



# *Stevenage* **BOROUGH COUNCIL**

## 2024 Air Quality Annual Status Report (ASR)

Report for: Stevenage Borough Council

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***Stevenage***  
***BOROUGH COUNCIL***  
2024 Air Quality Annual Status Report  
(ASR)

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

Date: June, 2024

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<b>Report Reference Number</b>	ED18432131
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## Executive Summary: Air Quality in Our Area

### Air Quality in Stevenage 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. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year<sup>1</sup>.

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

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

**Table ES 1 - Description of Key Pollutants**

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

<sup>1</sup> UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

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

Monitored annual mean NO<sub>2</sub> concentrations across Stevenage Borough Council are lower at all sites in 2023 than in 2022. This has continued the general trend of decreasing concentrations over the past 5 years, despite the increase at some sites between 2021 and 2022. All monitoring locations recorded annual mean NO<sub>2</sub> concentrations below the annual mean NO<sub>2</sub> air quality objective in 2023. There are no declared Air Quality Management Areas (AQMA) in Stevenage Borough Council authority area.

With regard to the 1-hour mean NO<sub>2</sub> Air Quality Strategy (AQS) objective, whereby there should be no more than 18 hours where concentrations exceed 200 µg/m<sup>3</sup>, the automatic monitoring location on St George's Way continues to report no hourly concentrations greater than 200 µg/m<sup>3</sup>.

Monitored concentrations of PM<sub>2.5</sub> in Stevenage continue to be well below the annual mean air quality objective of 25 µg/m<sup>3</sup>.

## 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<sup>3</sup> 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<sub>2.5</sub>), the pollutant of most harm to human health. The Air Quality Strategy<sup>4</sup> 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<sup>5</sup> 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

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<sup>3</sup> Defra. Environmental Improvement Plan 2023, January 2023

<sup>4</sup> Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

<sup>5</sup> DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

personal travel and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Stevenage Borough Council has continued to promote cycling via the pool bike scheme, walking, and the use of electric cars as part of its measures to maintain and improve air quality around the borough.

The Hertfordshire Local Transport Plan<sup>6</sup> was adopted in 2018 and seeks to promote the use of walking and cycling within the county which can be beneficial to air quality. In addition, the Local Transport Plan aims to promote Ultra Low Emission Vehicles and address barriers to the uptake of these.

## Conclusions and Priorities

There were no exceedances of the relevant air quality objectives within the borough of Stevenage in 2023. There is no declared or planned AQMA within Stevenage borough, however reducing road traffic emissions is still a priority for air quality.

## Local Engagement and How to get Involved

The public can:

- Use the excellent network of cycle paths laid out across the borough.
- Ensure cars are serviced regularly.
- Reduce the use of cars for short journeys.
- When changing vehicles, consider a more efficient / cleaner one.

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<sup>6</sup> Hertfordshire County Council. Local Transport Plan (LTP4). 2018

## Local Responsibilities and Commitment

This ASR was prepared by Ricardo on behalf of the Environmental Health and Licensing Department of Stevenage Borough Council, with the support and agreement of the following officers and departments:

- Wesley Cushing, Environmental Health Officer

This ASR has been approved by:

- Wesley Cushing, Environmental Health Officer

This ASR has not been signed off by a Director of Public Health.

If you have any comments on this ASR please send them to Wesley Cushing at:

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# 1 Local Air Quality Management

This report provides an overview of air quality in Stevenage Borough Council (SBC) during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Stevenage Borough Council to improve air quality and any progress that has been made.

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

## **2 Actions to Improve Air Quality**

### **2.1 Air Quality Management Areas**

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

Stevenage Borough Council has no declared AQMAs, however measures to improve air quality are detailed in Table 2.1.

