



Barnsley Metropolitan Borough Council 2026 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995
Local Air Quality Management, as amended by the
Environment Act 2021

Date: June 2026

Information	Barnsley Metropolitan Borough Council Details
Local Authority Officer	Nigel Butterfield
Department	Pollution Control – Regulatory Services
Address	Barnsley MBC, PO Box 634, Barnsley, S70 9GG
Telephone	01226 772456
E-mail	pollutioncontrol@barnsley.gov.uk
Report Reference Number	ED22250145
Date	29 th June 2026

Local Responsibilities and Commitment

This ASR was prepared by Ricardo (member of WSP) on behalf of Barnsley Metropolitan Borough Council with the support and agreement of the following officers and departments:

Nigel Butterfield, Technical Officer (Air Quality) – Pollution Control Team

This ASR has been approved by:

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

If you have any comments on this ASR please send them to Nigel Butterfield at:

Regulatory Services

Barnsley MBC,

PO Box 634,

Barnsley,

S70 9GG

01226 772456

pollutioncontrol@barnsley.gov.uk

Executive Summary: Air Quality in Our Area

Air Quality in Barnsley Metropolitan Borough Council

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

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

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

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO ₂)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO ₂)	Sulphur dioxide (SO ₂) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM ₁₀ and PM _{2.5})	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM₁₀ refers to particles under 10 micrometres. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres.

The Barnsley Metropolitan Borough Council (Barnsley MBC) area covers 32,853 hectares (127 square miles) and has an estimated population of approximately 244,500.

Barnsley MBC's air quality issues are typical of an urban location, with emissions from road transport being a major source of air pollution, and the underlying reason for the declaration of the five Air Quality Management Areas (AQMAs). Emissions from industrial

and domestic sources are still of importance, however, and continue to be subject to the relevant regulation, where appropriate.

Previous assessment of Barnsley MBC's air quality revealed an exceedance of the annual average Air Quality Objective (standard) for nitrogen dioxide gas (NO₂) at receptors (mainly houses). Nitrogen dioxide is strongly associated with traffic emissions, and contributes to respiratory symptoms¹. There have been inter-year fluctuations of NO₂ concentrations, but there is a general downward trend and there have been no exceedances of the Air Quality Objectives in AQMA 1 or 2A over the past five years. As a result of this, the Council aims to explore revocation of AQMA 1 in the near future. These areas are close to several arterial roads and junctions near to Barnsley town centre and close to the M1 motorway. All Barnsley's current AQMAs are summarised in **Table 2-1 – Declared Air Quality Management Areas** Further details of Barnsley MBC's AQMAs can be found at [List of Local Authorities with AQMAs - DEFRA, UK](#).

The Council has an Air Quality Action Plan (AQAP), published in May 2017 (and updated in 2019) available at the [Barnsley Air Quality page](#)², which contains measures designed to improve air quality within the AQMAs and within the Council as a whole, as it is important to continually drive down emissions and reduce air pollution, even below legal standards to protect public health. Barnsley MBC is currently working on an updated 2025-2030 AQAP, which will be published when final approval is received from DEFRA

Barnsley MBC will continue to monitor concentrations in future years, and further monitoring is required in order to continue assessing longer term trends. Barnsley recorded its first year of PM_{2.5} concentrations at the Defra managed Barnsley Gawber (BAR3) site in 2023 and began recording PM_{2.5} at the Barnsley A635 Kendray Roadside (BAR9) site in 2025. Both sites continue to show compliance with UK air quality strategy objectives.

Further details of Barnsley's local air quality, including up-to-date local data and comparison with the Daily Air Quality Index (AQI; which tells us the daily pollution concentrations and their impacts on our health), can be found at our [Barnsley Metropolitan](#)

¹ DEFRA, 2017 – Getting to grips with air pollution – the latest evidence and techniques – A briefing for Directors of Public Health. Available at: <https://laqm.defra.gov.uk/assets/63091defraairqualityguide9web.pdf>

² Barnsley MBC. Air Quality. Barnsley MBC, 2025. Available at: <https://www.barnsley.gov.uk/services/pollution/air-pollution/air-quality/>

[Borough Council air quality](#) webpage or the [Air Quality in England](#) webpage. The Council believes it is important that Barnsley residents are made aware of the air quality they breathe and how it may impact them.

Actions to Improve Air Quality

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

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

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

Barnsley's key actions are set out in the Barnsley Air Quality Action Plan 2025-2030, which are split into five key themes. These have been developed and agreed by the Barnsley MBC Air Quality Action Plan Steering Group, chaired by our Director of Public Health. These are:

- Reduce Traffic
- Behavioral Change
- Increase Efficiency

³ Defra. Environmental Improvement Plan 2023, January 2023, <https://www.gov.uk/government/publications/environmental-improvement-plan>

⁴ Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023, <https://www.gov.uk/government/publications/the-air-quality-strategy-for-england>

⁵ DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018, <https://assets.publishing.service.gov.uk/media/5b968e3ee5274a13859deed2/road-to-zero.pdf>

- Improve Fleet
- Regulation

Conclusions and Priorities

Barnsley MBC's 2026 ASR is an update of the monitoring carried out within the last year and illustrates that there has been a general improvement in air quality across the district over several years, with levels remaining relatively stable from 2022 to 2025.

There were three exceedances of the NO₂ annual mean air quality objective identified across the 64 passive monitoring sites and two automatic monitoring sites. Two of these exceedances occurred within AQMA 4 and the third was at site 53, on Sheffield Road in the town centre. In 2025, NO₂ concentrations slightly decreased overall compared to 2024 concentrations, with the greatest decrease seen at site 43, from 48.4µg/m³ in 2024 to 44.0µg/m³ in 2025 (-4.4 µg/m³). The greatest increase was seen at site 50, from 23.1µg/m³ in 2024 to 26.0µg/m³ in 2025 (+2.9 µg/m³).

The annual mean NO₂ concentration did not exceed 60µg/m³ at any monitoring locations during 2025, which indicates that an exceedance of the 1-hour mean objective (200µg/m³) is unlikely at these sites.

Barnsley MBC's priorities for the coming year are:

- To publish the new 2025-2030 Air Quality Action Plan (AQAP).
- To explore revocation of AQMA No 1.
- Where appropriate, the Council will bid for funding for actions within the AQAP, as and when this funding becomes available.
- Following the successful road closure scheme aimed at improving awareness and air quality around a local school, it is planned that further schemes will be implemented following the same template. This scheme was funded by Defra and was successful as part of a joint air quality grant bid with our partners Doncaster Metropolitan Borough Council and Sheffield City Region. The scheme involved temporary road closures around a local school, along with active travel initiatives, in order to highlight the benefits of cycling and walking.
- To continue to work with developers to minimise the air quality impact of new development, and to ensure that this development takes account of future sustainable transport modes, and in particular refine the Council's requirement of

LAQM Annual Status Report 2023 iv Barnsley Metropolitan Borough Council electric vehicle (EV) charge points for new developments in the Borough, in order ensure installation of the most optimum charge point schemes.

- To align the AQAP with the Council's Sustainable Energy Action Plan to ensure that the co-benefits of improved air quality and reductions in carbon emissions in the Borough are maximised.
- Continue monitoring both inside and outside of AQMAs to gauge progress with actions and ensure continued compliance outside of our AQMAs, and assess the continued direct and indirect impact of the pandemic and subsequent recovery on air pollution concentrations.
- To work with Public Health colleagues in order to raise awareness of poor air quality and actions that can be taken to reduce emissions, and develop programmes such as anti-idling and promotion of Clean Air Day.
- To work with nearby local authorities, who may be required to implement Clean Air Zones, to understand the impacts these zones may have on Barnsley.

How to get Involved

As part of the ongoing AQMA process, and in light of the upcoming 2025-2030 AQAP, we welcome continuous suggestions from residents, local business and interest groups in order to improve air quality in the area. We have further met with local and regional organisations and Councils to ensure that we are in touch with local concerns and are better placed to explore potential solutions.

Find out more about your local air quality by:

- Contacting the Air Quality officer at Barnsley (details at the beginning of this report) or through [Barnsley MBC's website](#)⁶
- Contact your local Councillor with any concerns.

Consider how and when you use your car, especially at peak times. Consider using public transport where possible for trips into towns and walking or cycling for a non-polluting and healthy alternative.

⁶ Barnsley MBC. Air Quality. Available at: <https://www.barnsley.gov.uk/air-quality>

Table of Contents

Local Responsibilities and Commitment	i
Executive Summary: Air Quality in Our Area	ii
Air Quality in Barnsley Metropolitan Borough Council.....	ii
Actions to Improve Air Quality	iv
Conclusions and Priorities	v
How to get Involved	vi
1 Local Air Quality Management	1
2 Actions to Improve Air Quality	2
2.1 Air Quality Management Areas	2
2.2 Progress and Impact of Measures to address Air Quality in Barnsley Metropolitan Borough Council	5
2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations	14
2.3.1 PM _{2.5} concentrations and future targets	14
2.3.2 Fraction of mortality data	14
2.3.3 Actions to address PM _{2.5}	15
3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance	16
3.1 Summary of Monitoring Undertaken	16
3.1.1 Automatic Monitoring Sites	16
3.1.2 Non-Automatic Monitoring Sites	16
3.2 Individual Pollutants	16
3.2.1 Nitrogen Dioxide (NO ₂)	17
3.2.2 Particulate Matter (PM ₁₀)	17
3.2.3 Particulate Matter (PM _{2.5})	18
3.2.4 Sulphur Dioxide (SO ₂)	18
Appendix A: Monitoring Results	19
Appendix B: Full Monthly Diffusion Tube Results for 2025	44
Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC	47
New or Changed Sources Identified Within Barnsley Metropolitan Borough Council During 2025	47
Additional Air Quality Works Undertaken by Barnsley Metropolitan Borough Council During 2025	47
QA/QC of Diffusion Tube Monitoring	47
Diffusion Tube Annualisation	48
Diffusion Tube Bias Adjustment Factors	48
NO ₂ Fall-off with Distance from the Road	50
QA/QC of Automatic Monitoring	50

PM₁₀ and PM_{2.5} Monitoring Adjustment 50

Automatic Monitoring Annualisation 50

NO₂ Fall-off with Distance from the Road..... 51

Appendix D: Map(s) of Monitoring Locations and AQMAs52

Appendix E: Summary of Air Quality Objectives in England.....67

Glossary of Terms68

References70

Figures

Figure 1 - South Yorkshire Mayoral Combined Authority Enhanced Partnership Plan	7
Figure 2 - Location of Penny Pie Park traffic congestion easing scheme, with automatic monitoring station BAR11 (bottom right).....	8
Figure 3 - fraction of mortality attributable to particulate air pollution for Barnsley and England between 2018-2024, as a line-graph.	15
Figure A.1 - Trends in Annual Mean NO ₂ Concentrations in AQMA 1	28
Figure A.2 - Trends in Annual Mean NO ₂ Concentrations in AQMA 2A.....	29
Figure A. 3 - Trends in Annual Mean NO ₂ Concentrations in AQMA 4	30
Figure A.4 - Trends in Annual Mean NO ₂ Concentrations in AQMA 6	31
Figure A.5 - Trends in Annual Mean NO ₂ Concentrations in AQMA 7	32
Figure A.6 - Trends in Annual Mean NO ₂ Concentrations outside of AQMAs - 1	33
Figure A.7 - Trends in Annual Mean NO ₂ Concentrations outside of AQMAs - 2	34
Figure A.8 - Trends in Annual Mean NO ₂ Concentrations outside of AQMAs - 3	35
Figure A.9 - Trends in Annual Mean PM ₁₀ Concentrations	38
Figure A.10 - Trends in Number of 24-Hour Mean PM ₁₀ Results > 50µg/m ³	40
Figure A.11 - Trends in Annual Mean PM _{2.5} Concentrations	42
Figure D.1 1 - Map displaying diffusion tube 1	53
Figure D.1 2 - Map displaying diffusion tubes 2 to 8, and AQMA 6.....	54
Figure D.1 3 - Map displaying diffusion tube 9.....	56
Figure D.1 4 - Map displaying diffusion tubes 10 to 23, 28, 45, 59 to 60, automatic monitoring location BAR11, AQMA 1 and 2A.....	57
Figure D.1 5 - Map displaying diffusion tubes 24 to 27, 29, 31, 51 and AQMA 1	58
Figure D.1 6 - Map displaying diffusion tubes 30, 54 and 56	59
Figure D.1 7 - Map displaying diffusion tubes 34 to 36 and 50	60
Figure D.1 8 - Map displaying diffusion tubes 37 to 38, 41 to 44, and AQMA 4.....	61
Figure D.1 9 - Map displaying diffusion tube 39.....	62
Figure D.1 10 - Map displaying diffusion tube 40.....	63
Figure D.1 11 - Map displaying diffusion tubes 46, 49, 55, 57 and 58 and automatic monitoring location BAR9	64
Figure D.1 12 - Map displaying diffusion tubes 47, 48, 53, 61 to 64 and AQMA 7.....	65
Figure D.1 13 – Map displaying diffusion tubes 32 and 33	66

Figure D.1 – Map of Non-Automatic Monitoring Sites	52
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Tables

Table 2-1 – Declared Air Quality Management Areas.....	3
Table 2-2 – Progress on Measures to Improve Air Quality	11
Table A.1 – Details of Automatic Monitoring Sites	19
Table A.2 – Details of Non-Automatic Monitoring Sites	20
Table A.3 – Annual Mean NO ₂ Monitoring Results: Automatic Monitoring (µg/m ³).....	24
Table A.4 – Annual Mean NO ₂ Monitoring Results: Non-Automatic Monitoring (µg/m ³)	25
Table A.5 – 1-Hour Mean NO ₂ Monitoring Results, Number of 1-Hour Means > 200µg/m ³	36
Table A.6 – Annual Mean PM ₁₀ Monitoring Results (µg/m ³)	37
Table A.7 – 24-Hour Mean PM ₁₀ Monitoring Results, Number of PM ₁₀ 24-Hour Means > 50µg/m ³	39
Table A.8 – Annual Mean PM _{2.5} Monitoring Results (µg/m ³).....	41
Table A.9 – SO ₂ 2025 Monitoring Results, Number of Relevant Instances	43
Table B.1 – NO ₂ 2025 Diffusion Tube Results (µg/m ³)	44
Table C.1 - Annualisation Summary (concentrations presented in µg/m ³)	48
Table C.2 - Bias Adjustment Factor	49
Table C.3 - Local Bias Adjustment Calculation	49
Table C.4 - Automatic NO ₂ Annualisation Summary (concentrations presented in µg/m ³ .	50
Table E.1 – Air Quality Objectives in England	67

1 Local Air Quality Management

This report provides an overview of air quality in Barnsley Metropolitan Borough Council (MBC) during 2025. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Barnsley MBC 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 18 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

A summary of AQMAs declared by Barnsley MBC can be found in Table 2-1. The table presents a description of the five AQMAs that are currently designated within Barnsley MBC. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO₂ annual mean;
- NO₂ 1-hour mean (AQMA 6 only)

In February 2022, Barnsley MBC successfully revoked AQMA 5, originally declared in 2008 due to exceeding the NO₂ annual mean Air Quality Objective. The Council is considering and collating the evidence for the revocation of AQMA 1 in future years. AQMA 1 covers parts of the M1 and extends to 100 m either side of the motorway carriageway. The case for revocation is based on monitoring data showing compliance with the Air Quality Objective for NO₂ for several years⁷.

⁷ Barnsley MBC previously postponed the revocation process as a proposed “Smart Motorway” was planned for the stretch of M1 passing through the Borough; however, an announcement by the UK Government in April 2023 stated that “plans for new smart motorways will be cancelled in recognition of the current lack of public confidence felt by drivers and cost pressures” and so the Council is revisiting the case.

Table 2-1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Highest Concentration : Declaration	Highest Concentration : Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
No. 1	03/10/2001	NO ₂ Annual Mean	An area encompassing residential properties one hundred metres either side of the central reservation of the M1 motorway in Barnsley	YES	46.4 µg/m ³	29.7 µg/m ³	5 Years	Barnsley MBC Air Quality Action Plan 2019	https://www.barnsley.gov.uk/media/18071/air-quality-action-plan.pdf
No. 2A	16/06/2005	NO ₂ Annual Mean	Residential properties along Dodworth Road between Junction 37 of the M1 motorway and Town End roundabout, including a portion of Summer Lane.	NO	49.7 µg/m ³	32.6 µg/m ³	5 Years	Barnsley MBC Air Quality Action Plan 2019	https://www.barnsley.gov.uk/media/18071/air-quality-action-plan.pdf
No. 4	07/07/2008	NO ₂ Annual Mean	Residential properties along the uphill carriageway of Harborough Hill Road from the gyratory	NO	58.6 µg/m ³	44.7 µg/m ³	n/a – in exceedance	Barnsley MBC Air Quality Action Plan 2019	https://www.barnsley.gov.uk/media/18071/air-quality-action-plan.pdf

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Highest Concentration : Declaration	Highest Concentration : Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
No. 6	30/08/2012 (Amended 27/10/2016 to include NO ₂ 1-hour mean)	NO ₂ Annual Mean NO ₂ 1-hour mean	Residential properties along the A616 Manchester Road in Langsett	YES	77.1 µg/m ³	37.1 µg/m ³	2 Years	Barnsley MBC Air Quality Action Plan 2019	https://www.barnsley.gov.uk/media/18071/air-quality-action-plan.pdf
No.7	30/08/2012	NO ₂ Annual Mean	Residential properties at the junction of Sheffield Road and the A6133 Cemetery Road	NO	48.5 µg/m ³	34.1 µg/m ³	5 Years	Barnsley MBC Air Quality Action Plan 2019	https://www.barnsley.gov.uk/media/18071/air-quality-action-plan.pdf

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

☒ Barnsley MBC confirm that all current AQAPs have been submitted to Defra.

2.2 Progress and Impact of Measures to address Air Quality in Barnsley Metropolitan Borough Council

Defra's appraisal of last year's ASR concluded that the report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. *As AQMA No. 1, and AQMA No. 2A have remained complaint with the relevant AQOs for 5 consecutive years, the Council should consider the revocation of this AQMA as stated within LAQM.TG22; "There should not be any declared AQMAs for which compliance with the relevant objective has been achieved for a consecutive five-year period". However, it should be noted that for AQMA 7, while five years of monitoring are below the statutory AQO of 40 µg/m³, only two years of diffusion tube data are below 36 µg/m³. Therefore, Table 2.1 should assess compliance against 36 µg/m³ to fully reflect diffusion tube screening criteria.*
2. *The current AQAP was published in 2019 and is therefore out of date. It is acknowledged that the Council are working to update their AQAP and are encouraged to do so as a priority.*
3. *Distance corrected concentrations should be considered in Table 2.1, as exceedances in the relevant air quality objectives are only considered at relevant exposure.*
4. *The Council have provided a comparison between the local and national bias adjustment factors and the impact that each would have on the monitored concentrations in 2024. They also outline a clear justification for the choice of the local bias adjustment factor. This is commended and is encouraged to continue in future reports.*
5. *The Council provide clear, well-presented graphs with robust comparisons of their 2024 monitored concentrations with the air quality objectives. This is welcomed and is encouraged to continue in future reports.*
6. *The Council has removed erroneous data from the NO₂ diffusion tube dataset presented in Table B.1. This is commended and demonstrative of good practice.*
7. *It is recommended that reviewer comments be incorporated into the next report to strengthen transparency and continuous improvement*

8. *The council has included a good deal of description of their measures and the progress that has been made this reporting year, including details regarding funding of measures and their funding sources.*
9. *It is encouraged that map labels are increased in size to improve readability, as some current labels are difficult to distinguish; this adjustment will enhance clarity for all readers.*
10. *Although the report was sent to Director of Public Health team, it has not been signed off yet. This is encouraged for future reports.*

The above comments have been taken into consideration as part of this latest Annual Status Report.

Barnsley MBC has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2-2. 25 measures are included within Table 2-2, with the type of measure and the progress Barnsley MBC have made during the reporting year of 2025 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2-2.

Barnsley MBC has submitted updated 2025-2030 AQAP, which is expected to be published once approved by DEFRA. More detail on these measures can be found in their respective Action Plans.

Key completed measures are:

- **South Yorkshire Enhanced Bus Partnership:** The Barnsley Bus partnership was replaced with the [South Yorkshire Enhanced Bus Partnership](#) in 2022⁸. Figure 1 shows the South Yorkshire Enhanced Bus Partnership which incorporates a statutory scheme, as opposed to the previous scheme which was a Voluntary Agreement. The plan targets increased use of public transport through fare alteration, system reliability, and improved user experience. Barnsley is continuing to work with the Partnership and corresponding bus companies in order to enhance the fleet. Similarly, Barnsley has encouraged licenced taxi drivers to increase update of EV and hybrid vehicles. Currently, 182 vehicles out of 452 are EVs or hybrids (40%).

