186550	NO2	No	0.3	2.0	No	2.1
W53	Chapel Street 2, Marlow	Roadside	484893	186677	NO2	No	0.3	1.5	No	2.4
W54	Desborough Avenue, High Wycombe	Roadside	485763	193278	NO2	No	2.0	1.0	No	2.1
W55	Easton Street, High Wycombe	Roadside	486823	192874	NO2	Yes - Wycombe AQMA	2.0	0.2	No	2.1

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
CM1	476604	195436	Suburban	99.4	99.4	30.7	28.8	28.9	21	18
CM2	486352	192478	Roadside	99.7	99.7				23.39	26

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16**

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

Notes:

The annual mean concentrations are presented as µg/m³.

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

All means have been “annualised” as per LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

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

Table A.4 – Annual Mean 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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
AV1	469518	234006	Roadside	100	100.0	31.3	31.0	30.2	21.8	24.1
AV2	469587	233939	Roadside	90.38461538	90.4	38.3	34.8	32.1	22.8	25.6
AV3	469601	233858	Roadside	92.30769231	92.3	15.6	14.9	13.8	10.3	11.7
AV4	469672	233862	Roadside	100	100.0	15.7	15.8	14.9	11.5	11.9
AV5	469610	233982	Roadside	100	100.0	27.9	27.2	25.2	19.0	18.8
AV6	469597	233999	Roadside	100	100.0	41.8	37.2	35.3	25.4	27.0
AV7	469727	234117	Roadside	100	100.0	32.2	29.6	28.5	22.1	20.6
AV8	476979	227698	Roadside	100	100.0	32.9	28.8	27.3	21.8	22.7
AV9	481891	214979	Roadside	100	100.0	36.9	35.4	34.1	26.7	27.5
AV10	483948	215645	Roadside	100	100.0	24.9	23.7	23.2	18.4	18.1
AV11	482177	214093	Roadside	100	100.0	36.7	33.2	31.7	25.0	28.0
AV12	483128	213637	Roadside	100	100.0	30.7	30.5	27.7	21.9	20.4
AV13	483601	213590	Roadside	100	100.0	45.5	40.7	37.4	28.2	32.2

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
AV14	482436	213121	Roadside	100	100.0	57.6	47.9	48.2	39.1	42.2
AV15	482444	213090	Roadside	100	100.0	43.4	39.0	37.6	31.8	32.7
AV16	482376	213039	Roadside	100	100.0	44.1	39.5	40.1	33.8	35.5
AV17	482278	213271	Roadside	100	100.0	54.0	45.1	49.9	40.2	39.8
AV18	482374	213170	Roadside	92.30769231	92.3	45.2	41.6	41.6	32.7	37.2
AV19	482237	213717	Roadside	100	100.0	41.9	39.9	40.7	31.2	33.0
AV20	481451	213588	Roadside	100	100.0	40.7	37.9	36.6	29.6	31.5
AV21	481381	213823	Roadside	80.76923077	80.8	22.6	21.3	21.9	17.2	18.6
AV22	481408	213940	Roadside	100	100.0	30.1	25.4	25.8	20.9	22.8
AV23	481514	213860	Roadside	100	100.0	41.7	45.3	39.8	31.7	36.5
AV24	480710	214576	Roadside	82.69230769	82.7	35.8	33.8	33.6	26.9	28.0
AV25	481768	214276	Roadside	84.61538462	84.6	30.8	29.7	29.5	22.8	23.6
AV26	486811	207795	Roadside	82.69230769	82.7	29.7	24.1	25.9	18.3	19.8
AV27	488573	222902	Roadside	92.30769231	92.3	38.9	31.6	32.5	24.7	27.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
AV28	483337	213644	Roadside	100	100.0		33.9	32.5	25.3	26.1
AV29	483394	213646	Roadside	100	100.0		35.6	35.6	27.7	27.4
AV30	483488	213729	Roadside	100	100.0		27.4	26.2	21.6	22.3
AV31	484902	213138	Roadside	76.92307692	76.9					32.2
AV32	482157	212768	Roadside	76.92307692	76.9					25.0
AV33	481743	214967	Roadside	76.92307692	76.9					23.6
AV34	481766	214182	Roadside	67.30769231	67.3					39.8
AV35	483660	212602	Urban Background	59.61538462	59.6					12.6
CDC1, CDC1a	497640	205271	Roadside	96.97802198	97.0	22.2	22.9	20.5	12.0	13.9
CDC2, CDC2a	497622	205191	Roadside	96.97802198	97.0	18.8	19.4	18.8	11.9	12.1
CDC3	496326	202932	Roadside	79.67032967	79.7	27.1	31.3	28.4	21.7	22.5
CDC4	496305	202884	Roadside	96.97802198	97.0	25.8	27.4	25.5	19.5	20.7
CDC5, CDC5a	496261	202656	Roadside	96.97802198	97.0	27.9	31.7	29.1	18.0	21.7
CDC6, CDC6a	496272	202699	Roadside	96.97802198	97.0	32.9	29.1	26.7	18.7	24.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
CDC7, CDC7a	496278	202743	Roadside	96.97802198	97.0	29.9	29.9	26.9	17.3	23.0
CDC8, CDC8a	496247	202328	Roadside	96.97802198	97.0	36.9	40.7	35.9	21.4	29.7
CDC9, CDC9a	496215	202300	Roadside	96.97802198	97.0	36.6	37.9	32.2	24.3	28.3
CDC10	496233	202330	Roadside	96.97802198	97.0	23.6	28.7	22.8	17.1	18.8
CDC11, CDC11a	496133	202072	Roadside	89.28571429	89.3	36.2	40.1	36.2	27.7	27.2
CDC12, CDC12a	496107	202033	Roadside	96.97802198	97.0	37.3	40.7	33.8	20.8	29.0
CDC13, CDC13a	495850	201510	Roadside	80.21978022	80.2	29.0	34.8	29.6	19.6	24.4
CDC14, CDC14a	495869	201436	Roadside	96.97802198	97.0	34.4	40.2	34.6	26.1	27.3
CDC15	489484	201234	Roadside	79.3956044	79.4	19.9	20.9	18.3	13.7	13.8
CDC16	487002	200812	Roadside	96.97802198	97.0	20.1	21.5	19.3	13.2	13.4
CDC17	487991	200978	Roadside	96.97802198	97.0	15.1	21.3	17.4	11.9	12.7
CDC18	495298	197520	Roadside	96.97802198	97.0	22.7	25.3	23.1	15.4	17.0
CDC19	495446	196797	Roadside	96.97802198	97.0	26.5	30.5	25.4	17.0	20.9
CDC20	496760	197100	Roadside	96.97802198	97.0	36.6	44.6	36.9	26.0	27.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
CDC21, CDC21a	495960	196940	Roadside	91.75824176	91.8	38.2	43.6	34.6	25.3	27.1
CDC22	494450	197647	Roadside	87.36263736	87.4	26.9	35.0	29.2	20.2	21.5
CDC23	495708	198806	Urban Background	96.97802198	97.0	10.5	13.4	11.8	7.9	8.0
CDC24, CDC24a	496550	198720	Roadside	96.97802198	97.0	26.6	28.7	23.7	17.0	16.9
CDC25	499260	197452	Roadside	96.97802198	97.0	27.9	30.8	27.6	18.9	20.1
CDC27	500050	190810	Roadside	79.3956044	79.4	25.6	27.3	24.1	16.9	18.4
CDC28, CDC28a	499250	193750	Roadside	96.97802198	97.0	32.7	35.8	28.7	18.9	20.2
SB1	503696	178533	Roadside	99.7	99.7	27.0	27.0	25.2	16.1	16.2
SB2	504056	180901	Roadside	99.7	99.7	27.0	29.3	27.7	17.4	18.3
SB3	503716	181218	Roadside	73.1	73.1	31.0	39.6	36.0	23.6	27.2
SB4	502072	182753	Roadside	84.3	84.3	42.0	43.8	42.0	29.0	30.7
SB5	504754	185138	Roadside	91.8	91.8	32.0	32.8	31.6	22.0	24.5
SB8	500259	188613	Roadside	92.0	92.0	27.0	36.0	35.4	22.8	24.8
SB12	496095	185599	Roadside	38.7	38.7	27.0	35.4	32.3	23.1	26.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
SB13	493873	191040	Roadside	84.6	84.6	31.0	34.0	30.5	22.1	23.2
SB14	584728	192313	Roadside	99.7	99.7	40.0	35.9	37.9	25.6	25.5
SB15	494600	190081	Roadside	99.7	99.7	26.0	25.3	24.1	15.2	17.1
SB16	493136	182503	Roadside	74.5	74.5	20.0	18.6	19.7	13.6	15.9
SB17	491668	181187	Roadside	84.3	84.3	34.0	32.9	30.9	20.9	23.3
SB21	503690	179278	Roadside	99.7	99.7	39.0	38.2	37.2	25.4	28.1
SB22	503972	179701	Roadside	99.7	99.7	34.0	37.8	34.3	23.7	27.2
SB23	503936	180547	Roadside	99.7	99.7	35.0	33.9	33.2	23.6	26.7
SB24	503050	181176	Roadside	99.7	99.7	31.0	31.2	29.5	19.8	21.7
SB25	503604	181378	Roadside	99.7	99.7	34.0	31.6	32.7	22.7	22.8
SB26	502100	182473	Roadside	99.7	99.7	30.0	29.1	29.1	20.0	20.7
SB27	502520	183456	Roadside	99.7	99.7	38.0	35.3	37.3	26.8	30.3
SB28, SB29	503899	181199	Roadside	90.1	90.1	39.5	39.0	36.8	25.7	30.2
SB30, SB31	503924	181127	Roadside	74.5	74.5	45.0	42.0	43.6	26.4	32.6

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
SB32, SB33	504047	179475	Roadside	99.7	99.7	42.5	42.0	39.2	26.4	28.6
SB34, SB35	502217	182870	Roadside	91.8	91.8	31.0	31.0	28.9	19.3	22.5
SB36	503022	183070	Roadside	99.7	99.7	38.0	37.3	39.1	28.4	30.0
SB37	494478	190142	Roadside	99.7	99.7	33.0	30.8	29.6	19.0	20.4
SB38	503618	180518	Roadside	99.7	99.7	27.0	27.5	28.0	18.0	21.2
SB39, SB40	501652	187168	Roadside	99.7	99.7	41.0	38.5	38.7	26.3	28.5
SB41	503256	181272	Roadside	91.8	91.8		27.5	25.5	19.1	20.6
SB42	502477	184784	Roadside	99.7	99.7		27.1	28.2	19.4	19.1
SB44	496099	185047	Roadside	82.7	82.7		17.7	17.4	10.7	11.6
SB45	495776	185762	Roadside	99.7	99.7		24.6	24.9	18.4	19.7
SB46	501568	186763	Roadside	99.7	99.7		33.6	30.7	20.4	22.3
SB47	494862	190156	Roadside	99.7	99.7			42.1	28.3	29.6
W1	485012	186444	Urban Centre	84.61538462	84.6	28.5	28.5	23.8	17.5	17.8
W2	484966	186773	Roadside	100	100.0	40.0	44.3	37.4	26.1	31.2

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
W3	484753	186888	Roadside	92.30769231	92.3	30.8	31.4	32.1	22.5	22.8
W4	486384	192513	Roadside			64.9	62.1	48.8	-	-
W5	486471	193665	Roadside	92.30769231	92.3	33.6	32.3	36.4	26.0	27.3
W6	485869	193231	Roadside	92.30769231	92.3	26.3	30.1	35.4	25.2	24.2
W7	486116	192890	Roadside	82.69230769	82.7		27.3	26.4	17.5	18.3
W8	487101	192766	Roadside	92.30769231	92.3	37.6	36.7	35.3	23.7	30.2
W9	485353	191416	Roadside	100	100.0		34.8	37.5	21.2	26.7
W10	485514	193658	Roadside	100	100.0	37.7	50.6	42.9	32.1	32.6
W11	486214	192992	Urban Centre			27.2	29.2	25.1	14.5	-
W12	486364	193266	Roadside	100	100.0	25.6	24.9	25.9	19.1	19.7
W13	485891	191788	Roadside	92.30769231	92.3	29.4	25.9	26.2	20.7	18.3
W14	487048	193473	Roadside	100	100.0	20.6	18.8	19.1	17.0	14.1
W18	486785	192987	Roadside	90.38461538	90.4	39.1	39.2	38.3	30.3	32.8
W19	486842	193144	Roadside	84.61538462	84.6	36.8	32.3	34.3	29.5	34.3

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
W20	488858	191923	Roadside	100	100.0	46.1	41.1	43.0	25.5	23.8
W21	485070	186871	Roadside	100	100.0	42.3	39.7	39.1	32.7	33.8
W22	485665	193586	Roadside	100	100.0	31.5	30.5	30.9	29.5	28.8
W23	487787	194657	Roadside	92.30769231	92.3	45.0	36.3	40.9	23.4	22.3
W24	486485	193803	Roadside	84.61538462	84.6	19.8	26.6	27.1	31.3	31.6
W25	486079	192883	Urban Background	100	100.0	22.1	19.3	17.9	20.6	21.3
W29	485217	187010	Roadside	92.30769231	92.3	28.4	29.2	27.6	12.9	14.3
W30	484868	186656	Roadside	92.30769231	92.3	30.9	25.1	26.6	21.8	22.6
W31	484888	186571	Urban Centre	100	100.0		40.4	40.3	17.6	19.3
W32	490784	190216	Roadside	92.30769231	92.3		48.5	46.0	19.3	19.0
W33	490247	190768	Roadside	92.30769231	92.3	30.7	32.2	30.8	29.2	32.1
W34	483442	194645	Roadside	100	100.0	35.4	34.4	31.4	36.0	37.8
W35	484749	186496	Roadside	100	100.0	34.5	33.4	32.1	22.3	23.4
W36	484643	186436	Roadside	92.30769231	92.3		30.8	29.7	21.3	23.6

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
W37	482896	194659	Roadside	92.30769231	92.3		39.3	35.4	22.5	27.0
W38	487561	192616	Kerbside	100	100.0	31.8	29.7	30.1	24.1	27.6
W39	484421	194179	Kerbside	92.30769231	92.3	36.6	38.7	37.1	21.4	33.1
W40	485290	191280	Suburban	100	100.0	33.9	26.9	27.6	19.4	21.4
W41	485024	186825	Roadside	100	100.0	34.6	26.3	24.8	28.7	30.8
W42	485028	186327	Urban Centre	100	100.0	28.8	29.2	21.1	19.0	19.9
W43	485182	186974	Roadside	84.61538462	84.6	28.5	27.2	25.9	15.4	18.5
W44	486607	191725	Roadside	92.30769231	92.3	42.9	37.8	36.5	14.0	19.4
W45	486520	193110	Urban Centre	92.30769231	92.3		35.5	35.1	19.9	21.4
W46	486474	193121	Urban Centre	65.38461538	65.4	50.3	43.6	40.0	26.6	32.0
W47	486766	193065	Roadside	100	100.0	43.9	45.0	43.8	25.5	28.3
W48	486381	193179	Urban Centre	92.30769231	92.3	30.8	29.4	31.2	29.7	35.8
W49	484958	186748	Roadside	92.30769231	92.3	44.0	42.3	39.2	29.9	30.4
W50	485462	193384	Roadside	100	100.0	32.1	30.8	30.4	24.9	23.2

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 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
W51	486144	193271	Roadside	100	100.0	48.6	40.0	32.7	35.8	36.7
W52	484830	186550	Roadside	100	100.0	30.4	31.7	30.1	21.0	21.7
W53	484893	186677	Roadside	100	100.0	39.4	37.6	29.2	20.5	22.9
W54	485763	193278	Roadside	92.30769231	92.3	30.4	31.7	30.1	22.3	24.3
W55	486823	192874	Roadside	100	100.0	39.4	37.6	29.2	20.1	22.9

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16

☒ 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 NO₂ annual mean objective of $40\mu\text{g}/\text{m}^3$ are shown in **bold**.

NO₂ annual means exceeding $60\mu\text{g}/\text{m}^3$, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

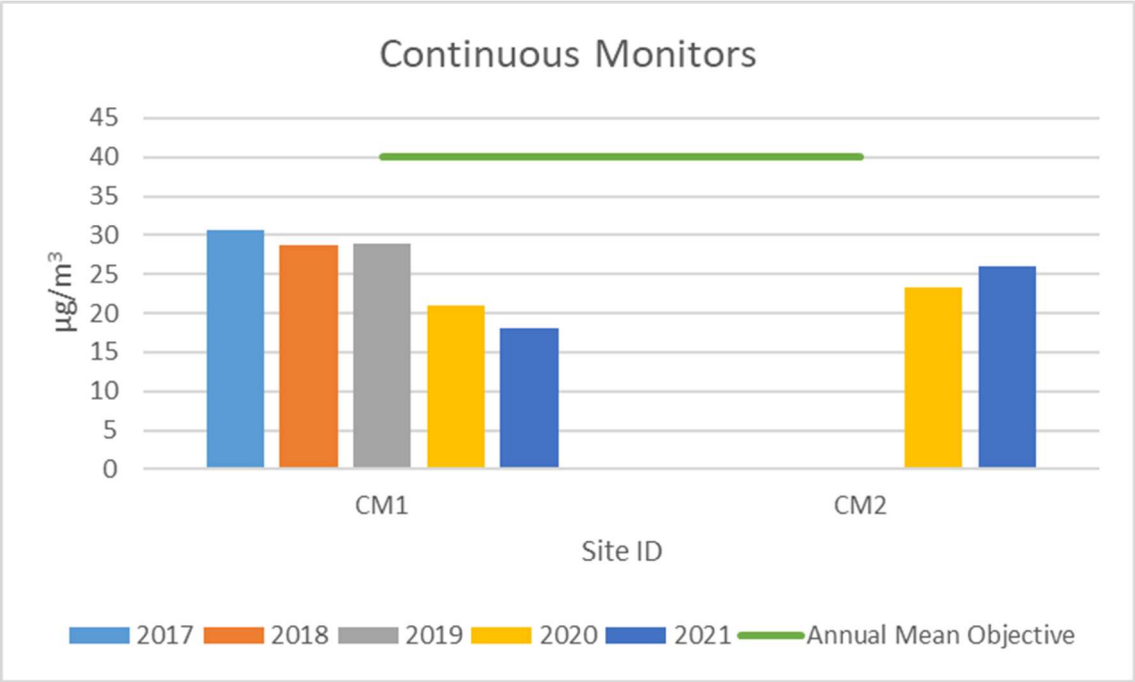
Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

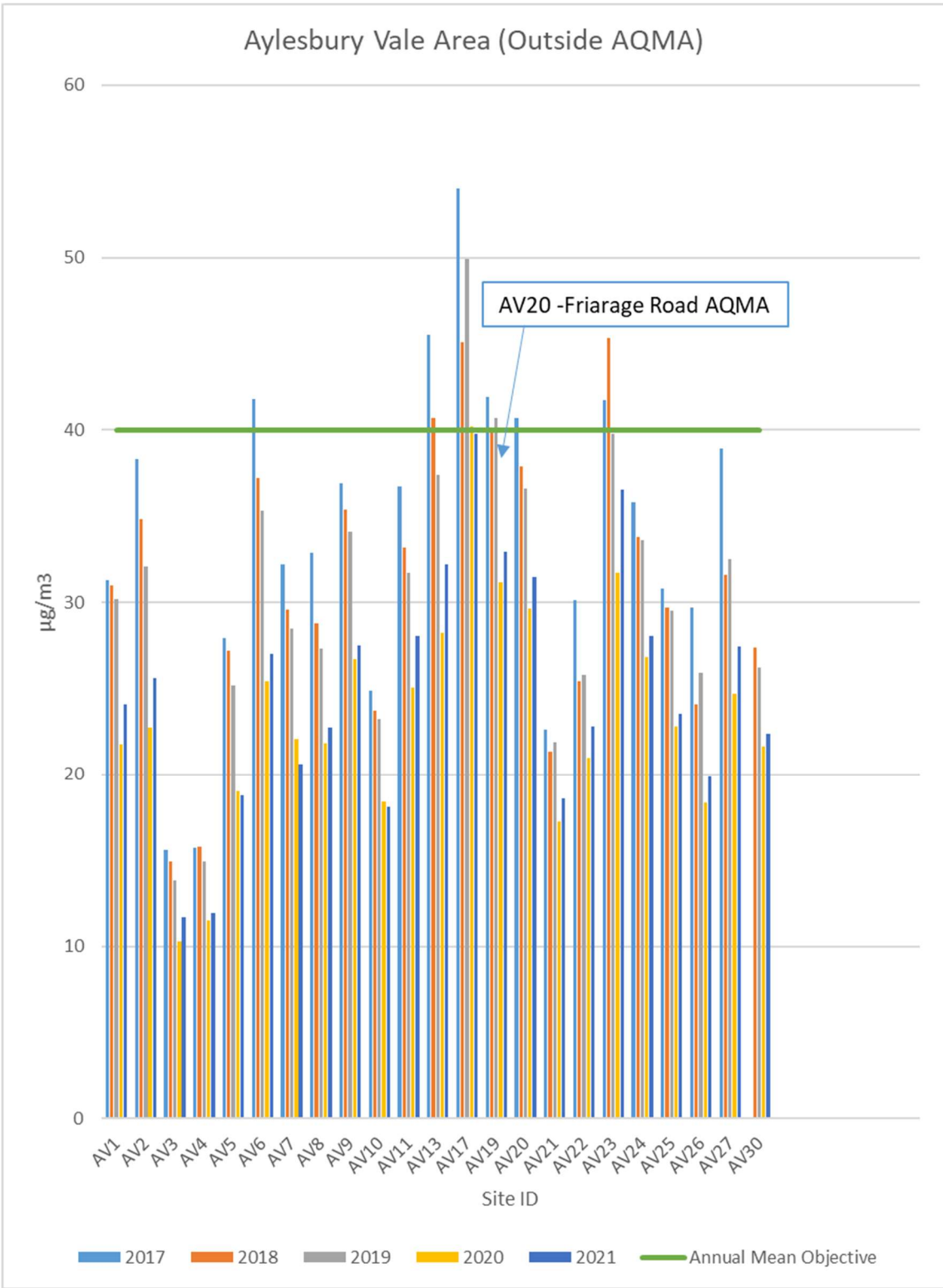
Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

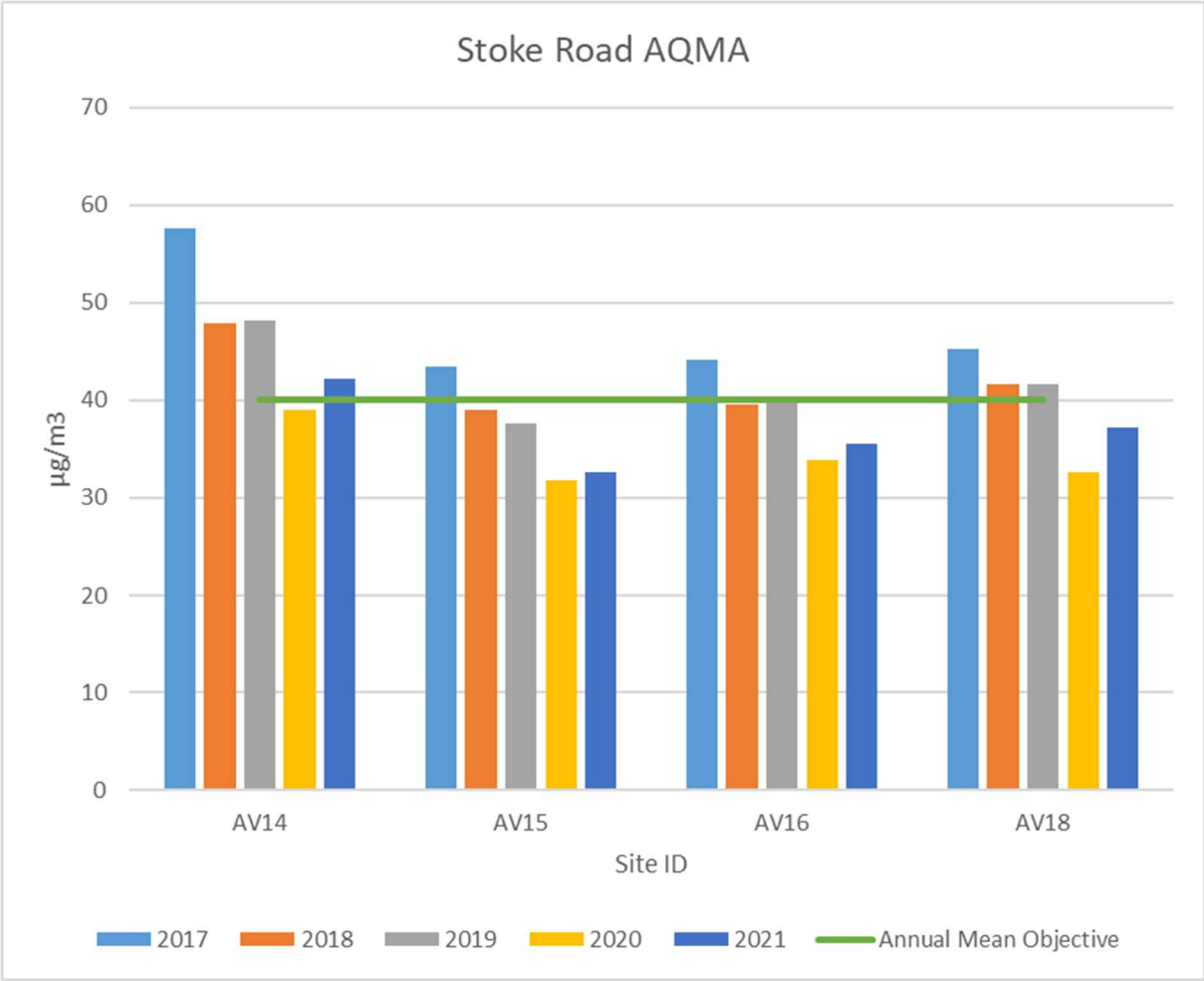
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

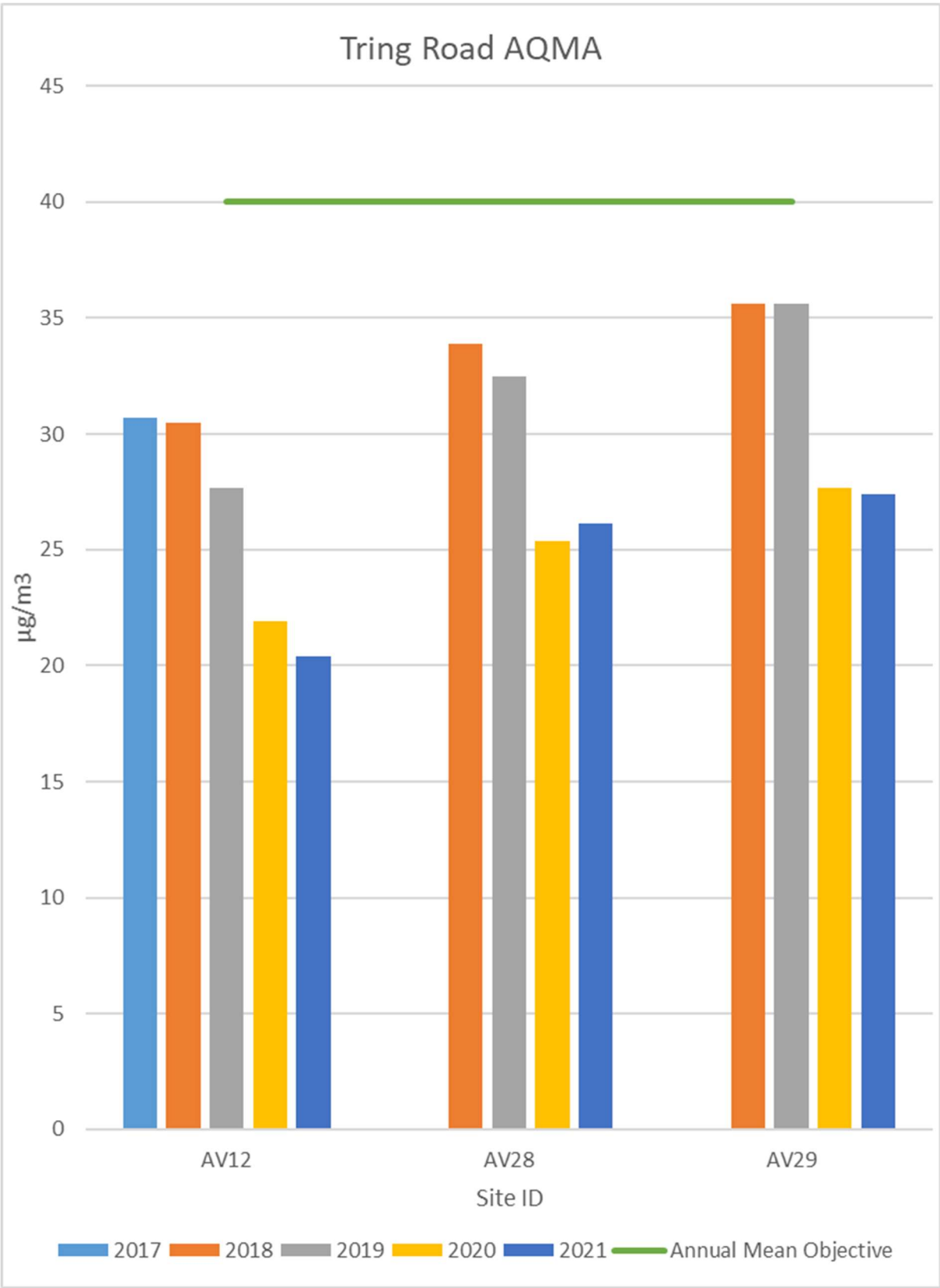
(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