## 2.2 Progress and Impact of Measures to address Air Quality in Stevenage 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 were provided to help inform future reports:

1. The Council has promoted eleven measures to improve air quality, such as alternatives to private vehicle use (i.e., electric cars) and the promotion of cycling and walking, which are well-considered. It would be beneficial if an estimated completion date is included to Table 2.1.
2. The information between tables and graphs is consistent. The trends have been well presented and discussed within the report.
3. In "Conclusions and Priorities" section, SBC have reported that although there are no exceedances and AQMAs within the borough, reducing road traffic emissions is still their top priority. This is welcomed, and it is encouraged that this continues. It would be beneficial to also include the relevant plans and measures to this section.
4. There are some sites (e.g., Hydean Way, A602 Chequers) that continuously show low NO<sub>2</sub> concentrations in the last five years. The Council should consider the relocation of those diffusion tubes within this year.
5. The Council have not discussed health outcomes attributable to particulate air pollution. It would be beneficial to include the D01-Fraction of Mortality Attributable to Particulate Air Pollution, which can be found at: <http://fingertips.phe.org.uk/public-health-outcomes-framework>.
6. Defra recommends that Directors of Public Health approve draft ASRs. Sign off is not a requirement, however collaboration and consultation with those who have responsibility for Public Health is expected to increase support for measures to improve air quality, with co-benefits for all. Please bear this in mind for the next annual reporting process too.
7. A national bias adjustment factor has been used by SBC. A screenshot of the tool should be added so the factor can be verified.

8. According to Table C.3, SBC did require a distance correction, so the paragraph on page 33 is incorrect.
9. Comments from last year's ASR have been mentioned and addressed, which is welcomed.
10. Overall, the report provides a good insight into the work that the Council are doing and all the current and future measures to improve local air quality.

Stevenage Borough Council has taken forward a number of direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1. Eleven measures are included within Table 2.1, with the type of measure and the progress Stevenage Borough Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Stevenage Borough Council have completed the measure to establish an air pollution episode alert system. The Hertfordshire and Bedfordshire Air Pollution Alert System is a free service which is utilised to alert residents to forecasted pollution levels Moderate, High or Very High based on the UK Air Quality Banding System.

Stevenage Borough Council worked to implement these measures in partnership with Hertfordshire County Council, and ongoing work is taking place to develop a county-wide approach to air quality.

**Table 2.1 – Progress on Measures to Improve Air Quality**

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
3	Local Plan Mobility Strategy - Cycle Network	Transport Planning and Infrastructure	Cycle network	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
7	Promotion of Clean Air Day	Public Information	Via the internet	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Public Information	NK	Ongoing - annual	None
11	Consider AQ on new planning applications	Policy Guidance and Development Control	Air quality planning and policy guidance	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
1	Local Plan Mobility Strategy - Promotion of Cycling	Promoting Travel Alternatives	Promotion of cycling	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
2	Local Plan Mobility Strategy - Promotion of Walking	Promoting Travel Alternatives	Promotion of walking	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	First phase successful, second phase on-going
3	Local Plan Mobility Strategy - Cycle Network	Transport Planning and Infrastructure	Cycle network	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
4	Relocating diffusion tubes	Other	Other	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	No direct impact on emissions - some tubes have been removed and new locations found	Tube deployed	Ongoing	None
5	Local plan mobility strategy - Cycle Hire	Transport Planning and Infrastructure	Public cycle hire scheme	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
6	Electric car club	Alternatives to private vehicle use	Car clubs	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None
7	Promotion of Clean Air Day	Public Information	Via the internet	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Public Information	NK	Ongoing - annual	None
8	Air pollution episode alert system	Public Information	Other	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Public Information	NK	Complete	None
9	Monitoring air quality	Public Information	Via other mechanisms	Prior to 2016	Ongoing	HCC / SBC	HCC / SBC	NO	None	None	Ongoing	Public Information	NK	Ongoing	None
10	Engagement with Comms	Public Information	Via the internet	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Public Information	NK	Ongoing	None
11	Consider AQ on new planning applications	Policy Guidance and Development Control	Air quality planning and policy guidance	Prior to 2016	Ongoing	SBC	SBC	NO	None	None	Ongoing	Reduced vehicle emissions	NK	Ongoing	None