⁸ South Yorkshire Mayoral Combined Authority. Enhanced Partnership Plan. South Yorkshire: SYMCA, 2022. Available at: <https://www.southyorkshire-ca.gov.uk/getattachment/b396e5dd-eb2a-4e2a-b108-c539b658e996/South-Yorkshire-Enhanced-Partnership-Plan-FINAL.pdf>

Figure 1 - South Yorkshire Mayoral Combined Authority Enhanced Partnership Plan



- **Barnsley Intelligent Transport Systems:** This process involved the installation of intelligent systems (SCOOT / MOVA) within AQMAs. Several of our AQMAs now have SCOOT/MOVA installed with performance reviewed. Ongoing maintenance along with minor upgrades when funding allows. Barnsley Metropolitan Borough Council will continue to investigate the installation of new Intelligent Transport Systems where the opportunity presents, such as new developments and new road schemes.
- **Electric Vehicle Infrastructure:** Since the previous ASR, Barnsley reviewed the most suitable locations and technology to facilitate electric vehicle technology. This has resulted in the implementation of EV charging points and reserved parking for electric vehicles in public car parks across the borough.
- **Penny Pie Park Road Scheme:** The Penny Pie Park Road is a scheme created in order to improve traffic flow through AQMA 2A with the addition of a through-road to reduce standing traffic. The scheme was completed in 2022, and NO₂ concentrations at the BAR11 automatic monitoring site have reduced from 24µg/m³ in 2021 to below 18µg/m³

in all monitoring years from 2023-2025. Key components of the scheme, as detailed in the Statement of Reasons⁹, consist of:

- The replacement of the existing signalised junction with an upgrade of the A628 incorporating a one-way signalised gyratory, increasing the number of traffic lanes;
- The realignment and upgrade of links to the A6133 Broadway, Pogmoor Road and to Junction 37 of the M1, increasing capacity of the existing approaches;
- The construction of a new attenuated highway drainage system;
- The construction of new controlled toucan crossing points at all the junction interfaces, to improve access and safety for both pedestrians and cyclists;
- The relocation and upgrade of the existing play areas and the inclusion of extensive hard and soft landscaping.

Figure 2 - Location of Penny Pie Park traffic congestion easing scheme, with automatic monitoring station BAR11 (bottom right)



⁹ Barnsley MBC. Statement of reasons for the order - Penny Pie Park. Barnsley: Barnsley MBC, 2019. Available at: <https://www.barnsley.gov.uk/media/14682/statement-of-reasons-for-the-order-penny-pie-park.pdf>

Barnsley MBC expects the following measures to be completed over the course of the next reporting year:

- **Encourage uptake of lower emission vehicles and alternative fuels (EVs, CNG, H₂):** The Sheffield City Region Air Quality Action Plan notes that uptake of low-emission vehicles is increasing and expected to grow significantly, supported by national policies such as the phase-out of petrol and diesel cars from 2030 and investment in charging infrastructure. Locally, Barnsley MBC is promoting this transition through initiatives including EV adoption within its fleet, expansion of public charging (78 points in town centres with further rollout planned), and partnership schemes, with around 9,000 EVs already in use across the borough. Planning guidance also encourages developers to include EV charging to help mitigate air quality impacts from new developments.
- **Speed restrictions on gradient Feasibility Study:** This measure has been completed during the development of the AQAP, in which the study determined that the average speed was approximately 42 mph. As such, BMBC and the South Yorkshire Partnership agreed that a speed reduction would not be an appropriate measure to carry forward.
- **ECO Stars Heavy Duty Vehicle Recognition Scheme:** The ECO Stars fleet recognition scheme is a free scheme that aims to help fleet operators improve efficiency and reduce fuel consumption, with the subsequent benefit of reducing emissions. This scheme was originally set up by Barnsley and neighbouring South Yorkshire local authorities as a means of working with this fleet sector (HGVs, buses, coaches and vans) in order to improve air quality. Following the success of the scheme, the Transport Research Laboratory has succeeded the running of the scheme and the intellectual property rights, which the Council agreed to.

Barnsley MBC's priorities for the coming year are to encourage uptake of lower emission vehicles and alternative fuels, continue the Energise Barnsley & Barnsley Strategic Resilience Partnership, and encourage cycling and walking by developing infrastructure and campaigns. The three key measures identified in Table 2-2 tackle emissions from roads and domestic and commercial sources, which have been identified as major sources in the latest AQAP.

Barnsley MBC worked to implement these measures in partnership with the following stakeholders during 2025:

- South Yorkshire Combined Authority (SYMCA)
- National Highways
- Transport Research Laboratory
- Energise Barnsley

The principal challenges and barriers to implementation that Barnsley MBC anticipates facing are funding and stakeholder coordination. Measures are often dependent on future funding or opportunities, with continuation beyond 2025 uncertain in some cases. In addition, implementation of several measures requires coordination across multiple organisations, e.g. National Highways and Transport Research Laboratory.

Barnsley MBC anticipates that the measures stated above and in Table 2-2 will achieve compliance in all AQMAs.

Table 2-2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
Priority Air Quality Actions														
3	Encourage uptake of lower emission vehicles and alternative fuels (EVs, CNG, H2)	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2024	2026	South Yorkshire Combined Authority (SYMCA) BMBC - Environment & Transport and Place Directorate	OZEV & ORCS delivered. Now on LEVI funding (distributed by SYMCA)	Funded	Min £1.2M due for capital and £125k for capability to deliver on-street charging)	Implement-ation	High	Public and private charging points / emission reductions from transport (DfT / SYMCA measures)	By 2030: about 30% of vehicles in Barnsley have the potential to be electric. By 2040: about 90% of vehicles in Barnsley potential to be electric. Barnsley council has 74 public EV charging bays in council car parks. These were fully funded from grant schemes.	Over the next few years, more people are expected to choose electric vehicles. This means more people will need places to charge, especially if they do not have a driveway.
15	Energise Barnsley & Barnsley Strategic Resilience Partnership	Other	Behavioural Change	2020	Ongoing	Energise Barnsley and private business/ stakeholders	Energise Barnsley	n/a	n/a	Implement-ation	High	KPIs include number of solar PV installations, number of bond and emission reductions Delivery of Solar PV and battery storage via Energise Barnsley under various schemes	Through our Energise Barnsley partnership we are installing solar photovoltaics on 910 council properties so far and have secured community bonds and pots to invest back into opportunities to support the local communities.	None at present
20	Encourage cycling and walking (developing infrastructure and campaigns)	Promoting Travel Alternatives	Promotion of cycling	2021	2040	BMBC, ST	South Yorkshire Mayoral Combined Authority (SYMCA)	Funded	> £10 million	Planning	High	Completion of schemes	Successful Sheffield City Region bid for £166 million. River Dearne long route (RDLR) scheme is part of the South Yorkshire Mayoral Combined Authority's Transforming Cities fund. The RDLR will improve active travel routes within the Dearne valley Park area between Harborough Hill Road, Pontefract Road, and Grange Lane. Where possible, the existing route will be widened to a four-metre shared use foot and cycle way.	One scheme is designed to enhance walking and cycling routes to retail estates located close to AQMA 4. Promotion of Active Travel as part of Clean Air Day. A number of schemes which will help give people more choices to travel without relying on their cars, so we can all work towards a healthy, more sustainable Barnsley and rapidly reduce emissions.
1	Carriageway Improvements	Traffic Management	UTC, Congestion management, traffic reduction	2024	2027	Local Authority Highways and Major Projects departments	South Yorkshire Mayoral Combined Authority (SYMCA)	Funded	n/a	Implement-ation	High	Completion of the scheme	Several carriageway improvements already delivered	Previous construction of road management schemes adjacent / within AQMAs has resulted in revocation of AQMAs – leading to this being a key measure
2	SYMCA Bus Reform	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2026	2027	SYMCA ST	South Yorkshire Mayoral Combined Authority (SYMCA)	Funded	£10k - 50k	Implement-ation	High	Number of ZEBRA buses in the fleet	Consultation on Proposed Bus Reform Jan 2025	Agreement based on previously signed ones elsewhere in South Yorkshire, but opportunity to update emission requirement (EURO specification)
4	Specific schemes for the Langsett AQMA (AQMA No. 6)	Traffic Management	UTC, Congestion management, traffic reduction	2026	2027	National Highways	BMBC & National Highways	n/a	n/a	Planning	High	Reduction in concentrations	Setting up of working group	The joint National Highways- BMBC working party has identified potential actions, which now require further consideration and consultation
5	Speed restrictions on gradient Feasibility Study	Traffic Management	UTC, Congestion management, traffic reduction	2024	2026	BMBC, Regulatory Services	BMBC	Funded	<£10k	Completed		Decision to implement the scheme	This measure has been completed during the development of the AQAP, in which the study determined that a speed reduction was not appropriate	This AQMA has been declared due to increased emissions using a steep uphill carriageway. Concentrations adjacent to the downhill carriageway are meeting air quality objectives for NO ₂
6	Procurement	Policy Guidance and Development Control	Sustainable Procurement Guidance	2026	Ongoing	BMBC, Procurement	BMBC	Funded	n/a	Ongoing	High	Production and implementation of revised policy	See Section 5.2.6	Process will involve the review of other local authority procurement policies

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
7	Control over emissions from Part B and A2 processes, and act as consultees for Part A1 processes	Other	Other	2021	2032	BMBC, Regulatory Services	BMBC	Funded	£10k - 50k	Ongoing	High	Reduction in breaches of Part A1, Part A2 and Part B permits	Ongoing inspection carried out on an annual basis (more frequently if required)	Ongoing statutory duty for local authorities
8	Enforcement of the Clean Air Act with regards to industrial smoke	Other	Other	2021	2032	BMBC, Regulatory Services	BMBC	Funded	£10k - 50k	Implement-ation	High	Reduction in breaches of the Clean Air Act	Ongoing	Ongoing statutory duty for local authorities
9	Enforcement of the Clean Air Act with regards to domestic smoke control	Other	Other	2021	2033	BMBC, Regulatory Services	BMBC	Funded	£10k - 50k	Implement-ation	High	Reduction in breaches of the Clean Air Act	Ongoing	Schedule 12 of the Environmental Bill amends the Clean Air Act 1993 to allow local authorities to impose financial penalties in smoke control areas. The existing criminal offence of emitting smoke from a chimney in a Smoke Control Area is replaced with a civil penalty regime.
10	Investigation of nuisance complaints, including appropriate action to resolve the problem	Other	Other	2024	2033	BMBC, Regulatory Services	BMBC	Funded	£10k - 50k	Implement-ation	Medium	Reduction in nuisance complaints attributed to air quality/smoke; decrease in resolution time for existing nuisances	Ongoing	The use of Abatement Enforcement Notices (Under the Environmental Protection Act 1990) and Community Protection Warning / Notices (ASB, Crime and Policing Act 2014) will be utilised to help tackle antisocial burning
11	BMBC fleet improvements	Vehicle Fleet Efficiency	Vehicle Replacement Programme	2021	2025	BMBC	BMBC	Funded	£1 million - £10 million	Implement-ation	High	Number of electric vehicles purchased (minimum of 30)	33 fully electric vehicles, which amount to 15 percent of the Council fleet	Vehicle replacement ongoing as vehicles near their end-of-life
12	Priority parking for LEVs	Promoting Low Emission Transport	Priority parking for LEV's	2024	2030	BMBC	BMBC/Grants	Funded	n/a	Implement-ation	High	Not yet determined	Programme in progress – delivery includes providing EV charging points for residents without access to off-street parking. All major BMBC carparks now have EV charging points and priority parking	Consultation process should provide opportunity to comment on priority parking for LEVs
13	ECO Stars Heavy Duty Vehicle Recognition Scheme	Freight and Delivery Management	Delivery and Service plans	2015	2026	BMBC, Transport Research Laboratory	BMBC, SYMCA	n/a	n/a	Completed	High	n/a – transitioned from BMBC remit	n/a - transitioned from BMBC remit	This scheme was originally set up by Barnsley and neighbouring South Yorkshire local authorities as a means of working with this fleet sector (HGVs, buses, coaches and vans) to improve air quality. The success of the scheme has resulted in an approach by the Transport Research Laboratory to take over the running of the scheme and the intellectual property rights, which the Council agreed to.
14	Support organisations in reducing emissions	Other	Behavioural Change	2020	2030	BMBC	BMBC	n/a	n/a	Ongoing	High	Number of organisations demonstrably benefiting from support (e.g. in reporting of reduced carbon footprint)	The Strategic Resilient Partnership meets quarterly and supports others / shares best practice so that others can adopt a range of interventions to help them be more resilient through reduced energy usage, emissions, lower operating costs and contribute positively to social and economic outcomes. Further details and annual report with details of measures are available here: Strategic Resilience Partnership	None, this is working well at present

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
16	Explore potential for heat/ energy networks	Promoting Low Emissions heat and energy	Public Procurement of stationary combustion sources	2026	2030	BMBC	BMBC / grants / stakeholder funding	n/a	n/a	Planning	High	Uptake once the project is running	Through the Public Sector decarbonisation scheme, we retrofitted our highest usage council buildings and some of our schools to use low or zero emission equipment such as air source heat pumps and photovoltaics	Unknown at present
17	Tree planting	Other	Other	2025	2030	BMBC	BMBC/ Partners/ Stakeholders	Funded	<£20k	Implement-ation		Number of trees planted (target 246,000)	Ongoing	Following Mayor Coppard's initiative to plant over 1.4 million trees, we are committed to plant "our share" of over 246,000 – that's one tree for every person living in Barnsley
18	Consolidation Centre	Freight and Delivery Management	Freight Consolidation Centre	2025	2030	BMBC	n/a	n/a	n/a	Planning	Medium	n/a	n/a	Dependent on future opportunities
19	Barnsley Intelligent Transport Systems	Traffic Management	UTC, Congestion management, traffic reduction	2021	2023	BMBC, ST	BMBC	Funded	£1 million - £10 million	Completed	Medium	As the system is responsive to demand management requirements, it is considered difficult to prescribe a key performance indicator, however ITS (SCOOT/MOVA / Bus Virtual Triggers28) has been installed within several of our AQMAs	See previous PRs. Installation of SCOOT within AQMAs, 2A, 4 and 7. Installation of MOVA in AQMA 5	Intend to continue beyond 2025, subject to securing of further funding in future years
21	Care4Air South Yorkshire Clean Air Campaign	Public Information	Via other mechanisms	2007	Ongoing	BMBC, Regulatory Services	South Yorkshire Local Transport Plan	n/a	n/a	Ongoing		Voluntary uptake by the public; Care4Air awards	See website for details of progress	http://www.care4air.org/
22	Assessment of air quality impact of major traffic schemes	Traffic Management	UTC, Congestion management, traffic reduction	2021	2032	BMBC, Regulatory Services	BMBC	Funded	< £10k	Implementation		Assessment of air quality impact of major road schemes with allotted timescale	Assessments completed to allotted timescales	Ongoing subject to future road schemes
23	Smoky diesel Hotline	Public Information	Via other mechanisms	n/a	Ongoing	BMBC, Regulatory Services	BMBC, Regulatory Services	Funded	n/a	Ongoing		Number of prosecutions	Ongoing	https://www.barnsley.gov.uk/services/pollution/air-pollution/vehicle-pollution/
24	Promoting Travel Alternatives (Workplace travel planning; encourage / facilitate home-working; personalised travel planning; school travel plans)	Promoting Travel Alternatives	Workplace Travel Planning	2024	2040	BMBC	South Yorkshire Mayoral Combined Authority (SYMCA)	Funded	> £10 million	Planning		Increase in active travel for work commutes	We have delivered over 10km of new active travel routes and will continue to promote walking, cycling and more sustainable modes of transport and will work closely with SYMCA to ensure the suitable provision of bus and rail	Ongoing projects
25	Anti-idling policy feasibility study	Traffic Management	Anti-idling enforcement	2025	2030	BMBC, Highways, Transport and Public Health	BMBC/ Stakeholders	Funded	<£10k	Planning	Medium	Reduced vehicle emissions around schools	One school used as a pilot diffusion tube deployed to get readings. School and BMBC interacting and educational process taking place parents have been contacted re dangers of vehicle emissions.	Feasibility study to determine if an anti-idling policy is appropriate for Barnsley Multiple teams within Barnsley to meet in 2026 to further explore the scope of this project

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy¹⁰, local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter (PM_{2.5}). There is clear evidence that PM_{2.5} (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

2.3.1 #PM_{2.5} concentrations and future targets

From latest available monitoring data, total PM_{2.5} concentrations were measured between 7.8 µg/m³ (BAR3) and 9.6 µg/m³ (BAR9), below the latest Environmental Improvement Plan PM_{2.5} annual mean concentration target of 10 µg/m³ by 2030. There is not enough historic monitoring data to fully describe the trends in PM_{2.5} concentrations in Barnsley, however Barnsley MBC will report on this as monitoring continues.

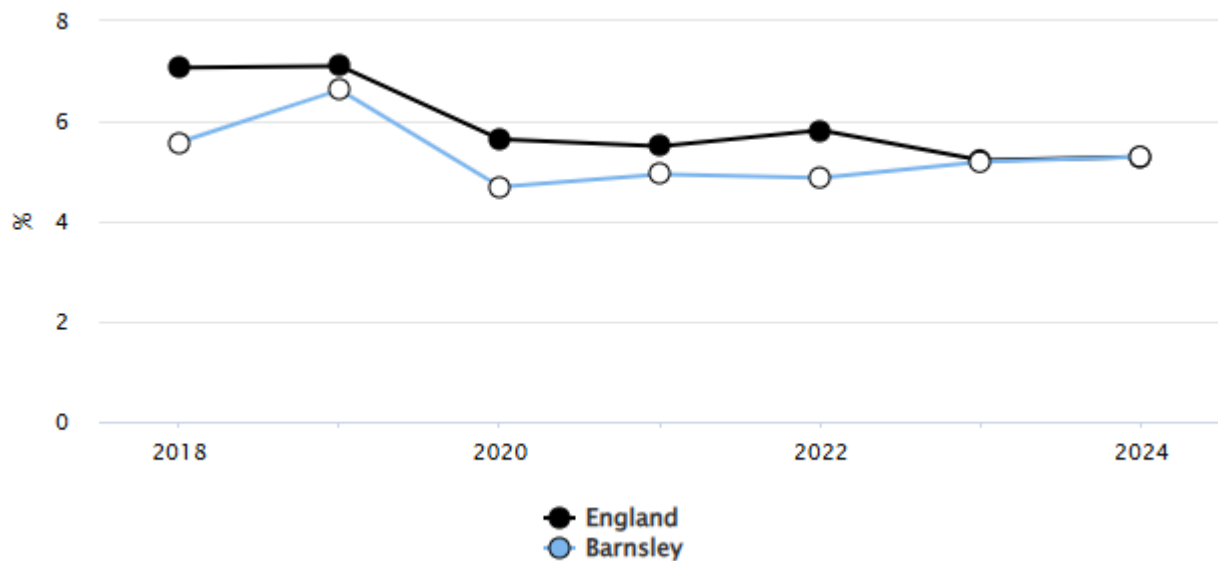
2.3.2 Fraction of mortality data

From [latest Public Health Outcomes Framework data](#), the fraction of mortality attributable to particulate matter is indicated using “D01 - Air pollution: estimated fraction of mortality attributable to particulate air pollution”. This is calculated as the mortality burden associated with long term exposure to particulate air pollution (measured as fine particulate matter, PM_{2.5}) at existing levels, expressed as the percentage of annual deaths from all causes in those aged over 30.

From the figure below, there is an observed slight increase between 2020-2024 in the mortality attributable to particulate air pollution within Barnsley, increasing from 4.7% in 2020 to 5.3% in 2024. However, in 2023 and 2024, Barnsley has been meeting the England average and only marginally above the average (+0.1%) in the region of Yorkshire and the Humber.

¹⁰ Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

Figure 3 - fraction of mortality attributable to particulate air pollution for Barnsley and England between 2018-2024, as a line-graph.