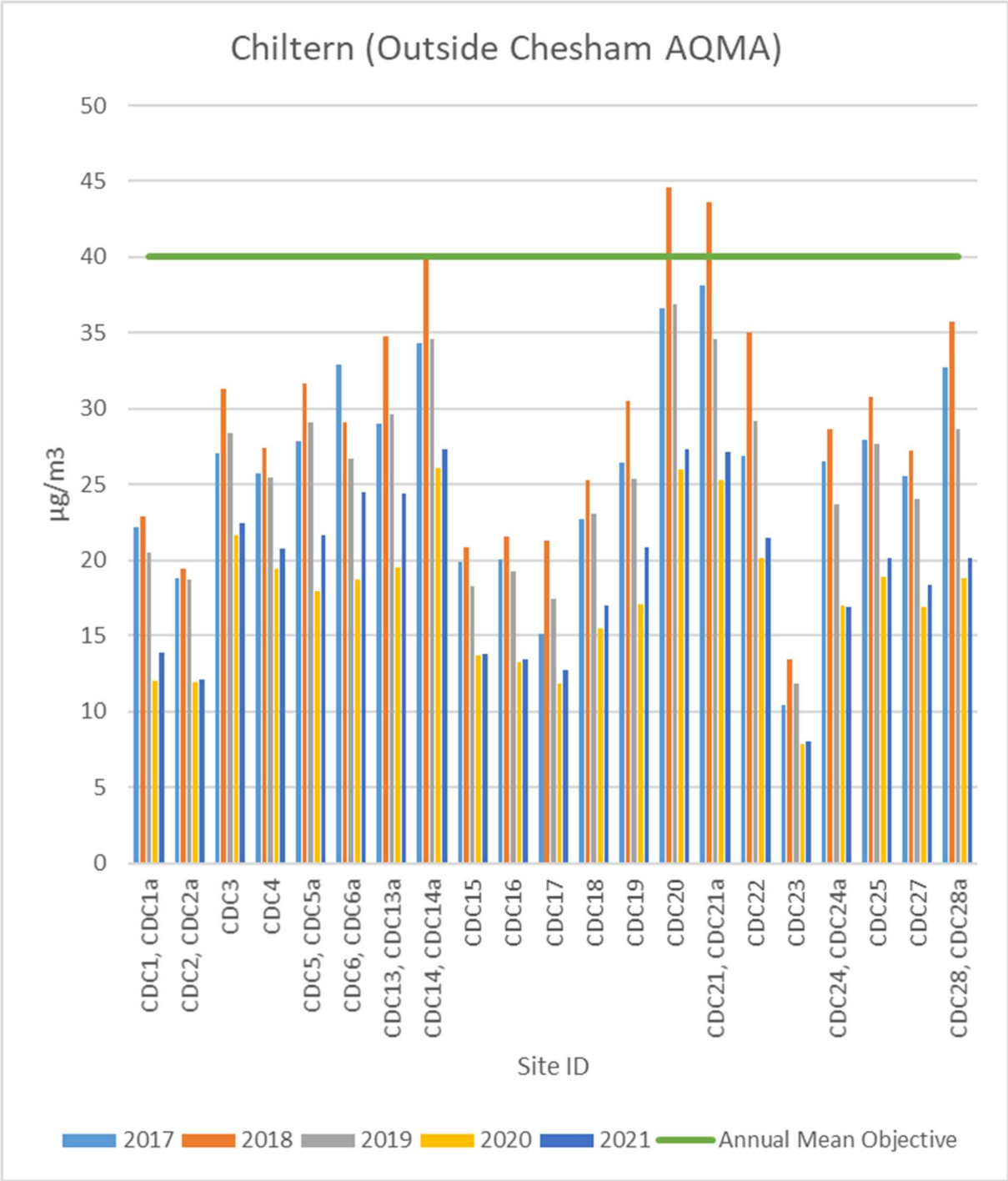
Figure A.1 – Trends in Annual Mean NO₂ Concentrations

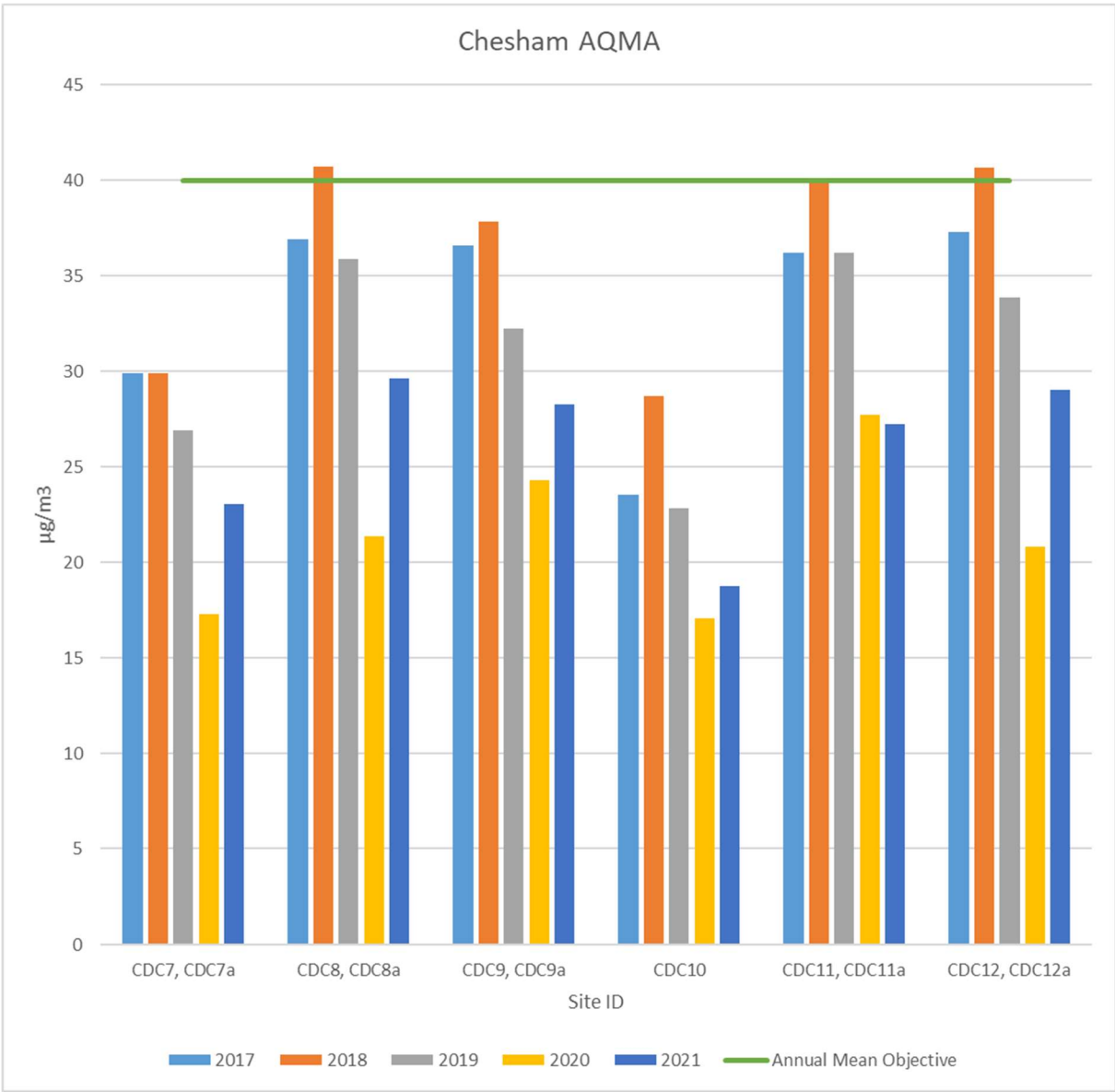


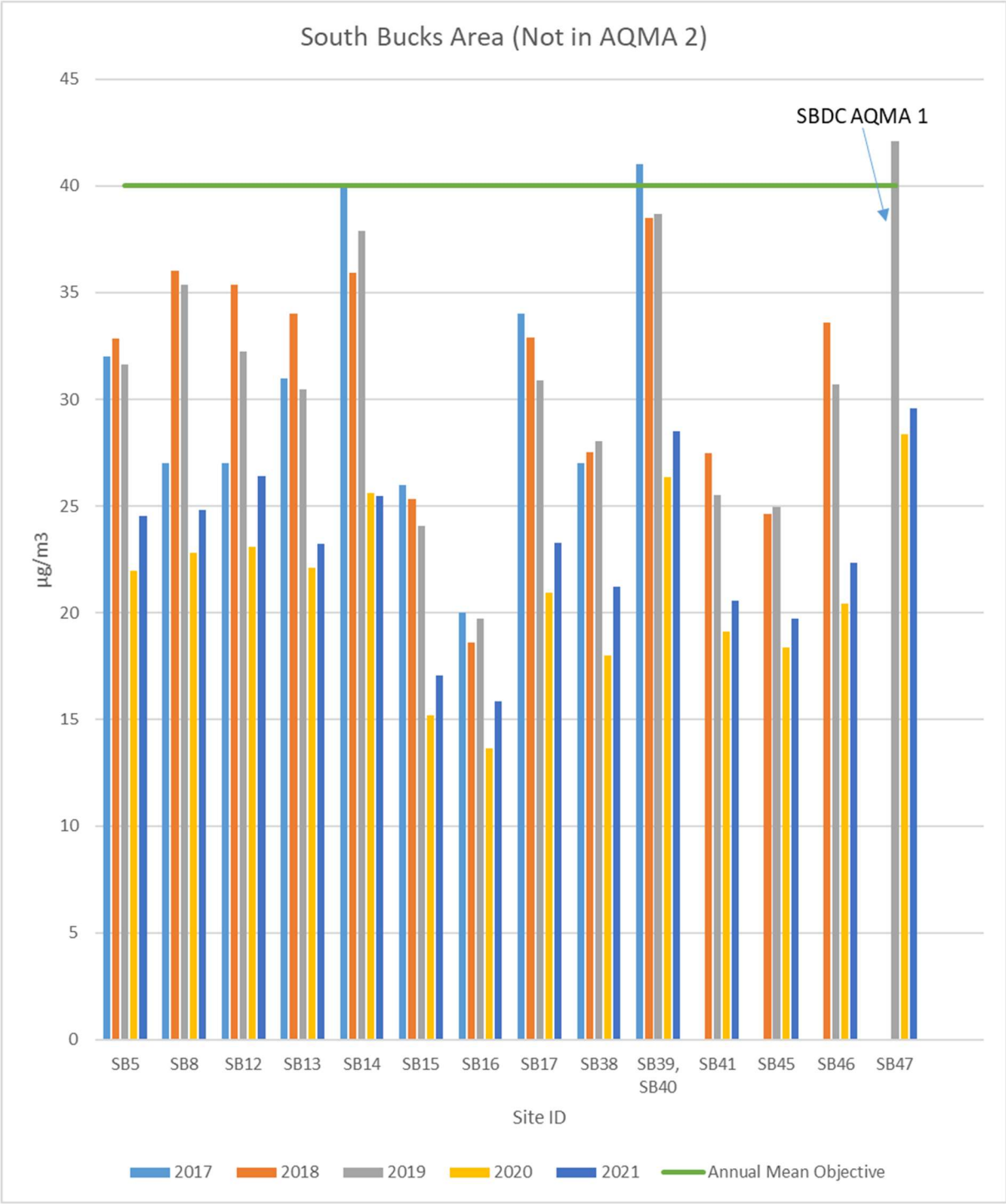


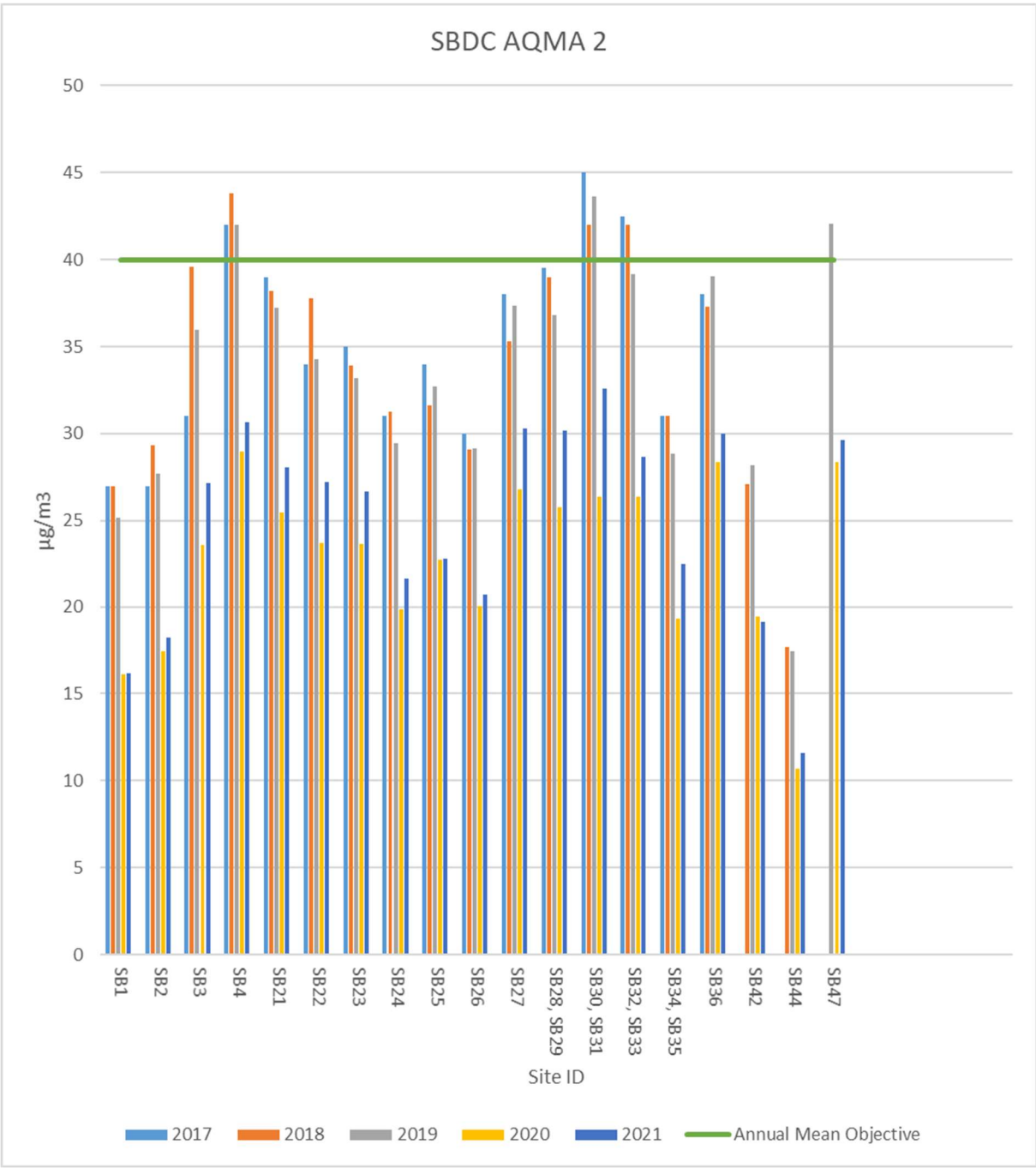


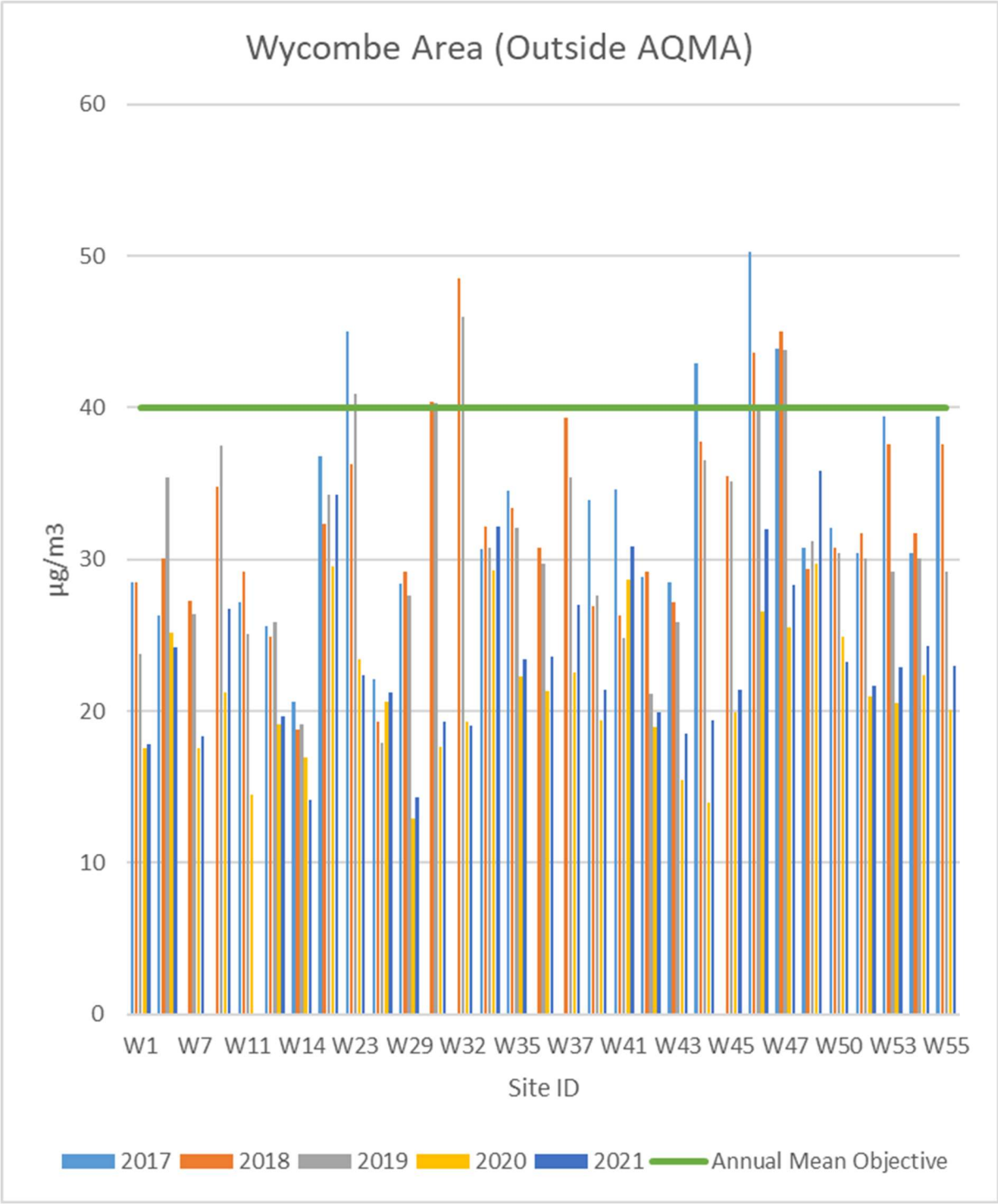


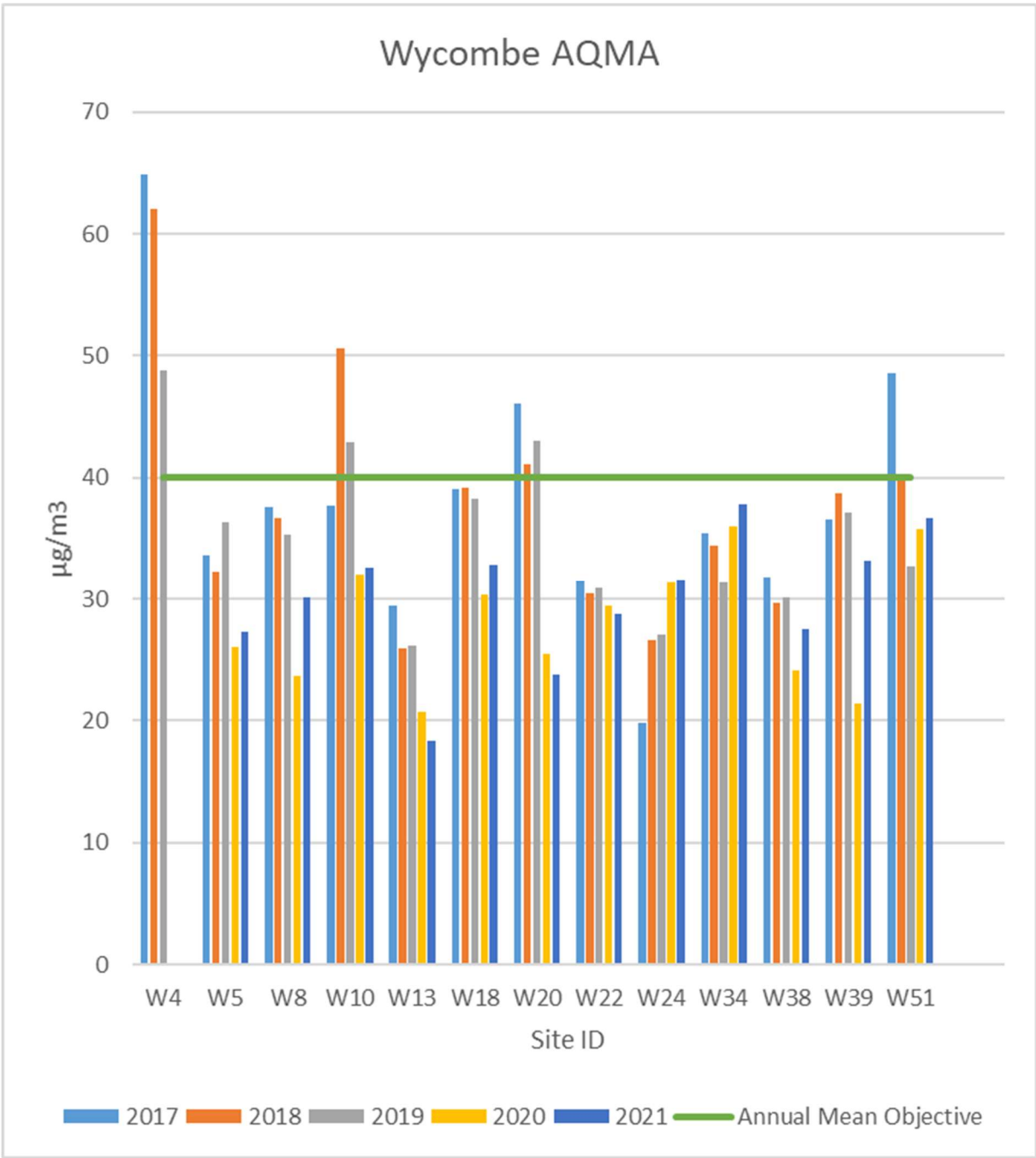












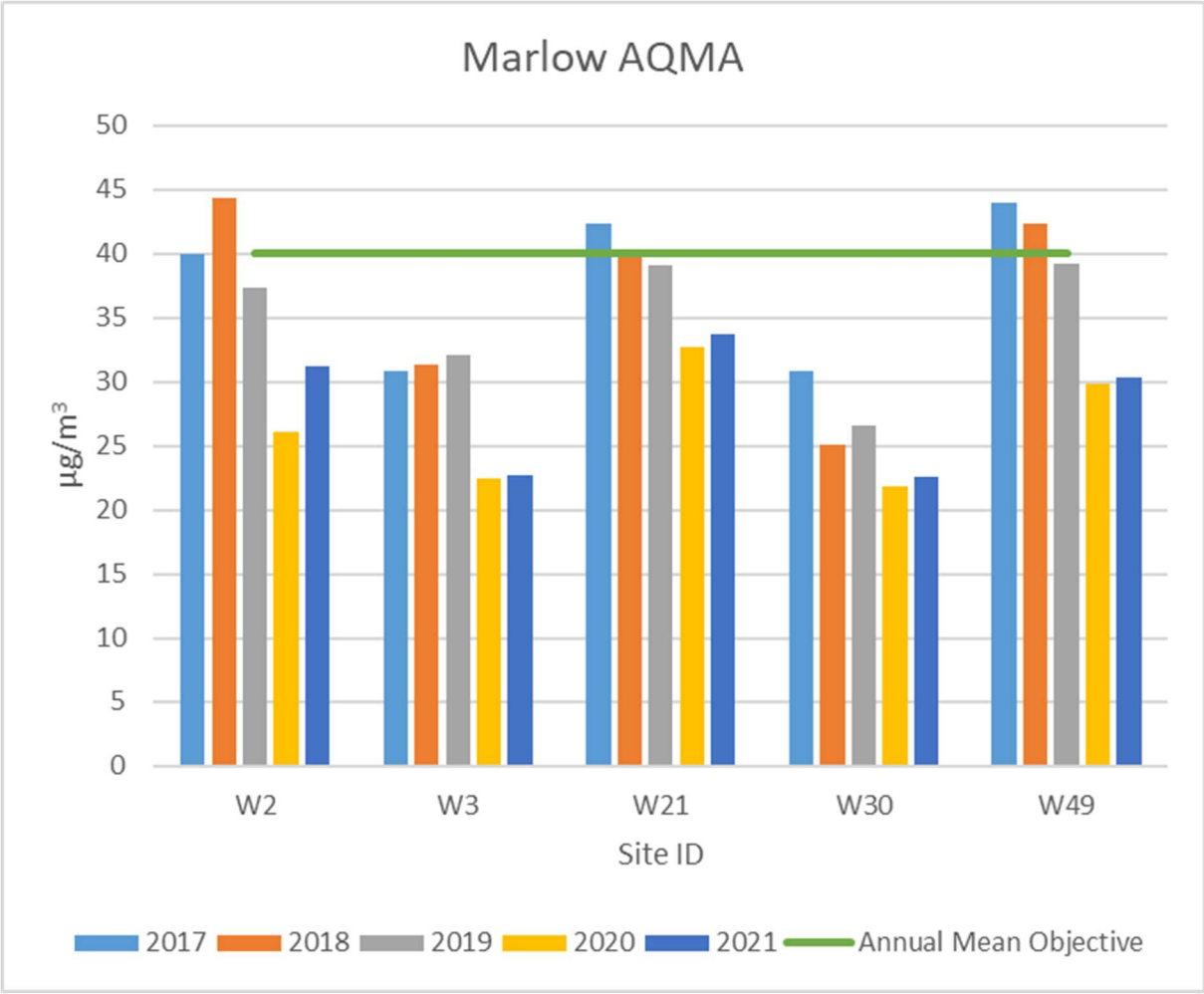


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2021 (%) ⁽²⁾	2017	2018	2019	2020	2021
CM1	476604	195436	Suburban	99.4	99.4	1	0	0	0	0
CM2	486352	192478	Roadside	99.7	99.7				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%).