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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy<sup>7</sup>, local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter (PM<sub>2.5</sub>). There is clear evidence that PM<sub>2.5</sub> (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases. In Hertfordshire, the fraction of mortality attributable to particulate air pollution in 2022 was 6.8%, this was higher than the fraction for all of England (5.8%).<sup>8</sup>

Stevenage Borough Council is progressing on a number of measures detailed in Table 2.1 which will also be beneficial to reducing PM<sub>2.5</sub> emissions, including promoting walking and cycling, car clubs, cycle hire and improved cycleways. In addition, the monitored concentration of PM<sub>2.5</sub> at St George's Way is consistently well below the annual mean air quality objective for PM<sub>2.5</sub>. In 2022 the annual mean concentration was 9 µg/m<sup>3</sup> and this was 7 µg/m<sup>3</sup> in 2023.

The majority of the borough of Stevenage was declared a smoke control area in 1972 and later updated to cover the whole borough.

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<sup>7</sup> Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

<sup>8</sup> Office for Health Improvement & Disparities. Public Health Outcomes Framework, 2022

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

This section sets out the monitoring undertaken within 2023 by Stevenage Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

### 3.1 Summary of Monitoring Undertaken

#### 3.1.1 Automatic Monitoring Sites

Stevenage Borough Council undertook automatic (continuous) monitoring at one site during 2023. Table A.1 in Appendix A shows the details of the automatic monitoring site. NB. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The [Hertfordshire and Bedfordshire Monitoring Data](#) page presents automatic monitoring results for Stevenage Borough Council.

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

#### 3.1.2 Non-Automatic Monitoring Sites

Stevenage Borough Council undertook non-automatic (i.e. passive) monitoring of NO<sub>2</sub> at 26 sites during 2023. Table A.2 in Appendix A presents the details of the non-automatic sites.

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

## 3.2 Individual Pollutants

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

### 3.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO<sub>2</sub> annual mean concentrations for the past five years with the air quality objective of 40 µg/m<sup>3</sup>. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

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

Table A.5 in Appendix A compares the ratified continuous monitored NO<sub>2</sub> hourly mean concentrations for the past five years with the air quality objective of 200 µg/m<sup>3</sup>, not to be exceeded more than 18 times per year.

There were no exceedances of the annual mean NO<sub>2</sub> air quality objective at any monitoring location within the borough of Stevenage in 2023. All monitoring locations showed a decrease in 2023 relative to 2022.

The highest concentration in 2023 was recorded at diffusion tube 34 on the A602. This monitoring location recorded a mean concentration of 33.8 µg/m<sup>3</sup>, which is no longer within 10% of the annual mean air quality objective for NO<sub>2</sub>, 40 µg/m<sup>3</sup>. This location experienced a decrease in concentration relative to the 2022 mean of 36.8 µg/m<sup>3</sup> and shows a downwards trend across five years. Furthermore, diffusion tube 34 is also located greater than 50 m from the nearest receptor, so concentrations would be lower at any sensitive receptors.

The annual mean concentration at St Georges Way automatic monitoring station was 17.7 µg/m<sup>3</sup>, a reduction from 19.4 µg/m<sup>3</sup> in 2022 and below the annual mean air quality objective. There were no exceedances of the NO<sub>2</sub> hourly air quality objective of 200 µg/m<sup>3</sup> in 2023.

### 3.2.2 Particulate Matter (PM<sub>10</sub>)

PM<sub>10</sub> is not monitored by Stevenage Borough Council.

### 3.2.3 Particulate Matter (PM<sub>2.5</sub>)

Table A.8 in Appendix A presents the ratified and adjusted monitored PM<sub>2.5</sub> annual mean concentrations for the past five years.

Monitored concentrations of PM<sub>2.5</sub> in Stevenage remain well below the annual mean air quality objective of 20 µg/m<sup>3</sup> in 2023. Concentrations of PM<sub>2.5</sub> at St George's Way automatic analyser recorded a concentration of 7 µg/m<sup>3</sup> in 2023, a decrease from the 9 µg/m<sup>3</sup> recorded in 2022.