2.3.3 Actions to address PM_{2.5}

Barnsley MBC is taking the following measures to address PM_{2.5}:

- Measures 8 and 9 in Table 2-2 cover the enforcement of the Clean Air Act with regards to industrial and domestic smoke control. The entire Barnsley borough is covered by smoke control orders, and Barnsley MBC offer advice to householders who are considering using biomass and solid fuel appliances on the [Barnsley MBC smoke control website](#). All stoves or boilers intended for domestic use in the Barnsley borough therefore will have to be exempted appliances or the householder will need to use an authorised fuel. Furthermore, Barnsley MBC investigates complaints regarding domestic smoke under the requirements of the Clean Air Act 1993.
- Barnsley MBC have also undertaken monitoring of PM_{2.5} concentrations within parts of the borough which may be subject to domestic PM_{2.5} emissions. This monitoring concluded that air quality standards relating to PM_{2.5} were not being exceeded.

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

This section sets out the monitoring undertaken within 2025 by Barnsley MBC and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2021 and 2025 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Barnsley MBC undertook automatic (continuous) monitoring at 3 sites during 2025. Table A.1 in Appendix A shows the details of the automatic monitoring sites. The [Air Quality England](#) page presents automatic monitoring results for Barnsley MBC, with automatic monitoring results also available through the [UK-Air website](#).

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

3.1.2 Non-Automatic Monitoring Sites

Barnsley MBC undertook non- automatic (i.e. passive) monitoring of NO₂ at 64 sites during 2025. 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.

No changes were made for the 2025 monitoring period.

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 2025 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.

Exceedances of the NO₂ annual mean air quality objective of 40µg/m³ were observed in three of the non-automatic monitoring sites in 2025. Site 41, located on the boundary of AQMA No.4, recorded 44.7µg/m³. Site 43, also on the boundary of AQMA No.4, recorded 44.0µg/m³. Site 53, located just over 250m from AQMA No. 7, was at 42.2µg/m³. Site 48, which is located within AQMA No.7, did not exceed the air quality objective of 40µg/m³. The concentration at site 48 was 34.1µg/m³.

Taking these monitoring results into consideration, Barnsley MBC will continue monitoring and enacting measures within AQMA No.4 to bring concentrations below the air quality objective.

There were no recorded exceedances of the NO₂ 1-hour mean objective, nor were there any sites with annual means greater than 60µg/m³, which indicates that an exceedance of the 1-hour mean objective is also unlikely at these sites.

3.2.2 Particulate Matter (PM₁₀)

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

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

No exceedances of the PM₁₀ annual mean or daily mean concentrations were observed at either of the monitoring sites within Barnsley MBC.

3.2.3 Particulate Matter (PM_{2.5})

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

No exceedances of the PM_{2.5} annual mean concentrations were observed at either of the monitoring sites within Barnsley MBC.

3.2.4 Sulphur Dioxide (SO₂)

Table A.9 in Appendix A compares the ratified continuous monitored SO₂ concentrations for 2025 with the air quality objectives for SO₂.

No exceedances of the SO₂ 15 minute, 1 hour or 24 hour mean objective were observed at the monitoring site within Barnsley MBC.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA? ⁽¹⁾	Monitoring Technique	Distance to Relevant Exposure (m) ^(1,2)	Distance to kerb of nearest road (m) ⁽¹⁾	Inlet Height (m)
BAR9	Barnsley A635 Kendray Roadside	Roadside	436298	405691	PM ₁₀ , PM _{2.5}	No		Beta Attenuation	N/A	5.0	1.5
BAR11	Barnsley A628 Roadside 2	Roadside	432674	406180	NO ₂	Yes	AQMA 2A	Chemiluminescent	N/A	7.0	1.8
BAR3	Barnsley Gawber	Urban Background	432525	407475	NO ₂ , PM ₁₀ , PM _{2.5}	No		Chemiluminescent, UV Fluorescence, UV Absorption	N/A	N/A	4.0

Notes:

(1) N/A if not applicable

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

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
1	Midhonestones Eastbound	Roadside	423621	399817	NO ₂	No	3.0	2.5	No	2.9
2	Langsett, Stanley Cottages	Roadside	421102	400496	NO ₂	Yes, AQMA 6	0.0	1.5	No	3.0
3	Footpath Sign, School House, Langsett	Roadside	421143	400481	NO ₂	Yes, AQMA 6	0.0	3.5	No	1.9
4	Langsett, School House	Roadside	421126	400485	NO ₂	Yes, AQMA 6	0.0	2.0	No	2.8
5	Langsett, Café	Roadside	421291	400482	NO ₂	Yes, AQMA 6	0.0	2.0	No	2.9
6	Langsett, Wagon and Horses	Roadside	421282	400471	NO ₂	Yes, AQMA 6	0.0	3.0	No	2.6
7	Gilbert Hill - Langsett	Roadside	421117	400501	NO ₂	Yes, AQMA 6	7.5	2.5	No	2.6
8	Langsett - Footpath Sign Bus Stop	Roadside	421215	400475	NO ₂	Yes, AQMA 6	2.0	2.0	No	2.1
9	Claycliffe Road / Barugh Lane	Kerbside	431482	408572	NO ₂	No	0.0	1.5	No	2.8
10	60 Gawber Road, Gawber (70)	Roadside	433563	406982	NO ₂	No	0.0	0.0	No	2.6
11	23 Dodworth Road	Roadside	434000	406292	NO ₂	Yes, AQMA 2A	0.0	0.0	No	2.7
12	53 Dodworth Road	Roadside	433910	406290	NO ₂	Yes, AQMA 2A	0.0	0.0	No	2.8
13	Traffic Lights Dodworth Road	Roadside	433820	406278	NO ₂	Yes, AQMA 2A	2.5	2.5	No	2.9
14	Dodworth Road - SE of Cross Roads	Roadside	432702	406160	NO ₂	Yes, AQMA 2A	13.0	3.0	No	2.7
15, 16, 17	Pogmoor Crossroads	Roadside	432674	406180	NO ₂	Yes, AQMA 2A	0.0	7.0	Yes	1.7
18	Pogmoor Road CCTV Pole Opp Apartments	Roadside	432603	406312	NO ₂	No	0.0	5.3	No	2.8

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)
19	67 Gawber Road, Gawber (71)	Roadside	433351	407074	NO ₂	No	0.0	0.0	No	2.8
20	Dodworth Road - Outbound - LC 54	Roadside	432535	406071	NO ₂	Yes, AQMA 2A	7.5	1.5	No	3.0
21	305 Dodworth Road	Roadside	432402	406013	NO ₂	Yes, AQMA 2A	8.0	3.0	No	2.9
22	315 Dodworth Rd, Pogmoor	Kerbside	432351	405985	NO ₂	Yes, AQMA 2A	11.5	2.5	No	2.9
23	329 Dodworth Rd, Pogmoor	Roadside	432262	405950	NO ₂	Yes, AQMA 1	8.0	2.0	No	3.0
24	Cross Keys, Hoyland	Kerbside	435274	400384	NO ₂	No	6.5	1.0	No	2.8
25	25 Sheffield Road, Birdwell	Roadside	434832	400405	NO ₂	No	3.0	1.5	No	2.9
26	20 Sheffield Road, Birdwell	Roadside	434820	400421	NO ₂	No	3.0	1.5	No	2.8
27	Aetherius Temple, Birdwell	Roadside	434823	400398	NO ₂	No	0.0	0.0	No	2.9
28	LC 9, 2 Pogmoor Road, Gawber (72)	Roadside	433299	406873	NO ₂	No	0.0	0.0	No	2.7
29	5, Moor Lane, Birdwell	Urban Background	434721	400352	NO ₂	Yes, AQMA 1	0.0	0.0	No	2.7
30	Don Villas, Barnsley Road, Penistone (73)	Roadside	424388	403694	NO ₂	No	0.0	0.0	No	2.7
31	Sheffield Rd, Birdwell - LC 32	Roadside	434595	401107	NO ₂	No	0.0	1.7	No	3.0
32	12 High Street, Royston	Roadside	436150	411395	NO ₂	No	0.0	0.0	No	2.5
33	Cherry Cakes, Midland Road, Royston	Roadside	436198	411469	NO ₂	No	0.0	0.0	No	2.9
34	Wakefield Road / Carlton Road	Roadside	435011	408281	NO ₂	No	7.0	2.0	No	3.5
35	Wakefield Road - South of Carlton Road	Roadside	435027	408190	NO ₂	No	0.0	0.0	No	2.8

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)
36	Wakefield Road / Smithies Lane (North)	Roadside	435027	408104	NO ₂	No	6.5	2.0	No	2.7
37	Wakefield Rd – app. Burton Rd junc.	Roadside	435174	407499	NO ₂	No	5.8	1.7	No	2.8
38	Old Mill Lane / Honeywell Street	Kerbside	434757	406995	NO ₂	No	3.0	0.3	No	2.8
39	Burton Road – app Rotherham Rd junc.	Kerbside	436072	407320	NO ₂	No	2.5	0.5	No	2.7
40	Grange Lane, near to Cundy Cross junc.	Roadside	437122	406557	NO ₂	No	6.0	1.4	No	2.8
41	49 Harbrough Hill Road	Roadside	434933	406695	NO ₂	Yes, AQMA 4	8.0	2.0	No	2.7
42	11 Eldon Street North	Roadside	434733	406774	NO ₂	No	4.0	0.5	No	2.7
43	Harbrough Hills Road – near to bakery	Roadside	434955	406769	NO ₂	Yes, AQMA 4	5.0	2.0	No	2.9
44	119 Harbrough Hills	Roadside	435049	407047	NO ₂	Yes, AQMA 4	0.0	0.0	No	2.9
45	Junc Dodworth Road/Shaw Lane (74)	Roadside	433431	406272	NO ₂	Yes, AQMA 2A	8.1	1.8	No	2.7
46	Tesco, Wwell Lane	Kerbside	437554	405291	NO ₂	No	4.0	0.7	No	3.2
47	Sheffield Road / Park Road Xrds	Roadside	434958	405672	NO ₂	No	0.0	0.0	No	2.8
48	Sheffield Road / Cemetery Road Xrds	Roadside	434964	405709	NO ₂	Yes, AQMA 7	1.5	2.0	No	2.7
49	Doncaster Road, Ardsley	Kerbside	437528	405675	NO ₂	No	3.9	0.5	No	2.8
50	Carlton Road (W'fd Road junction) uphill	Roadside	435062	408244	NO ₂	No	5.5	1.5	No	2.8
51	Hoyland Common Primary School (75)	Roadside	435481	400222	NO ₂	No	6.0	1.4	No	2.8
52	Wakefield Road / Bar Lane junction	Roadside	434112	409625	NO ₂	No	2.8	1.6	No	2.7

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)
53	Sheffield Road, town centre	Roadside	434809	406023	NO ₂	No	2.5	0.3	No	2.7
54	LC8 Bridge Street, Penistone (76)	Roadside	424424	403587	NO ₂	No	0.0	15.0	No	2.5
55	Wombwell Lane, adj. Keel Inn	Roadside	437367	405458	NO ₂	No	2.4	1.6	No	1.2
56	10 Thurlstone Road, Penistone (77)	Roadside	424313	403645	NO ₂	No	0.0	12.0	No	2.8
57	Grange Lane, Stairfoot, northbound	Roadside	437242	405772	NO ₂	No	1.5	1.5	No	3.0
58	Grange Lane, Stairfoot, southbound	Roadside	437250	405813	NO ₂	No	2.3	2.3	No	2.9
59	Entrance to Horizon, sign	Roadside	432882	406259	NO ₂	Yes, AQMA 2A	52.0	3.0	No	2.9
60	LC41, opp Horizon Entrance	Roadside	432817	406244	NO ₂	Yes, AQMA 2A	90.0	3.0	No	2.1
61	LC16, Sheffield Road	Roadside	434780	406055	NO ₂	No	40.0	1.5	No	3.1
62	LC22, Quarry St/Sheffield Rd	Roadside	434855	405957	NO ₂	No	5.1	1.4	No	3.0
63	LC35, Sheffield Road	Roadside	434912	405817	NO ₂	No	0.0	4.6	No	2.9
64	LC32, Sheffield Road	Roadside	434931	405781	NO ₂	No	12.0	4.6	No	3.2

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.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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
BAR11	432674	406180	Roadside	97.3	97.3	24	19	16	16.6	17.9
BAR3	432525	407475	Urban Background	68.6	68.6	13	13	12	11.1	11.0

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

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

☒ Where exceedances of the NO₂ annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2025.

Notes:

The annual mean concentrations are presented as µg/m³.

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

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

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

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

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

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
1	423621	399817	Roadside	100.0	100.0	19.3	19.7	19.8	18.8	17.8
2	421102	400496	Roadside	90.4	90.4	23.5	26.8	25.7	24.9	23.8
3	421143	400481	Roadside	100.0	100.0	34.4	37.2	37.3	36.1	33.8
4	421126	400485	Roadside	100.0	100.0	34.8	37.5	35.1	33.5	31.9
5	421291	400482	Roadside	100.0	100.0	22.5	24.7	23.7	22.2	20.3
6	421282	400471	Roadside	100.0	100.0	27.7	26.7	27.1	25.9	26.1
7	421117	400501	Roadside	84.6	84.6	18.8	21.7	20.8	19.7	18.8
8	421215	400475	Roadside	100.0	100.0	36.3	40.2	36.6	37.6	37.1
9	431482	408572	Kerbside	92.3	92.3	20.0	21.2	20.5	20.3	21.3
10	433563	406982	Roadside	92.3	92.3	-	-	20.7	17.8	17.1
11	434000	406292	Roadside	100.0	100.0	29.1	28.2	30.7	30.0	29.2
12	433910	406290	Roadside	100.0	100.0	29.0	29.7	29.9	29.7	28.4
13	433820	406278	Roadside	100.0	100.0	31.8	31.6	32.7	31.4	30.1
14	432702	406160	Roadside	84.6	84.6	29.7	26.3	26.2	25.3	25.0
15, 16, 17	432674	406180	Roadside	100.0	100.0	26.6	19.3	18.6	18.3	18.1
18	432603	406312	Roadside	100.0	100.0	17.3	17.3	17.1	16.2	16.7
19	433351	407074	Roadside	100.0	100.0	-	-	19.5	20.4	17.4
20	432535	406071	Roadside	92.3	92.3	31.0	29.7	30.0	29.1	27.6
21	432402	406013	Roadside	100.0	100.0	31.8	32.8	32.2	31.2	30.0
22	432351	405985	Kerbside	90.4	90.4	34.6	35.8	35.6	33.1	32.6
23	432262	405950	Roadside	100.0	100.0	31.5	31.6	30.1	32.3	29.7
24	435274	400384	Kerbside	100.0	100.0	24.4	23.1	20.8	19.8	19.7
25	434832	400405	Roadside	100.0	100.0	32.4	27.8	27.3	25.5	26.3
26	434820	400421	Roadside	100.0	100.0	32.5	29.1	28.7	28.1	25.6
27	434823	400398	Roadside	92.3	92.3	27.4	27.8	25.1	23.9	24.7
28	433299	406873	Roadside	90.4	90.4	-	-	20.9	22.2	20.2
29	434721	400352	Urban Background	82.7	82.7	19.0	20.3	18.7	18.5	21.0
30	424388	403694	Roadside	92.3	92.3	-	-	18.6	16.1	15.6

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
31	434595	401107	Roadside	100.0	100.0	21.7	21.5	19.9	18.4	20.3
32	436150	411395	Roadside	92.3	92.3	24.7	25.9	23.3	17.2	17.3
33	436198	411469	Roadside	100.0	100.0	-	-	-	30.1	28.5
34	435011	408281	Roadside	100.0	100.0	24.3	23.8	24.0	24.2	22.9
35	435027	408190	Roadside	100.0	100.0	28.9	26.6	25.9	26.4	25.9
36	435027	408104	Roadside	100.0	100.0	31.7	31.3	29.4	29.7	27.1
37	435174	407499	Roadside	100.0	100.0	23.7	23.0	21.8	22.7	20.3
38	434757	406995	Kerbside	90.4	90.4	29.5	29.5	28.2	26.5	25.1
39	436072	407320	Kerbside	100.0	100.0	34.8	32.6	31.9	30.4	30.0
40	437122	406557	Roadside	65.4	65.4	35.4	33.1	31.4	31.3	29.7
41	434933	406695	Roadside	92.3	92.3	51.3	49.7	48.4	48.2	44.7
42	434733	406774	Roadside	100.0	100.0	28.2	29.6	28.2	27.2	28.6
43	434955	406769	Roadside	100.0	100.0	47.9	50.1	48.0	48.4	44.0
44	435049	407047	Roadside	100.0	100.0	30.3	32.8	30.8	31.1	29.4
45	433431	406272	Roadside	100.0	100.0	-	-	22.5	22.1	20.9
46	437554	405291	Kerbside	100.0	100.0	29.4	33.1	30.3	31.3	30.5
47	434958	405672	Roadside	100.0	100.0	24.9	26.6	24.4	23.8	23.8
48	434964	405709	Roadside	100.0	100.0	33.6	36.9	35.8	34.9	34.1
49	437528	405675	Kerbside	100.0	100.0	31.2	33.9	29.4	32.0	31.8
50	435062	408244	Roadside	100.0	100.0	27.1	27.9	26.3	23.1	26.0
51	435481	400222	Roadside	100.0	100.0	-	-	19.4	19.9	20.8
52	434112	409625	Roadside	100.0	100.0	25.0	26.3	25.5	24.7	25.3
53	434809	406023	Roadside	75.0	75.0	45.0	43.6	44.4	44.0	42.2
54	424424	403587	Roadside	84.6	84.6	-	-	12.7	9.8	12.5
55	437367	405458	Roadside	100.0	100.0	30.2	30.1	28.3	29.2	26.3
56	424313	403645	Roadside	100.0	100.0	-	-	14.4	14.0	14.5
57	437242	405772	Roadside	92.3	92.3	27.9	31.7	28.8	27.9	27.3
58	437250	405813	Roadside	100.0	100.0	26.6	27.3	25.6	22.7	21.9
59	432882	406259	Roadside	100.0	100.0	22.2	20.1	18.9	18.0	16.4

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
60	432817	406244	Roadside	67.3	67.3	23.0	19.2	19.0	17.2	16.2
61	434780	406055	Roadside	75.0	75.0	38.9	36.7	36.1	34.3	33.1
62	434855	405957	Roadside	65.4	65.4	42.6	39.1	36.3	37.4	34.5
63	434912	405817	Roadside	75.0	75.0	24.2	25.4	24.2	22.4	23.4
64	434931	405781	Roadside	100.0	100.0	26.4	26.4	23.5	23.0	24.4

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

☒ Diffusion tube data has been bias adjusted.