Appendix B: Full Monthly Diffusion Tube Results for 2021

Table B.1 – NO₂ 2021 Diffusion Tube Results (µg/m³)

Aylesbury Vale and Wycombe Area

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northin g)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
AV1	469518	234006	35.0	27.2	30.8	37.1	13.6	30.9	34.4	27.1	44.2	29.5	28.6	32.0	30.9	24.1	-	
AV2	469587	233939	31.4	25.7	29.9	30.4	23.4	30.7	32.8	28.1	42.5	M	50.2	36.0	32.8	25.6	-	
AV3	469601	233858	18.8	14.2	15.3	13.6	M	11.6	12.0	11.0	15.0	14.2	23.0	16.3	15.0	11.7	-	
AV4	469672	233862	18.2	16.7	15.9	16.7	5.9	14.1	14.0	10.9	18.0	14.1	21.9	17.1	15.3	11.9	-	
AV5	469610	233982	29.4	24.9	24.7	26.6	10.0	16.8	21.5	19.8	32.0	25.7	28.9	28.7	24.1	18.8	-	
AV6	469597	233999	34.1	22.9	36.2	33.2	25.6	31.8	35.1	30.2	42.1	37.2	49.1	37.9	34.6	27.0	-	
AV7	469727	234117	29.9	25.5	26.4	20.5	21.7	24.5	26.6	18.5	35.2	33.4	32.6	22.3	26.4	20.6	-	
AV8	476979	227698	34.0	27.7	30.4	26.9	19.1	26.0	26.5	14.6	33.7	35.4	42.5	32.6	29.1	22.7	-	
AV9	481891	214979	42.7	33.7	34.4	29.7	27.6	33.2	30.1	29.7	43.6	41.2	42.7	34.7	35.3	27.5	-	
AV10	483948	215645	27.0	25.8	27.8	26.4	15.2	17.9	19.3	15.3	15.4	26.7	33.0	29.0	23.2	18.1	-	
AV11	482177	214093	40.5	34.8	35.5	35.8	24.6	31.8	31.7	24.4	48.6	38.0	48.1	37.7	36.0	28.0	-	
AV12	483128	213637	32.0	29.4	32.1	2.9	25.9	25.7	24.0	16.3	31.0	27.4	37.4	29.8	26.2	20.4	-	
AV13	483601	213590	38.9	36.1	42.5	38.2	39.5	40.4	38.6	32.7	48.6	43.8	56.2	39.6	41.3	32.2	-	
AV14	482436	213121	66.7	46.5	57.6	37.7	48.3	48.5	48.4	45.7	58.7	58.6	73.7	59.0	54.1	42.2	39.5	
AV15	482444	213090	52.8	28.6	42.7	41.8	45.2	35.2	33.8	30.8	51.3	40.1	58.6	41.8	41.9	32.7	-	
AV16	482376	213039	47.9	30.9	51.2	41.9	48.4	37.7	43.8	38.3	48.3	50.9	58.5	48.9	45.6	35.5	-	
AV17	482278	213271	53.6	49.2	51.4	27.5	51.4	42.0	41.3	41.7	57.3	68.7	65.6	61.9	51.0	39.8	31.9	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northin g)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
AV18	482374	213170	48.8	45.2		34.3	50.0	42.3	40.8	41.1	51.2	53.0	62.2	55.7	47.7	37.2	31.0	
AV19	482237	213717	44.7	35.6	42.1	40.0	40.9	40.3	41.9	35.4	49.9	44.7	48.7	42.8	42.3	33.0	-	
AV20	481451	213588	31.3	35.0	43.5	39.7	45.3	41.0	38.9	27.0	49.1	42.2	46.1	44.9	40.3	31.5	-	
AV21	481381	213823	26.4	24.5	23.9	24.2	23.2	17.6	21.8	17.5	30.8	M	28.7	M	23.9	18.6	-	
AV22	481408	213940	31.5	33.0	30.8	28.0	25.2	18.3	26.6	17.3	38.3	35.1	37.2	29.7	29.3	22.8	-	
AV23	481514	213860	36.8	51.8	44.8	53.8	34.5	38.5	52.5	41.4	64.4	44.3	52.3	47.0	46.8	36.5	30.3	
AV24	480710	214576		41.0	36.6	28.3	49.0	24.2	30.5	21.1	40.9	42.2	45.7		36.0	28.0	-	
AV25	481768	214276	31.6	33.7		27.0	30.9	20.8	25.7	25.1		36.4	37.3	33.5	30.2	23.6	-	
AV26	486811	207795		19.6	24.4		23.7	18.2	22.1	15.9	39.6	30.4	31.6	28.8	25.4	19.8	-	
AV27	488573	222902	37.5	31.3	36.3	30.6		33.2	33.1	23.9	39.9	35.9	44.9	39.9	35.1	27.4	-	
AV28	483337	213644	34.6	27.1	33.8	33.9	35.1	33.2	31.8	29.3	37.5	32.4	35.5	37.5	33.5	26.1	-	
AV29	483394	213646	38.6	31.0	35.6	32.8	33.2	28.3	31.7	28.6	45.9	33.8	47.6	34.5	35.1	27.4	-	
AV30	483488	213729	34.1	25.6	25.3	26.9	25.9	22.8	24.3	21.1	33.9	33.5	38.5	31.9	28.7	22.3	-	
AV31	484902	213138				33.2	45.3	37.6	41.1	34.2	49.8	45.5	46.6	37.9	41.2	32.2	-	
AV32	482157	212768				31.5	27.6	32.4	28.9	28.7	35.6	33.1	41.4	29.4	32.1	25.0	-	
AV33	481743	214967				32.2	29.9	26.5	27.2	21.8	35.2	27.8	35.6	35.8	30.2	23.6	-	
AV34	481766	214182				54.6	41.4	46.0	46.6	41.2	50.1	43.7	53.4		47.1	39.8	39.1	
AV35	483660	212602						10.5	10.5	9.9	15.6	15.7	23.9	18.9	15.0	12.6	-	
W1	485012	186444		27.0	16.7	23.3	18.7		18.0	15.7	29.0	22.5	29.6	27.6	22.8	17.8	-	
W2	484966	186773	22.5	38.2	40.4	47.3	33.7	39.1	42.1	37.5	49.9	39.3	46.5	43.6	40.0	31.2	-	
W3	484753	186888	18.6	30.5	28.1	30.1		27.8	20.1	23.0	37.4	34.8	36.4	34.2	29.2	22.8	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northin g)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
W4	486384	192513														-	-	
W5	486471	193665	22.3	35.1	34.5	33.4	31.7		30.7	27.6	42.6	41.6	44.9	40.4	35.0	27.3	-	
W6	485869	193231	23.8		30.3	28.2	26.8	27.8	28.0	23.5	42.4	38.6	38.4	33.1	31.0	24.2	-	
W7	486116	192890	18.3	30.8			26.5	19.7	19.1	0.7	28.0	24.4	35.2	32.5	23.5	18.3	-	
W8	487101	192766	24.1	41.4	36.8	46.6	36.3		35.3	36.1	47.0	38.2	44.8	38.9	38.7	30.2	-	
W9	485353	191416	23.8	37.3	35.6	33.8	25.9	27.3	24.4	31.6	45.6	39.2	46.0	40.6	34.3	26.7	-	
W10	485514	193658	26.5	40.5	44.0	41.1	37.7	34.3	38.2	33.3	53.2	50.4	52.3	50.6	41.8	32.6	-	
W11	486214	192992														-	-	
W12	486364	193266	19.7	25.9	27.3	27.3	22.4	17.3	15.1	19.8	33.1	28.2	35.5	31.1	25.2	19.7	-	
W13	485891	191788	16.3		27.5	26.3	22.3	19.7	5.1	20.5	28.7	27.4	36.4	28.5	23.5	18.3	-	
W14	487048	193473	13.1	20.2	17.9	18.6	16.4	14.8	11.7	12.6	24.8	20.3	25.5	21.4	18.1	14.1	-	
W15	476602	195435													-	-	-	Triplicate Site with W15, W16 and W17 - Annual data provided for W17 only
W16	476602	195435													-	-	-	Triplicate Site with W15, W16 and W17 - Annual data provided for W17 only
W17	476602	195435														-	-	Triplicate Site with W15, W16 and W17 - Annual data provided for W17 only
W18	486785	192987	26.8	43.4	34.7	45.5	28.6	60.9		32.2	55.0	44.0	46.0	45.5	42.1	32.8	-	
W19	486842	193144			37.8	41.6	46.5	38.7	32.3	39.3	54.1	47.0	50.6	51.3	43.9	34.3	-	
W20	488858	191923	23.7	35.4	32.3	29.7	30.6	23.6	25.5	25.4	40.2	29.1	36.0	33.9	30.5	23.8	-	
W21	485070	186871	26.8	38.9	42.0	42.4	40.4	41.6	38.7	39.9	52.3	45.6	58.2	52.7	43.3	33.8	-	
W22	485665	193586	24.6	41.7	38.6	42.2	33.8	35.6	24.4	33.2	50.3	47.0	49.1	22.0	36.9	28.8	-	
W23	487787	194657	16.4	28.9	30.8	33.1	25.6	24.0	23.9	24.2		33.8	38.1	36.0	28.6	22.3	-	
W24	486485	193803	29.7	49.8		38.4	38.5		32.1	32.6	44.1	41.6	48.5	49.7	40.5	31.6	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northin g)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
W25	486079	192883	19.2	31.9	28.8	30.0	25.8	21.9	19.1	18.0	32.8	26.9	36.4	36.3	27.3	21.3	-	
W26	486352	192478													-	-	-	Triplicate Site with W26, W27 and W28 - Annual data provided for W28 only
W27	486352	192478													-	-	-	Triplicate Site with W26, W27 and W28 - Annual data provided for W28 only
W28	486352	192478														-	-	Triplicate Site with W26, W27 and W28 - Annual data provided for W28 only
W29	485217	187010		19.3	19.0	20.2	14.9	14.2	11.8	12.4	20.4	19.1	24.3	26.0	18.3	14.3	-	
W30	484868	186656	19.2	30.4	26.6	32.4		27.4	24.3	24.3	37.9	28.8	32.6	34.7	29.0	22.6	-	
W31	484888	186571	15.8	27.6	23.1	31.8	18.5	24.3	22.4	19.7	35.2	22.0	27.0	29.9	24.8	19.3	-	
W32	490784	190216		29.4	20.1	18.6	22.1	16.9	17.8	18.0	29.5	34.1	28.8	32.7	24.4	19.0	-	
W33	490247	190768	26.9	38.8	36.9	41.3	40.3		34.7	32.7	54.5	45.0	53.0	48.9	41.2	32.1	-	
W34	483442	194645	24.6	45.4	51.8	56.5	53.8	40.8	50.2	42.5	63.6	53.9	47.9	50.2	48.4	37.8	27.9	
W35	484749	186496	17.7	24.4	31.0	36.5	27.6	33.2	25.8	27.0	37.9	28.8	36.7	33.3	30.0	23.4	-	
W36	484643	186436	18.6	27.9	33.7	35.0		30.0	24.0	26.2	36.5	27.7	37.8	34.9	30.2	23.6	-	
W37	482896	194659	20.5	34.2	37.1	41.5		34.8	29.5	26.7	41.5	36.8	41.5	37.0	34.6	27.0	-	
W38	487561	192616	24.8	31.6	33.8	34.8	30.2	31.3	28.9	26.5	44.7	47.4	48.7	41.3	35.3	27.6	-	
W39	484421	194179		40.9	37.5	49.3	40.9	38.0	39.0	30.5	52.0	43.9	55.1	40.2	42.5	33.1	-	
W40	485290	191280	16.6	29.7	23.4	26.9	24.4	25.0	24.3	20.6	38.9	35.2	31.2	32.6	27.4	21.4	-	
W41	485024	186825	22.7	33.8	40.1	44.4	40.0	39.9	37.8	36.8	45.7	38.8	50.5	44.0	39.5	30.8	-	
W42	485028	186327	18.2	24.0	24.8	25.2	24.4	22.1	21.6	20.5	32.9	30.0	34.2	28.7	25.6	19.9	-	
W43	485182	186974			22.2	23.9	18.6	20.0	19.4	18.1	32.0	23.4	27.0	32.3	23.7	18.5	-	
W44	486607	191725		25.5	23.8	27.8	24.9	17.0	20.1	15.6	32.3	25.1	35.0	26.7	24.9	19.4	-	
W45	486520	193110	22.8	31.9	24.8	29.8	25.8	21.7	22.8	22.5	35.6	31.6		32.6	27.4	21.4	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northin g)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
W46	486474	193121	25.8	46.7	39.4	44.3	40.3			40.2	54.2	47.7			42.3	32.0	-	
W47	486766	193065	23.9	44.2	34.3	35.3	34.4	33.1	30.3	27.9	47.9	34.3	45.4	44.3	36.3	28.3	-	
W48	486381	193179		44.7	44.3	40.8	49.4	36.7	31.9	40.0	58.0	54.6	53.5	51.5	45.9	35.8	-	
W49	484958	186748	24.2	43.0	36.3	44.7	38.2	39.3	39.7	29.5		41.7	44.1	47.8	39.0	30.4	-	
W50	485462	193384	20.1	28.0	29.6	32.6	27.2	27.0	25.9	24.5	35.7	35.1	35.8	35.7	29.8	23.2	-	
W51	486144	193271	30.4	41.1	50.3	48.6	46.4	40.3	45.6	42.3	57.9	50.3	62.9	48.6	47.1	36.7	35.5	
W52	484830	186550	17.4	29.8	28.5	31.4	24.4	25.7	24.7	21.8	35.9	27.9	31.1	34.6	27.8	21.7	-	
W53	484893	186677	17.8	26.8	29.9	32.9	24.6	26.0	27.6	26.1	37.2	30.1	35.6	38.0	29.4	22.9	-	
W54	485763	193278	23.1	36.6	30.0	33.8	28.4	27.5	26.7	21.1		36.0	38.9	40.1	31.1	24.3	-	
W55	486823	192874	19.7	29.9	30.5	28.2	27.3	24.8	24.8	22.0	37.1	35.1	37.5	35.9	29.4	22.9	-	

Chiltern Area

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 (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
CDC1	497640	205271	20.6	22.6	16.7	16.5	15.0	14.4	14.8	11.5	17.1	14.6	17.8	19.0	-	-	-	Duplicate Site with CDC1 and CDC1a - Annual data provided for CDC1a only
CDC1 a	497640	205271	20.6	18.7	15.3	19.3	18.1	14.8	14.3	12.0	17.0	16.0	20.1	18.1	16.7	13.9	-	Duplicate Site with CDC1 and CDC1a - Annual data provided for CDC1a only
CDC2	497622	205191	17.0	19.6	14.2	13.4	13.7	11.1	11.1	11.6	16.3	16.2	19.3	17.1	-	-	-	Duplicate Site with CDC2 and CDC2a - Annual data provided for CDC2a only
CDC2 a	497622	205191	15.7	19.4	14.2	13.6	14.2	11.7	7.3	11.7	15.3	16.1	18.7	17.5	14.6	12.1	-	Duplicate Site with CDC2 and CDC2a - Annual data provided for CDC2a only
CDC3	496326	202932	28.0	36.8	28.3	22.4	25.7		23.5	19.4	28.9	31.0	30.6		27.1	22.5	-	
CDC4	496305	202884	31.8	31.1	26.2	21.5	21.8	20.6	21.7	17.9	24.7	28.4	30.7	26.1	25.0	20.7	-	
CDC5	496261	202656	36.2	30.3	29.5	25.6	24.2	23.2	19.3	18.2	27.3	27.4	31.8	30.2	-	-	-	Duplicate Site with CDC5 and CDC5a - Annual data provided for CDC5a 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 (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
CDC5 _a	496261	202656	29.8	30.1	26.2	22.6	25.3	23.5	22.7	17.9	25.6	27.6	31.7	25.9	26.1	21.7	-	Duplicate Site with CDC5 and CDC5a - Annual data provided for CDC5a only
CDC6	496272	202699	31.8	33.3	30.0	27.6	28.6	25.7	25.8	23.0	30.2	33.1	33.8	33.0	-	-	-	Duplicate Site with CDC6 and CDC6a - Annual data provided for CDC6a only
CDC6 _a	496272	202699	32.2	32.4	32.2	26.2	29.0	26.3	25.1	24.4	30.2	31.5	33.4	31.8	29.5	24.5	-	Duplicate Site with CDC6 and CDC6a - Annual data provided for CDC6a only
CDC7	496278	202743	32.7	34.2	27.4	23.6	30.3	22.7	26.4	21.2	28.6	27.8	33.4	29.7	-	-	-	Duplicate Site with CDC7 and CDC7a - Annual data provided for CDC7a only
CDC7 _a	496278	202743	30.2	34.0	28.0	23.9	27.6	23.2		20.7	28.3	28.7	30.6	32.3	27.8	23.0	-	Duplicate Site with CDC7 and CDC7a - Annual data provided for CDC7a only
CDC8	496247	202328	40.3	39.6	34.3	34.5	37.3	31.1	36.1	26.0	41.0	35.0	37.5	38.3	-	-	-	Duplicate Site with CDC8 and CDC8a - Annual data provided for CDC8a only
CDC8 _a	496247	202328	37.8	42.3	31.4	40.4	28.2	32.6	35.9	28.4	39.6	36.7	37.8	37.2	35.7	29.7	-	Duplicate Site with CDC8 and CDC8a - Annual data provided for CDC8a only
CDC9	496215	202300	37.8	39.5	32.7	26.8	31.6	27.8	30.9	24.0	35.8	35.5	42.7	40.0	-	-	-	Duplicate Site with CDC9 and CDC9a - Annual data provided for CDC9a only
CDC9 _a	496215	202300	44.3	34.4	36.3	31.4	31.5	28.2	29.6	29.3	35.6	34.6	43.7	37.1	34.0	28.3	-	Duplicate Site with CDC9 and CDC9a - Annual data provided for CDC9a only
CDC1 ₀	496233	202330	25.4	26.5	23.3	20.2	19.0	19.6	21.1	17.7	23.0	22.6	28.6	25.9	22.6	18.8	-	
CDC1 ₁	496133	202072	35.1	33.9	33.9	32.2	31.7	34.2	28.4	28.6	34.8	34.8		36.2	-	-	-	Duplicate Site with CDC11 and CDC11a - Annual data provided for CDC11a only
CDC1 _{1a}	496133	202072	35.4	36.8	35.1	29.9	34.0	29.7	27.6	28.2				35.1	32.8	27.2	-	Duplicate Site with CDC11 and CDC11a - Annual data provided for CDC11a only
CDC1 ₂	496107	202033	36.2	36.9	37.0	39.4	31.2	31.3	33.6	31.5	39.4	34.0	34.5	35.9	-	-	-	Duplicate Site with CDC12 and CDC12a - Annual data provided for CDC12a only
CDC1 _{2a}	496107	202033	37.4	36.0	36.1	37.4	31.6	34.8	31.9	29.3	37.4	34.3	34.1	37.7	34.9	29.0	-	Duplicate Site with CDC12 and CDC12a - Annual data provided for CDC12a only
CDC1 ₃	495850	201510	28.1	29.0	28.2	24.2		25.7	31.1	22.8	29.6	26.0	30.3		-	-	-	Duplicate Site with CDC13 and CDC13a - Annual data provided for CDC13a only
CDC1 _{3a}	495850	201510	31.4	28.9	24.2	24.5		28.6	24.8		74.9	27.3	31.2		29.4	24.4	-	Duplicate Site with CDC13 and CDC13a - Annual data provided for CDC13a only
CDC1 ₄	495869	201436	31.9	37.0	33.7	30.3	31.7	28.6	24.4	25.4	38.4	34.7	41.7	35.1	-	-	-	Duplicate Site with CDC14 and CDC14a - Annual data provided for CDC14a only
CDC1 _{4a}	495869	201436	36.3	35.7	33.0	27.6	33.8	31.9	30.4	25.5	36.6	36.6	37.6	36.5	32.9	27.3	-	Duplicate Site with CDC14 and CDC14a - Annual data provided for CDC14a only
CDC1 ₅	489484	201234	19.0	19.9	15.7		14.4		14.1	10.2	18.7	16.5	20.4	18.2	16.6	13.8	-	
CDC1 ₆	487002	200812	18.2	17.3	14.8	16.0	15.7	13.7	14.6	12.2	18.8	16.7	19.0	17.1	16.1	13.4	-	
CDC1 ₇	487991	200978	17.1	19.0	13.8	15.7	15.4	12.8	12.9	10.4	16.4	16.7	16.9	17.9	15.3	12.7	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
CDC1 ₈	495298	197520	22.7	22.2	21.5	21.4	17.8	17.3	19.1	15.3	23.2	20.9	25.6	19.9	20.5	17.0	-	
CDC1 ₉	495446	196797	29.2	26.6	18.3	21.5	23.3	24.4	24.7	20.5	28.7	29.2	31.0	24.9	25.2	20.9	-	
CDC2 ₀	496760	197100	32.3	40.8	29.3	32.8	30.8	35.3	32.0	24.9	40.3	28.8	33.8	37.3	33.0	27.4	-	
CDC2 ₁	495960	196940	34.1		28.5	36.5	32.4	30.4	35.4	27.5	40.1	32.4	35.1	31.8	-	-	-	Duplicate Site with CDC21 and CDC21a - Annual data provided for CDC21a only
CDC2 _{1a}	495960	196940	31.9		27.9	32.7	34.9	32.8	34.2	26.1	40.3	31.2	30.3	31.5	32.7	27.1	-	Duplicate Site with CDC21 and CDC21a - Annual data provided for CDC21a only
CDC2 ₂	494450	197647	31.5	27.6	24.6		22.2	24.0	24.5	20.4	30.8	23.9	28.5	28.1	25.9	21.5	-	
CDC2 ₃	495708	198806	13.1	13.5	8.2	7.9	7.3	7.6	8.9	6.7	10.7	11.6	9.0	12.0	9.6	8.0	-	
CDC2 ₄	496550	198720	24.3	23.9	21.8	17.6	19.5	14.8	16.4	14.3	22.9	24.6	23.8	26.5	-	-	-	Duplicate Site with CDC24 and CDC24a - Annual data provided for CDC24a only
CDC2 _{4a}	496550	198720	23.0	25.0	21.5	16.4	18.6	14.2	16.8	13.3	22.0	22.2	24.3	23.3	20.3	16.9	-	Duplicate Site with CDC24 and CDC24a - Annual data provided for CDC24a only
CDC2 ₅	499260	197452	23.8	25.0	20.5	23.8	23.6	23.6	25.2	19.8	26.8	26.9	27.5	24.1	24.3	20.1	-	
CDC2 ₇	500050	190810	24.9	24.1	20.6	19.0	19.1			14.5	23.3	23.0	27.5	25.8	22.1	18.4	-	
CDC2 ₈	499250	193750	24.4	26.2	25.0	22.2	23.3	24.6	23.6	19.2	29.0	23.2	29.8	24.5	-	-	-	Duplicate Site with CDC28 and CDC28a - Annual data provided for CDC28a only
CDC2 _{8a}	499250	193750	25.9	25.5	24.2	27.0	22.7	21.3	19.6	20.4	29.4	25.4	27.0	23.5	24.3	20.2	-	Duplicate Site with CDC28 and CDC28a - Annual data provided for CDC28a only

South Bucks Area

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SB1	503696	178533	25.6	28.6	18.9	18.9	15.6	15.1	15.5	13.2	18.5	19.5	19.8	22.9	19.3	16.2	-	
SB2	504056	180901	28.5	35.0	21.1	23.2	19.2	7.0	18.7	12.8	25.6	23.9	21.8	25.2	21.7	18.3	-	
SB3	503716	181218	38.2	40.7	32.9		27.5	26.2	28.1		39.3	27.8	33.7		32.4	27.2	-	
SB4	502072	182753	38.5	43.9		38.1	36.0		34.4	20.6	45.2	35.8	37.6	37.0	36.5	30.7	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SB5	504754	185138	33.6	39.6	28.7	28.1	24.8		24.3	20.2	34.3	29.6	31.5	29.6	29.2	24.5	-	
SB8	500259	188613	32.9	37.9	29.7	29.5	26.8	26.0	25.3		36.1	29.9	28.9	25.4	29.5	24.8	-	
SB12	496095	185599	34.9	35.8			26.6	28.6					34.7		32.1	26.4	-	
SB13	493873	191040	30.2	34.4	29.5	25.0	26.7	23.1	23.3	20.3		28.7		36.4	27.7	23.2	-	
SB14	584728	192313	32.9	35.9	32.7	14.4	30.3	25.5	25.8	26.4	35.6	38.9	33.9	34.7	30.3	25.5	-	
SB15	494600	190081	22.3	22.8	19.7	24.7	20.7	14.2	15.1	13.4	21.7	21.8	24.0	23.1	20.3	17.1	-	
SB16	493136	182503	21.8	23.1	16.2	16.4	14.9				18.5	18.5	20.7	20.2	18.9	15.9	-	
SB17	491668	181187	32.8	32.3	26.1	31.0			20.2	18.1	28.5	27.6	31.7	29.4	27.7	23.3	-	
SB21	503690	179278	36.2	41.9	31.8	34.2	28.9	29.9	29.9	24.4	38.4	34.1	40.5	33.0	33.4	28.1	-	
SB22	503972	179701	34.6	42.6	32.5	35.3	29.0	29.8	27.3	25.3	38.4	30.8	32.5	34.4	32.4	27.2	-	
SB23	503936	180547	36.5	41.8	30.1	30.8	29.7	27.7	28.9	21.1	40.5	33.8	34.0	28.8	31.7	26.7	-	
SB24	503050	181176	32.5	33.8	26.5	25.6	22.1	21.3	21.0	18.6	30.2	26.5	29.6	23.8	25.8	21.7	-	
SB25	503604	181378	27.7	32.8	28.6	25.9	25.0	23.6	25.1	19.7	31.4	32.6	25.9	28.2	27.1	22.8	-	
SB26	502100	182473	20.7	35.9	23.3	26.0	22.9	22.0	23.3	19.6	30.3	25.5	23.3	27.0	24.6	20.7	-	
SB27	502520	183456	39.5	43.5	38.1	40.1	30.7	35.9	30.2	34.0	37.1	31.9	37.4	36.9	36.1	30.3	-	
SB28	503899	181199	38.3	43.5	35.2	32.1	32.4	31.6		24.6	42.9	33.9	43.0	36.5	-	-	-	Duplicate Site with SB28 and SB29 - Annual data provided for SB29 only
SB29	503899	181199	38.2	43.5	36.9	34.4	30.2	32.8		27.5	43.6	37.1	43.4	33.6	35.9	30.2	-	Duplicate Site with SB28 and SB29 - Annual data provided for SB29 only
SB30	503924	181127			40.3	40.2	37.1	33.8		28.1	46.8	39.9	42.5	41.2	-	-	-	Duplicate Site with SB30 and SB31 - Annual data provided for SB31 only
SB31	503924	181127			40.1	38.2	34.7			25.4	47.4	40.2	47.0	41.0	38.8	32.6	-	Duplicate Site with SB30 and SB31 - Annual data provided for SB31 only
SB32	504047	179475	35.2	39.4	33.4	38.3	27.4	29.6	28.3	29.8	36.6	32.9	35.9	32.0	-	-	-	Duplicate Site with SB32 and SB33 - Annual data provided for SB33 only
SB33	504047	179475	40.1	43.2	36.5	38.9	30.8	33.2	30.9	24.3	42.3	34.5	34.3	33.9	34.1	28.6	-	Duplicate Site with SB32 and SB33 - Annual data provided for SB33 only

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SB34	502217	182870	27.0	30.1	26.5	29.8	24.3		23.5	19.6	28.9	25.9	31.5	28.7	-	-	-	Duplicate Site with SB34 and SB35 - Annual data provided for SB35 only
SB35	502217	182870		27.7	26.1				23.8	19.8	31.5	26.8	31.3	25.8	26.8	22.5	-	Duplicate Site with SB34 and SB35 - Annual data provided for SB35 only
SB36	503022	183070	36.4	38.5	34.8	32.8	33.5	35.8	31.1	26.1	46.7	38.3	40.4	36.3	35.7	30.0	-	
SB37	494478	190142	29.5	28.6	24.7	16.2	25.6	21.6	21.4	17.0	31.0	26.2	25.6	26.0	24.3	20.4	-	
SB38	503618	180518	29.3	35.4	24.5	23.3	20.9	19.7	19.9	18.4	28.6	27.6	29.2	28.6	25.3	21.2	-	
SB39	501652	187168	36.4	41.6	35.8	32.1	32.9	25.6	29.5	27.6	39.3	36.6	38.8	36.6	-	-	-	Duplicate Site with SB39 and SB40 - Annual data provided for SB40 only
SB40	501652	187168	36.2	39.9		32.0	30.1	31.4		25.9	39.4	35.9	36.0	34.6	34.0	28.5	-	Duplicate Site with SB39 and SB40 - Annual data provided for SB40 only
SB41	503256	181272	30.6	34.9	22.8	20.6	21.2		18.4	15.5	26.8	25.9	28.5	27.1	24.5	20.6	-	
SB42	502477	184784	28.1	30.4	26.1	21.9	21.2	20.5	0.6	19.8	25.8	27.3	29.6	26.5	22.8	19.1	-	
SB44	496099	185047	16.4	18.4	12.8	13.1	11.8	11.7	13.2	11.1	17.3	13.0			13.8	11.6	-	
SB45	495776	185762	25.5	27.4	24.4	20.2	22.7	19.6	19.6	19.4	26.3	26.2	23.3	27.8	23.5	19.7	-	
SB46	501568	186763	31.0	37.5	24.1	34.3	24.2	22.7	23.4	20.7	33.5	22.6	20.0	26.9	26.6	22.3	-	
SB47	494862	190156	36.4	40.3	33.8	32.1	40.7	30.5	28.9	34.7	38.5	37.9	38.1	34.6	35.2	29.6	-	

☒ 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.TG16.

☒ National bias adjustment factor used.

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

☒ Buckinghamshire Council confirm that all 2021 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System .

Notes:

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

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

See [Appendix C](#) for details on bias adjustment and annualisation

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

New or Changed Sources Identified Within Buckinghamshire Council During 2021

Buckinghamshire Council has not identified any new sources relating to air quality within the reporting year of 2021.

Additional Air Quality Works Undertaken by Buckinghamshire Council During 2021

Buckinghamshire Council has not completed any additional works within the reporting year of 2021.

QA/QC of Diffusion Tube Monitoring

Nitrogen dioxide analysis procedures are compliant with the Diffusion Tubes for Ambient NO₂ Monitoring: Practical Guidance for users and laboratories (February 2008) and in the majority in adherence with the 2021 Diffusion Tube Monitoring Calendar. There was a small divergence from the calendar in March this has been accounted for in the Diffusion Tube Date Processing tool. The following table outlines the diffusion tubes used in each area of Buckinghamshire. In 2022 Buckinghamshire Council are using SOCOTEC 50% TEA in Acetone diffusion tubes in all areas.

Area	Supplier	Type
Aylesbury Vale	SOCOTEC	50% TEA in Acetone
Chiltern	Gradko	50% TEA in Acetone
South Bucks	Gradko	20% TEA in Water
Wycombe	SOCOTEC	50% TEA in Acetone

Both SOCOTEC and Gradko are UKAS accredited laboratories and participate in the AIR NO₂ PT scheme. Laboratory summary performance for AIR NO₂ PT round 42 for comparing spiked NO₂ diffusion tubes for both SOCOTEC and Gradko can be found in the table below. This table will be updated when further rounds of the scheme have been included.

Air PT Round	AIR PT AR042
Conducted in the period	January – March 2021
SOCOTEC	100%
Gradko International	25%

Diffusion Tube Annualisation

Four diffusion tube monitoring locations within Buckinghamshire Council recorded data capture of less than 75% but more than 25%. These results were annualised according to Box 7.9 of LAQM TG16. The calculation and results can be seen in table C.2 below.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2021 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.TG16 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.

Buckinghamshire Council have applied a national bias adjustment factor to the 2021 monitoring data. A local bias adjustment factor was not calculated. Consequently, table C.3 has been deleted. A summary of bias adjustment factors used by Buckinghamshire Council over the past five years is presented in **Error! Reference source not found.**

Table C.1 – Bias Adjustment Factor

Aylesbury Vale and Wycombe Area (SOCOTEC 50% TEA in Acetone)

Year	Local or National	Version of National Spreadsheet (Number of Studies)	Adjustment Factor
2021	National	04/22 (23)	0.78
2020	National	03/21	0.77
2019	National	03/20	0.75
2018	National	02/19	0.76
2017	National	03/18	0.77

Chiltern Area (Gradko 50% TEA in Acetone)

Year	Local or National	Version of National Spreadsheet (Number of Studies)	Adjustment Factor
2021	National	04/22 (14)	0.83
2020	National	03/21	0.82
2019	National	03/20	0.87
2018	National	02/19	0.92
2017	National	03/18	0.97

South Bucks Area (20% TEA in Water)

Year	Local or National	Version of National Spreadsheet (Number of Studies)	Adjustment Factor
2021	National	04/22 (32)	0.84
2020	National	03/21	0.81
2019	National	03/20	0.93
2018	National	02/19	0.93
2017	National	03/18	0.89

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.