### 3.2.4 Sulphur Dioxide (SO<sub>2</sub>)

SO<sub>2</sub> is not monitored by Stevenage Borough Council.

## Appendix A: Monitoring Results

**Table A.1 – Details of Automatic Monitoring Sites**

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Inlet Height (m)
AQMS2	St Georges Way	Roadside	523980	224265	NO <sub>2</sub> PM <sub>2.5</sub>	No	Chemiluminescent; BAM	85	1.5	2.9

**Notes:**

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

(2) N/A if not applicable

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co located with a Continuous Analyser?	Tube Height (m)
1	Town Centre	Roadside	523771	224090	NO <sub>2</sub>	No	102.0	4.0	No	2.4
3	Monks View	Suburban	524345	224468	NO <sub>2</sub>	No	9.5	0.2	No	2.9
4	Bedwell Crescent	Kerbside	525373	226985	NO <sub>2</sub>	No	20.0	0.8	No	2.5
7	High Street	Roadside	523278	225479	NO <sub>2</sub>	No	9.0	2.4	No	3.0
9	Magpie Crescent	Kerbside	526652	223438	NO <sub>2</sub>	No	12.5	2.0	No	2.9
10	Shoreham Close	Roadside	522075	225568	NO <sub>2</sub>	No	8.0	2.1	No	2.5
11	Newlyn Close	Suburban	522126	224862	NO <sub>2</sub>	No	3.5	1.7	No	2.7
12	Chadwell Road	Suburban	522955	223335	NO <sub>2</sub>	No	25.0	0.4	No	2.6
13	Whitney Drive	Suburban	523070	226070	NO <sub>2</sub>	No	8.0	1.9	No	2.3
17	Hitchin Road	Roadside	522700	226550	NO <sub>2</sub>	No	14.0	2.4	No	2.5
18	Fairlands Valley Park	Background	525425	224183	NO <sub>2</sub>	No	167.0	172.5	No	2.6
19	7 Tates Way	Roadside	522700	226570	NO <sub>2</sub>	No	0.0	9.0	No	2.3

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co located with a Continuous Analyser?	Tube Height (m)
21	13 Hitchin Road	Roadside	523128	225677	NO <sub>2</sub>	No	0.0	16.0	No	2.2
22	Townsend Mews	Roadside	523360	224786	NO <sub>2</sub>	No	0.0	7.8	No	2.7
23	Hitchin Road - Longfields	Roadside	523014	226029	NO <sub>2</sub>	No	7.4	2.5	No	2.1
24	Martins Way	Kerbside	525987	226368	NO <sub>2</sub>	No	8.0	0.8	No	2.2
26	Vardon Road	Roadside	524542	225654	NO <sub>2</sub>	No	10.2	7.7	No	2.6
28	Chells Way	Roadside	526078	224818	NO <sub>2</sub>	No	1.5	1.5	No	2.4
31	Hydean Way	Roadside	525160	223069	NO <sub>2</sub>	No	0.0	6.0	No	2.6
34	A602/A1(M) Junction 7	Kerbside	523695	222594	NO <sub>2</sub>	No	>50	2.2	No	2.2
35	A602 The Chequers	Kerbside	527020	221097	NO <sub>2</sub>	No	>50	0.5	No	2.2
37	Fishers Green Road	Roadside	522608	225880	NO <sub>2</sub>	No	2.9	1.7	No	2.6
38	High Street - Costa	Roadside	523406	225035	NO <sub>2</sub>	No	4.0	4.3	No	2.0
39	High Street - Bike Stop	Roadside	523319	225021	NO <sub>2</sub>	No	3.5	5.0	No	2.0
40	London Road	Kerbside	524097	222765	NO <sub>2</sub>	No	>50	0.9	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) <sup>(1)</sup>	Distance to kerb of nearest road (m) <sup>(2)</sup>	Tube Co located with a Continuous Analyser?	Tube Height (m)
41	St Georges Way South	Roadside	523980	224265	NO <sub>2</sub>	No	85.0	1.5	Yes	2.9

**Notes:**

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

(2) N/A if not applicable.