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

Notes:

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

Exceedances of the 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.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

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

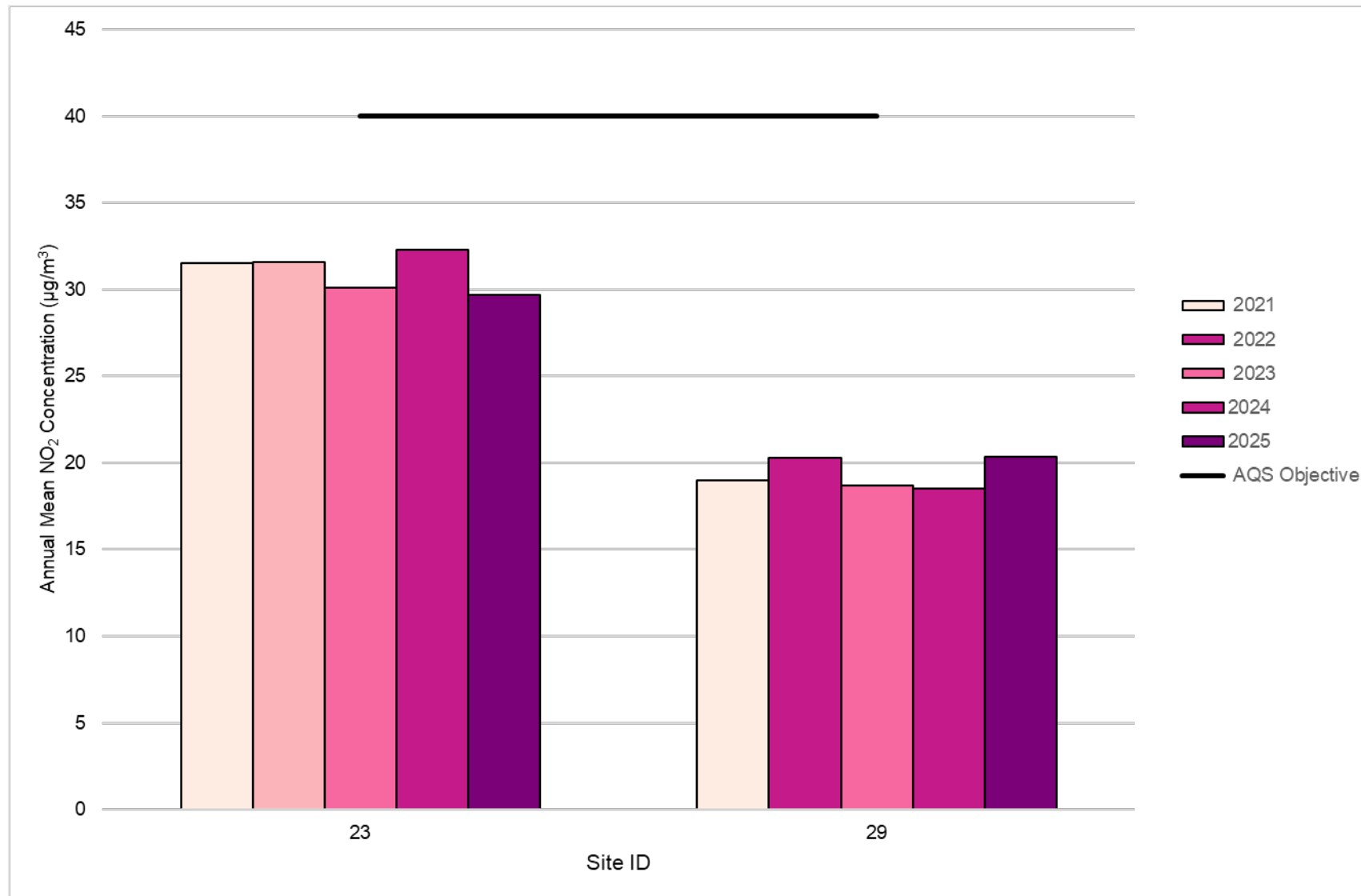
Figure A.1 - Trends in Annual Mean NO₂ Concentrations in AQMA 1

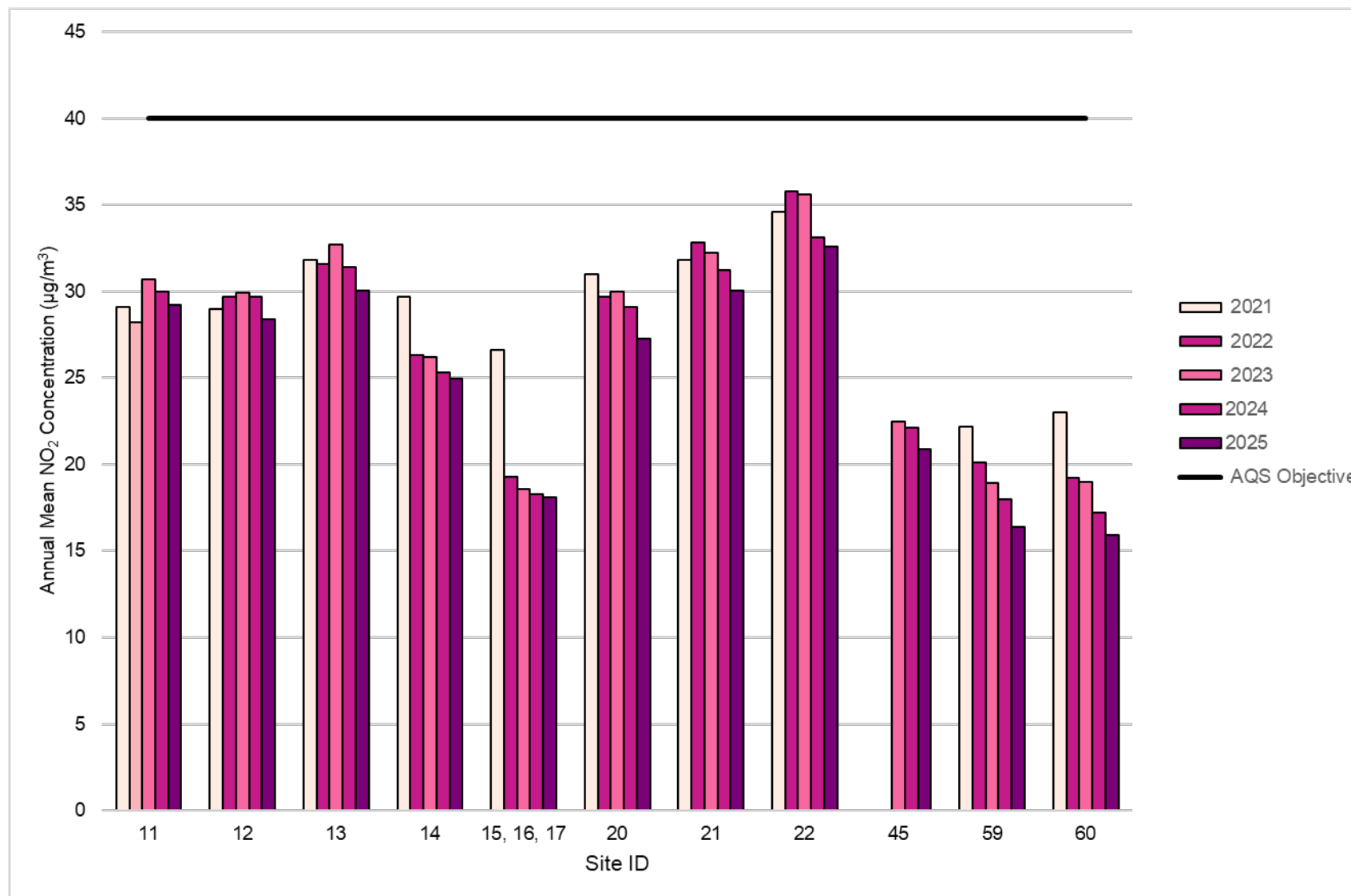
Figure A.2 - Trends in Annual Mean NO₂ Concentrations in AQMA 2A

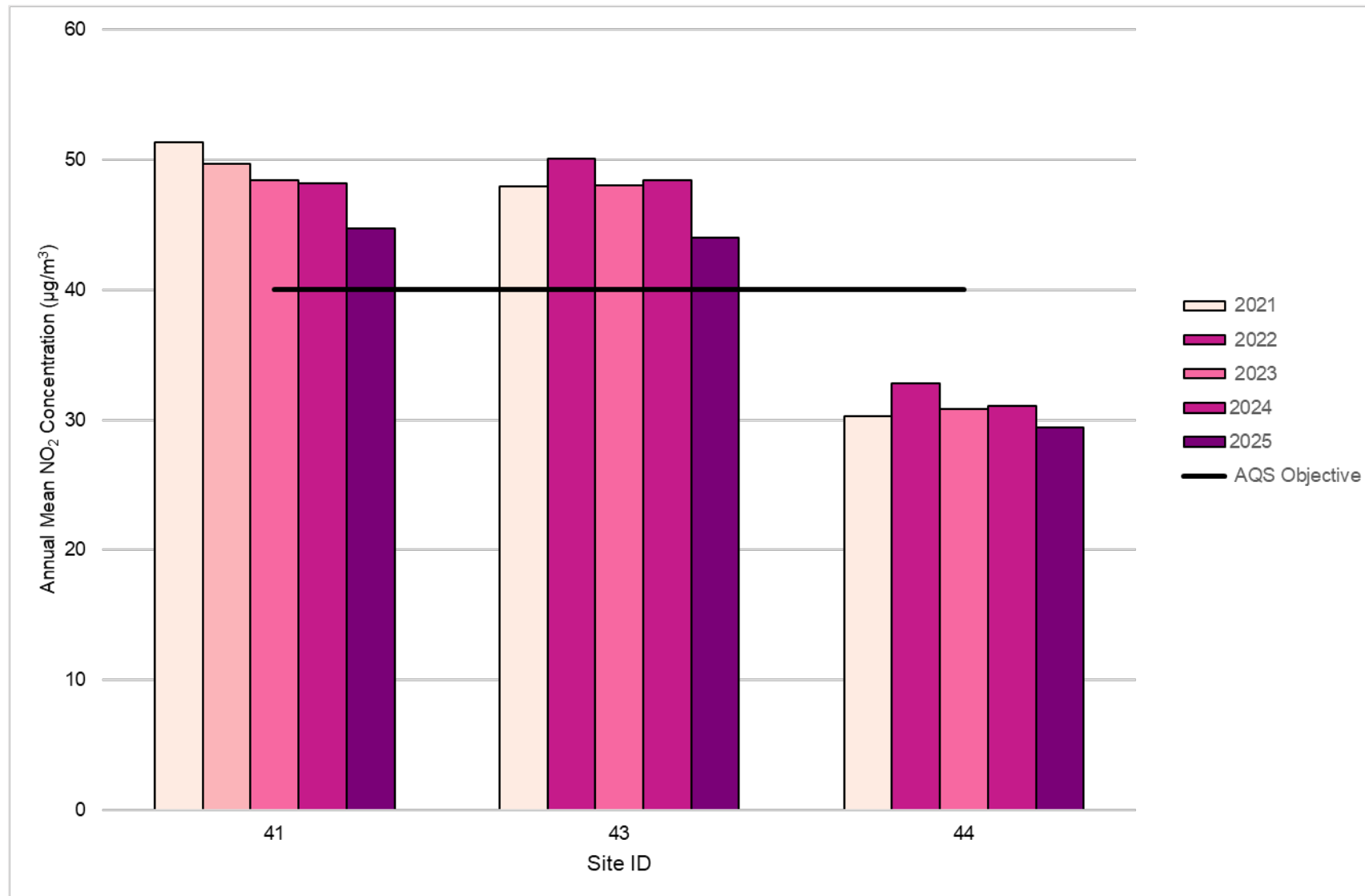
Figure A. 3 - Trends in Annual Mean NO₂ Concentrations in AQMA 4

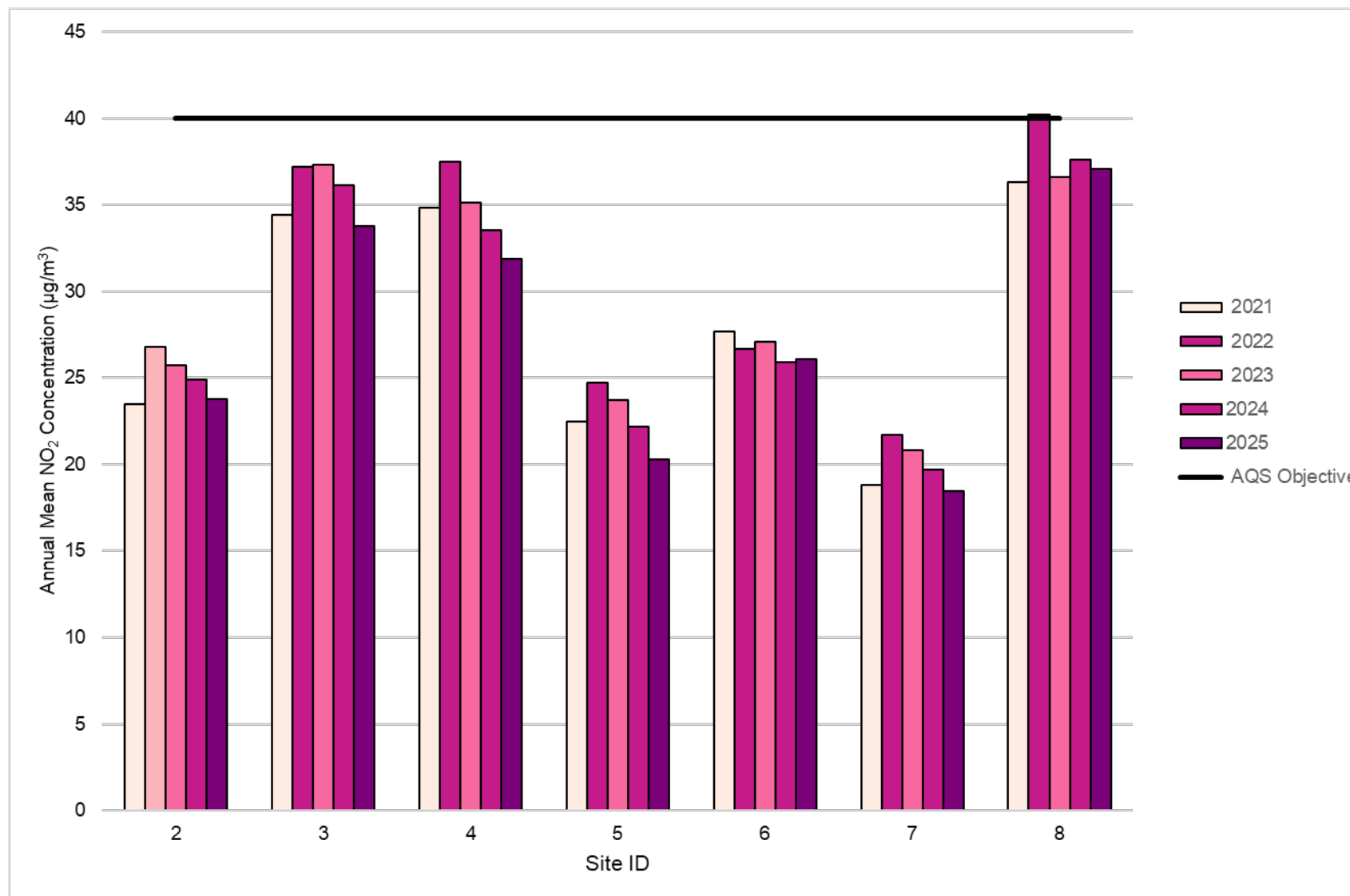
Figure A.4 - Trends in Annual Mean NO₂ Concentrations in AQMA 6

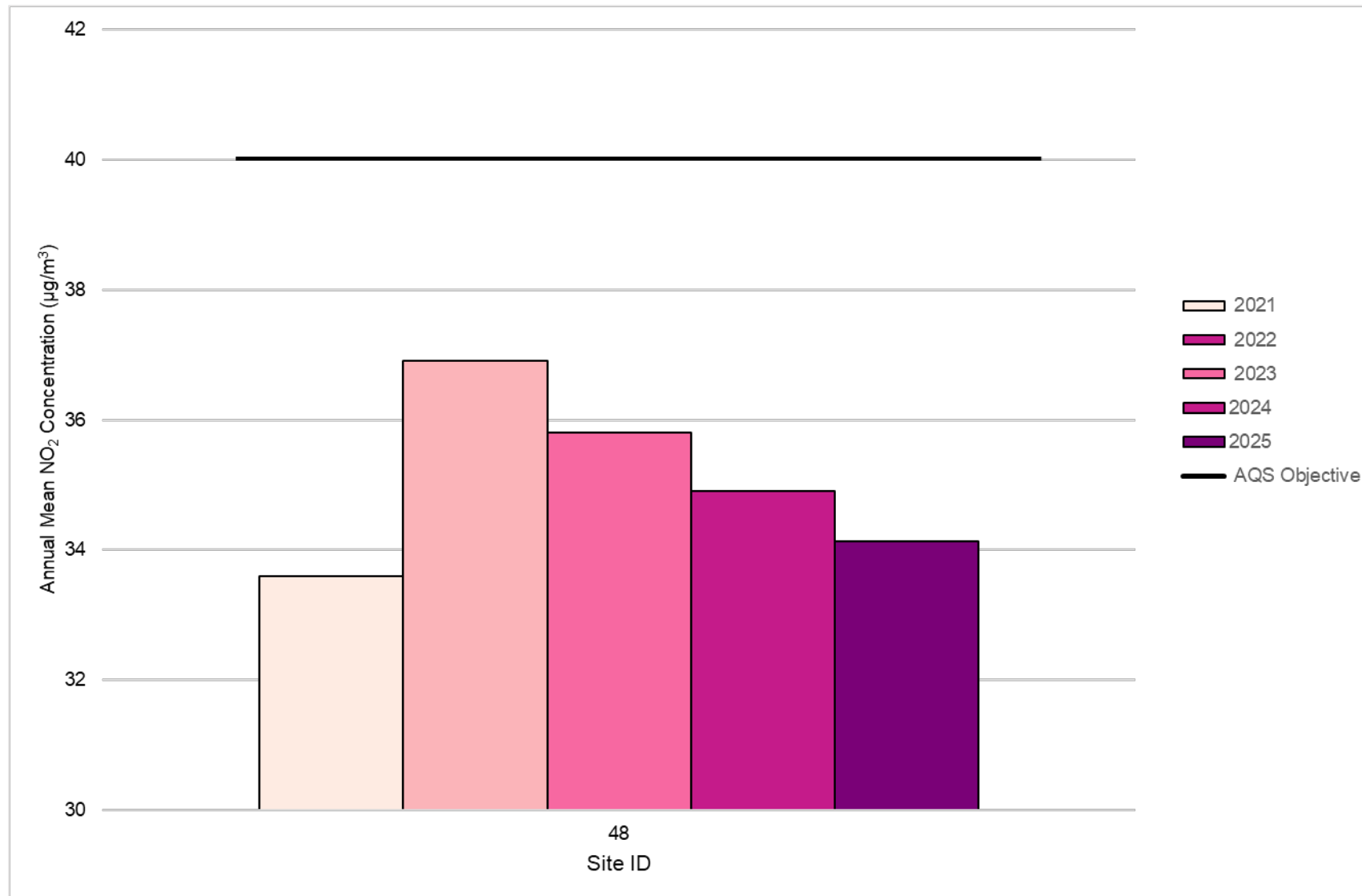
Figure A.5 - Trends in Annual Mean NO₂ Concentrations in AQMA 7

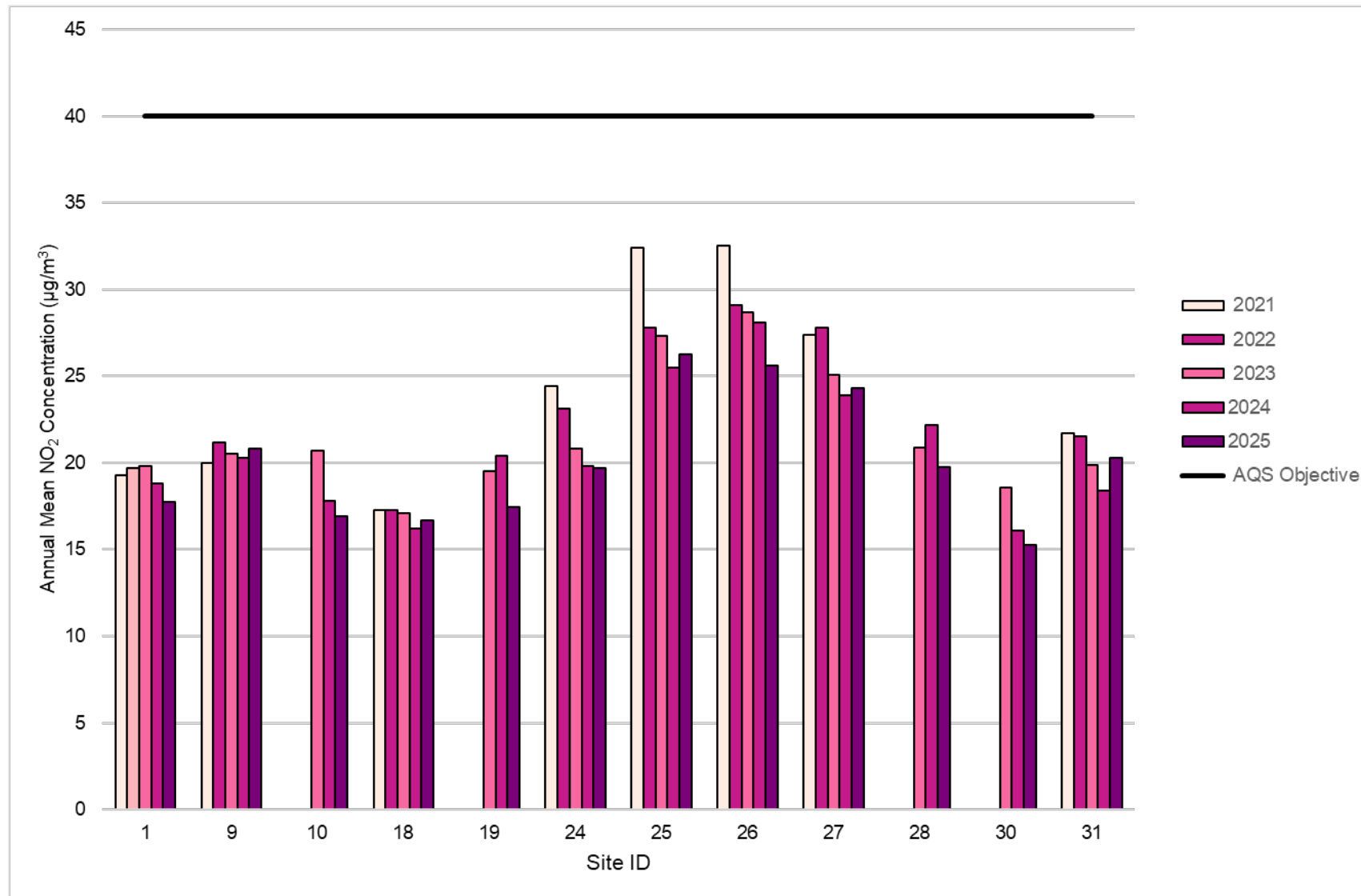
Figure A.6 - Trends in Annual Mean NO₂ Concentrations outside of AQMAs - 1