QA/QC of Automatic Monitoring

Ricardo E&E were employed to undertake validation and ratification work on the automatic monitoring stations in Buckinghamshire during 2021. The data has been fully validated and ratified to the standards described in the Local Air Quality Management – Technical Guidance LAQM TG (16) and is available on the Air Quality England Website [Buckinghamshire Council - Air Quality monitoring service \(airqualityengland.co.uk\)](https://airqualityengland.co.uk).

Automatic Monitoring Annualisation

All automatic monitoring locations within Buckinghamshire Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

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, non-automatic annual mean NO₂ concentrations corrected for distance are presented in Table B.1.

Table C.2 – Annualisation Summary (concentrations presented in $\mu\text{g}/\text{m}^3$)

Site ID	Annualisation Factor Site 1 London Harlington	Annualisation Factor Site 2 Oxford St Ebbes	Annualisation Factor Site 3 Reading New Town	Annualisation Factor Site 4 Borehamwood Meadow Park	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
AV34	1.0780	1.0521	1.0660	1.0882	1.0710	47.1	50.5	
AV35	1.0395	1.0628	1.0945	1.0982	1.0737	15.0	16.1	
SB12	0.9639	0.9714	1.0560	0.9235	0.9787	32.1	31.4	
W46	0.9711	0.9872	0.9397	0.9817	0.9699	42.3	41.1	

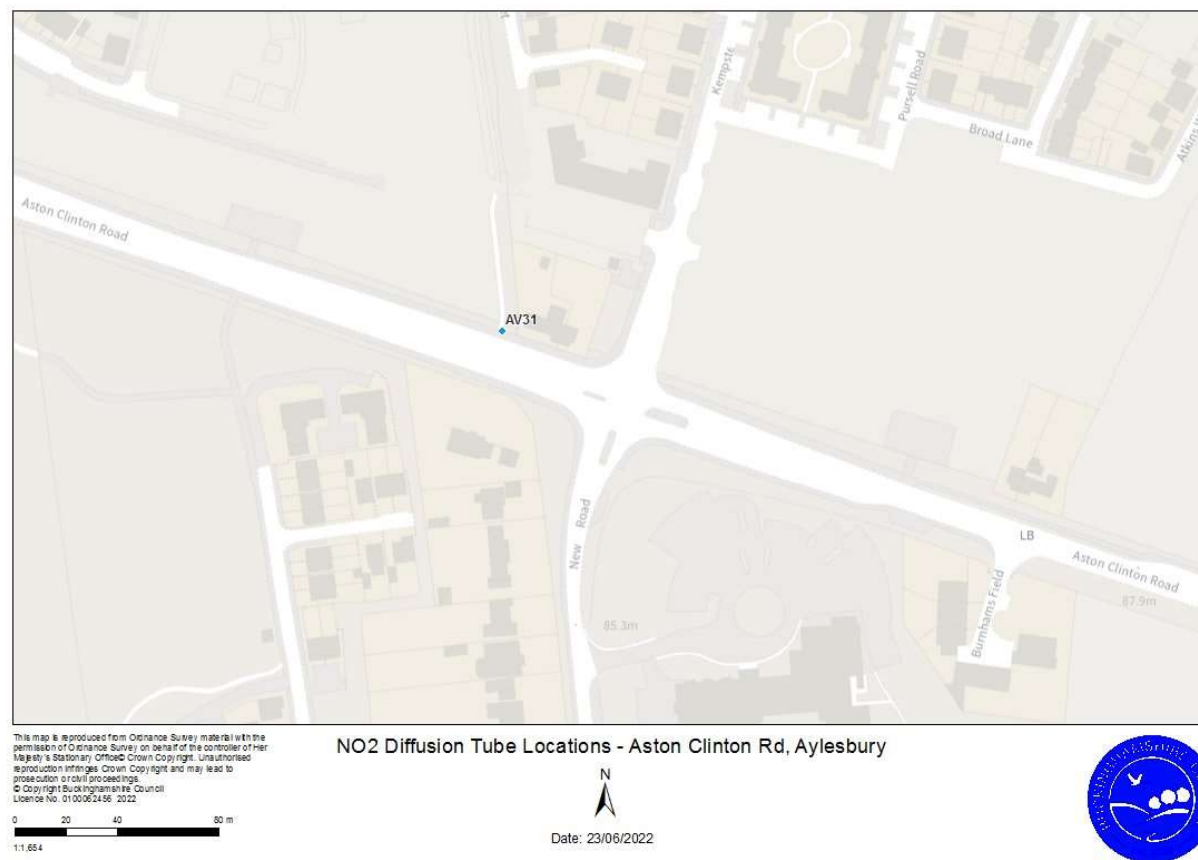
Table C.3 – NO₂ Fall off With Distance Calculations (concentrations presented in µg/m³)

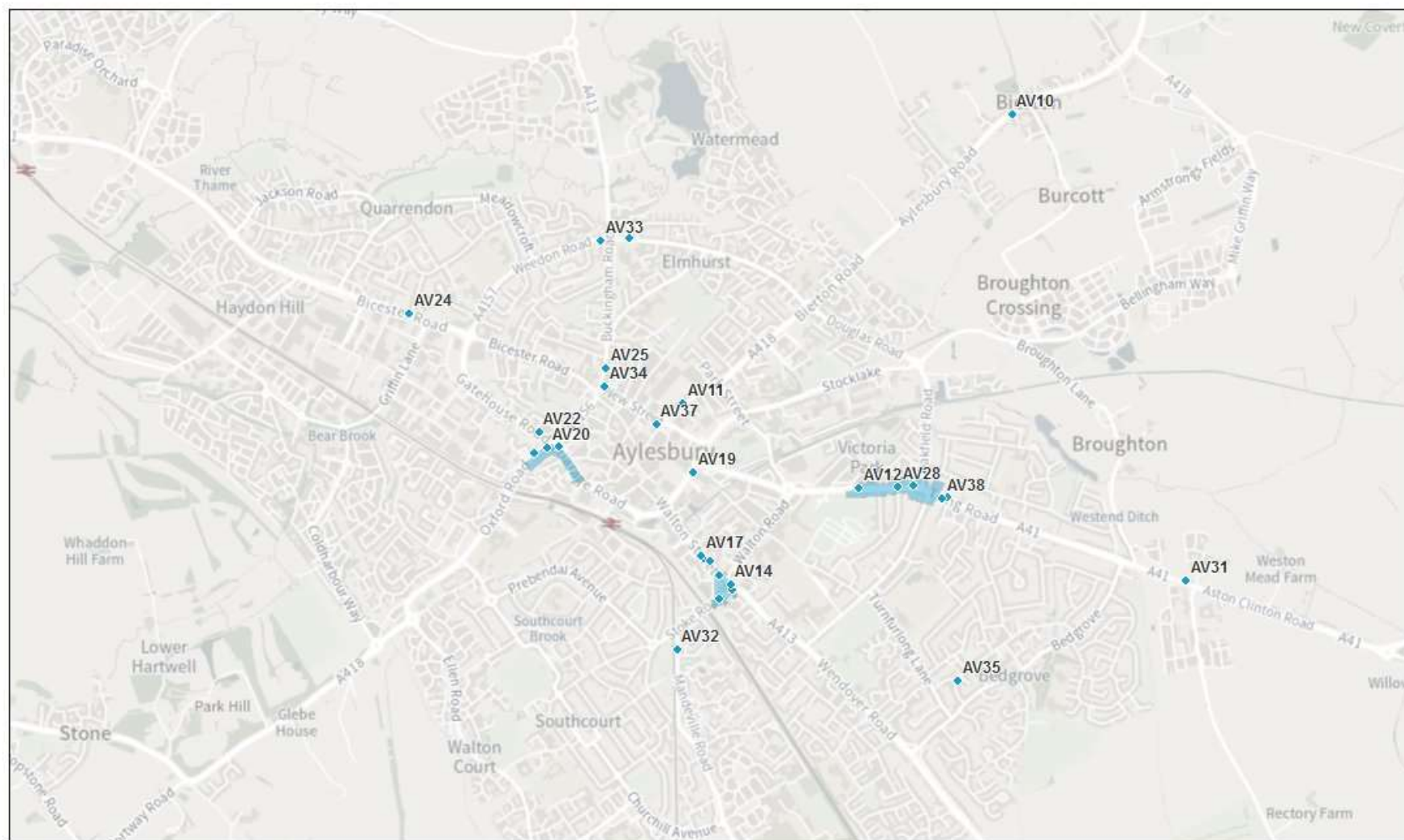
Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted)	Background Concentration	Concentration Predicted at Receptor	Comments
AV14	2.5	3.5	42.2	9.4	39.5	<i>Predicted concentration at Receptor within 10% the AQS objective.</i>
AV17	2.0	6.0	39.8	9.4	31.9	
AV18	1.0	3.0	37.2	9.4	31.0	
AV23	2.0	6.0	36.5	12.4	30.3	

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted)	Background Concentration	Concentration Predicted at Receptor	Comments
AV34	3.3	3.6	39.8	12.4	39.1	<i>Predicted concentration at Receptor within 10% the AQS objective.</i>
W34	6.0	17.6	37.8	8.8	27.9	
W51	2.0	2.5	36.7	13.0	35.5	

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

Figure D.1 – Map of Non-Automatic Monitoring Site





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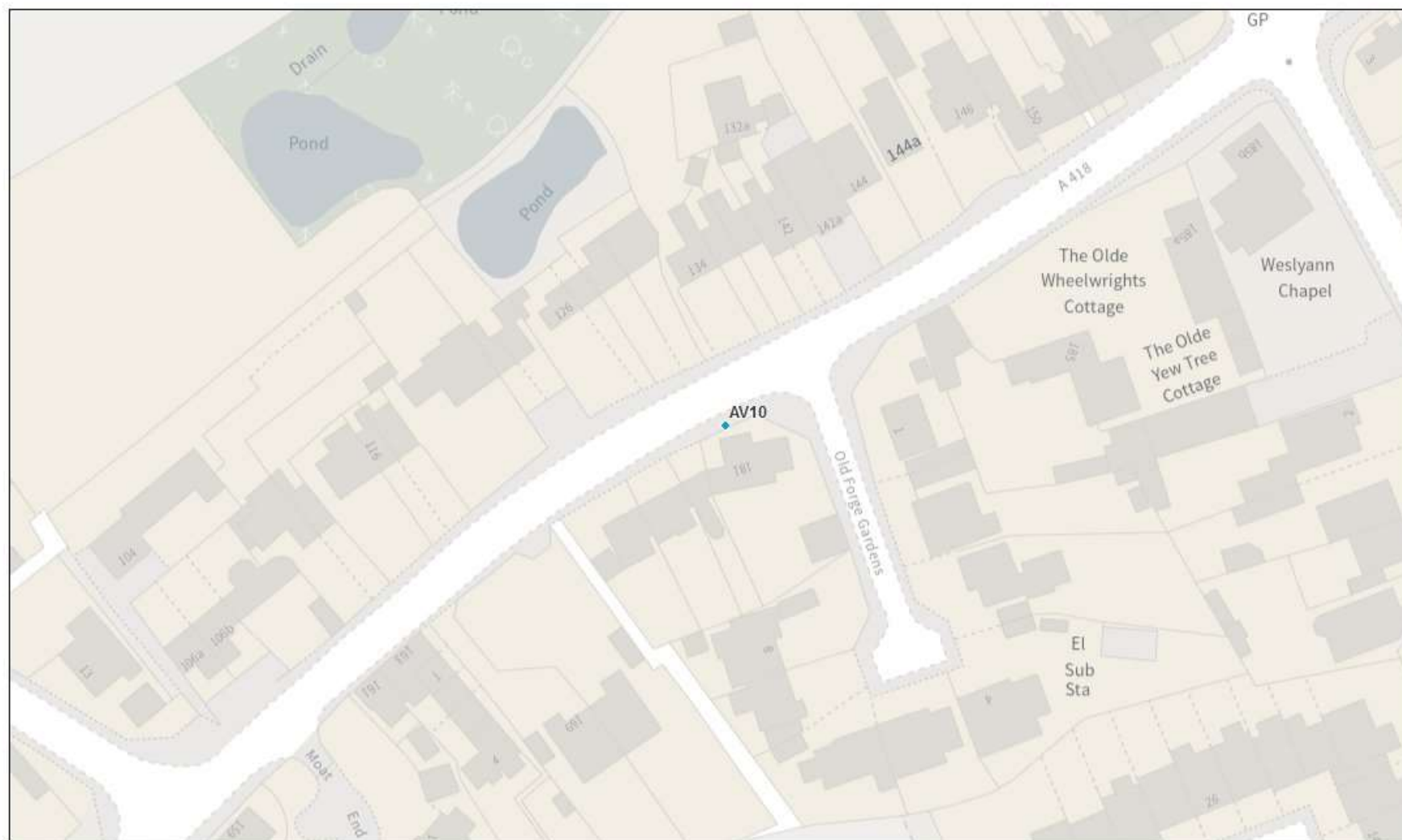
0 335 670 1,340 m
 1:26,457

NO2 Diffusion Tube Locations - Aylesbury and Birtton



Date: 23/06/2022





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0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Berton



Date: 23/06/2022





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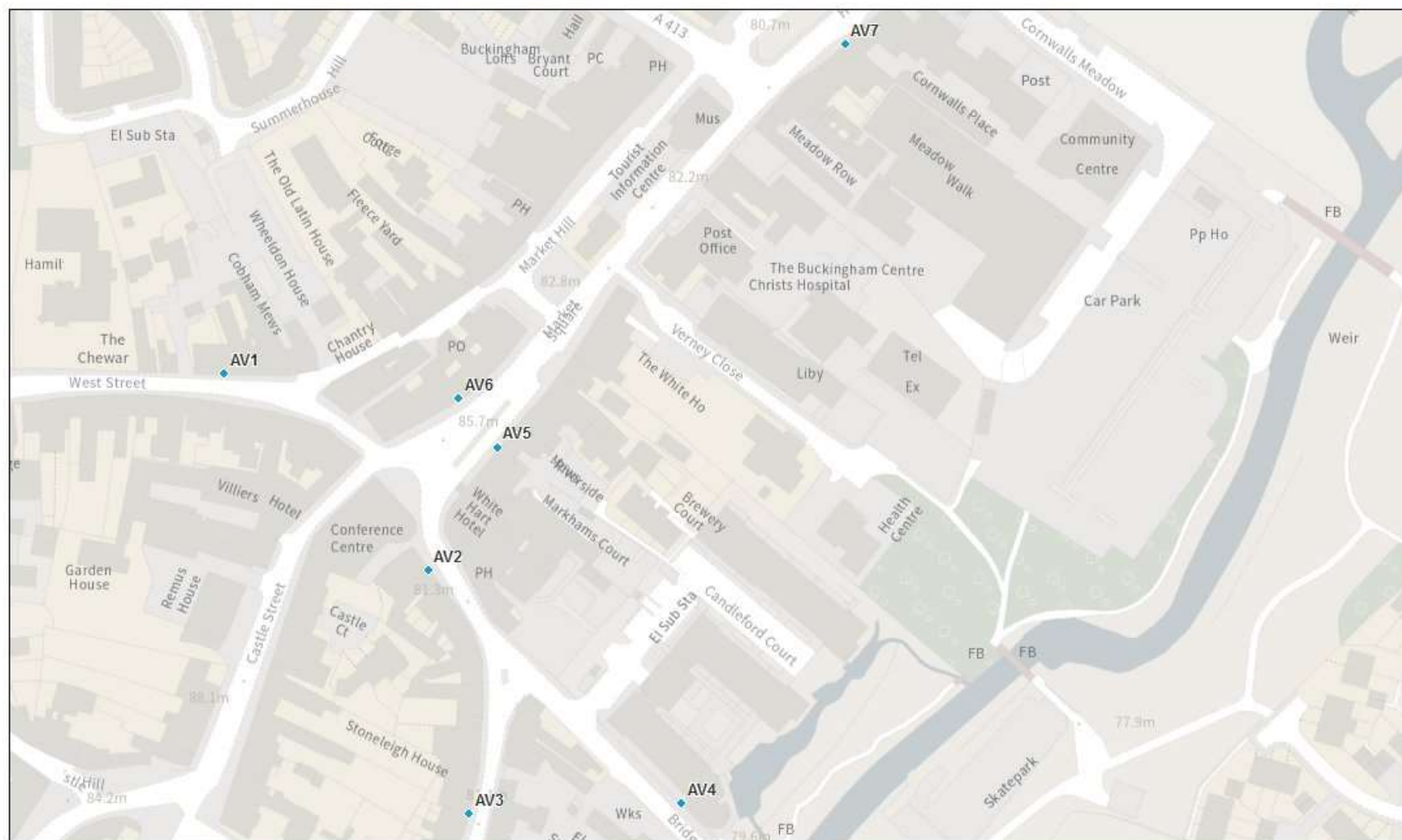
0 20 40 80 m
1:1.654



Date: 23/06/2022



NO2 Diffusion Tube Locations - Buckingham Rd and New Street, Aylesbury



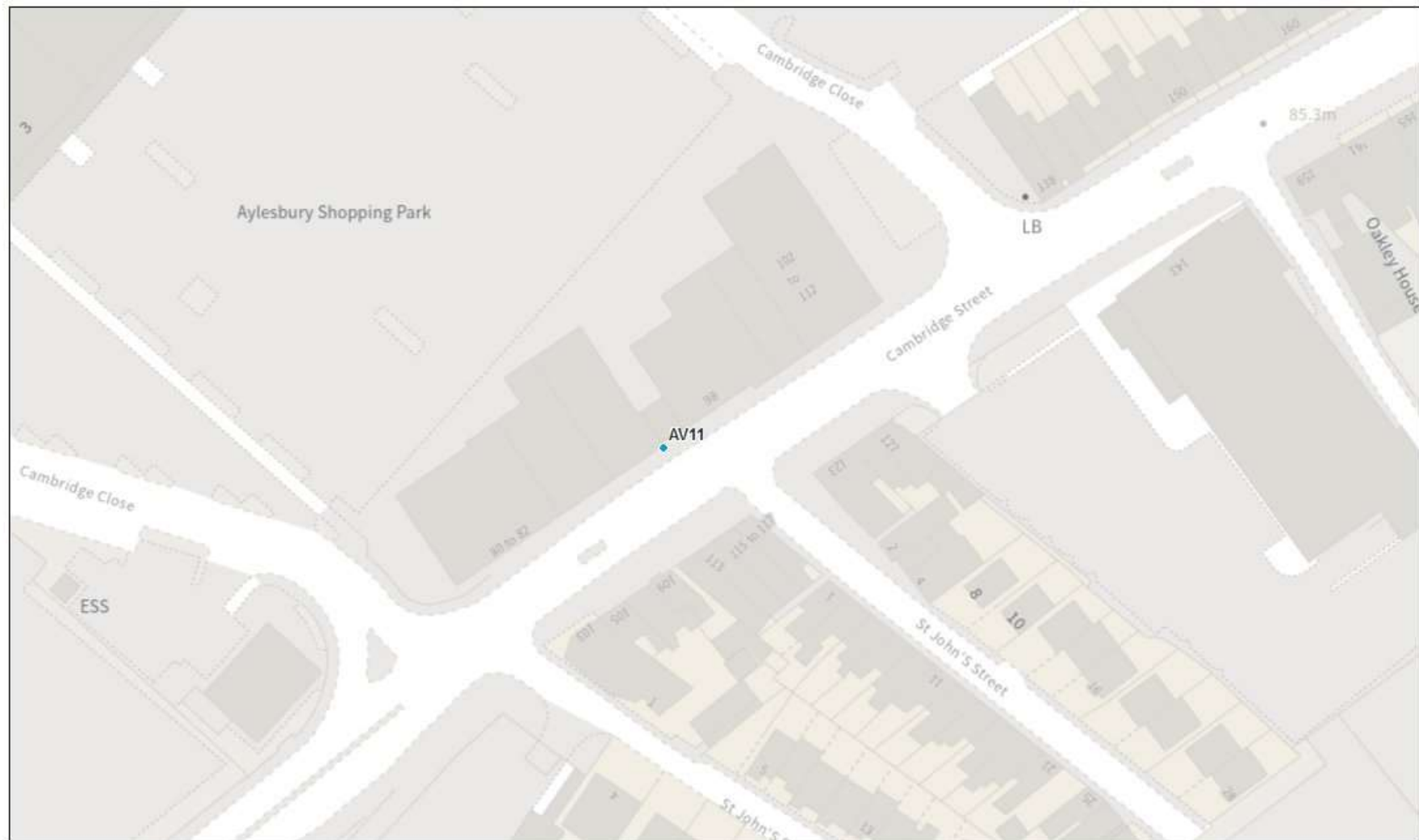
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NO2 Diffusion Tube Locations - Buckingham



Date: 23/06/2022





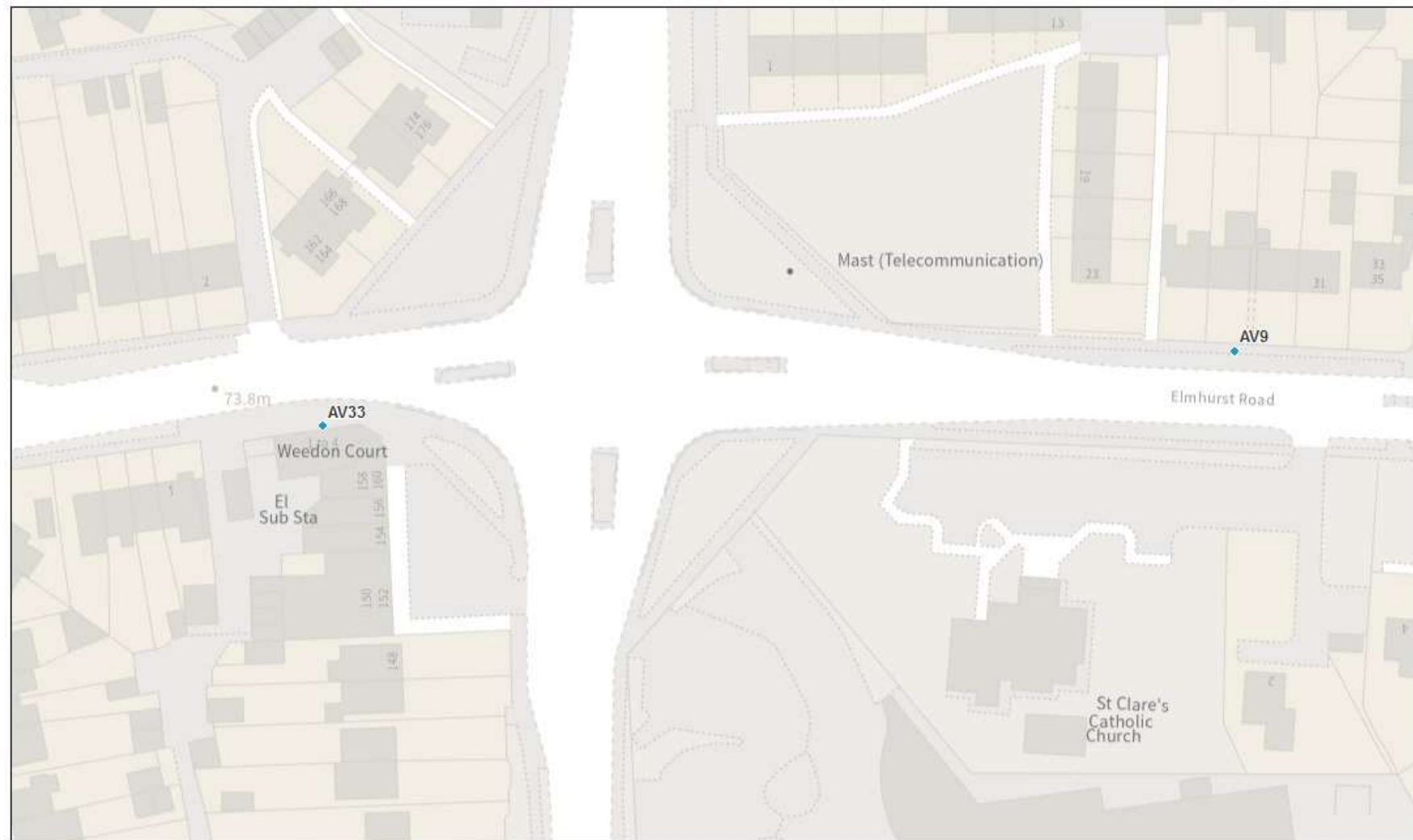
NO2 Diffusion Tube Locations - Cambridge Street, Aylesbury

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0 10 20 40 m
1:827

N
Date: 23/06/2022





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NO2 Diffusion Tube Locations - Elmhurst Rd and Weedon Rd, Aylesbury

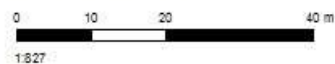
N
Date: 23/06/2022





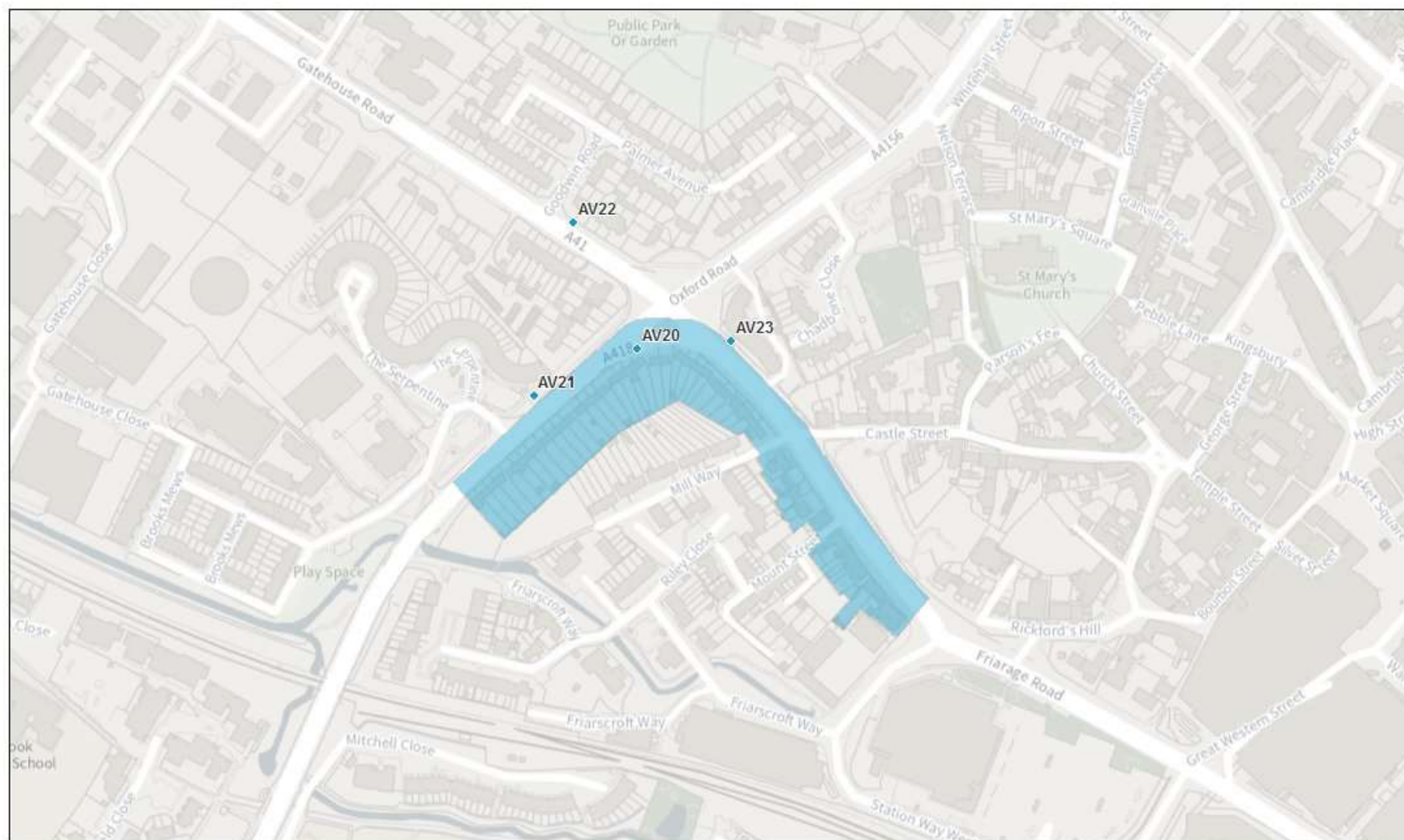
NO2 Diffusion Tube Locations - Exchange Street, Aylesbury