**Table A.3 – Annual Mean NO<sub>2</sub> Monitoring Results: Automatic Monitoring (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2023 (%) <sup>(2)</sup>	2019	2020	2021 <sup>(3)</sup>	2022	2023
AQMS2	523980	224265	Roadside	93	93	25	26.1	23.1	19.5	17.7

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

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

☒ **Where exceedances of the NO<sub>2</sub> annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2023.**

**Notes:**

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

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

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

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

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

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

(3) Data capture in 2021 was 15.4%

**Table A.4 – Annual Mean NO<sub>2</sub> Monitoring Results: Non-Automatic Monitoring (µg/m<sup>3</sup>)**

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2023 (%) <sup>(2)</sup>	2019	2020	2021	2022	2023
1	523771	224090	Roadside	90.4	90.4	31.8	25.5	25.7	22.1	16.0
3	524345	224468	Suburban	100	100.0	20.9	17.1	16.7	16.7	15.3
4	525373	226985	Kerbside	90.4	90.4	19.5	14.6	14.9	16.0	14.7
7	523278	225479	Roadside	82.7	82.7	29.5	21.9	22.2	22.8	21.2
9	526652	223438	Kerbside	100	100.0	22.7	17.2	16.6	19.7	16.6
10	522075	225568	Roadside	100	100.0	25.6	18.7	18.7	18.8	16.8
11	522126	224862	Suburban	92.3	92.3	19.5	13.8	13.4	13.9	12.6
12	522955	223335	Suburban	100	100.0	17.9	12.4	13.2	13.0	11.2
13	523070	226070	Suburban	100	100.0	21.1	15.8	14.9	16.8	16.0
17	522700	226550	Roadside	100	100.0	<b>42.7</b>	32.6	33.6	32.9	31.7
18	525425	224183	Background	100	100.0	14.3	10.1	9.7	11.1	9.0
19	522700	226570	Roadside	100	100.0	31.9	26.3	27.0	27.1	26.5
21	523128	225677	Roadside	82.7	82.7	23.2	17.3	17.4	18.4	16.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2023 (%) <sup>(2)</sup>	2019	2020	2021	2022	2023
22	523360	224786	Roadside	100	100.0	22.5	17.6	18.2	19.4	18.4
23	523014	226029	Roadside	100	100.0	33.1	24.4	25.7	24.2	23.5
24	525987	226368	Kerbside	90.4	90.4	30.3	23.5	23.8	22.9	20.5
26	524542	225654	Roadside	92.3	92.3	21.2	14.1	14.6	17.6	15.4
28	526078	224818	Roadside	100	100.0	22.2	17.0	16.9	17.4	16.7
31	525160	223069	Roadside	90.4	90.4	21.8	15.8	16.1	17.3	16.5
34	523695	222594	Kerbside	100	100.0	<b>50.7</b>	37.4	38.2	36.8	33.8
35	527020	221097	Kerbside	100	100.0	24.6	17.6	18.0	17.0	15.3
37	522608	225880	Roadside	100	100.0	-	21.5	16.8	16.6	14.7
38	523397	225028	Roadside	84.6	84.6	-	26.6	18.3	20.4	20.0
39	523319	225021	Roadside	90.4	90.4	-	27.2	21.0	22.5	20.3
40	524097	222765	Kerbside	100	100.0	-	32.1	21.4	21.9	20.9
41	523980	224265	Roadside	84.6	84.6	-	-	-	22.0	18.3

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  $\text{NO}_2$  annual mean objective of  $40\mu\text{g}/\text{m}^3$  are shown in **bold**.

$\text{NO}_2$  annual means exceeding  $60\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the  $\text{NO}_2$  1-hour mean objective are shown in **bold and underlined**.