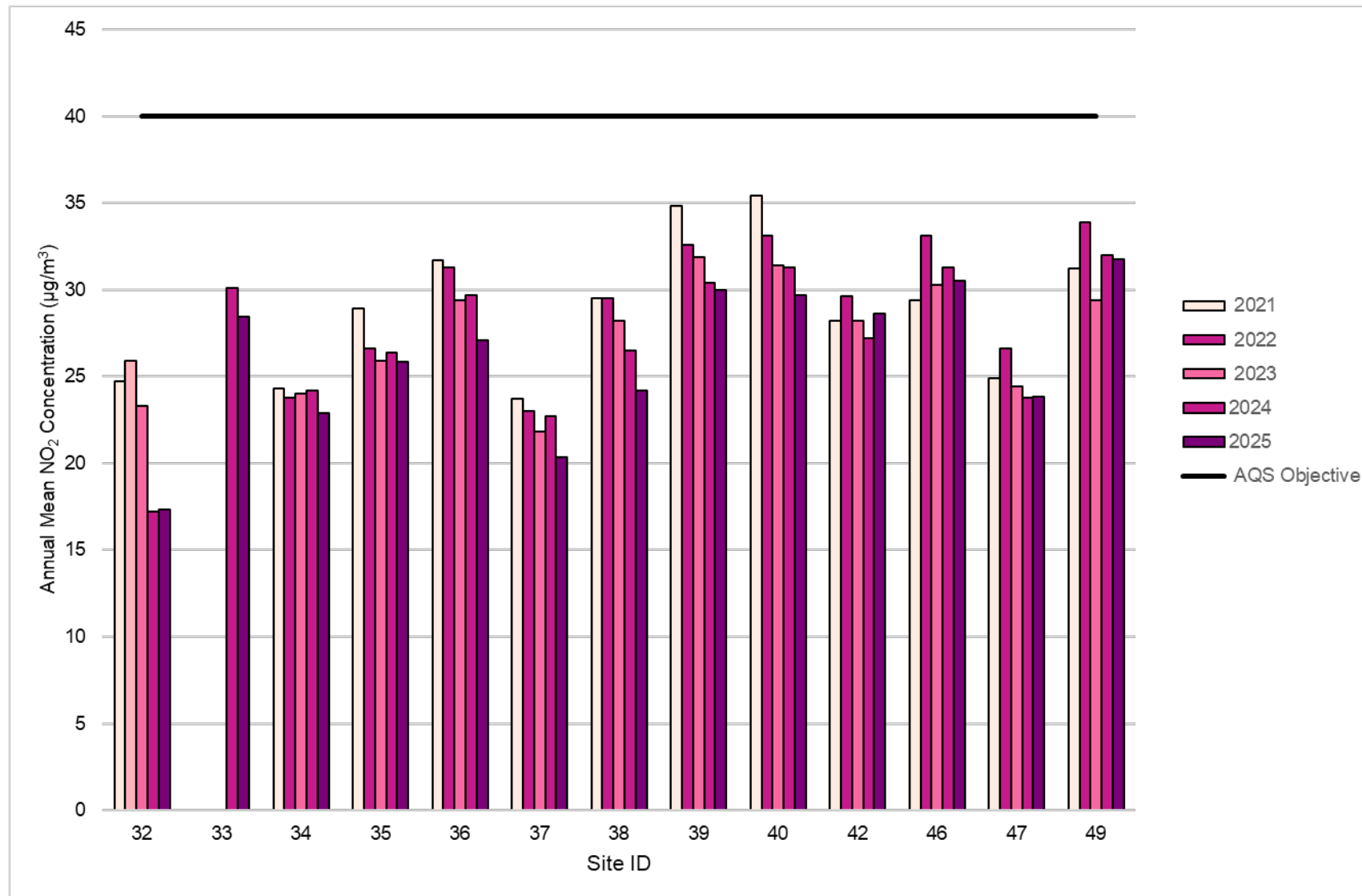
Figure A.7 - Trends in Annual Mean NO₂ Concentrations outside of AQMAs - 2

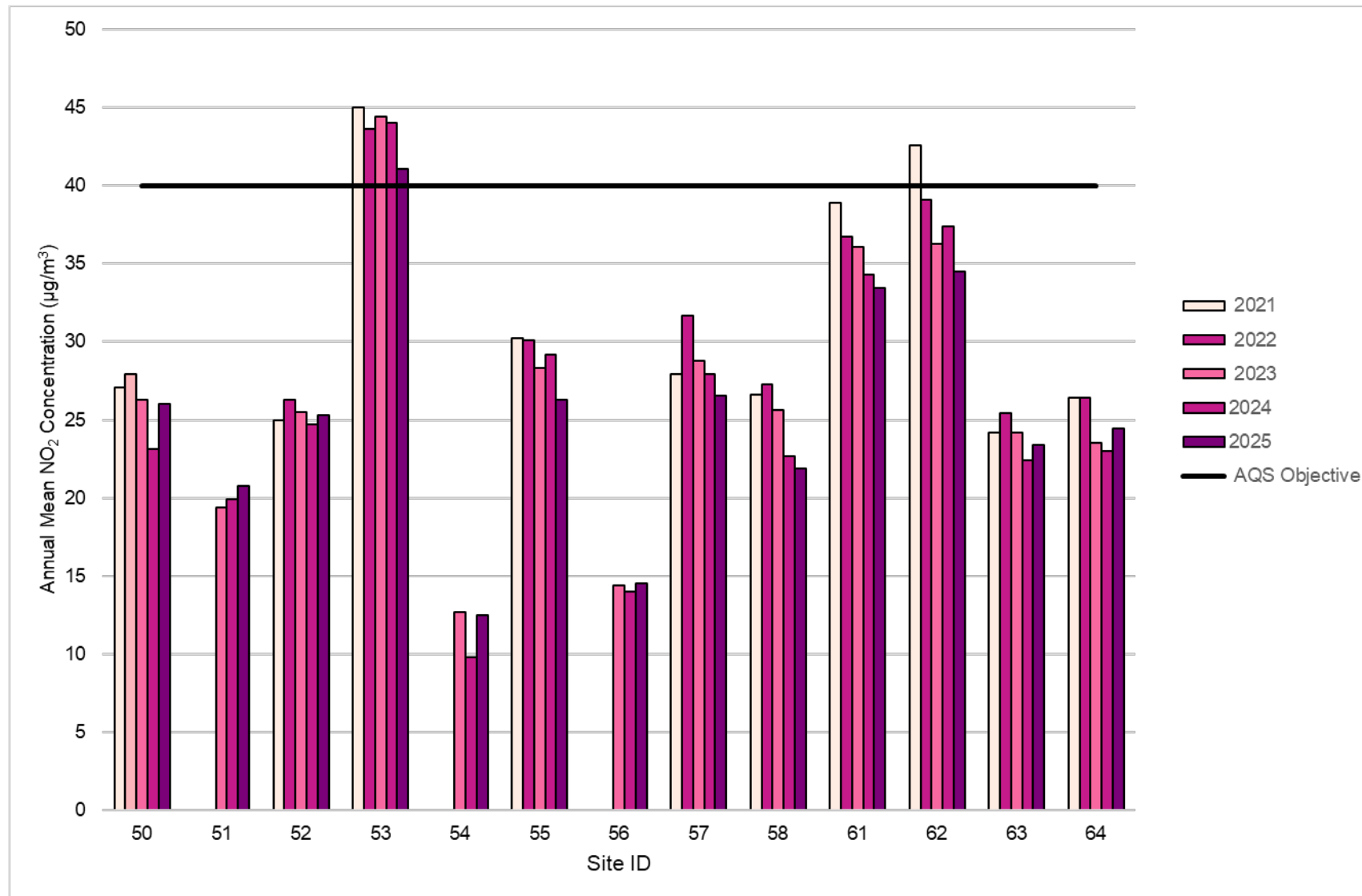
Figure A.8 - Trends in Annual Mean NO₂ Concentrations outside of AQMAs - 3

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 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
BAR11	432674	406180	Roadside	97.3	97.3	0	0	0	0	0
BAR3	432525	407475	Urban Background	68.6	68.6	0	0	0	0	0 (73)

Notes:

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

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

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

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

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

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
BAR9	436298	405691	Roadside	99.9	99.9	19	21	20	16.9	16.9
BAR3	432525	407475	Urban Background	99.9	99.9	-	-	12	11.4	13.1

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

Notes:

The annual mean concentrations are presented as µg/m³.

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

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

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

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

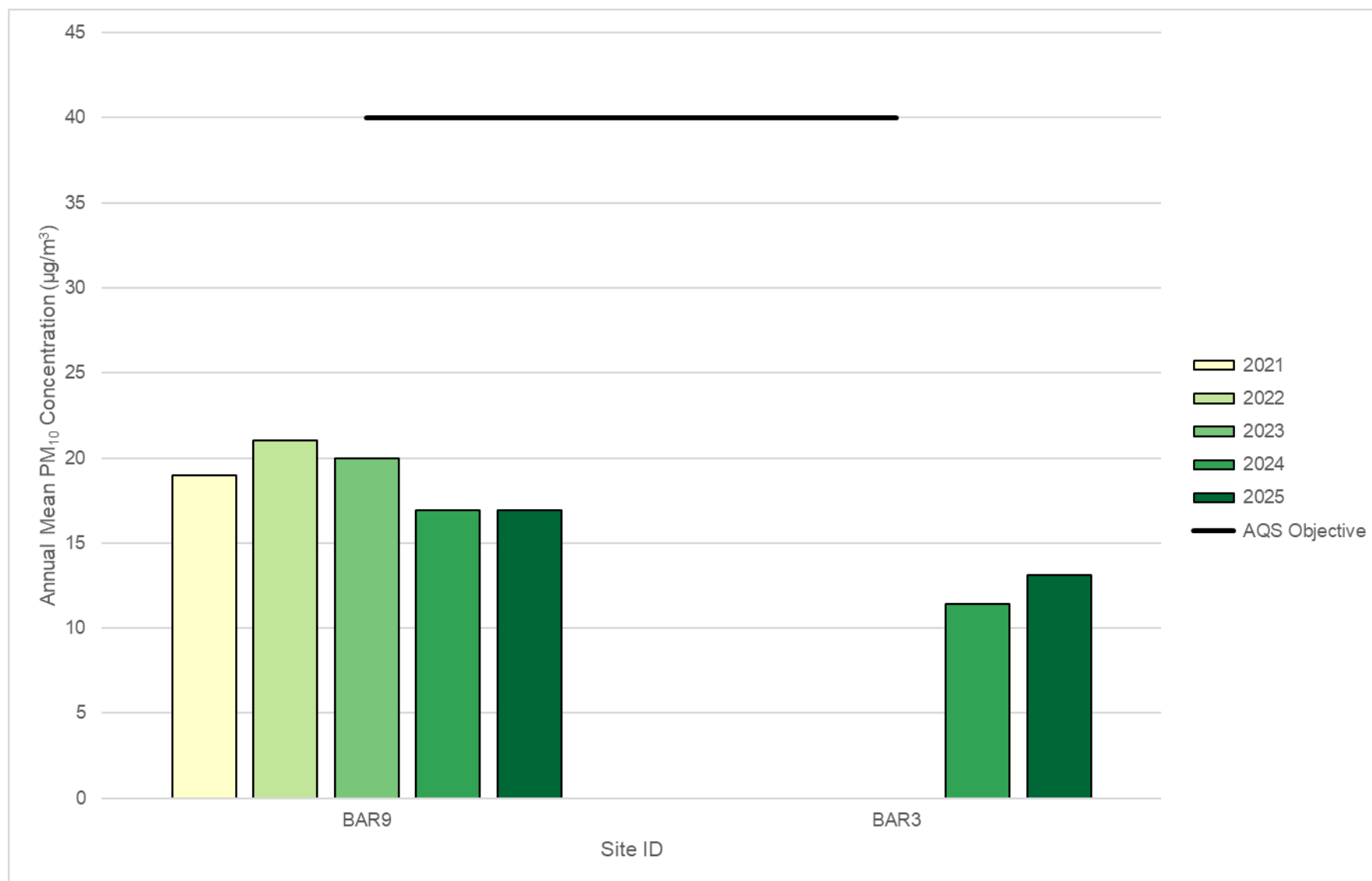
Figure A.9 - Trends in Annual Mean PM₁₀ Concentrations

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
BAR9	436298	405691	Roadside	99.9	99.9	1	7	1	2	6
BAR3	432525	407475	Urban Background	99.9	99.9	-	-	0	0	2

Notes:

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

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

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

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

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

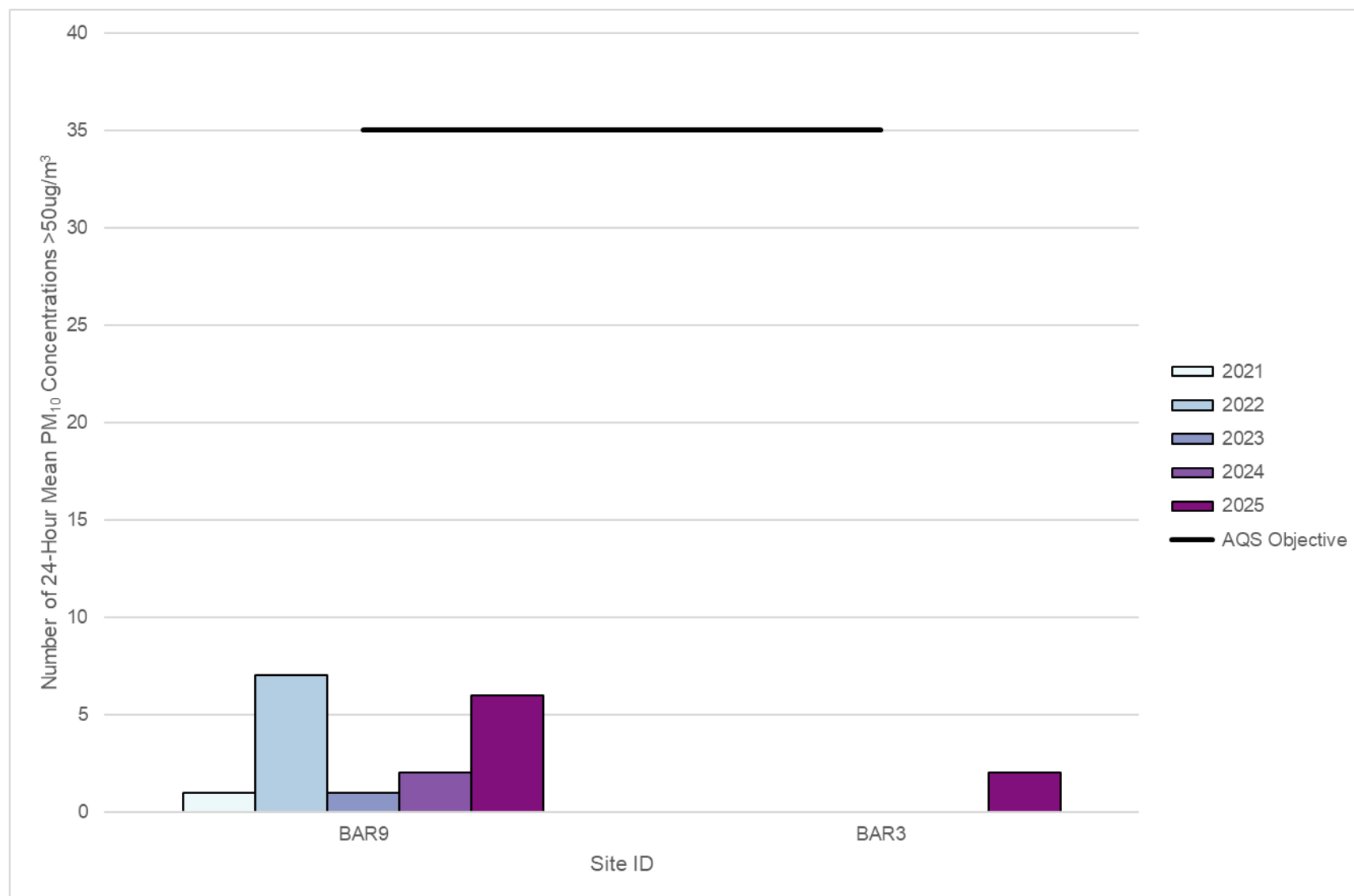
Figure A.10 - Trends in Number of 24-Hour Mean PM₁₀ Results > 50µg/m³

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2021	2022	2023	2024	2025
BAR9	436298	405691	Roadside	99.9	99.9	-	-	-	-	9.6
BAR3	432525	407475	Urban Background	99.9	99.9	-	-	7	7.1	7.8

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

Notes:

The annual mean concentrations are presented as µg/m³.

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

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

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

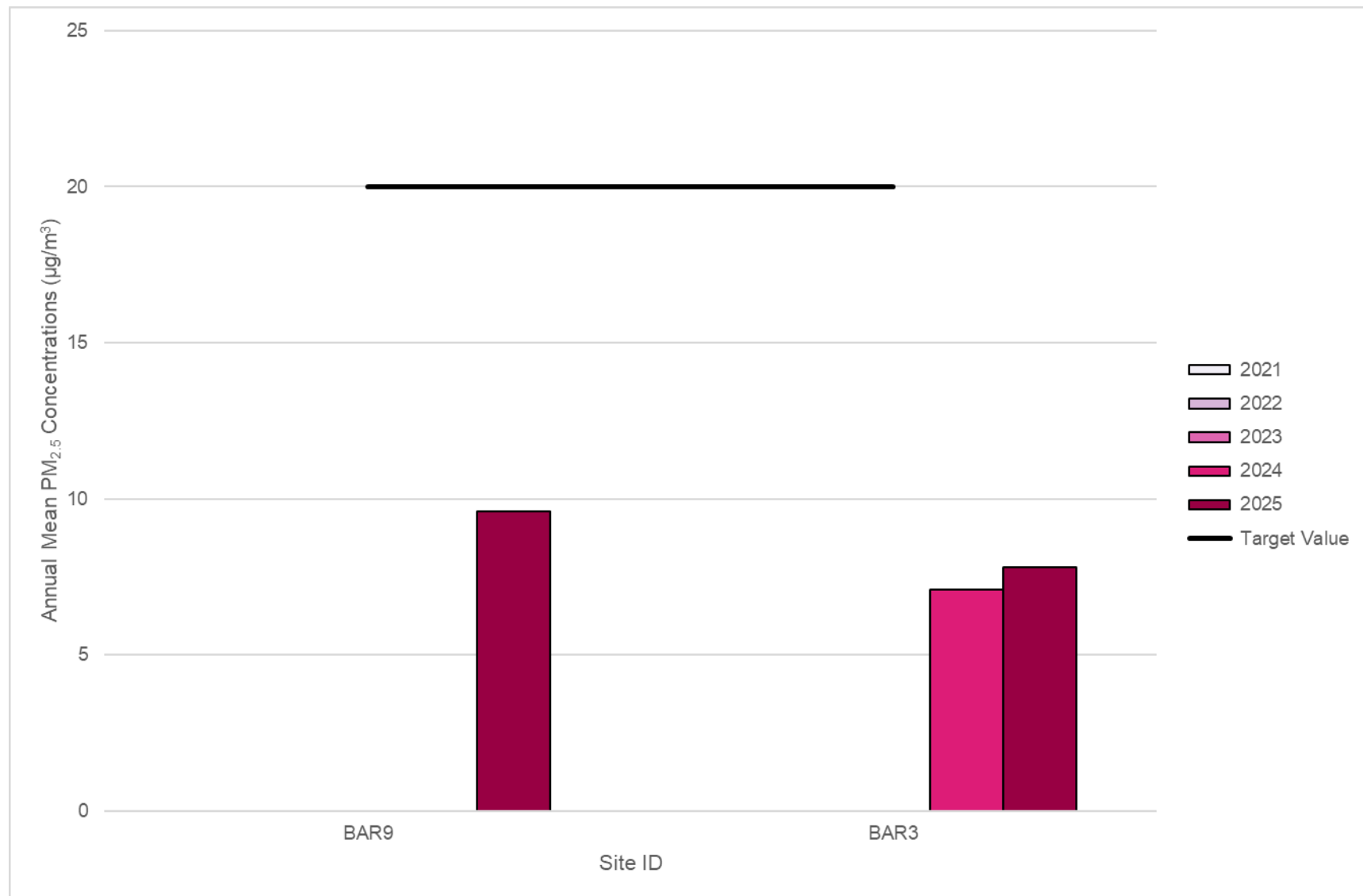
Figure A.11 - Trends in Annual Mean PM_{2.5} Concentrations

Table A.9 – SO₂ 2025 Monitoring Results, Number of Relevant Instances

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	Number of 15-minute Means > 266µg/m ³	Number of 1-hour Means > 350µg/m ³	Number of 24-hour Means > 125µg/m ³
BAR3	432525	407475	Urban Background	66.1	66.1	0(10.2)	0(7.3)	0(3.3)

Notes:

Results are presented as the number of instances where monitored concentrations are greater than the objective concentration.