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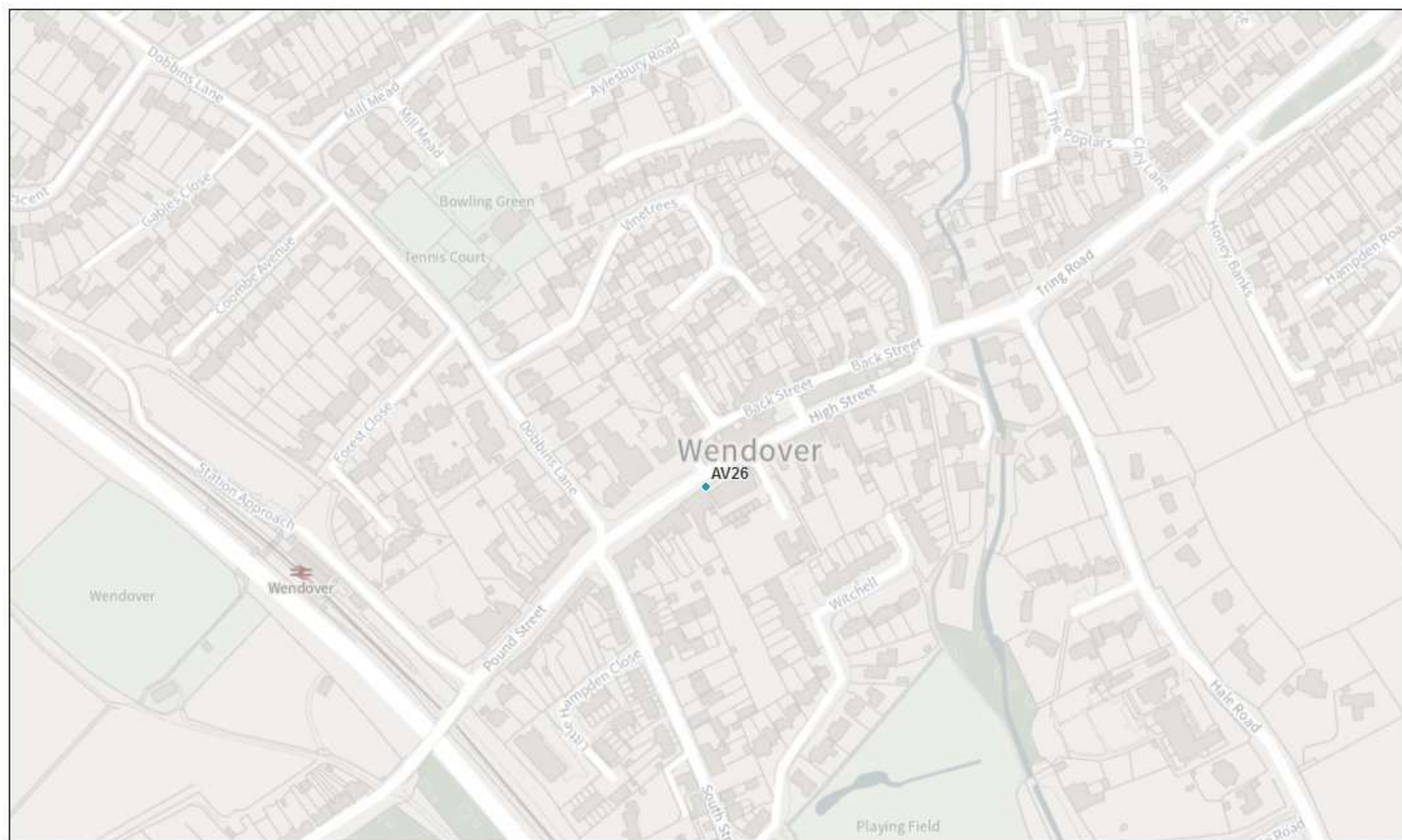
0 40 80 160 m
1:3,307

NO2 Diffusion Tube Locations - Friarage Rd AQMA, Aylesbury



Date: 23/06/2022





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0 40 80 160 m
1:3,307

NO2 Diffusion Tube Locations - High Street, Wendover



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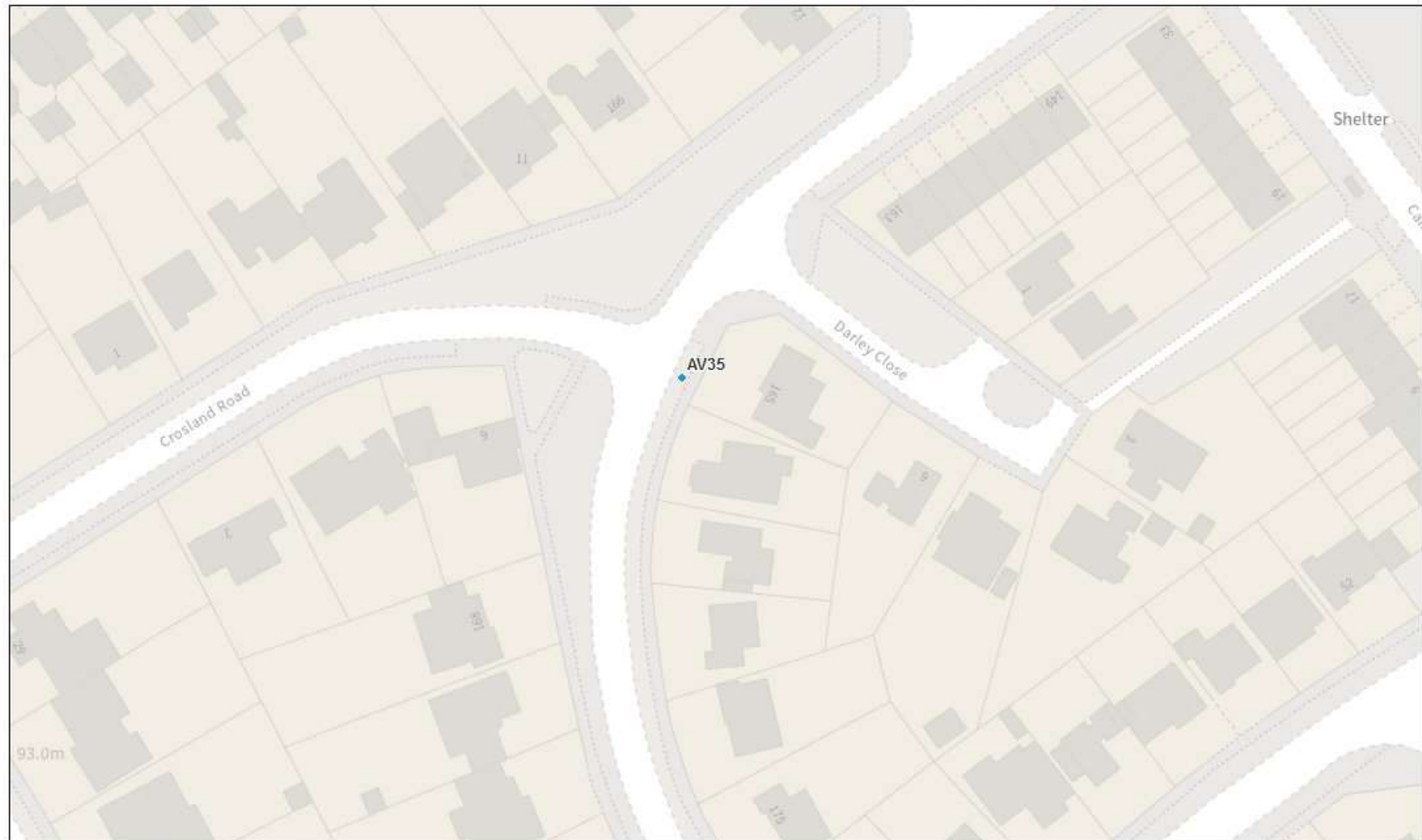
0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Leighton Rd, Wing



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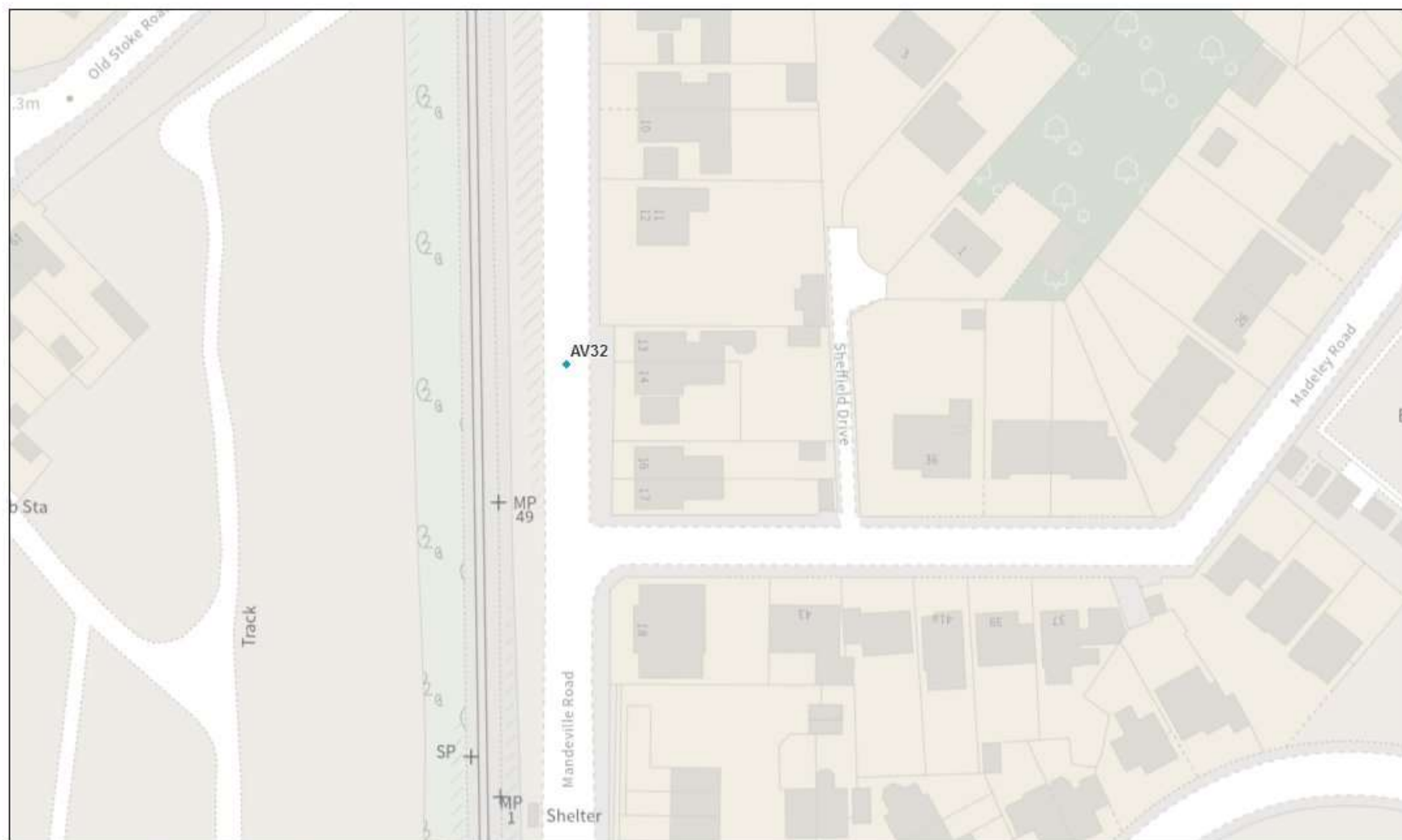
0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Long Meadow, Aylesbury



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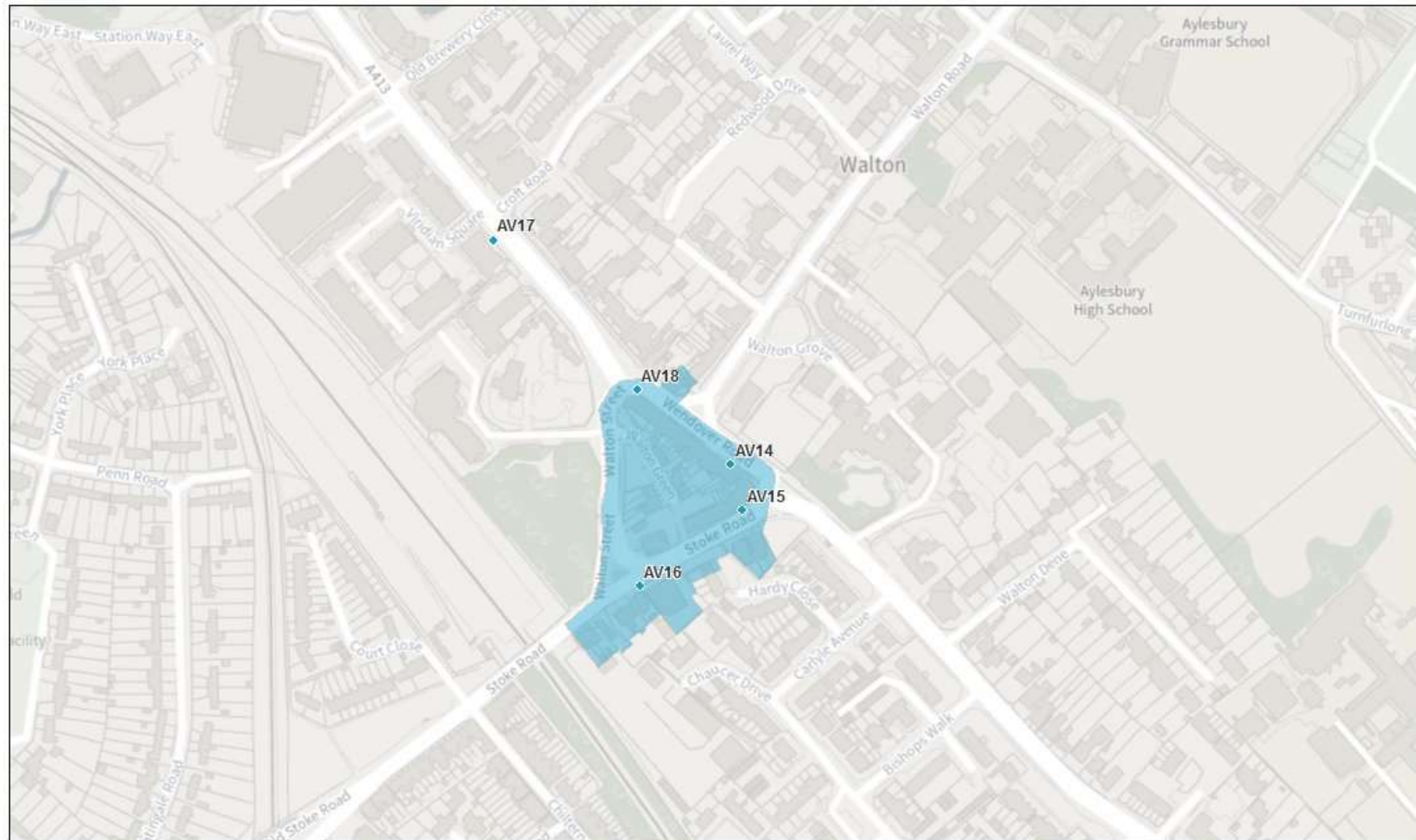
0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Mandeville Rd, Aylesbury



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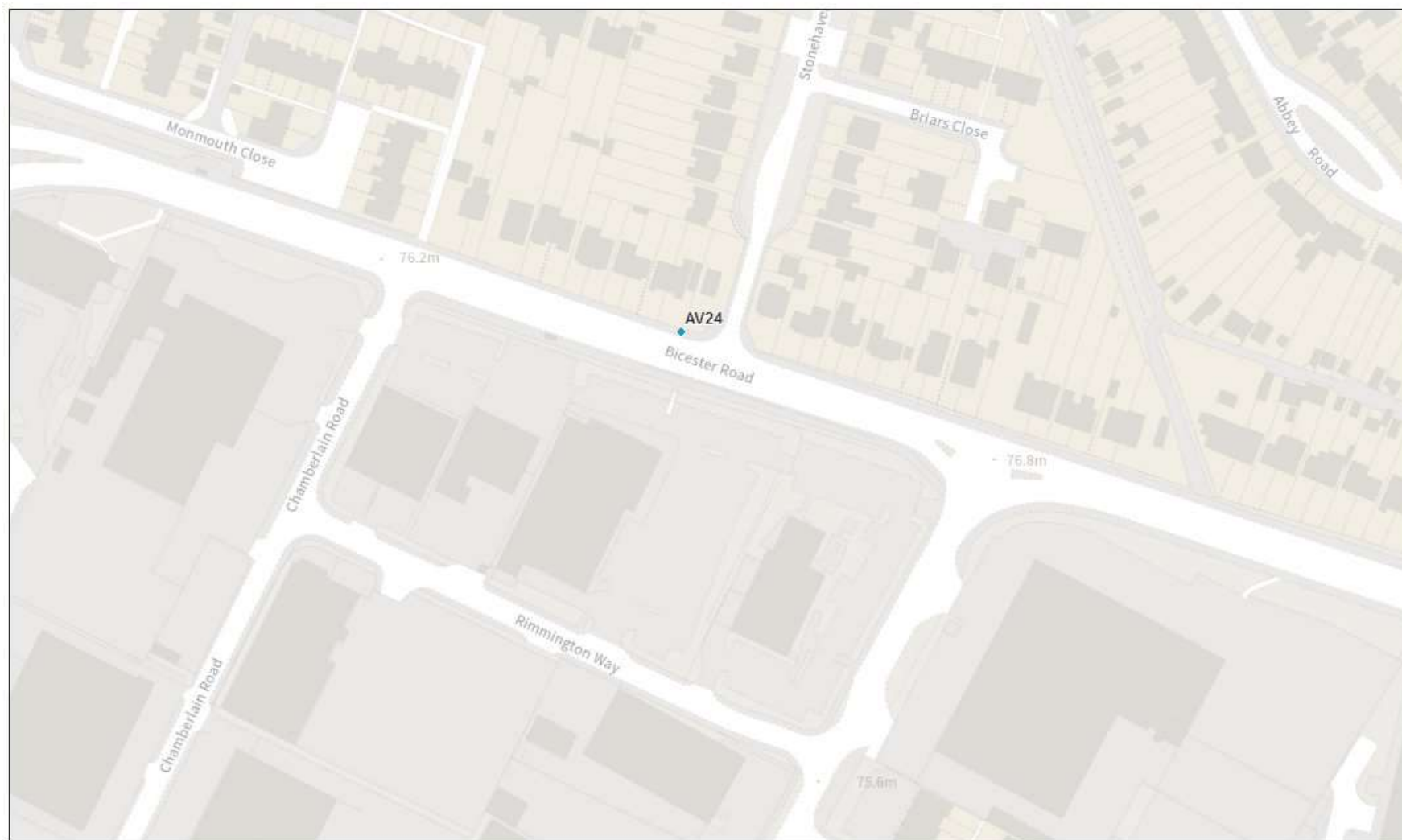
0 40 80 160 m
1:3,307

NO2 Diffusion Tube Locations - Stoke Rd AQMA, Aylesbury



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0 20 40 80 m
1:1,654

NO2 Diffusion Tube Locations - Stonehaven Rd/Bicester Rd, Aylesbury



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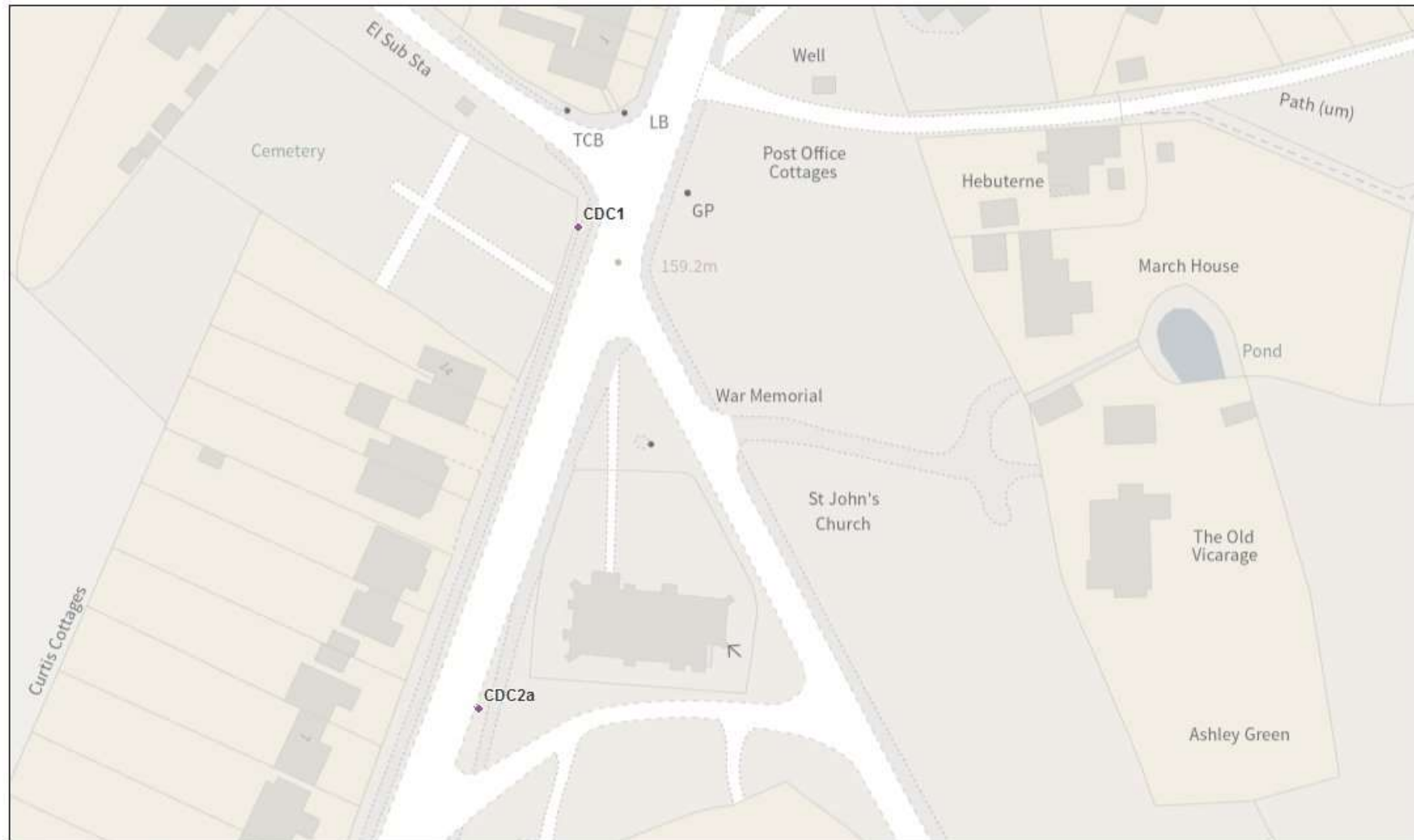
0 40 80 160 m
1:3,307

NO2 Diffusion Tube Locations - Tring Rd AQMA, Aylesbury



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0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Ashley Green



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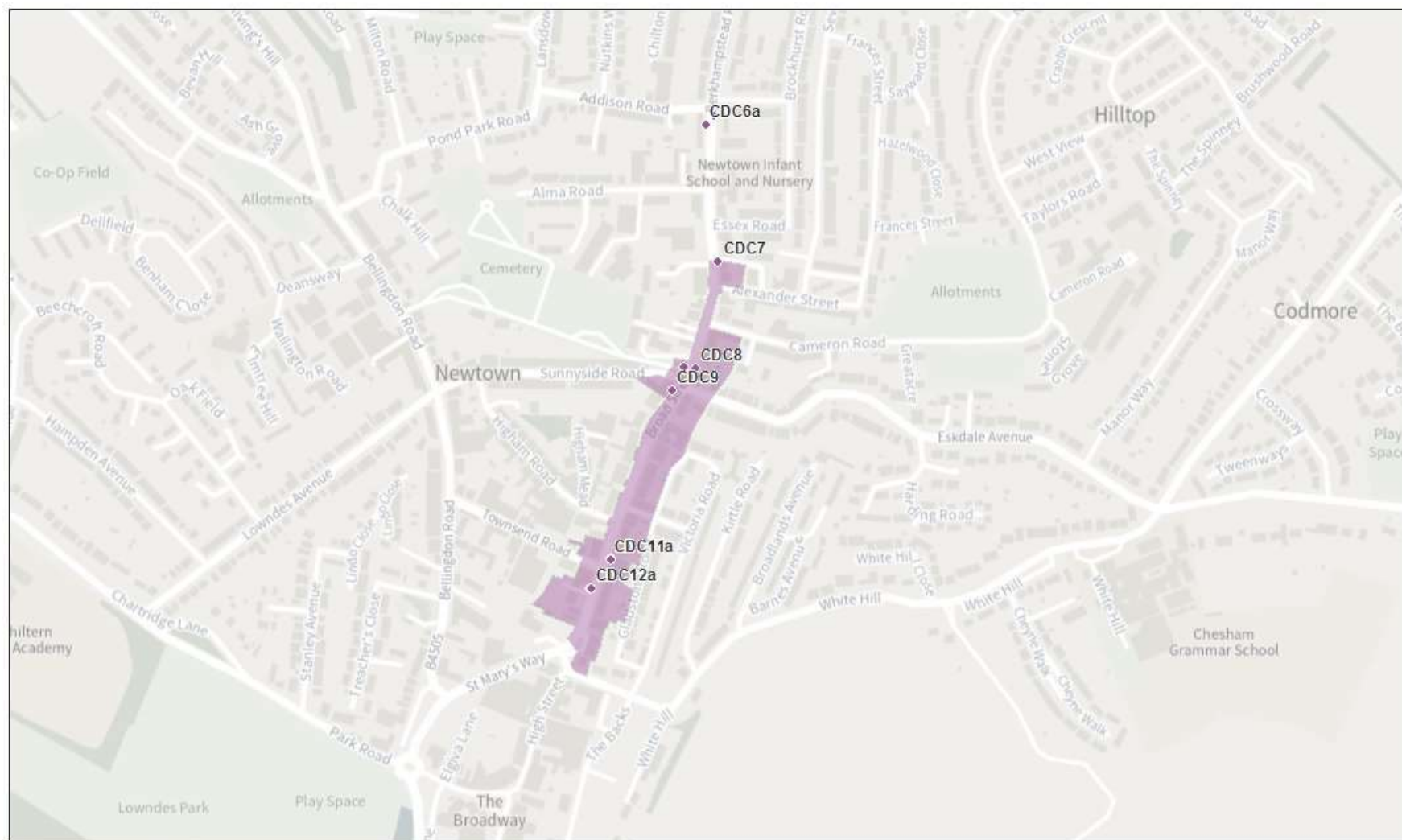
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NO2 Diffusion Tube Locations - Berkhamstead Road, Chesham



Date: 27/06/2022





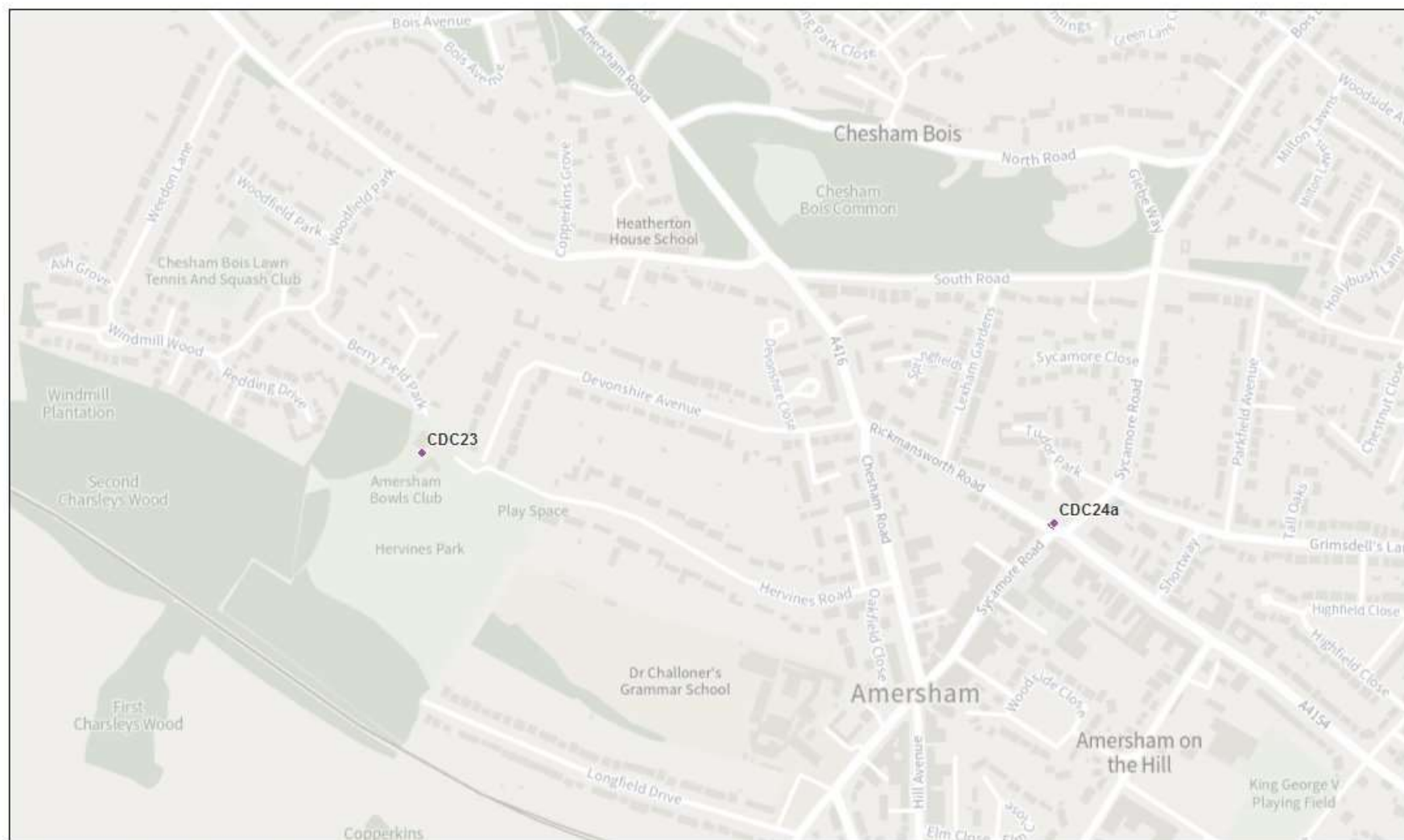
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0 80 160 320 m
1:6,614