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

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

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

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

Figure A. 1 – Trends in Annual Mean NO<sub>2</sub> Concentrations in the west of the borough

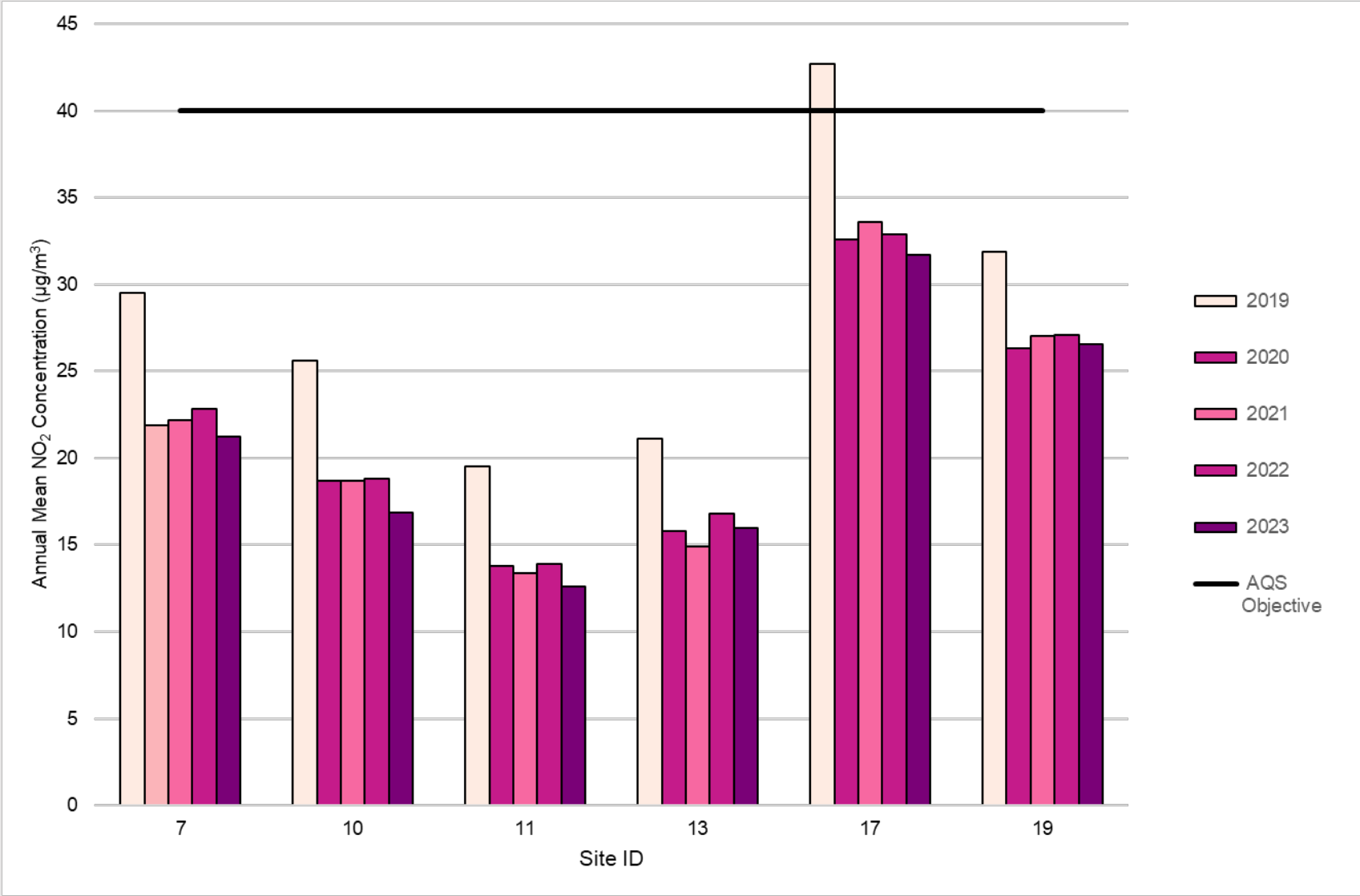


Figure A. 2 – Trends in Annual Mean NO<sub>2</sub> Concentrations in the west of the borough (continued)