Exceedances of the SO₂ objectives are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year).

If the period of valid data is less than 85%, the relevant percentiles are 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 2025

Table B.1 – NO₂ 2025 Diffusion Tube Results (µg/m³)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.92)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	423621	399817	17.5	22.2	21.3	22.6	20.2	17.1	14.7	20.9	17.8	17.2	21.2	19.5	19.4	17.8	-	
2	421102	400496	27.4	27.4	24.9	32.6	25.4	24.3		30.1	24.4	24.5	23.9	19.8	25.9	23.8	-	
3	421143	400481	37.1	33.0	33.0	43.8	39.5	37.3	31.5	45.1	37.9	29.5	39.2	34.8	36.8	33.8	-	
4	421126	400485	38.3	31.5	28.2	34.3	36.0	40.9	34.4	41.1	32.5	32.6	36.3	30.8	34.7	31.9	-	
5	421291	400482	27.0	22.5	21.4	24.0	21.2	20.2	21.4	23.0	22.2	20.4	22.1	19.7	22.1	20.3	-	
6	421282	400471	31.4	26.7	27.3	35.2	31.4	27.1	27.3	29.8	26.6	27.7	29.8	20.8	28.4	26.1	-	
7	421117	400501	22.2	21.6	17.1	23.1	15.8	23.8	19.2	22.3		21.3		18.7	20.5	18.8	-	
8	421215	400475	47.6	38.8	36.4	45.8	41.2	36.8	39.0	45.0	38.1	35.7	42.5	37.8	40.4	37.1	31.9	
9	431482	408572	31.0	25.6	23.1	27.2	21.5		15.8	21.8	19.9	19.8	27.2	22.6	23.2	21.3	-	
10	433563	406982	25.7	20.2	19.0	21.9	13.7		13.6	16.5	18.2	16.9	19.7	19.9	18.7	17.1	-	
11	434000	406292	35.7	34.1	36.2	37.1	33.3	26.3	27.6	30.8	28.3	30.0	31.1	31.7	31.8	29.2	-	
12	433910	406290	38.1	34.4	33.6	36.7	30.8	24.5	27.3	29.2	26.7	26.1	33.8	29.8	30.9	28.4	-	
13	433820	406278	43.8	36.6	30.6	34.2	27.9	28.3	30.1	36.0	30.6	27.5	35.7	31.9	32.8	30.1	-	
14	432702	406160	35.6	31.5	29.2		28.8		24.1	24.2	23.4	24.2	25.5	25.7	27.2	25.0	-	
15	432674	406180	27.3	24.6	20.2	25.1	15.8	15.1	11.2	18.7	16.9	15.1	24.0	22.0	-	-	-	Triplicate Site with 15, 16 and 17 - Annual data provided for 17 only
16	432674	406180	28.8	22.3	19.9	24.6	15.7	16.6	11.9	19.0	18.3	17.5	22.8	20.4	-	-	-	Triplicate Site with 15, 16 and 17 - Annual data provided for 17 only
17	432674	406180	34.9	21.5	20.9	18.3	14.8	15.5	12.3	19.6	18.8	17.4	21.8	21.2	19.7	18.1	-	Triplicate Site with 15, 16 and 17 - Annual data provided for 17 only
18	432603	406312	28.4	24.3	17.2	19.0	14.9	13.2	10.9	15.7	14.8	16.5	24.5	18.8	18.2	16.7	-	
19	433351	407074	30.9	24.6	18.6	19.1	12.9	17.4	11.7	16.3	14.9	17.7	23.7	20.0	19.0	17.4	-	
20	432535	406071	38.9	35.4	26.9	31.2	27.5		24.4	30.6	26.6	26.6	33.6	29.1	30.1	27.6	-	
21	432402	406013	43.5	36.0	35.2	36.3	26.6	33.5	25.9	31.8	31.0	28.7	33.7	30.5	32.7	30.0	-	
22	432351	405985	38.5	38.9	32.4	37.9	35.7	40.0	25.0	40.0	34.5		39.0	28.9	35.5	32.6	-	
23	432262	405950	36.3	36.8	26.3	32.3	30.6	31.5	27.6	36.0	31.6	31.4	37.7	30.4	32.4	29.7	-	
24	435274	400384	27.0	25.0	19.3	22.3	18.4	17.9	20.7	21.4	22.5	16.7	27.9	18.7	21.5	19.7	-	
25	434832	400405	32.7	32.0	30.5	36.2	29.2	22.1	19.8	28.4	26.2	25.7	34.3	26.2	28.6	26.3	-	
26	434820	400421	34.4	30.0	30.9	37.6	30.2	16.0	15.5	27.5	27.5	26.4	30.4	28.1	27.9	25.6	-	
27	434823	400398	29.0	29.8	25.5	33.2	23.0		20.9	26.8	26.3	23.9	33.2	24.5	26.9	24.7	-	

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 (0.92)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
28	433299	406873	32.6	23.2	19.6	23.9	15.7	18.5	20.2	17.6	18.2		27.3	25.9	22.1	20.2	-	
29	434721	400352	30.5	25.4	22.2	27.2	15.5	19.7		20.7		19.9	25.6	21.9	22.9	21.0	-	
30	424388	403694	21.1	18.4	17.1	19.6	14.4		12.7	17.1	16.3	16.5	14.4	19.4	17.0	15.6	-	
31	434595	401107	31.9	24.0	20.3	24.7	15.9	16.6	14.5	22.0	20.6	20.2	31.2	23.2	22.1	20.3	-	
32	436150	411395	26.4	24.1	21.7	18.8	15.9	14.3	11.2	16.4	17.4	18.7		22.5	18.9	17.3	-	
33	436198	411469	41.0	32.3	33.5	34.1	34.5	28.3	26.6	27.3	26.0	24.1	33.4	31.3	31.0	28.5	-	
34	435011	408281	30.0	28.4	24.2	26.4	21.6	22.1	16.4	26.0	21.7	22.5	33.7	26.0	24.9	22.9	-	
35	435027	408190	35.8	31.3	23.8	24.7	24.8	25.2	22.7	31.4	29.0	25.3	33.4	30.7	28.2	25.9	-	
36	435027	408104	32.7	32.5	28.7	34.8	27.1	23.9	24.7	31.2	27.1	26.9	34.1	30.5	29.5	27.1	-	
37	435174	407499	28.3	23.5	23.7	23.8	19.5	18.3	12.4	20.0	19.7	22.0	28.4	26.3	22.2	20.3	-	
38	434757	406995	36.8	26.8	25.9	28.7	22.5	22.6		26.0	25.6	23.2	30.0	32.5	27.3	25.1	-	
39	436072	407320	38.1	37.2	40.9	41.6	35.4	24.7	26.1	32.1	26.2	26.7	33.0	29.9	32.7	30.0	-	
40	437122	406557	36.6	39.0	40.0	42.0	34.0	25.1					34.2	34.2	35.6	29.7	-	
41	434933	406695	47.3	48.8	47.2	61.3	53.6		46.9	58.4	44.5	33.9	48.1	46.0	48.7	44.7	32.0	
42	434733	406774	44.9	37.4	28.4	33.7	33.7	23.6	23.6	29.2	26.7	24.4	36.9	32.0	31.2	28.6	-	
43	434955	406769	54.5	48.7	50.2	48.3	48.3	51.7	46.1	47.3	39.3	40.9	51.9	48.3	48.0	44.0	34.3	
44	435049	407047	41.5	34.0	29.8	33.0	33.0	29.2	27.4	30.7	29.5	27.4	37.2	31.8	32.0	29.4	-	
45	433431	406272	23.6	27.2	27.8	25.9	25.9	17.9	16.9	20.5	21.2	19.6	24.8	21.9	22.8	20.9	-	
46	437554	405291	37.0	35.4	35.3	32.5	32.5	31.7	30.3	32.6	28.8	29.7	40.4	33.3	33.3	30.5	-	
47	434958	405672	31.7	30.3	28.4	26.7	26.7	18.9	19.6	25.4	22.1	22.7	29.8	29.1	26.0	23.8	-	
48	434964	405709	41.4	42.0	39.9	47.4	47.4	27.7	29.0	35.6	29.5	31.3	35.0	40.2	37.2	34.1	-	
49	437528	405675	39.3	42.9	43.7	40.6	40.6	27.6	25.1	32.9	28.3	23.7	38.2	32.8	34.6	31.8	-	
50	435062	408244	33.6	30.9	33.4	26.7	26.7	18.4	24.6	28.5	26.7	23.9	37.0	29.8	28.4	26.0	-	
51	435481	400222	26.5	25.1	26.3	23.3	23.3	16.4	17.2	19.8	21.8	20.1	27.9	24.3	22.6	20.8	-	
52	434112	409625	26.4	34.6	33.8	29.0	29.0	20.6	23.1	26.1	22.4	23.8	32.5	29.7	27.6	25.3	-	
53	434809	406023	51.1	52.3	51.2	53.4	53.4	36.4				34.1	43.0	39.4	46.0	42.2	31.0	
54	424424	403587	11.9	16.5	15.9	14.6	14.6		11.9	11.9		11.8	13.9	12.9	13.6	12.5	-	
55	437367	405458	29.0	28.8	37.3	28.0	28.0	17.6	28.1	23.5	27.0	28.0	35.9	32.8	28.7	26.3	-	
56	424313	403645	16.9	18.2	20.2	18.9	18.9	12.5	10.2	13.3	13.1	13.1	17.6	17.0	15.8	14.5	-	
57	437242	405772	42.8	33.2	30.5	26.8	26.8	24.7	21.5		25.7	25.4	34.9	34.5	29.7	27.3	-	
58	437250	405813	27.1	27.3	28.7	26.1	26.1	11.2	16.7	23.4	21.1	21.0	30.0	27.6	23.9	21.9	-	
59	432882	406259	22.9	22.1	18.6	16.5	16.5	12.7	14.6	16.0	17.4	17.5	23.1	16.9	17.9	16.4	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.92)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
60	432817	406244	30.1	21.5	18.5				11.6	16.1		16.2	23.6	17.8	19.4	16.2	-	
61	434780	406055	37.4	42.5	21.9			37.8	36.2	35.7	33.8	32.6	46.6		36.1	33.1	-	
62	434855	405957	52.3	44.9	50.9	36.6	36.6	26.9					42.6	40.3	41.4	34.5	-	
63	434912	405817	30.7	26.3	27.2	24.4	24.4		20.9	20.8			30.3	24.9	25.5	23.4	-	
64	434931	405781	32.5	26.3	34.0	33.8	33.8	17.6	19.5	24.0	21.5	21.8	30.5	24.1	26.6	24.4	-	

☒ All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table B.1.

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

☒ Local bias adjustment factor used.

☐ National bias adjustment factor used.

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

☒ Barnsley MBC confirm that all 2025 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 Barnsley Metropolitan Borough Council During 2025

Barnsley MBC has not identified any new sources relating to air quality within the reporting year of 2025.

Additional Air Quality Works Undertaken by Barnsley Metropolitan Borough Council During 2025

Barnsley MBC has not completed any additional works within the reporting year of 2025. For the next reporting year of 2026, the council has added 4 new diffusion tube monitoring locations, with monitoring beginning in May 2026. These new sites are located as follows:

- Goldthorpe Road; 445994, 403729
- Entrance to Assembly Way out bound on Keresforth Hill; 433217, 405522
- Braithwaite Street outside numbers 33/35; 433195, 410154
- Lee Lane Royston; 434939, 411341

QA/QC of Diffusion Tube Monitoring

Nitrogen dioxide diffusion tubes for 2025 were analysed by Gradko. The Gradko lab used the analytical technique of the grid adsorbent being 50% triethanolamine (TEA) in acetone. Gradko International Ltd is a UKAS accredited laboratory and participates in laboratory performance and proficiency testing schemes. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO₂ concentrations reported are of a high calibre.

The laboratory follows the procedures set out in the Harmonisation Practical Guidance and participates in the AIR proficiency-testing (AIR-PT) scheme. Defra and the Devolved Administrations advise that diffusion tubes used for LAQM should be obtained from laboratories that have demonstrated satisfactory performance in the AIR-PT scheme. Laboratory performance in the AIR-PT is also assessed by the National Physical Laboratory (NPL), alongside laboratory data from the monthly NPL Field Inter-Comparison Exercise.

In the 2025 AIR-PT results, Gradko scored 100% in AIR-PT AR072 (October – December 2025)¹¹. The percentage score reflects the results deemed to be satisfactory based upon the z-score of $< \pm 2$.

The diffusion tube calendar was adhered to for most of the schedule, with the greatest variation being +5 days in January and September.

Diffusion Tube Annualisation

Annualisation was required at sites 40 and 62 as these sites had data capture less than 75% but greater than 25%. Details of the calculation method undertaken are provided in Table C.1.

Table C.1 - Annualisation Summary (concentrations presented in $\mu\text{g}/\text{m}^3$)

Site ID	Annualisation Factor Dewsbury Ashworth Grange	Annualisation Factor Sheffield Tinsley	Annualisation Factor Sheffield Devonshire Green	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
40	0.8954	0.9330	0.8968	0.9084	35.6	32.4
62	0.8954	0.9330	0.8968	0.9084	41.4	37.6

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2026 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Barnsley MBC have applied a local bias adjustment factor of 0.92 to the 2025 monitoring data. A summary of bias adjustment factors used by Barnsley MBC over the past five years is presented in Table C.2.

¹¹ Available at <https://laqm.defra.gov.uk/wp-content/uploads/2026/03/AIR-PT-Rounds-62-to-74-February-2024-February-2026.pdf>

The local bias adjustment factor of 0.92 was calculated at the BAR11 automatic monitoring site at Pogmoor Crossroads, which is co-located in triplicate with diffusion tubes 15, 16 and 17. A summary of the local bias adjustment factor calculation is given in Table C.3. The national bias adjustment factor given by the National Bias Adjustment Factor Spreadsheet was also 0.92, so the local factor was used due to good agreement.

Table C.2 - Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	Local	-	0.92
2024	National	April 2025	0.88
2023	National	March 2024	0.83
2022	Local	-	0.83
2021	Local	-	0.87

Table C.3 - Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12	-	-	-	-
Bias Factor A	0.92 (0.86 - 0.98)	-	-	-	-
Bias Factor B	9% (2% - 16%)	-	-	-	-
Diffusion Tube Mean ($\mu\text{g}/\text{m}^3$)	19.7	-	-	-	-
Mean CV (Precision)	6.4%	-	-	-	-
Automatic Mean ($\mu\text{g}/\text{m}^3$)	18.1	-	-	-	-
Data Capture	96%	-	-	-	-
Adjusted Tube Mean ($\mu\text{g}/\text{m}^3$)	18 (17 - 19)	-	-	-	-

Notes:

A single local bias adjustment factor has been used to bias adjust the 2025 diffusion tube results.

NO₂ Fall-off with Distance from the Road

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

No diffusion tube NO₂ monitoring locations within Barnsley MBC required distance correction during 2025.

QA/QC of Automatic Monitoring

PM₁₀ and PM_{2.5} Monitoring Adjustment

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

Automatic Monitoring Annualisation

The automatic monitoring site at Barnsley Gawber (BAR3) had NO₂ data capture below 75% but greater than 25%, so required annualisation. The NO₂ annualisation is detailed in Table C.4.

Table C.4 - Automatic NO₂ Annualisation Summary (concentrations presented in µg/m³)

Background Site	Annual Data Capture (%)	Annual Mean (A _m)	BAR3	
			Period Mean (P _m)	Ratio (A _m / P _m)
Dewsbury Ashworth Grange	89.1	16.6	16.5	1.006
Sheffield Tinsley	98.5	19.0	19.0	1.001
Sheffield Devonshire Green	95.9	15.0	14.6	1.030
Average (R _a)			1.012	
Raw Data Annual Mean (M)			10.8	
Annualised Annual Mean (M x R _a)			11.0	

NO₂ Fall-off with Distance from the Road

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

No automatic NO₂ monitoring locations within Barnsley MBC required distance correction during 2025.