Date: 27/06/2022





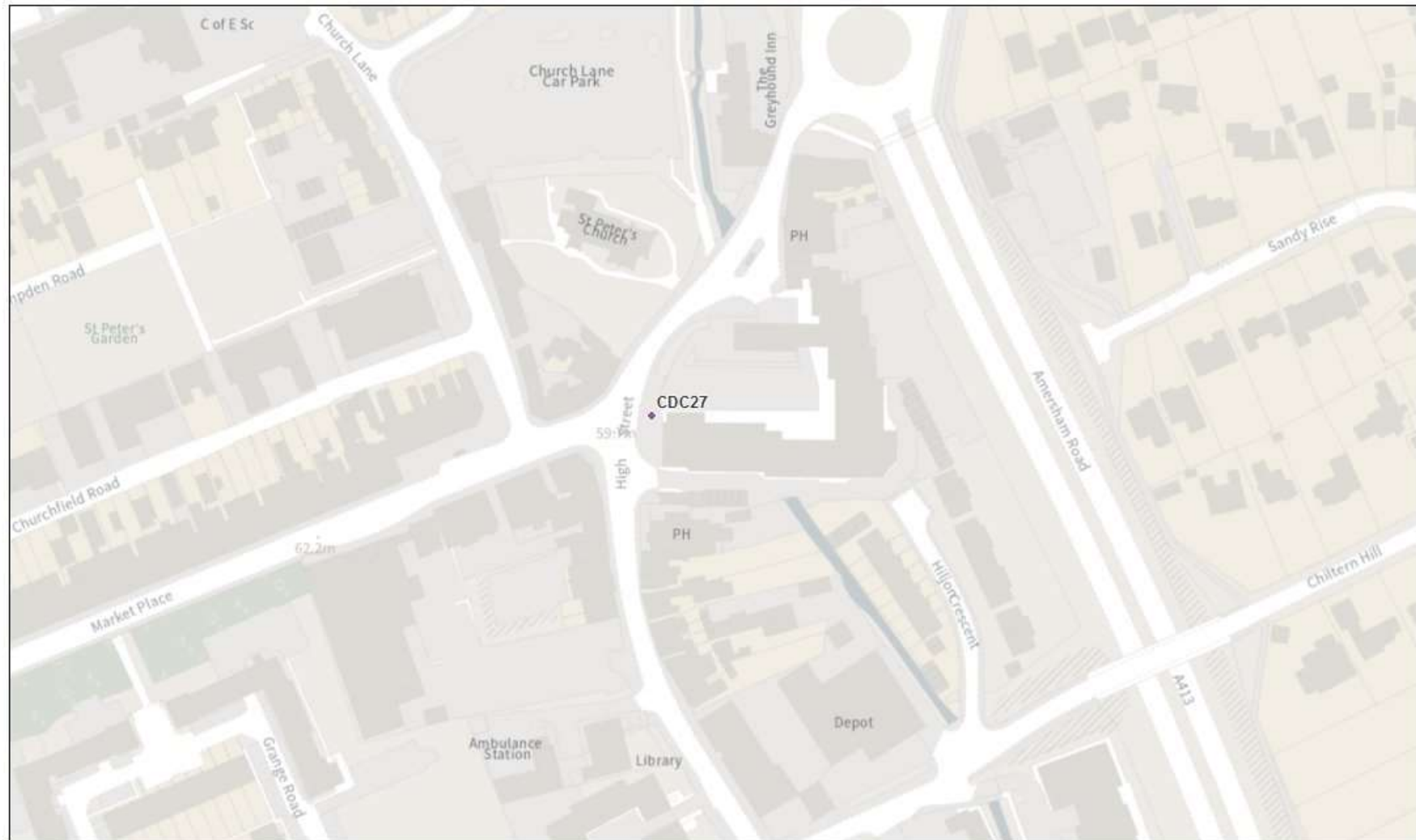
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NO2 Diffusion Tube Locations - Hervines Park and Rickmansworth Rd, Amersham



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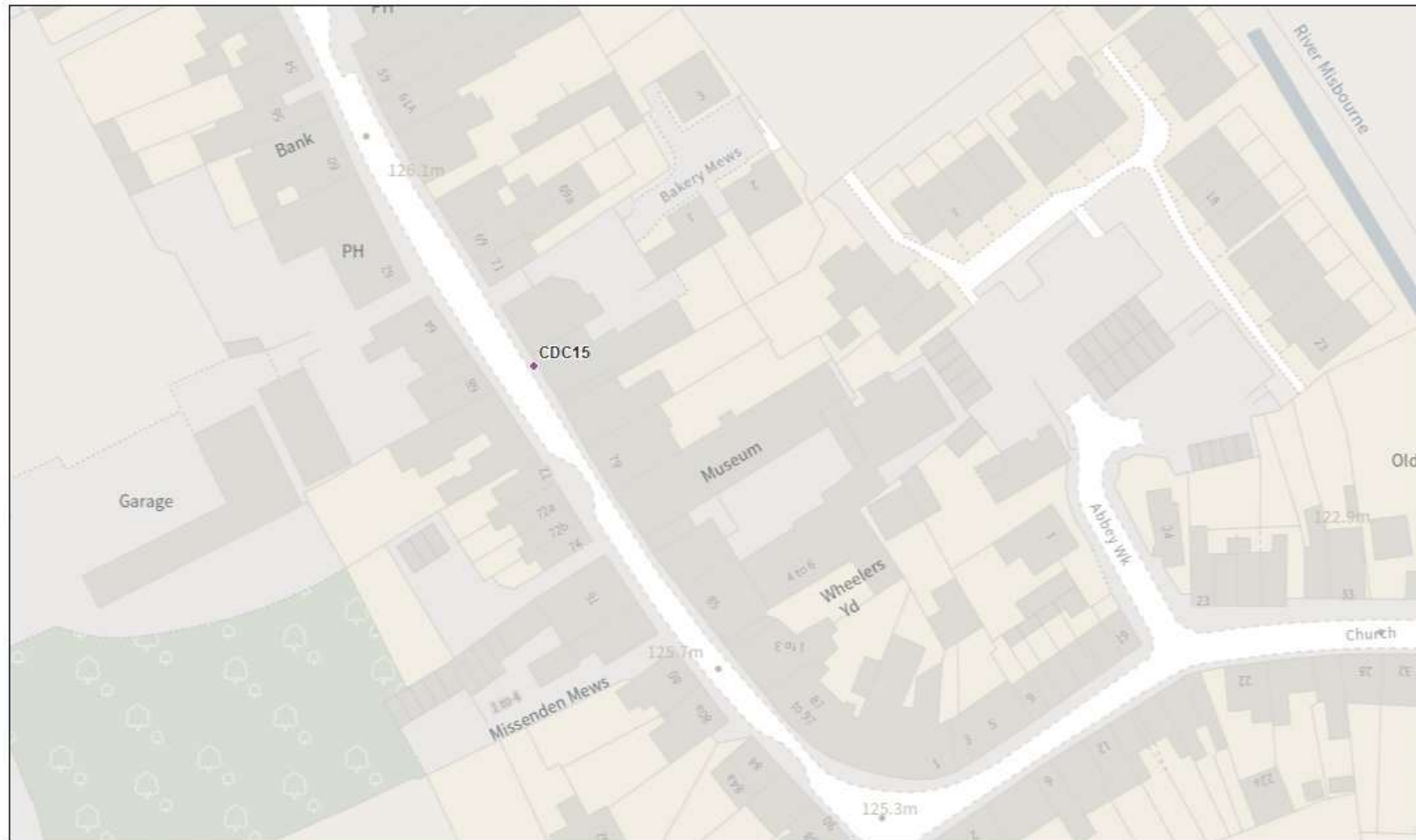
0 20 40 80 m
1:1,654

NO2 Diffusion Tube Locations - High Street, Chalfont St Peter



Date: 27/06/2022





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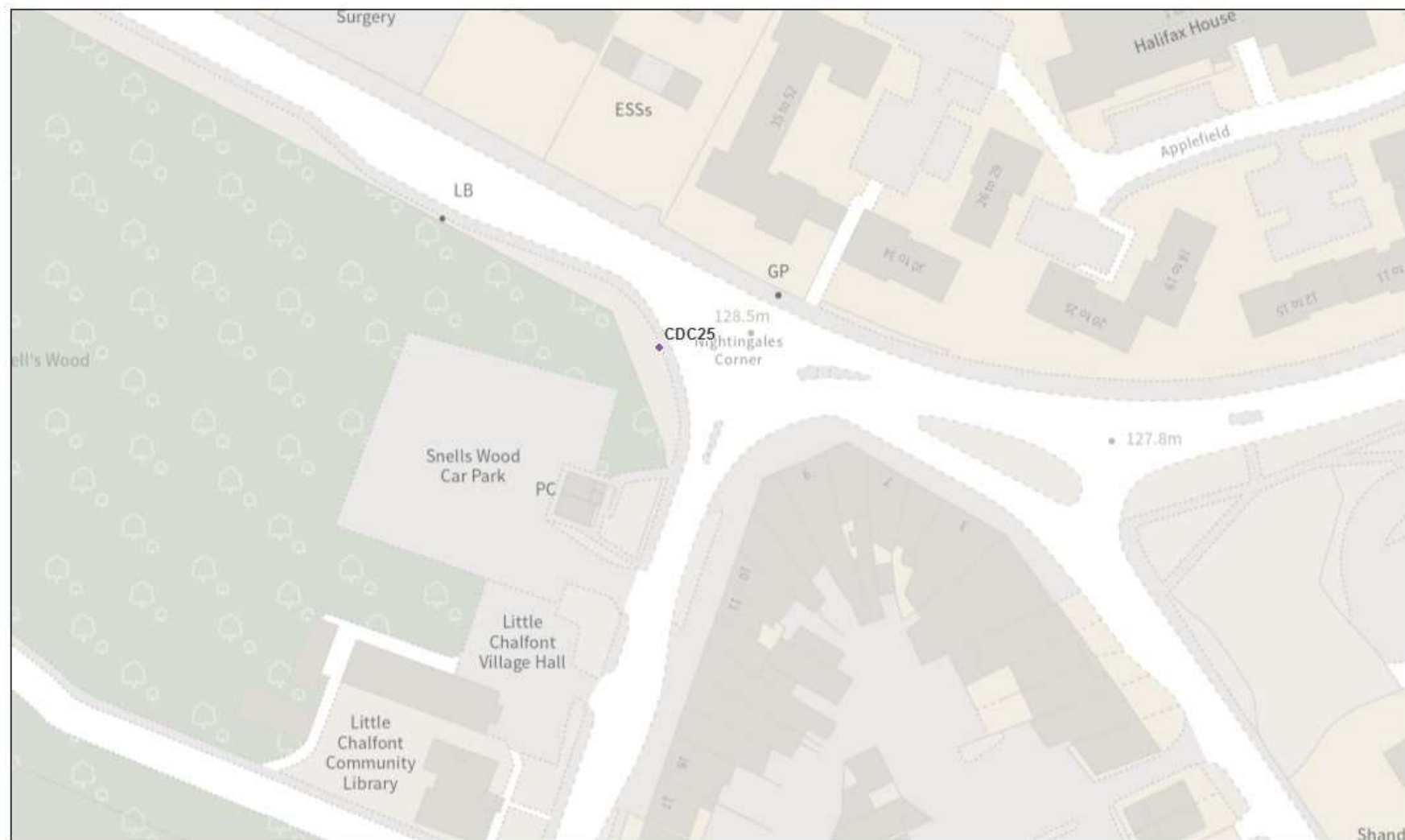
0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - High Street, Great Missenden



Date: 27/06/2022





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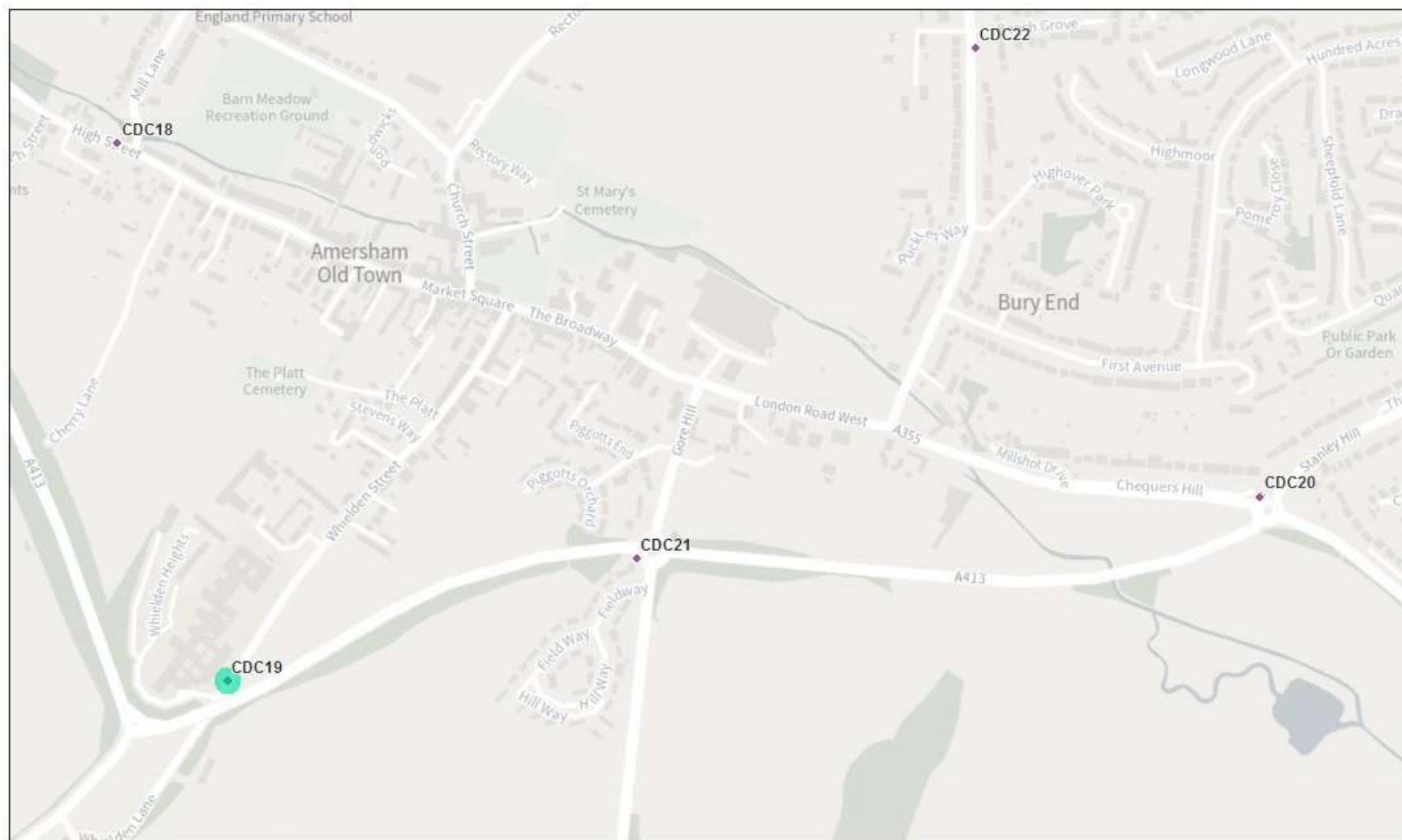
0 10 20 40 m
1:827

NO2 Diffusion Tube Locations - Nightingales Lane, Little Chalfont



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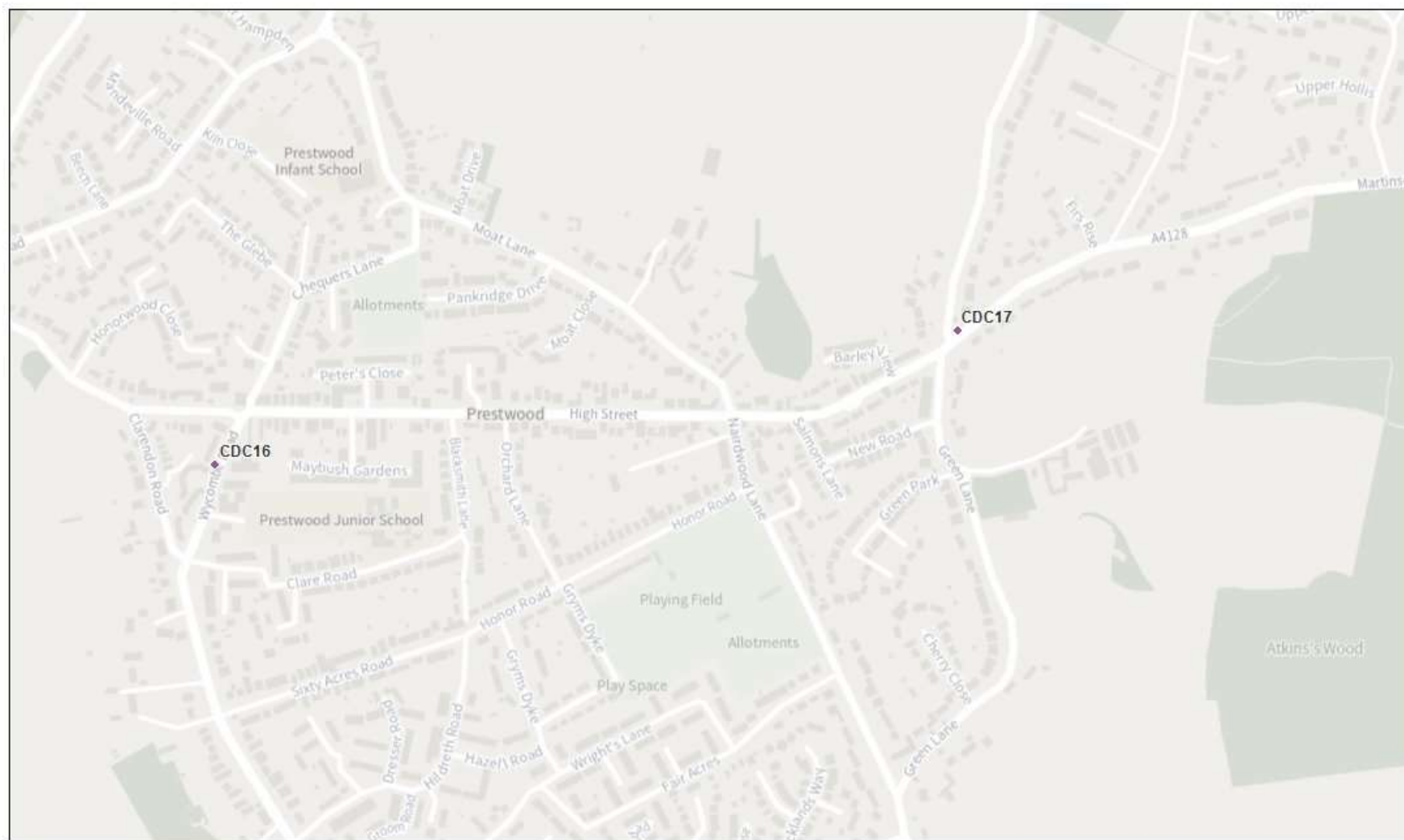
0 80 160 320 m
1:6,614



Date: 27/06/2022



NO₂ Diffusion Tube Locations - Old Amersham, Gore Hill, Stanley Hill and Station Rd, Amersham



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0 80 160 320 m
1:6,614

NO2 Diffusion Tube Locations - Prestwood and Little Missenden



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0 10 20 40 m
1:827

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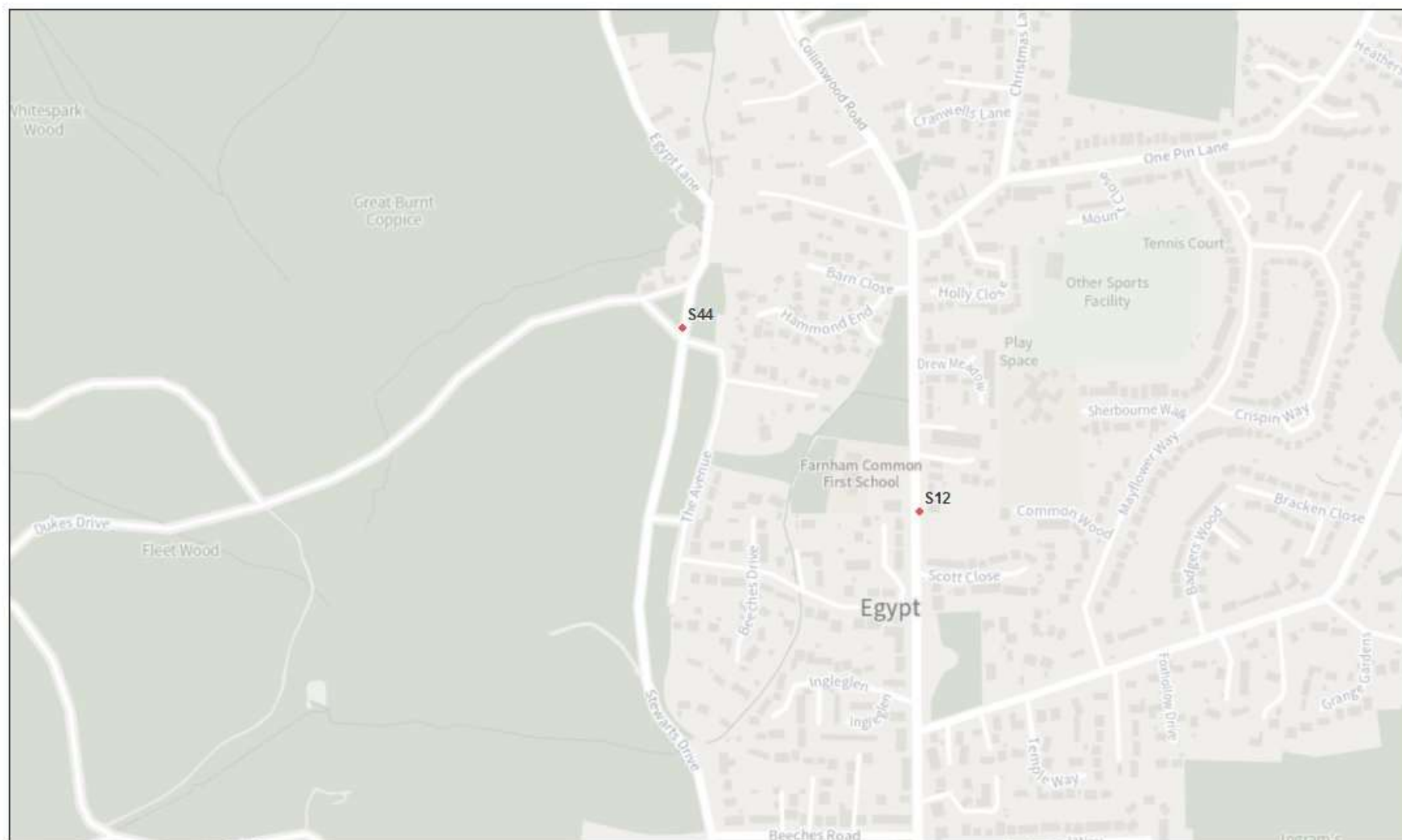
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1:1,654

NO2 Diffusion Tube Locations - Bath Road, Taplow



Date: 28/06/2022





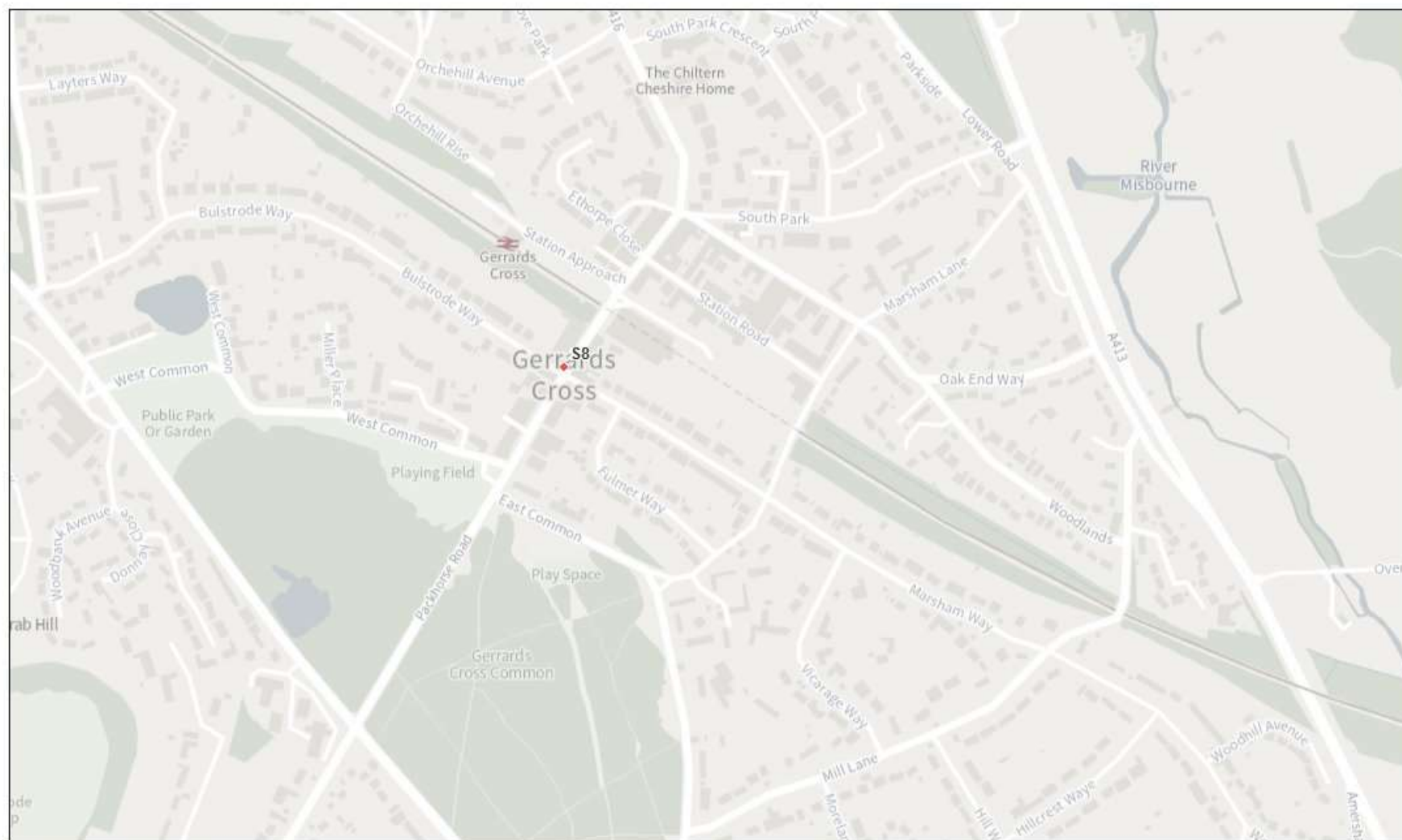
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0 80 160 320 m
1:6,614



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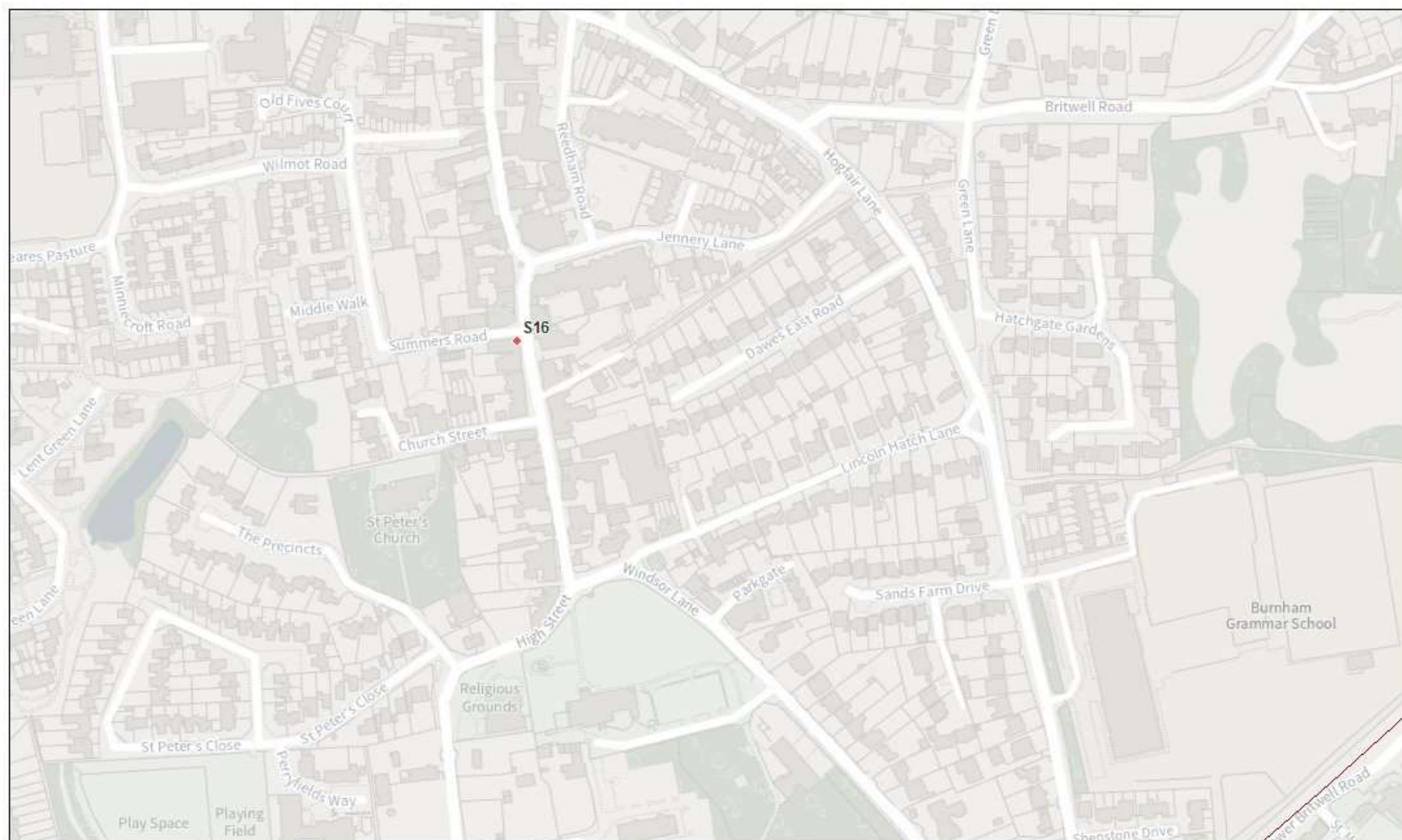
1:6,614