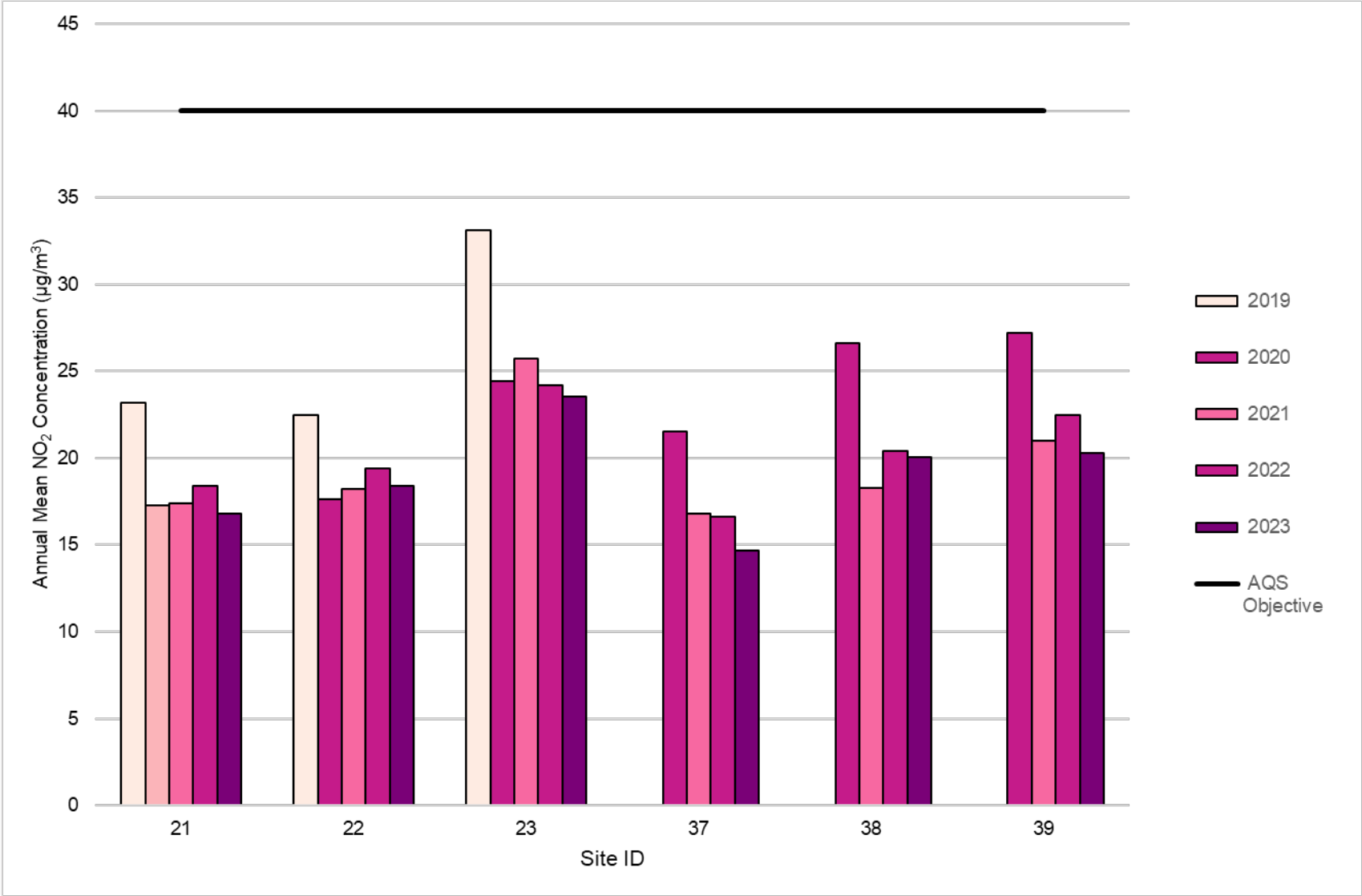


Figure A. 3 – Trends in Annual Mean NO<sub>2</sub> Concentrations in the east of the borough