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

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

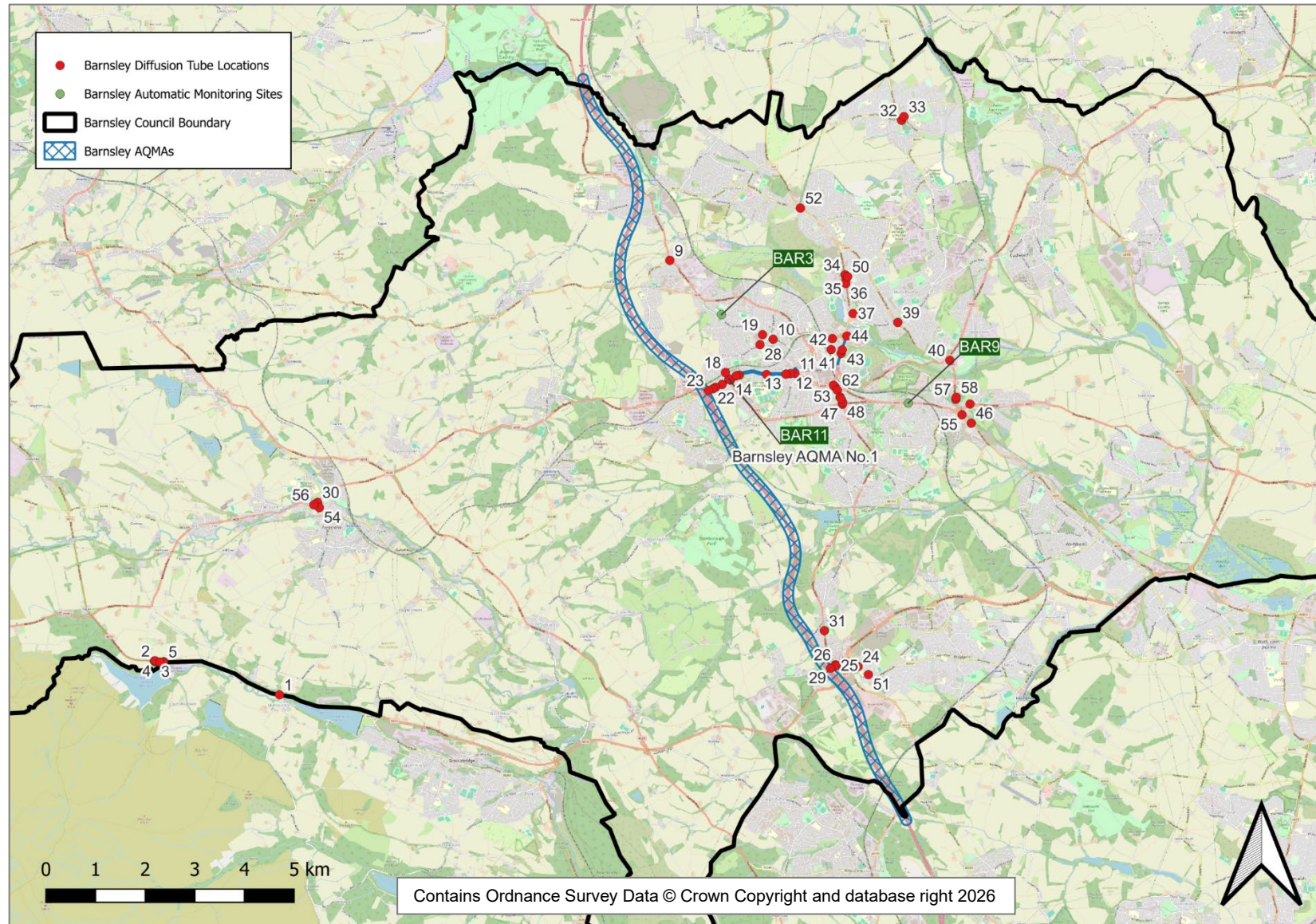


Figure D.1 1 - Map displaying diffusion tube 1

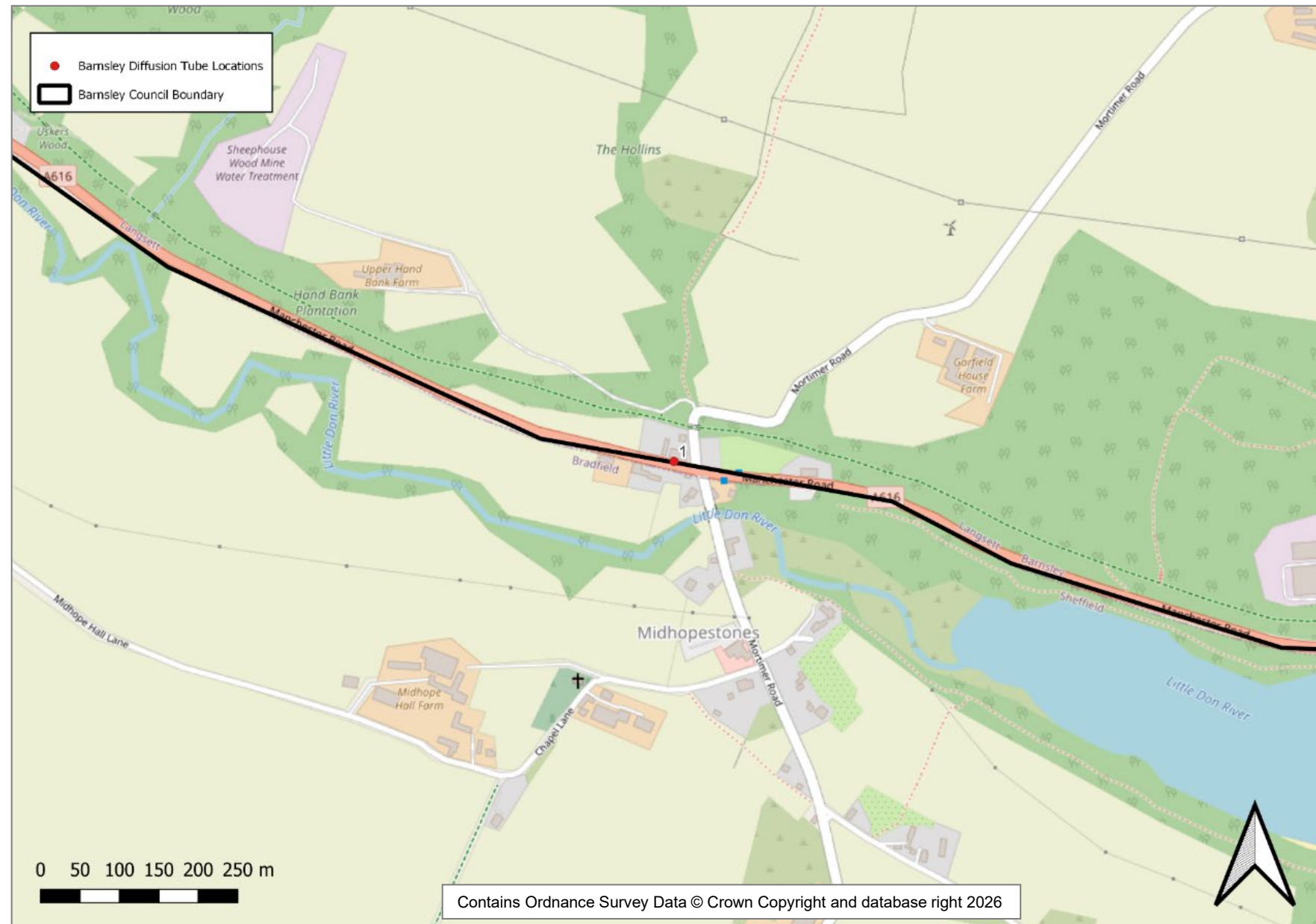


Figure D.1 2 - Map displaying diffusion tubes 2 to 8, and AQMA 6

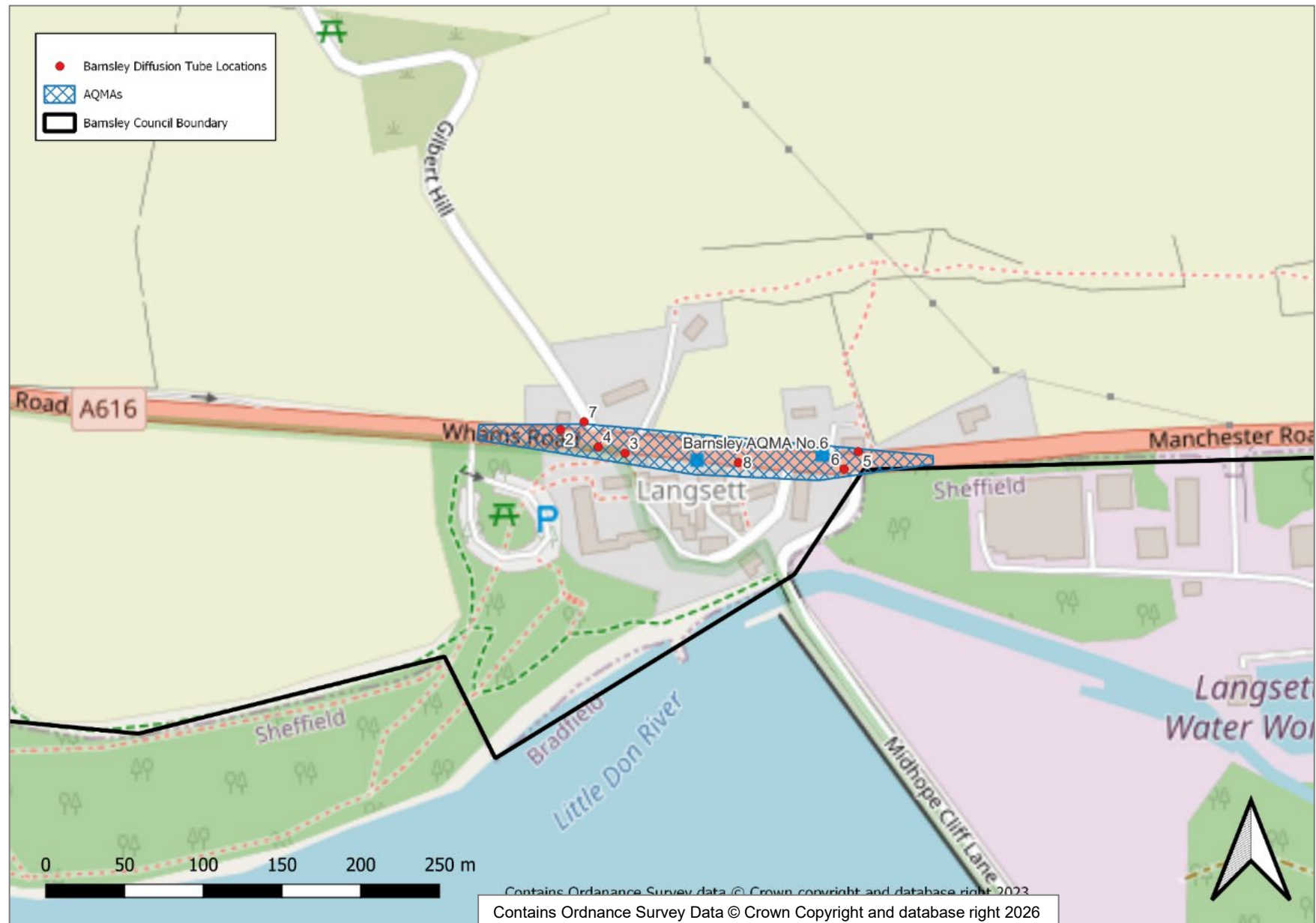


Figure D.1 3 - Map displaying diffusion tube 9

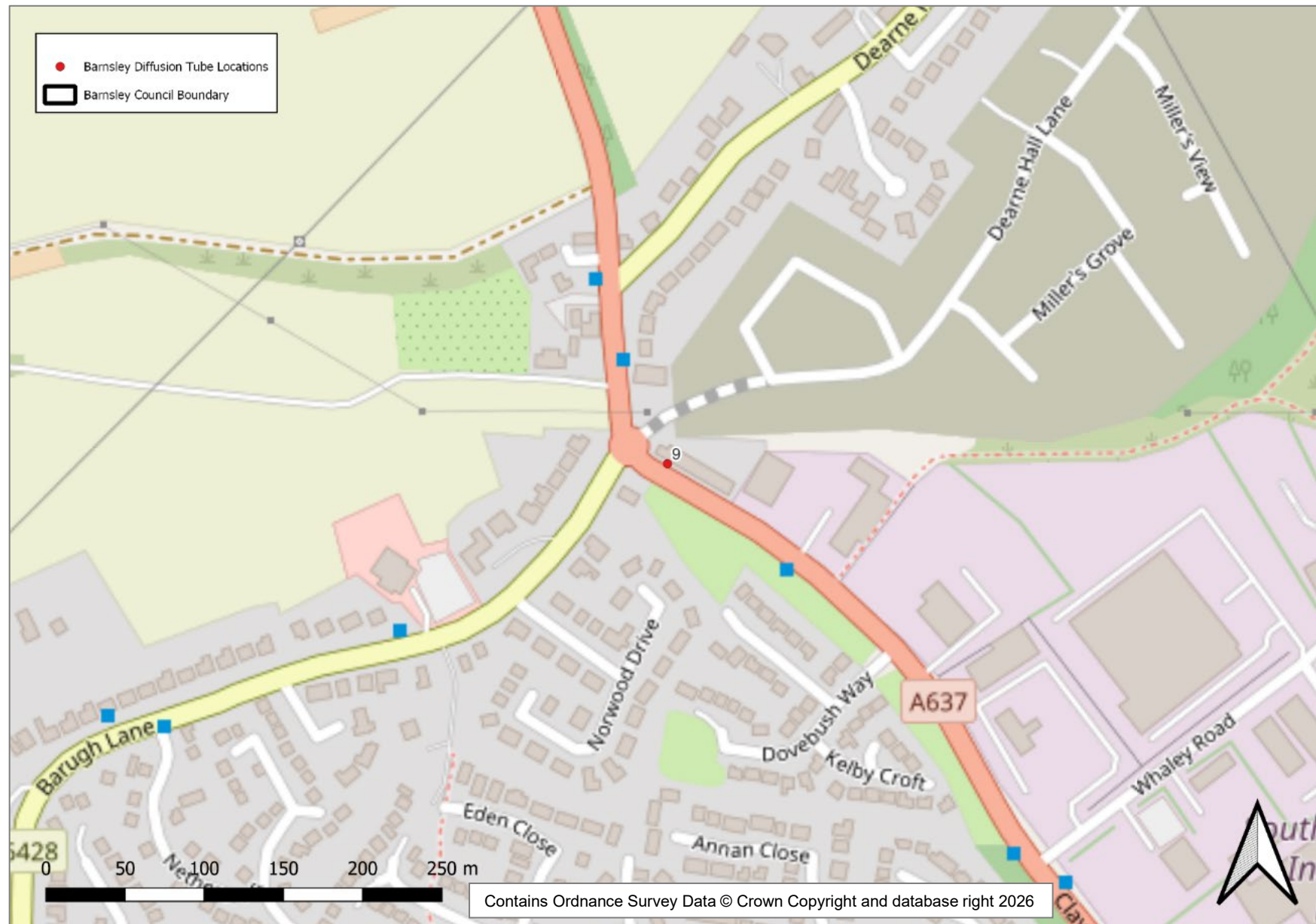


Figure D.1 4 - Map displaying diffusion tubes 10 to 23, 28, 45, 59 to 60, automatic monitoring location BAR11, AQMA 1 and 2A