NO2 Diffusion Tube Locations - Gerrards Cross/Packhorse Road



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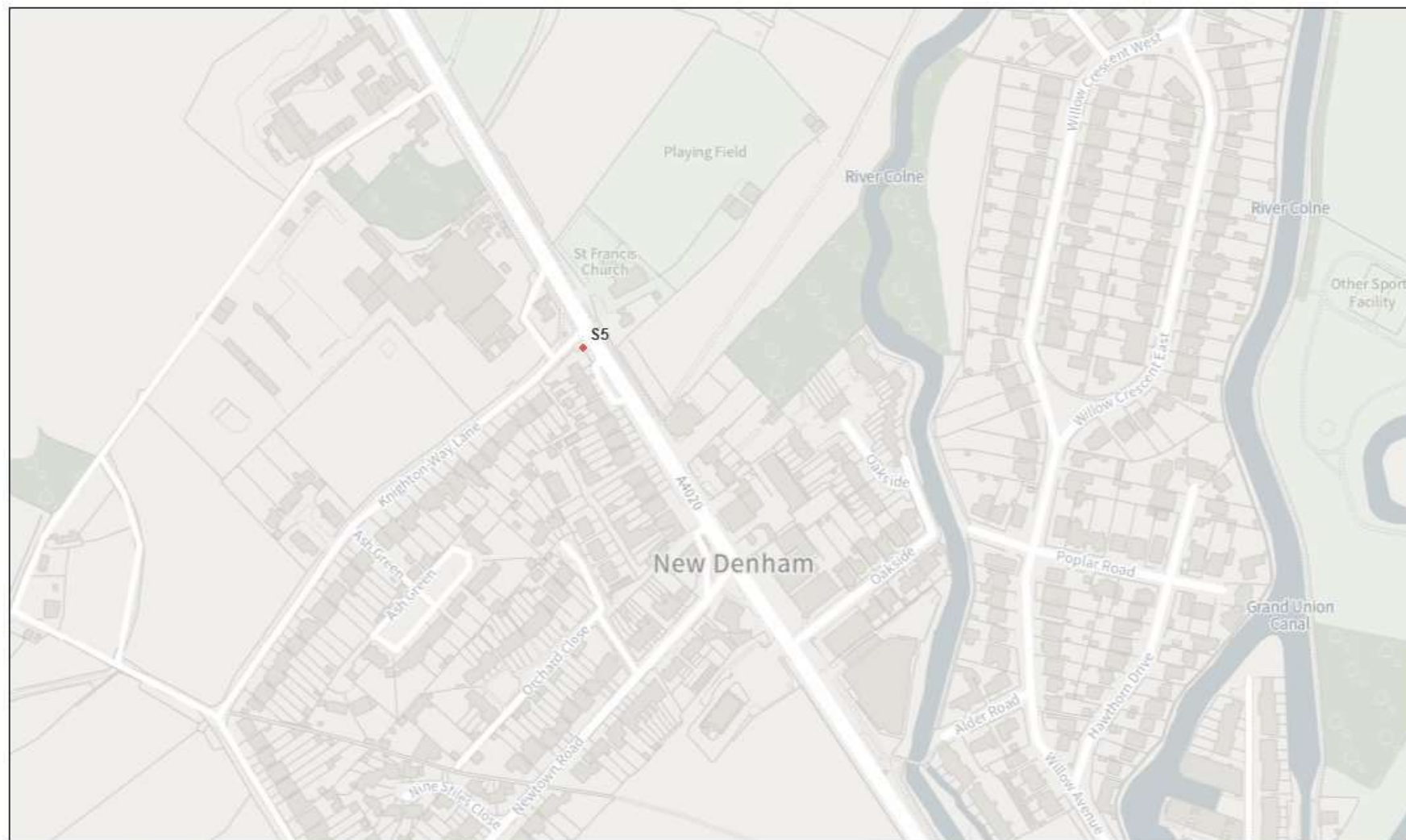
0 40 80 160 m
1:3,307

NO2 Diffusion Tube Locations - High Street, Burnham



Date: 28/06/2022





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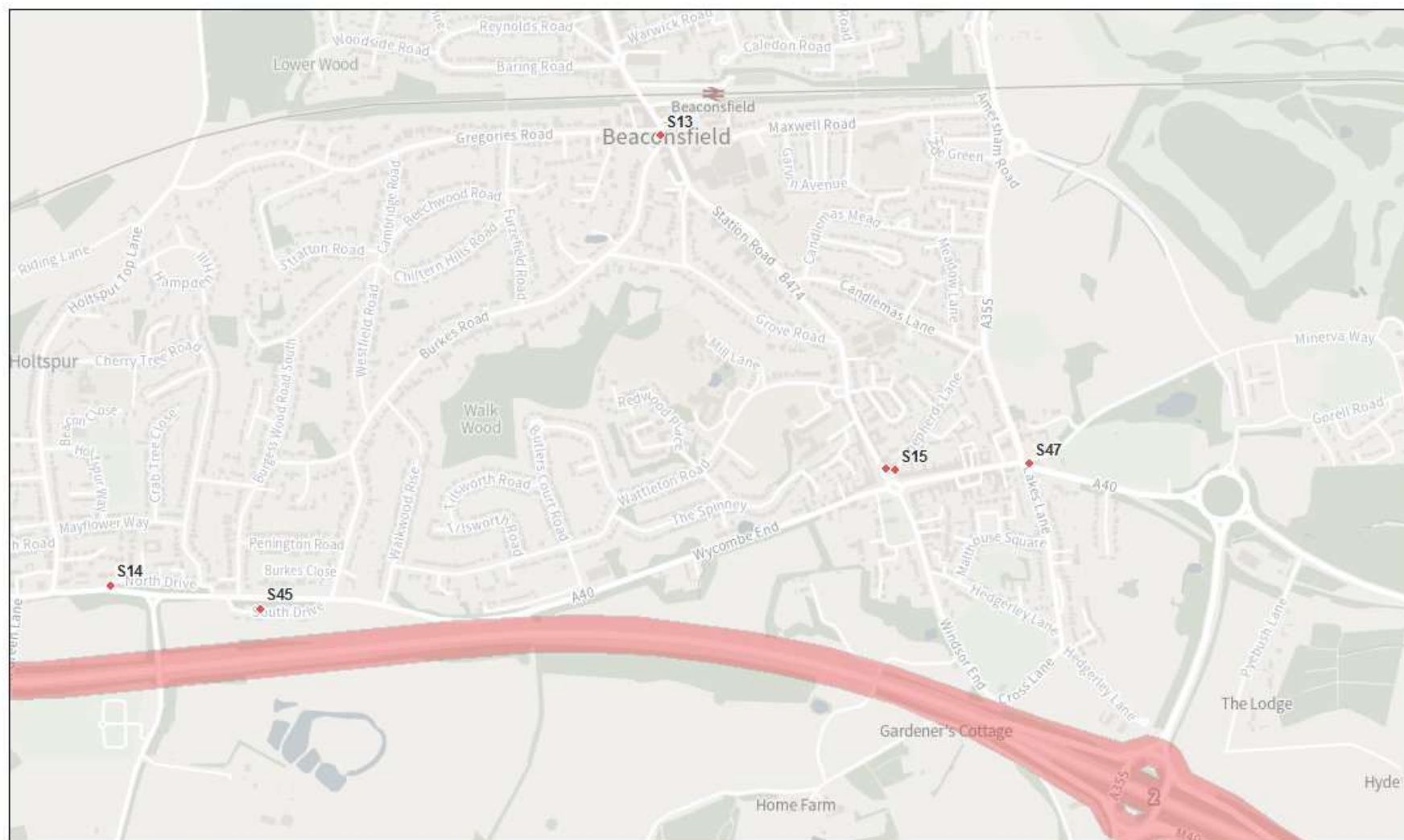
NO2 Diffusion Tube Locations - New Denham

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1:3,307



Date: 27/06/2022



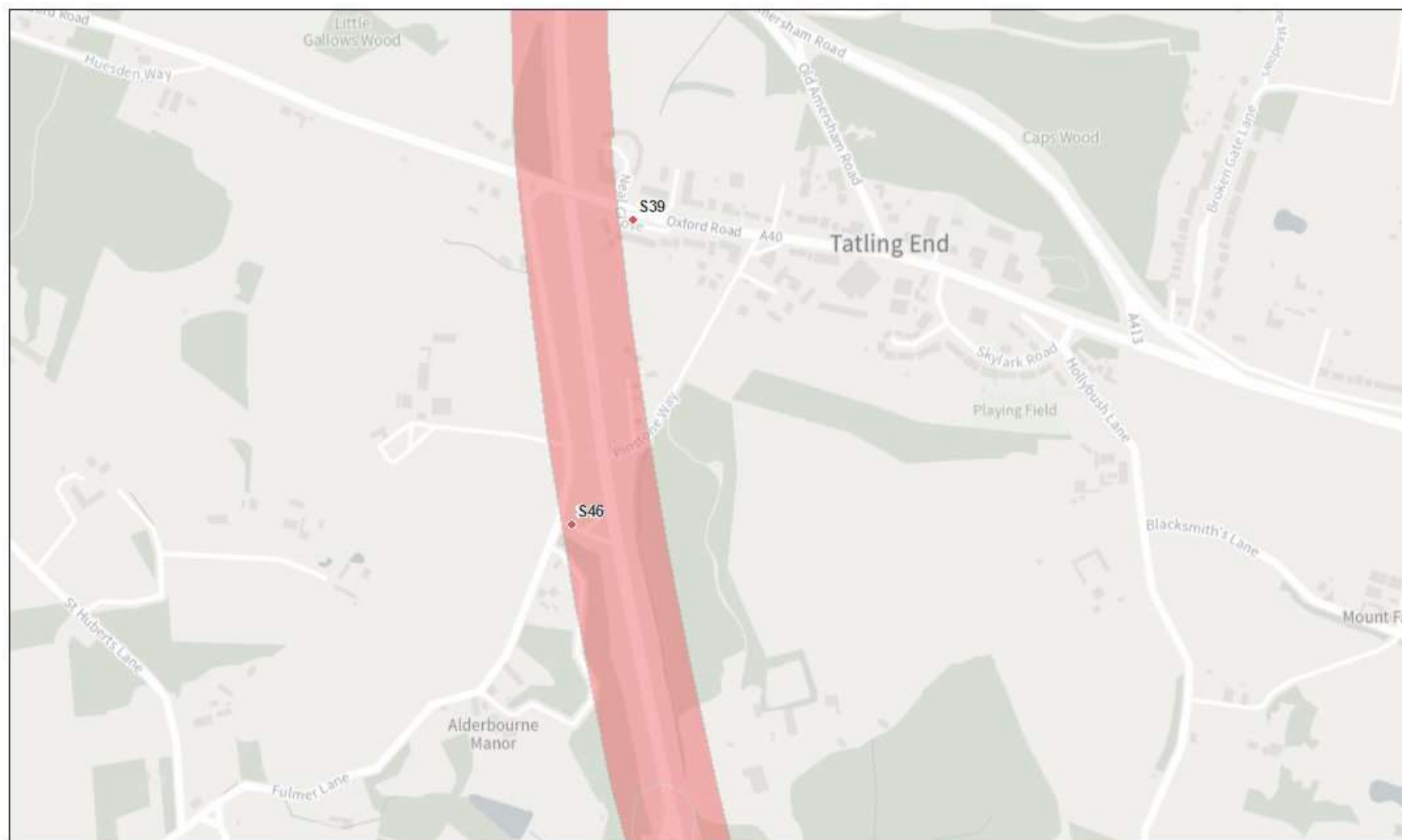


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NO2 Diffusion Tube Locations - SBDC 1 (M40, M24 & M4) AQMA, Beaconsfield

N
 Date: 28/06/2022





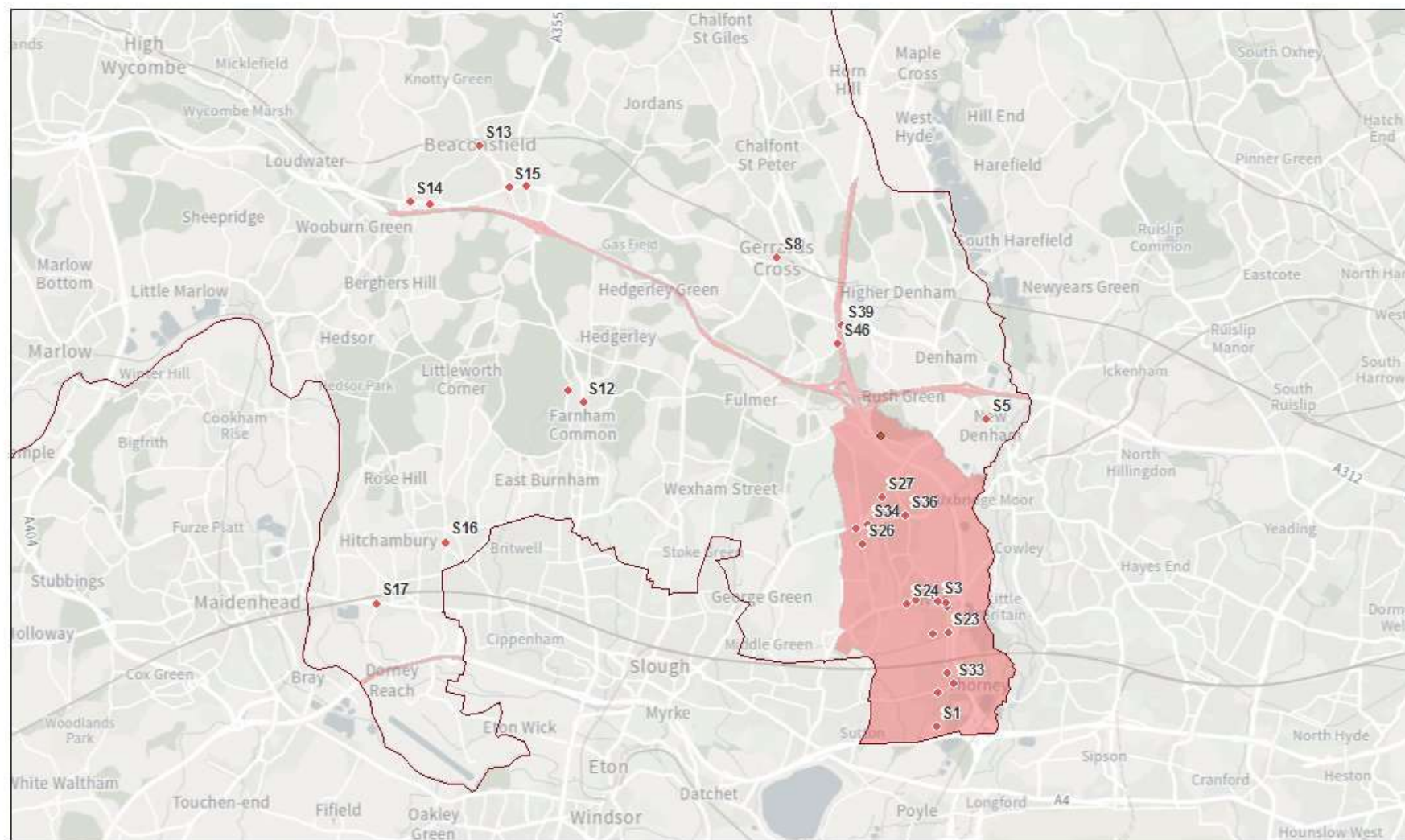
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0 80 160 320 m
1:6,614



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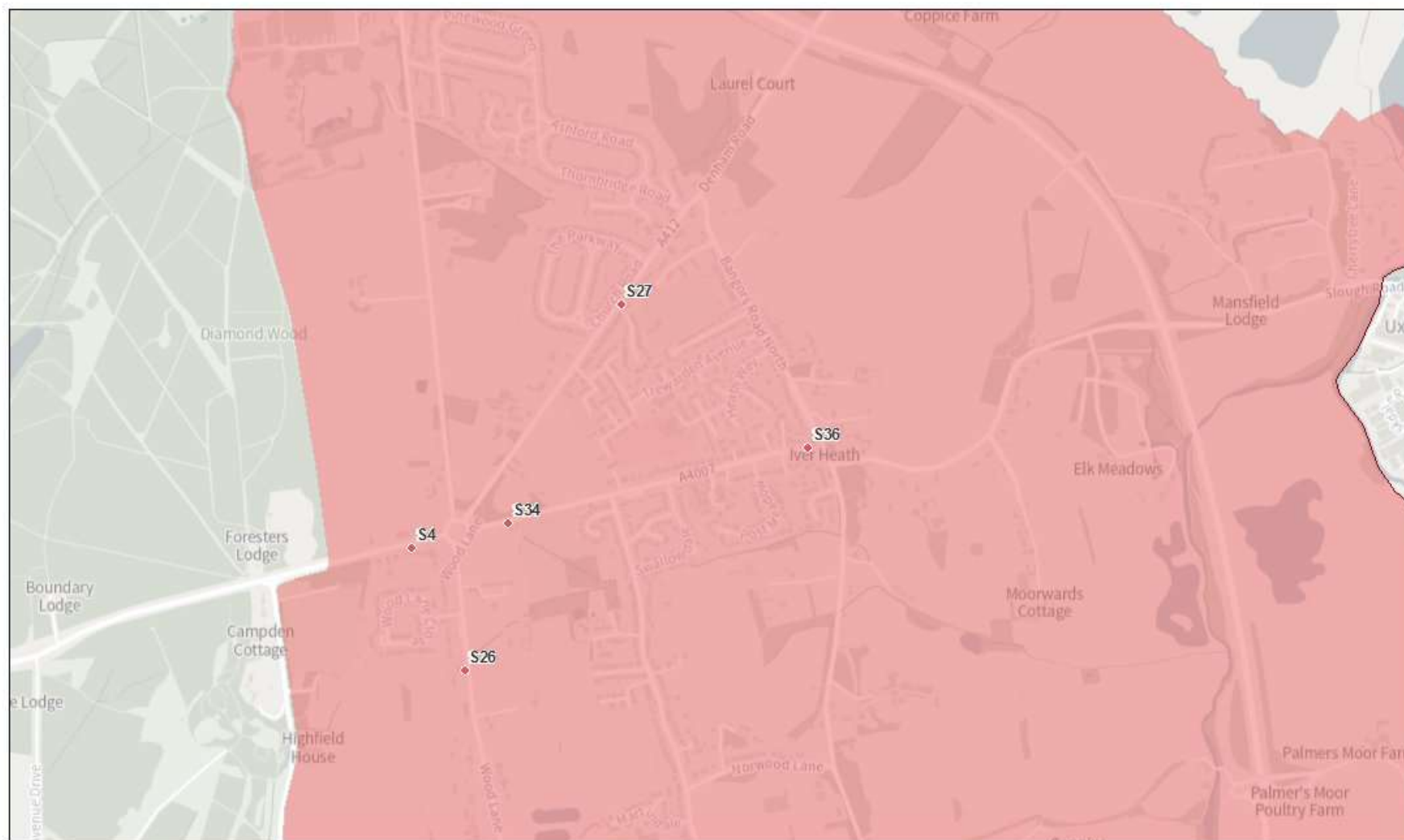
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0 1,300 2,600 5,200 m
 1:105,827



Date: 28/06/2022





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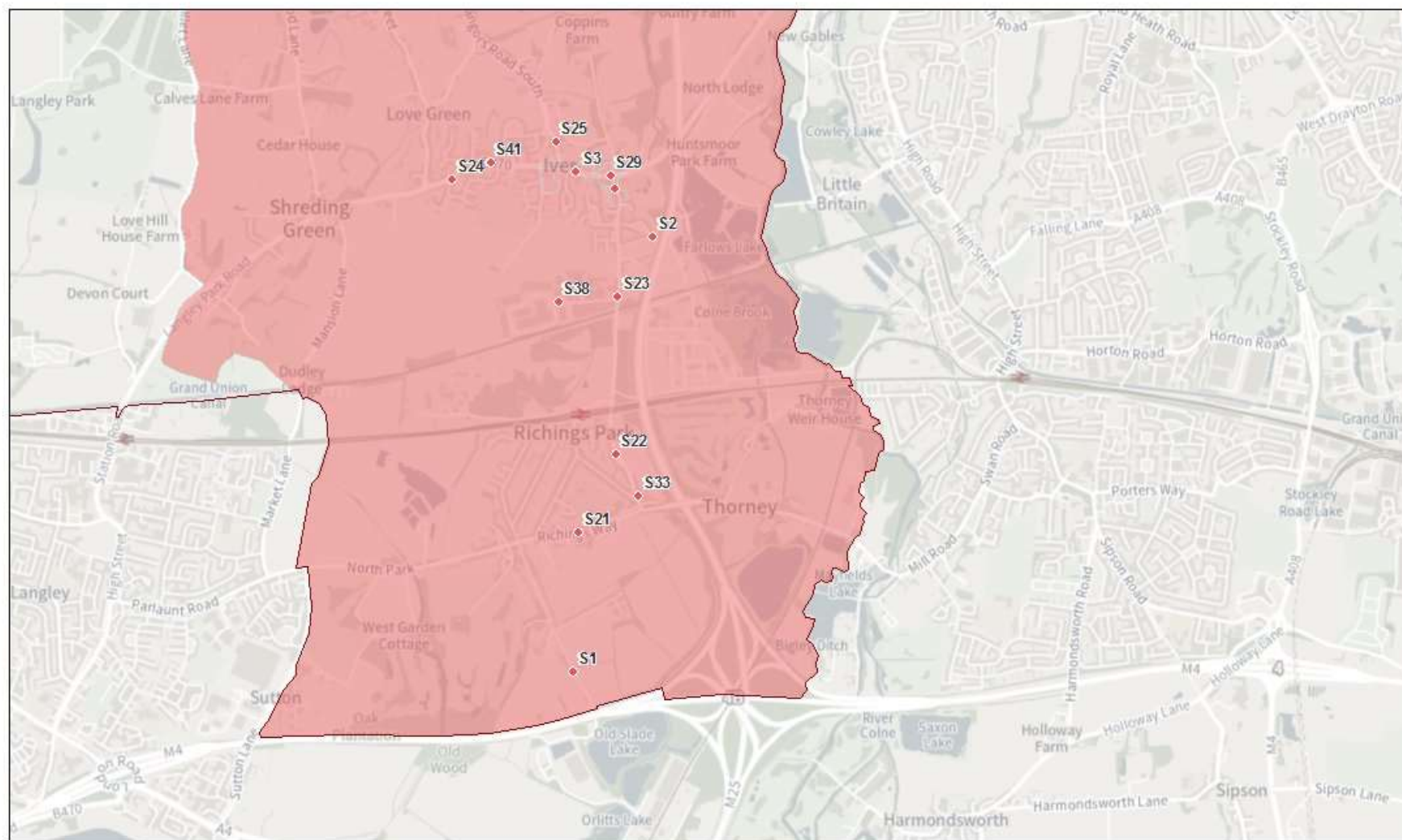
0 170 340 680 m
1:13,228



Date: 28/06/2022



NO2 Diffusion Tube Locations - SBDC2 (Iver Parish) AQMA, Iver Heath



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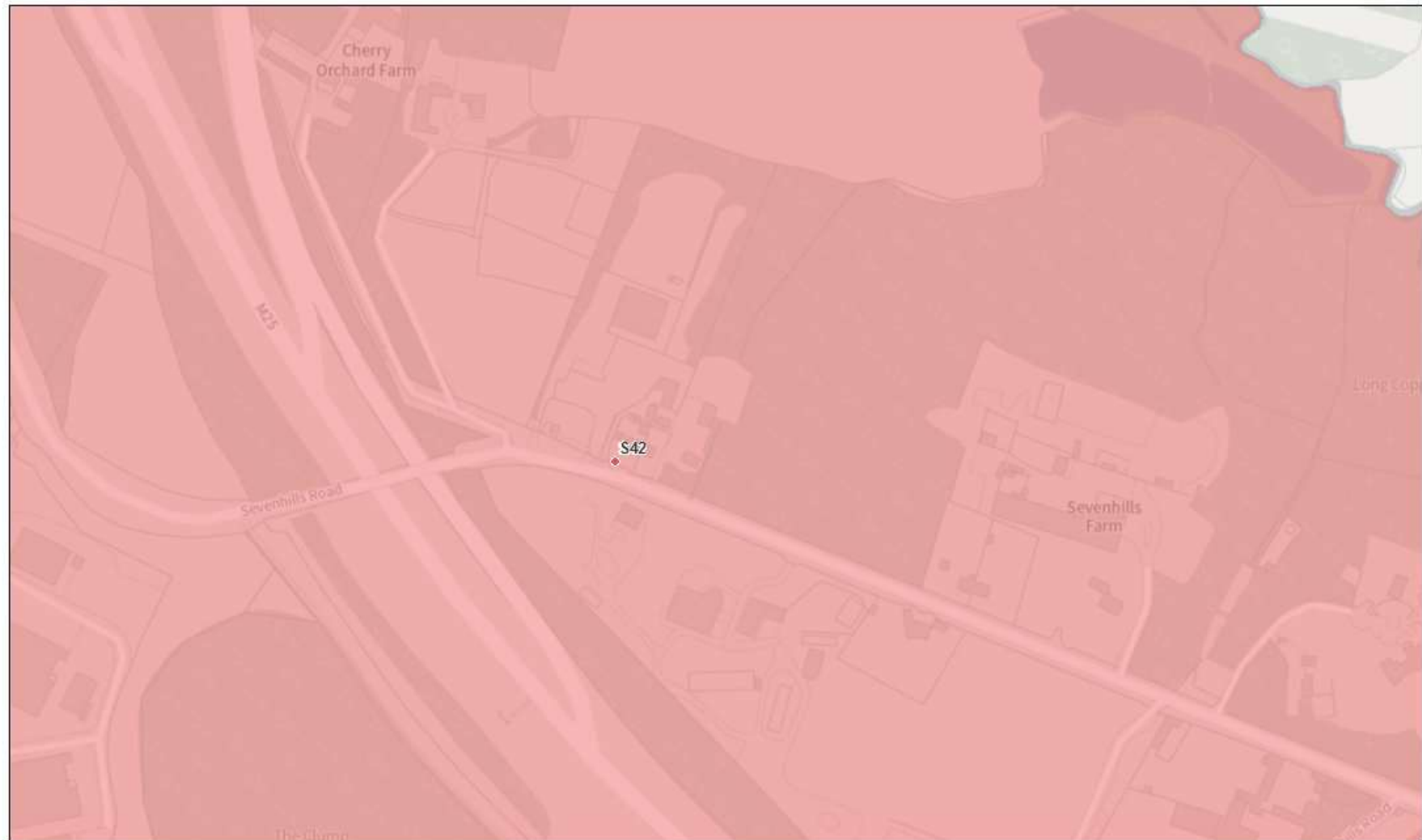
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 1:26,457

NO2 Diffusion Tube Locations - SBDC2 (Iver Parish) AQMA, Iver



Date: 28/06/2022





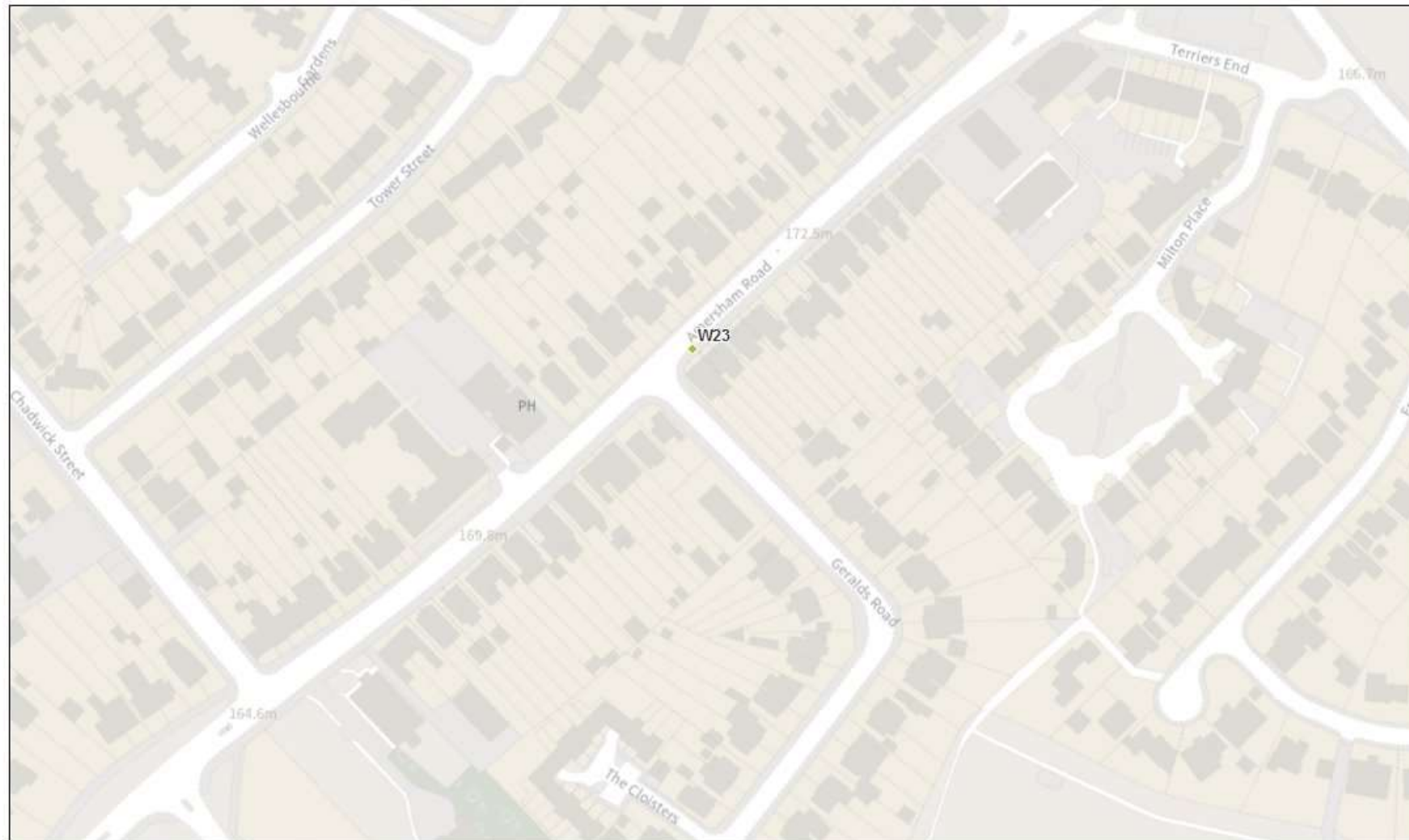
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0 40 80 160 m
1:3,307



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0 20 40 80 m
1:1,654

NO2 Diffusion Tube Locations - Amersham Hill, High Wycombe



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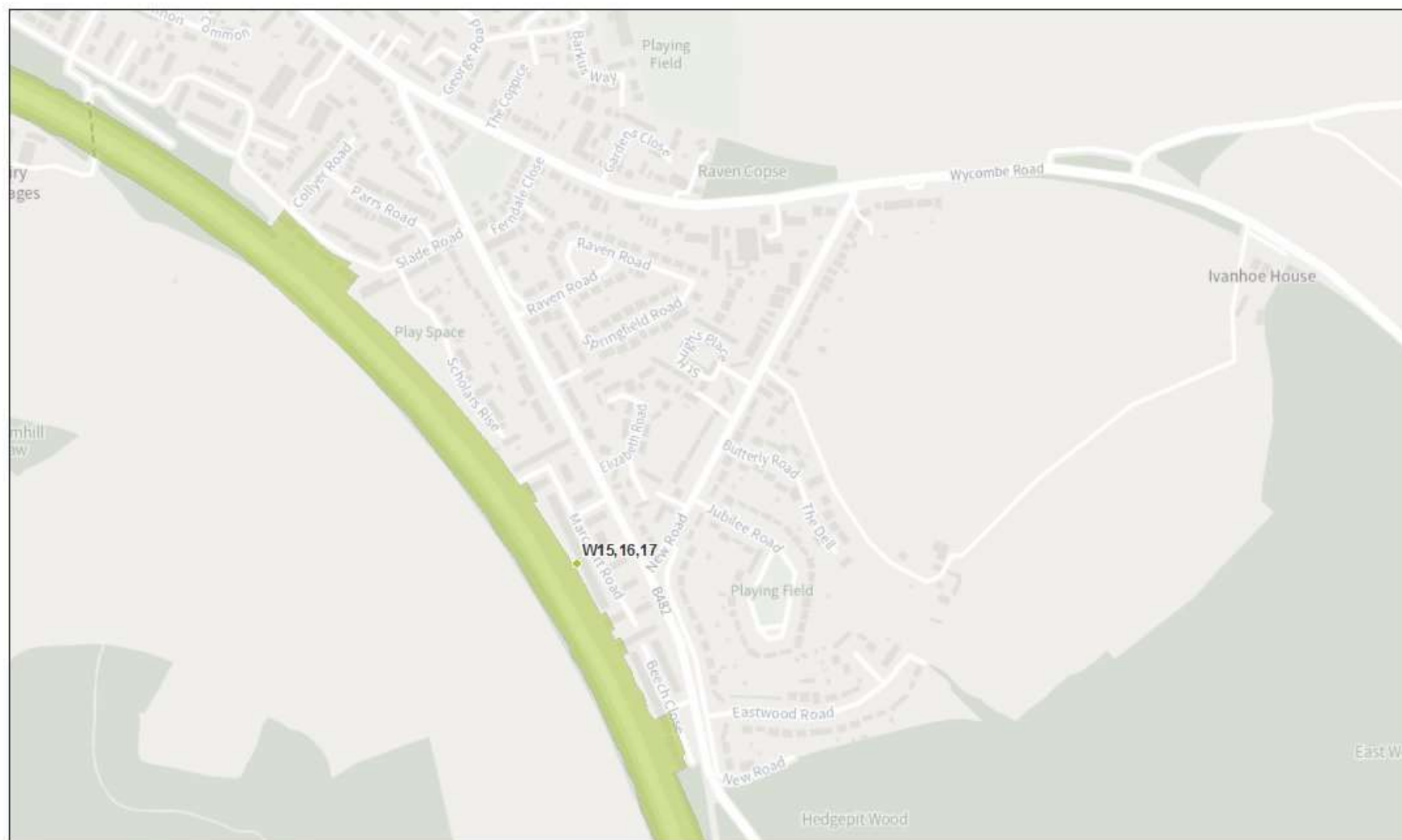


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NO2 Diffusion Tube Locations - M40 AQMA and 40 Marcourt Rd, Stokenchurch

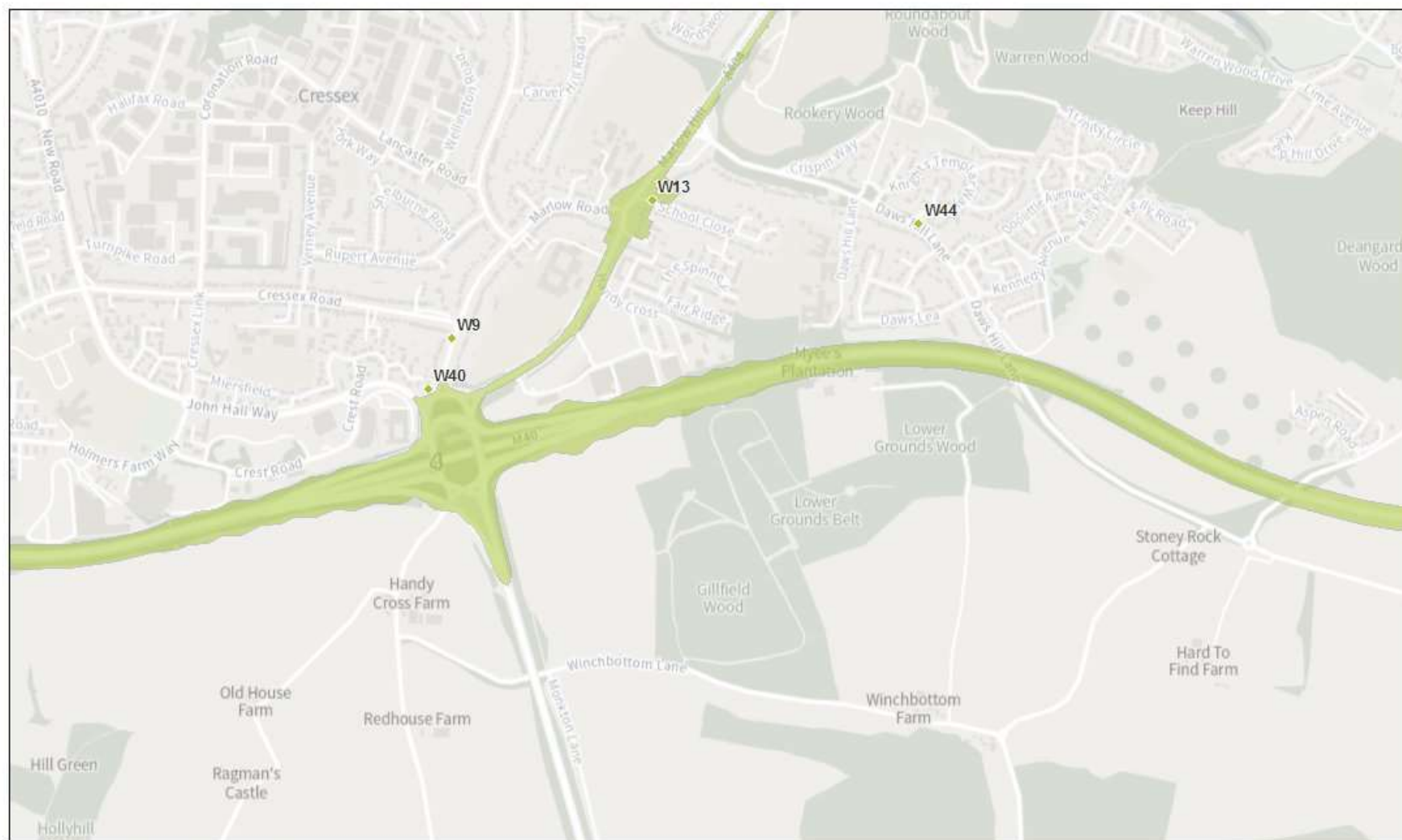


1:6,614



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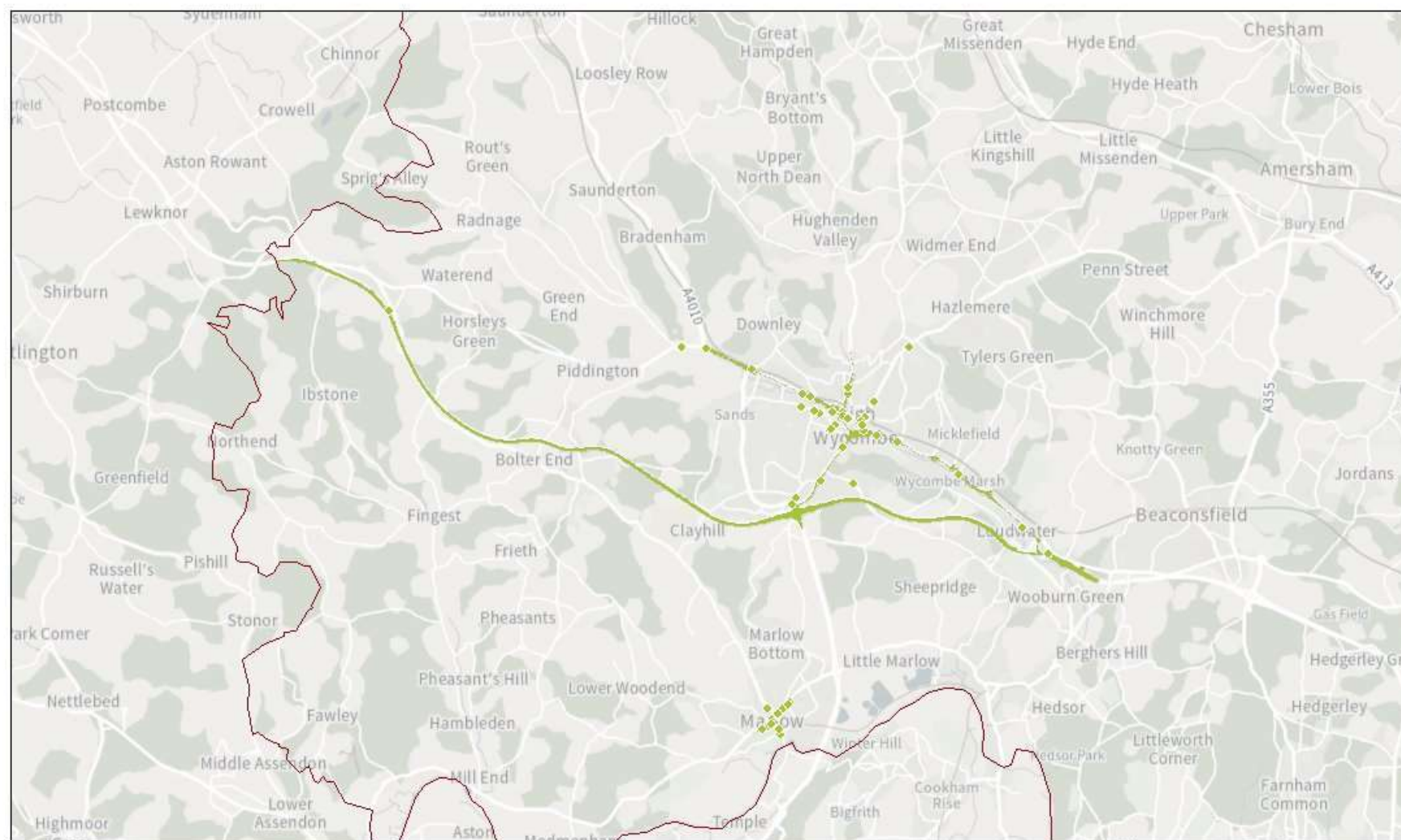
NO₂ Diffusion Tube Locations - M40 AQMA and Handy Cross Roundabout, High Wycombe

0 170 340 680 m
1:13,228



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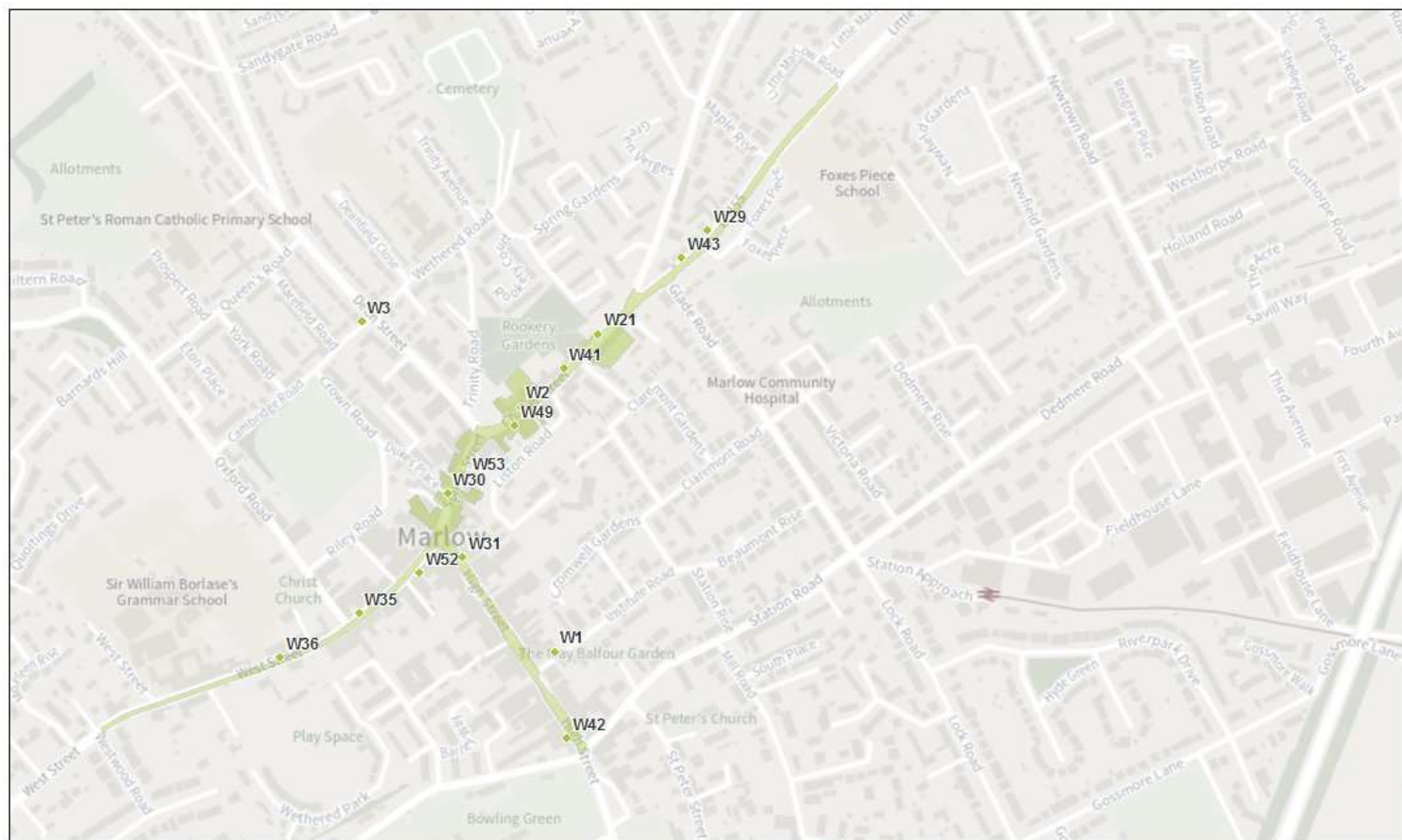
NO2 Diffusion Tube Locations - M40, Marlow and Wycombe AQMAs

0 1,300 2,600 5,200 m
1:105,827



Date: 23/06/2022





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NO2 Diffusion Tube Locations - Marlow AQMA



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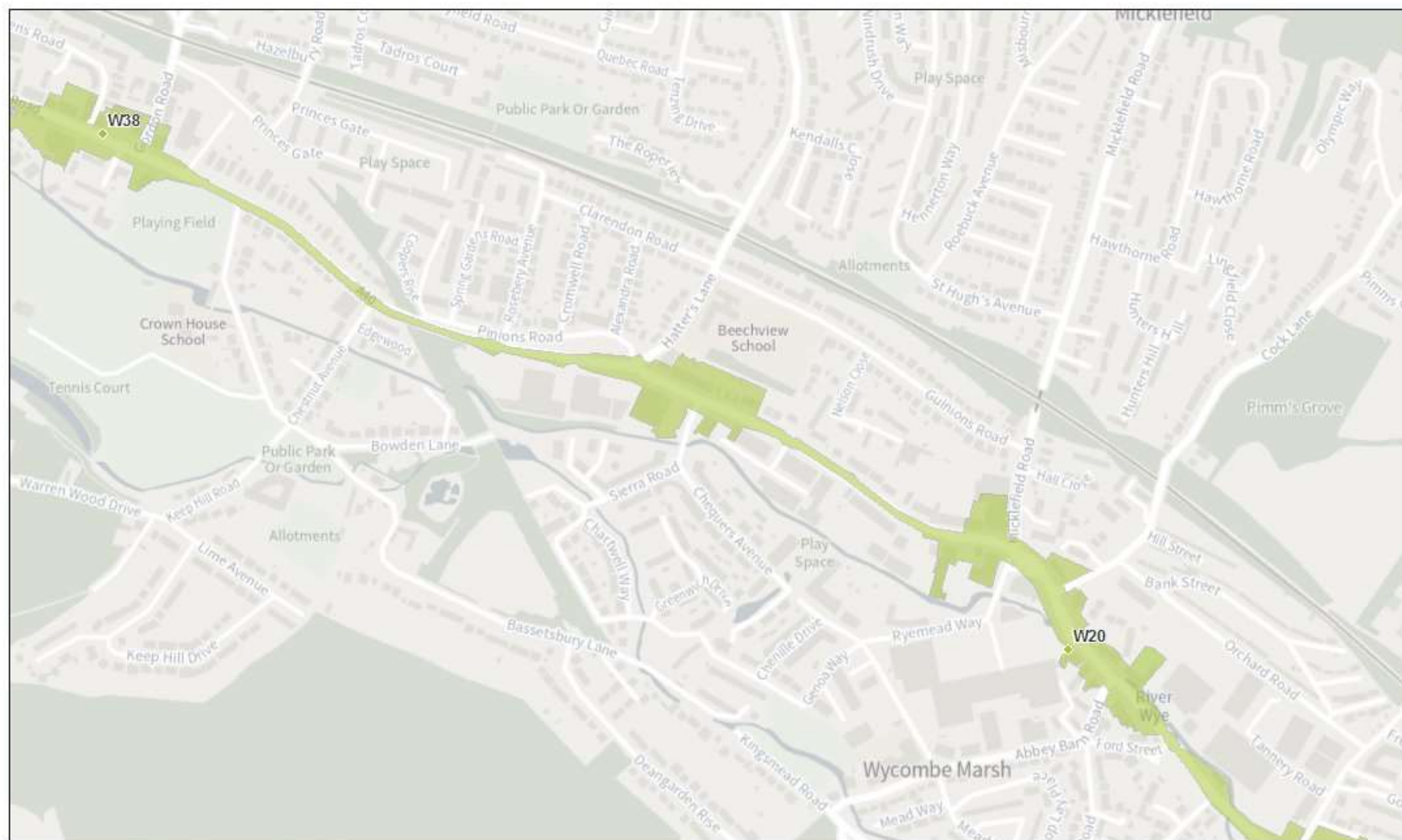


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NO2 Diffusion Tube Locations - Wycombe AQMA and Central High Wycombe

N
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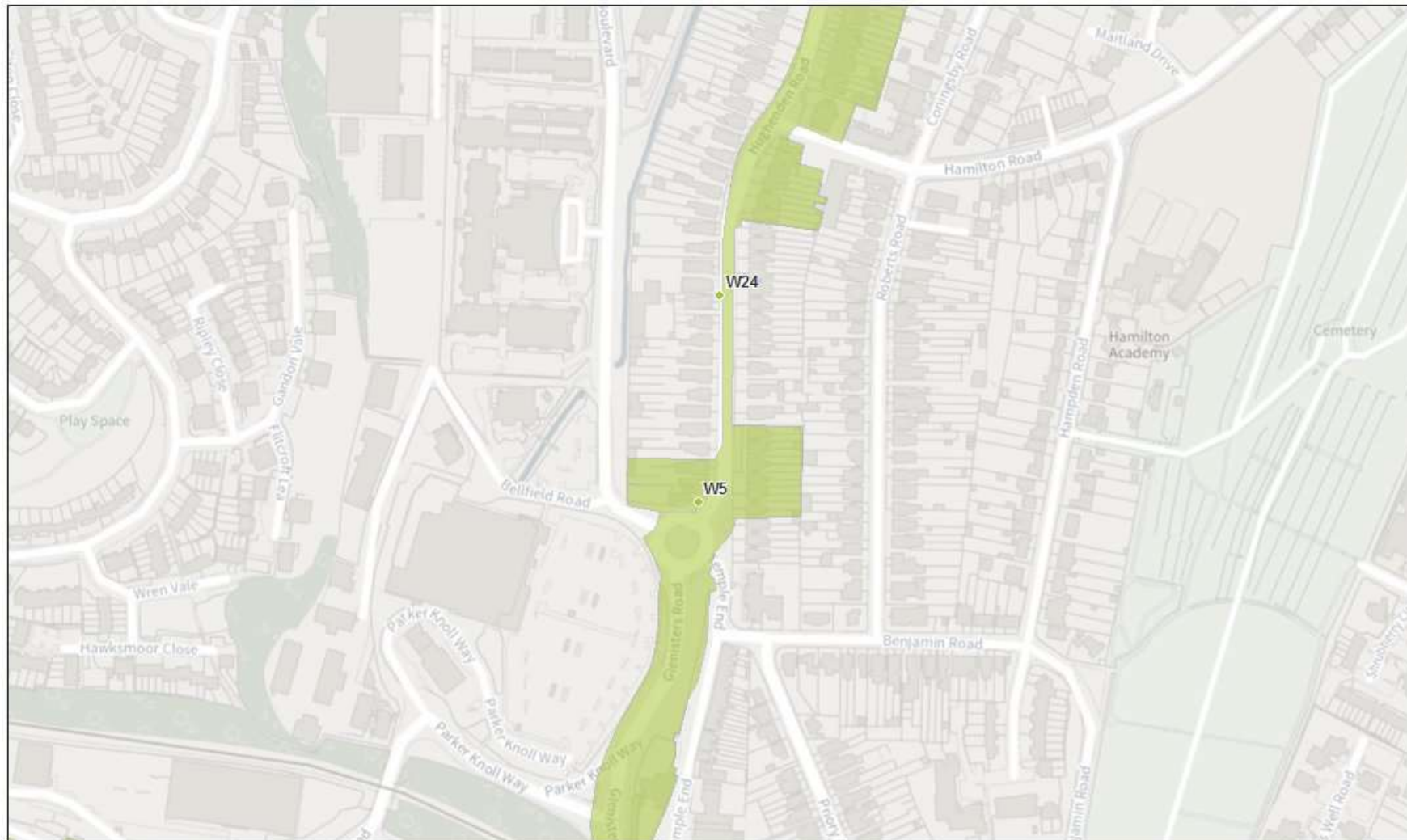


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0 80 160 320 m
1:6,614

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NO₂ Diffusion Tube Locations - Wycombe AQMA and Hughenden Rd, High Wycombe

0 40 80 160 m
1:3,307



Date: 23/06/2022

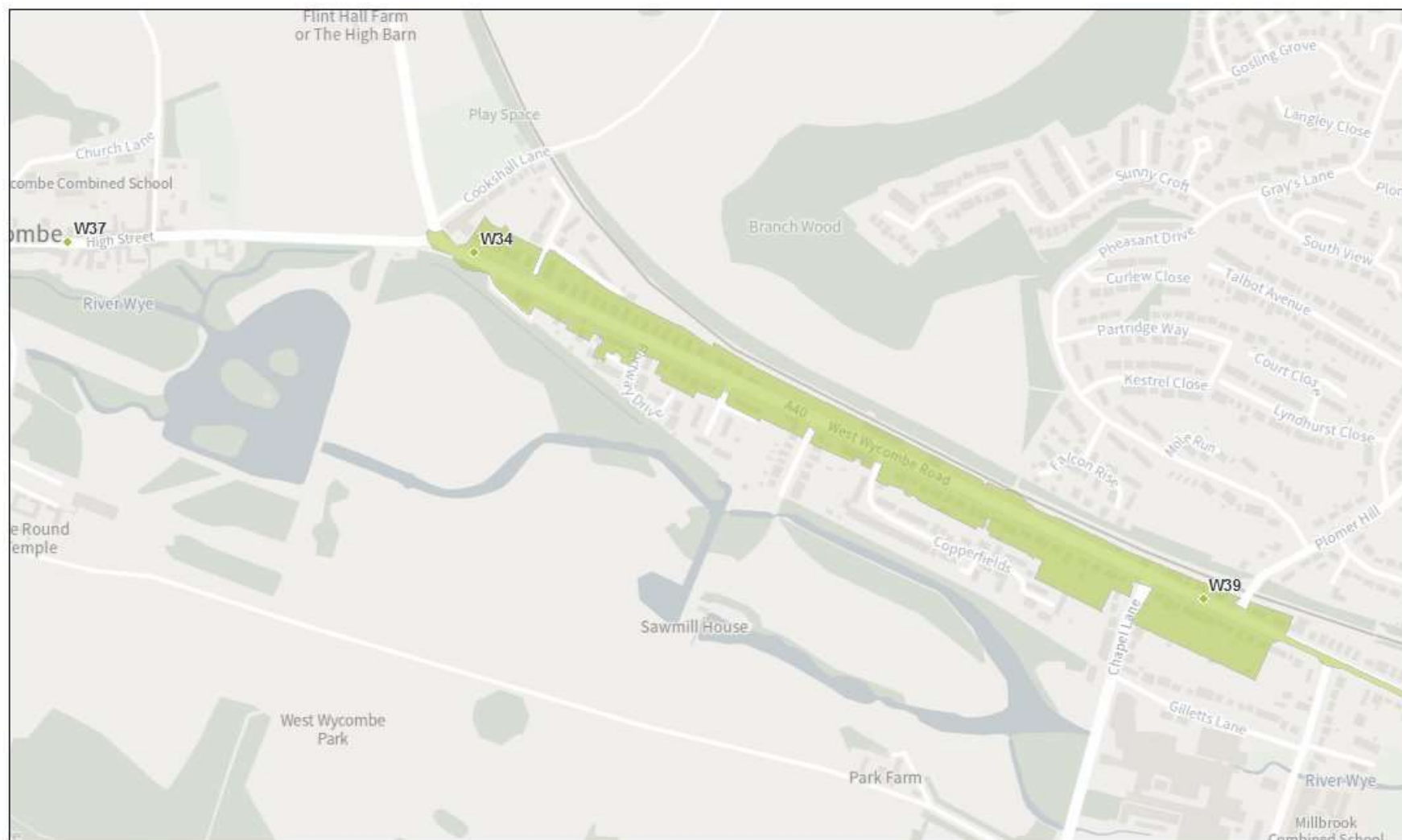




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NO2 Diffusion Tube Locations - Wycombe AQMA and West Wycombe Rd, High Wycombe





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0 80 160 320 m
1:6,614

NO2 Diffusion Tube Locations - Wycombe AQMA and West Wycombe



Date: 23/06/2022



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
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
EV	Electric Vehicle
FDMS	Filter Dynamics Measurement System
GAP	Global Action Plan
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide
SCA	Smoke Control Area

References

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- Office for National Statistics - [Preview and Download - Office for National Statistics \(ons.gov.uk\)](#)
- Press Release for New Electric Bike Scheme [New electric bike scheme leads the charge along Waddesdon Greenway | Buckinghamshire Council](#)
- Buckinghamshire Local Plan - [Buckinghamshire Local Plan | Buckinghamshire Council](#)
- Public Health Outcomes Framework - [Public Health Outcomes Framework - Data - OHID \(phe.org.uk\)](#)