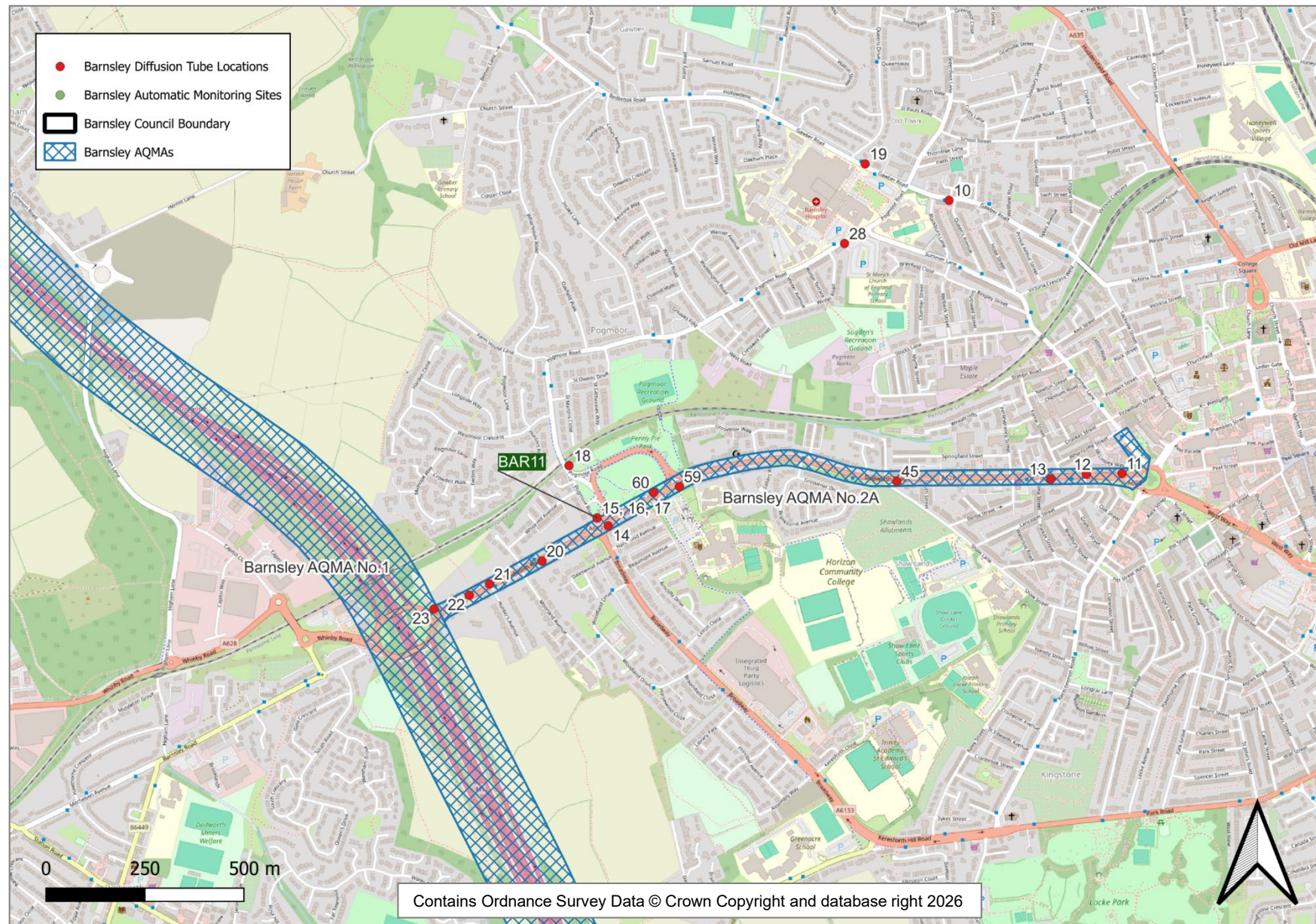


Figure D.1 5 - Map displaying diffusion tubes 24 to 27, 29, 31, 51 and AQMA 1

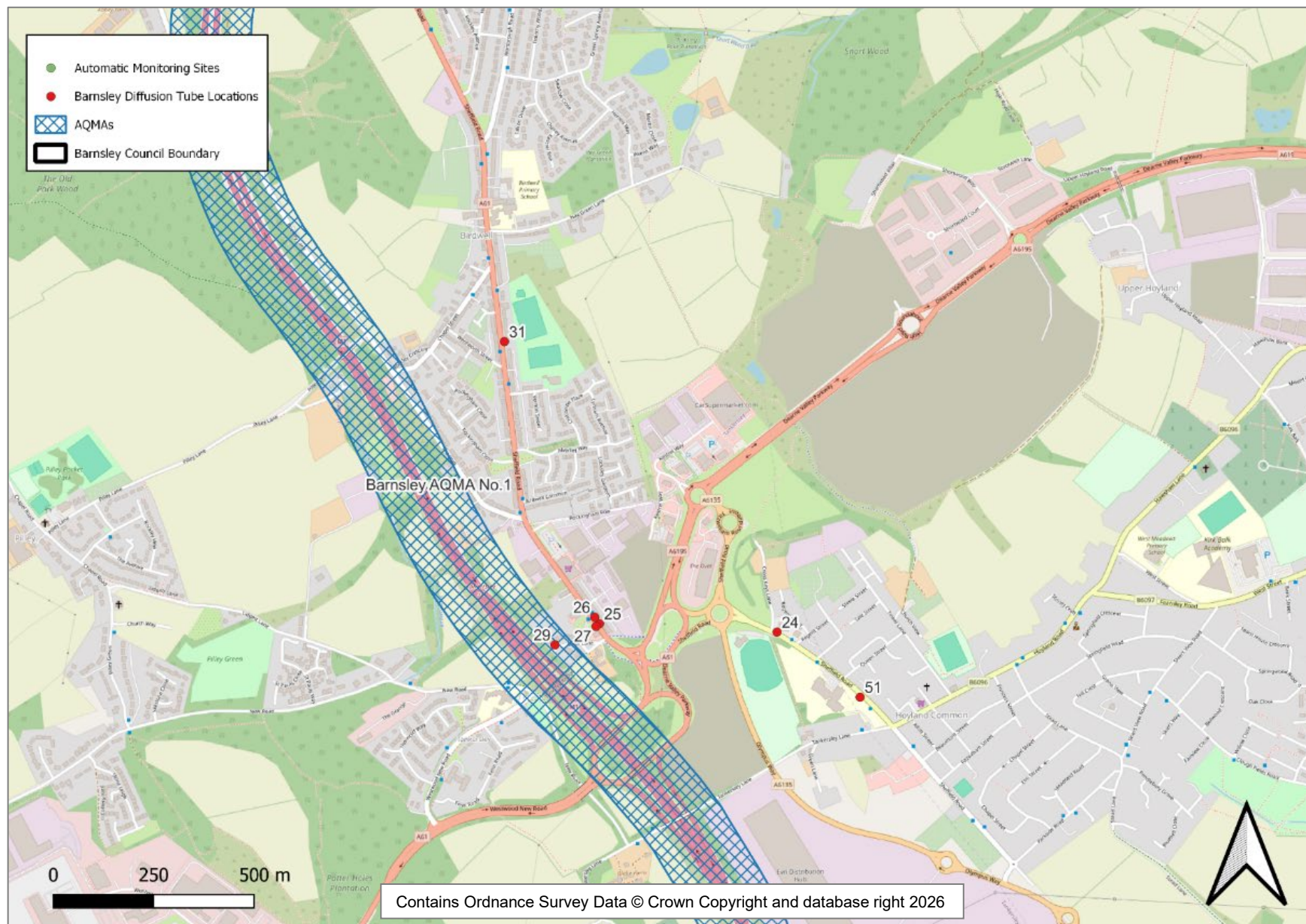


Figure D.1 6 - Map displaying diffusion tubes 30, 54 and 56

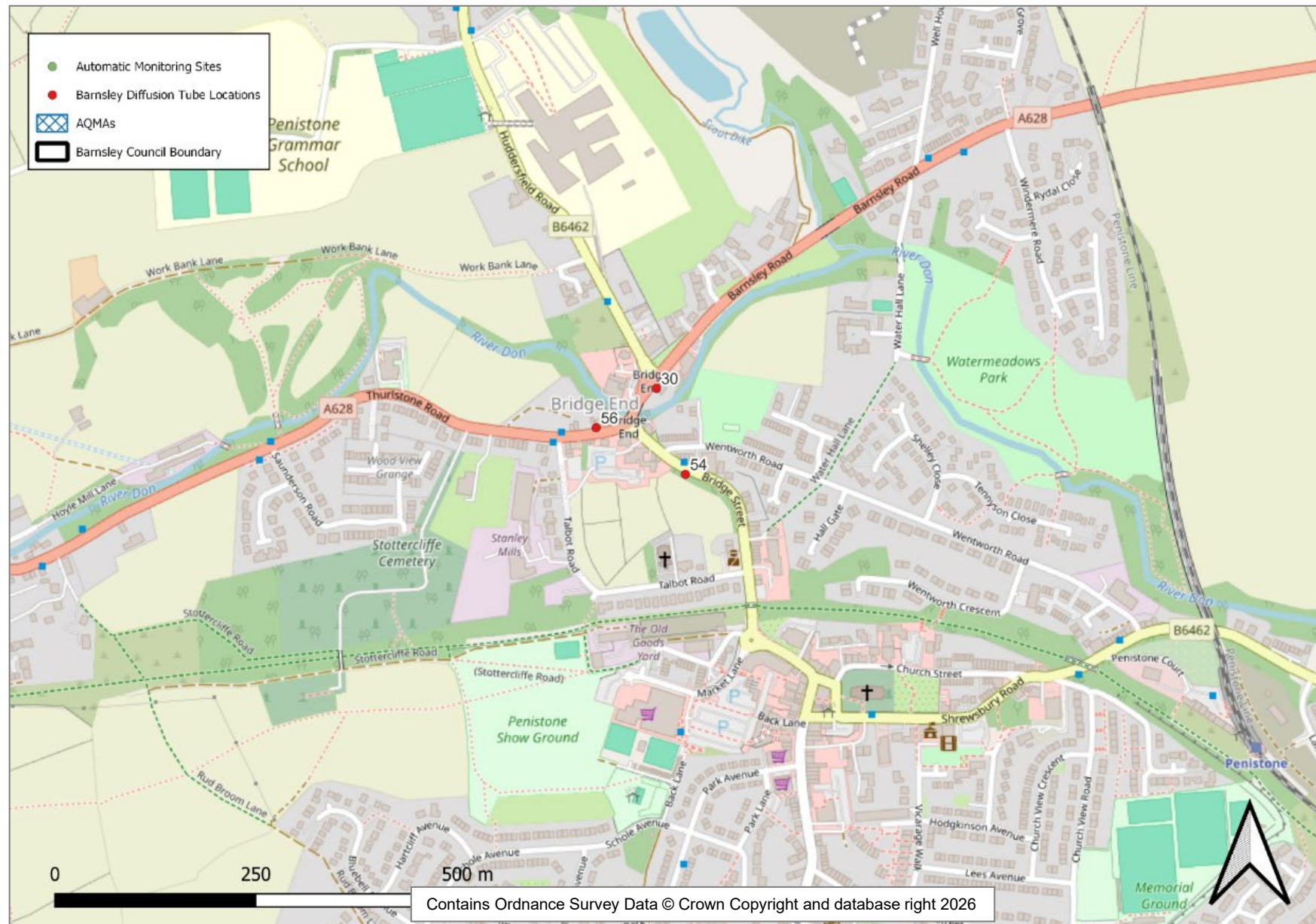


Figure D.1 7 - Map displaying diffusion tubes 34 to 36 and 50



Figure D.1 8 - Map displaying diffusion tubes 37 to 38, 41 to 44, and AQMA 4

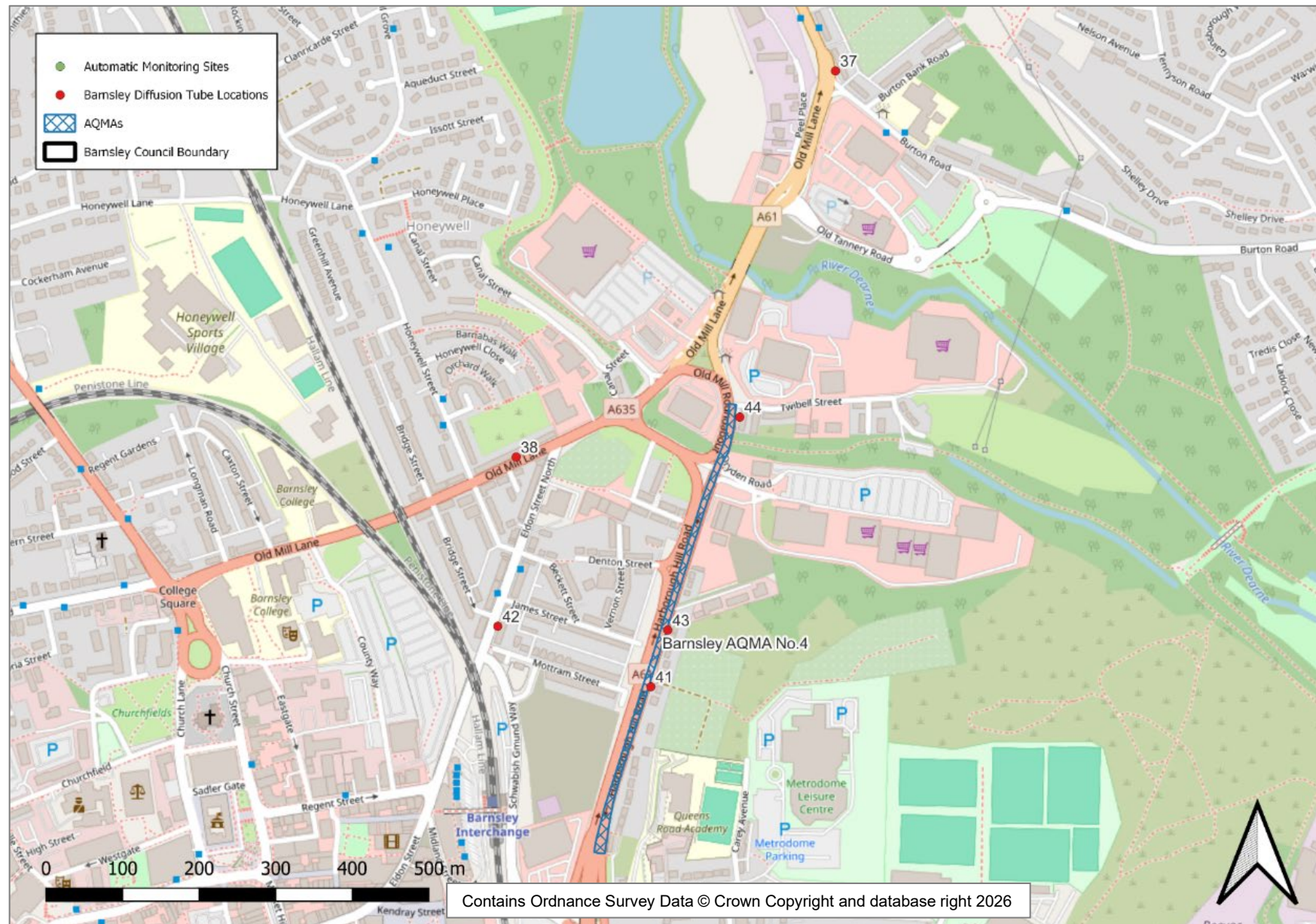


Figure D.1 9 - Map displaying diffusion tube 39



Figure D.1 10 - Map displaying diffusion tube 40

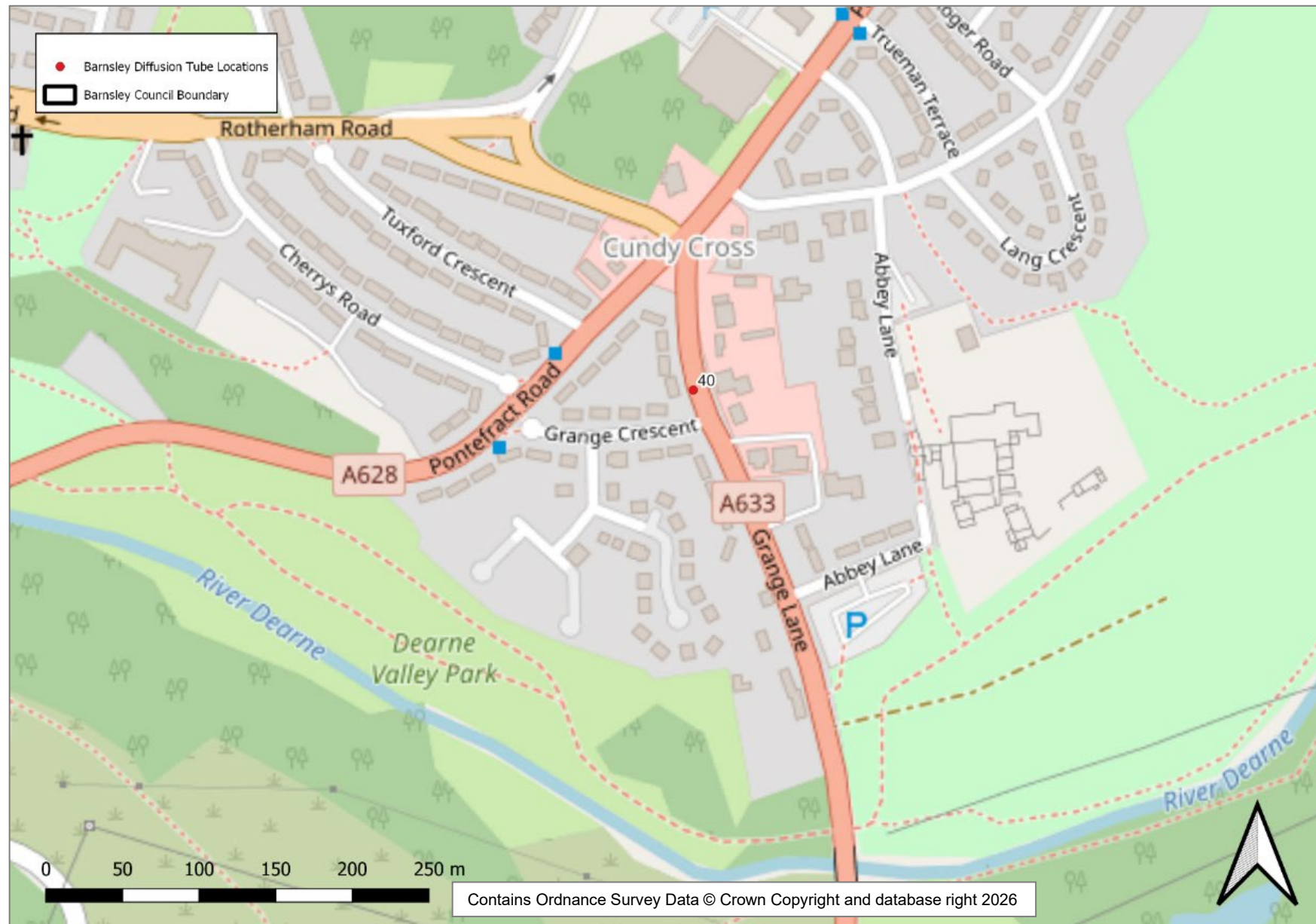


Figure D.1 11 - Map displaying diffusion tubes 46, 49, 55, 57 and 58 and automatic monitoring location BAR9

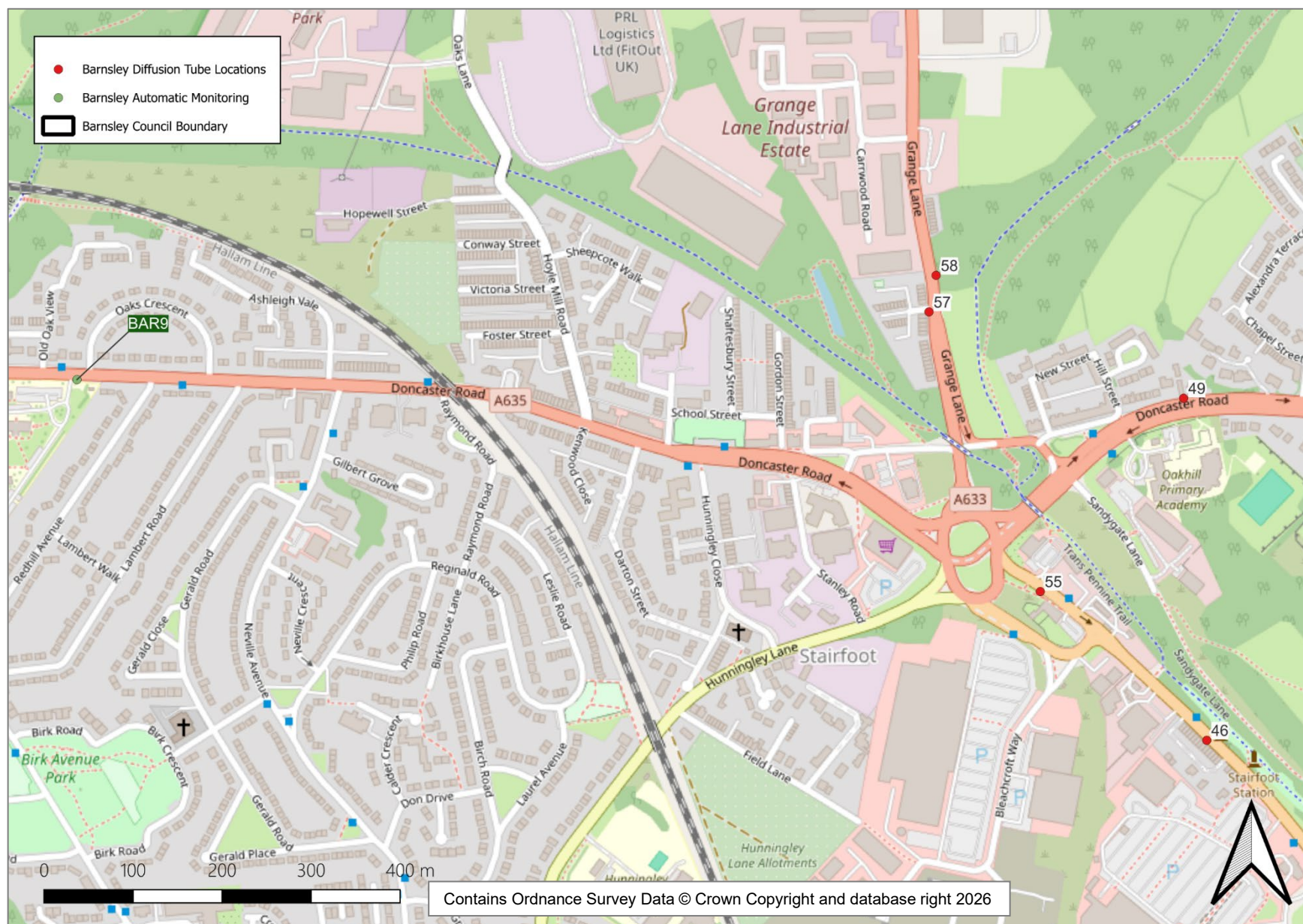


Figure D.1 12 - Map displaying diffusion tubes 47, 48, 53, 61 to 64 and AQMA 7

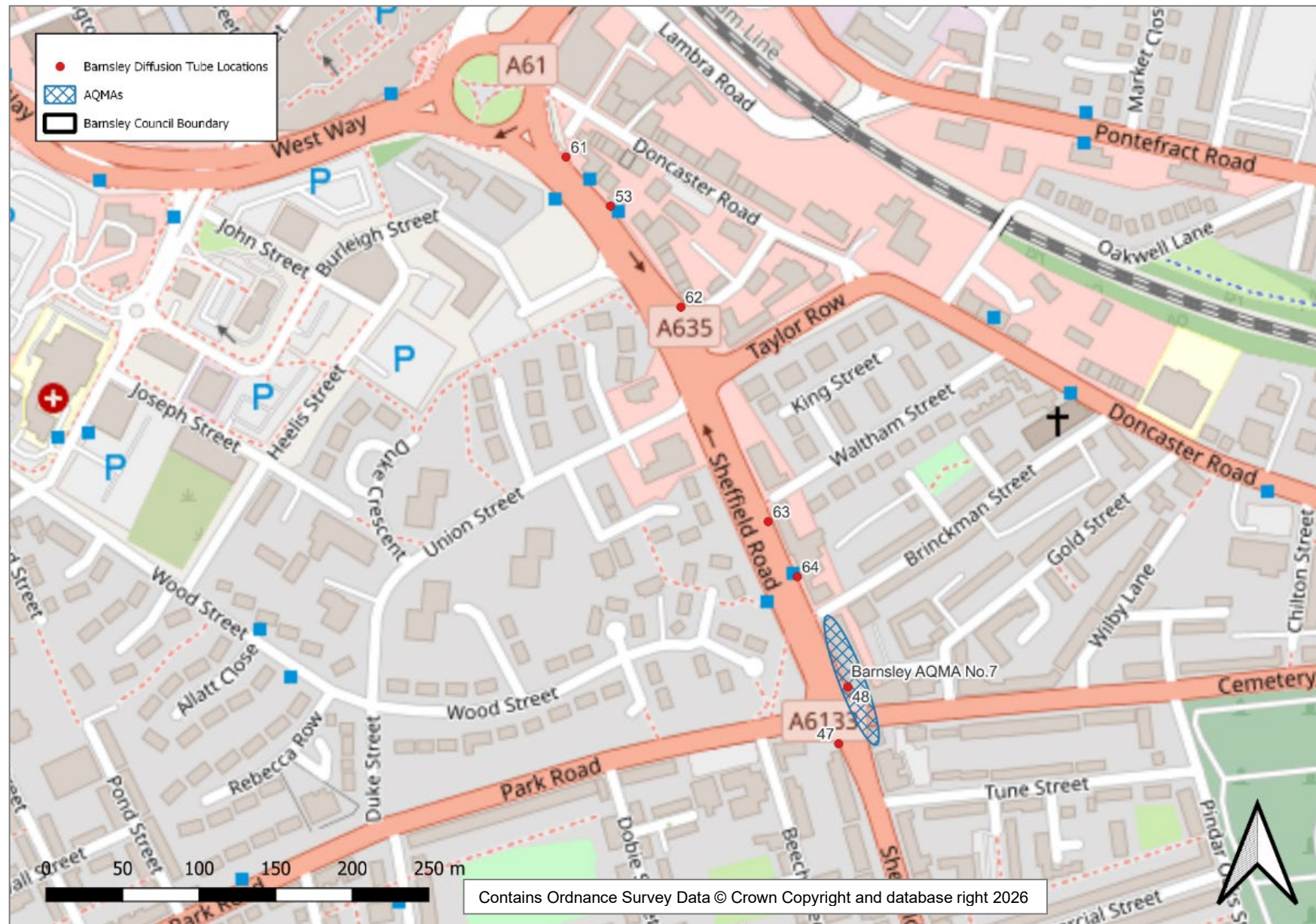


Figure D.1 13 – Map displaying diffusion tubes 32 and 33



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England¹²

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

¹² The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

Glossary of Terms

Abbreviation	Description
AIR-PT	Air Proficiency Testing Scheme
AQAP	Air Quality Action Plan
AQI	Air Quality Index
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
ASR	Annual Status Report
AURN	Automatic Urban and Rural Network
BAR	Barnsley Automatic Monitoring Site Identifier
BMBC	Barnsley Metropolitan Borough Council
CNG	Compressed Natural Gas
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DT	Diffusion Tube
ECO Stars	Efficient and Cleaner Operations Stars Scheme
EV	Electric Vehicle
H ₂	Hydrogen
HGV	Heavy Goods Vehicle
LAQM	Local Air Quality Management
LAQM.TG22	Local Air Quality Management Technical Guidance 2022
LEV	Low Emission Vehicle
LEVI	Local Electric Vehicle Infrastructure
MBC	Metropolitan Borough Council

Abbreviation	Description
MOVA	Microprocessor Optimised Vehicle Actuation
N/A	Not Applicable
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NPL	National Physical Laboratory
ORCS	On-Street Residential Chargepoint Scheme
OS Grid Ref	Ordnance Survey Grid Reference
OZEV	Office for Zero Emission Vehicles
PM ₁₀	Particulate Matter (less than 10 micrometres)
PM _{2.5}	Particulate Matter (less than 2.5 micrometres)
PV	Photovoltaics
QA/QC	Quality Assurance and Quality Control
SCOOT	Split Cycle Offset Optimisation Technique
SO ₂	Sulphur Dioxide
ST	Sustainable Transport
SY	South Yorkshire
SYMCA	South Yorkshire Mayoral Combined Authority
TEA	Triethanolamine
UTC	Urban Traffic Control
UKAS	United Kingdom Accreditation Service
UV	Ultraviolet
ZEBRA	Zero Emission Bus Regional Areas

References

- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.
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