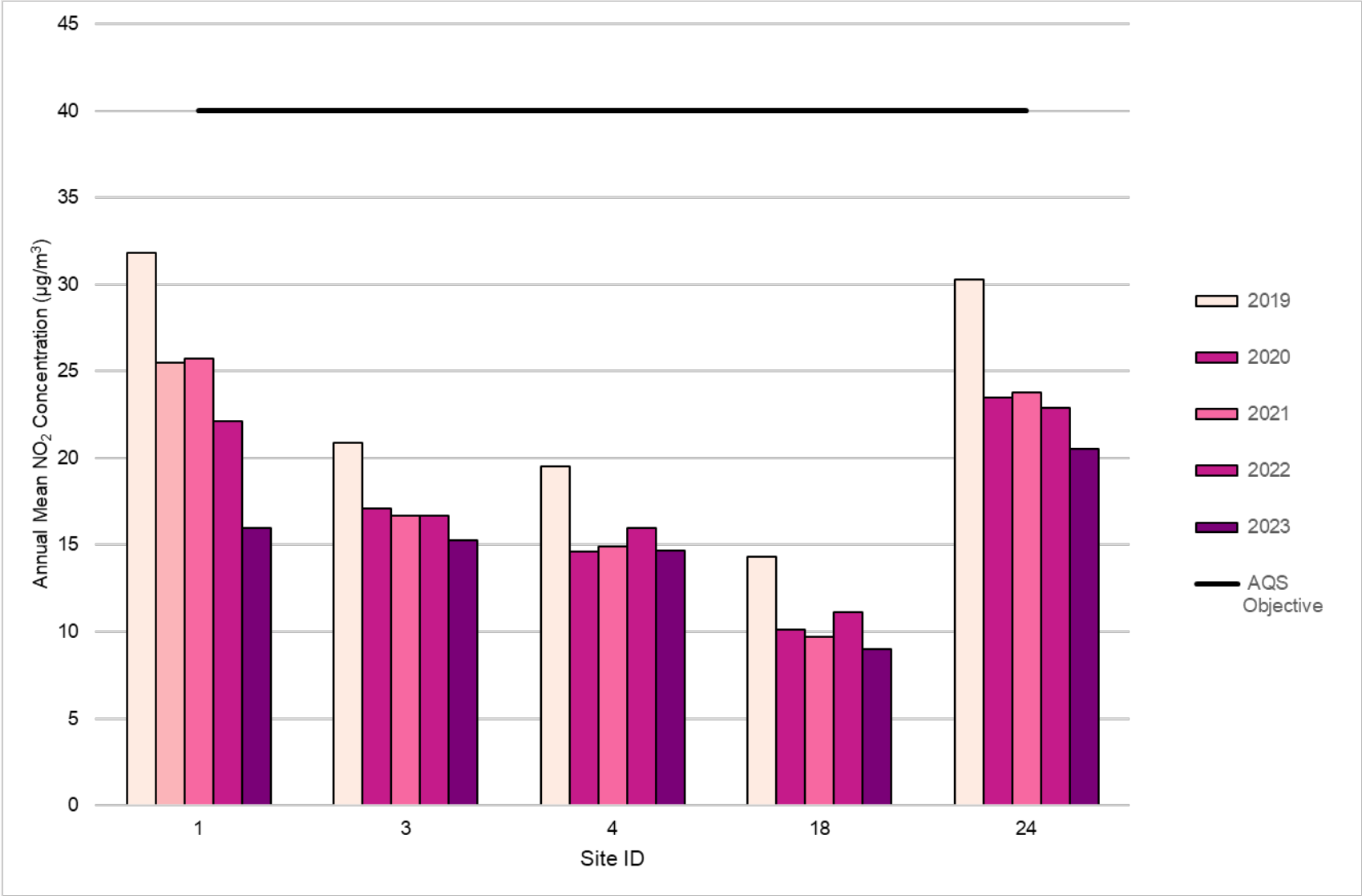


Figure A. 4 – Trends in Annual Mean NO<sub>2</sub> Concentrations in the east of the borough (continued)

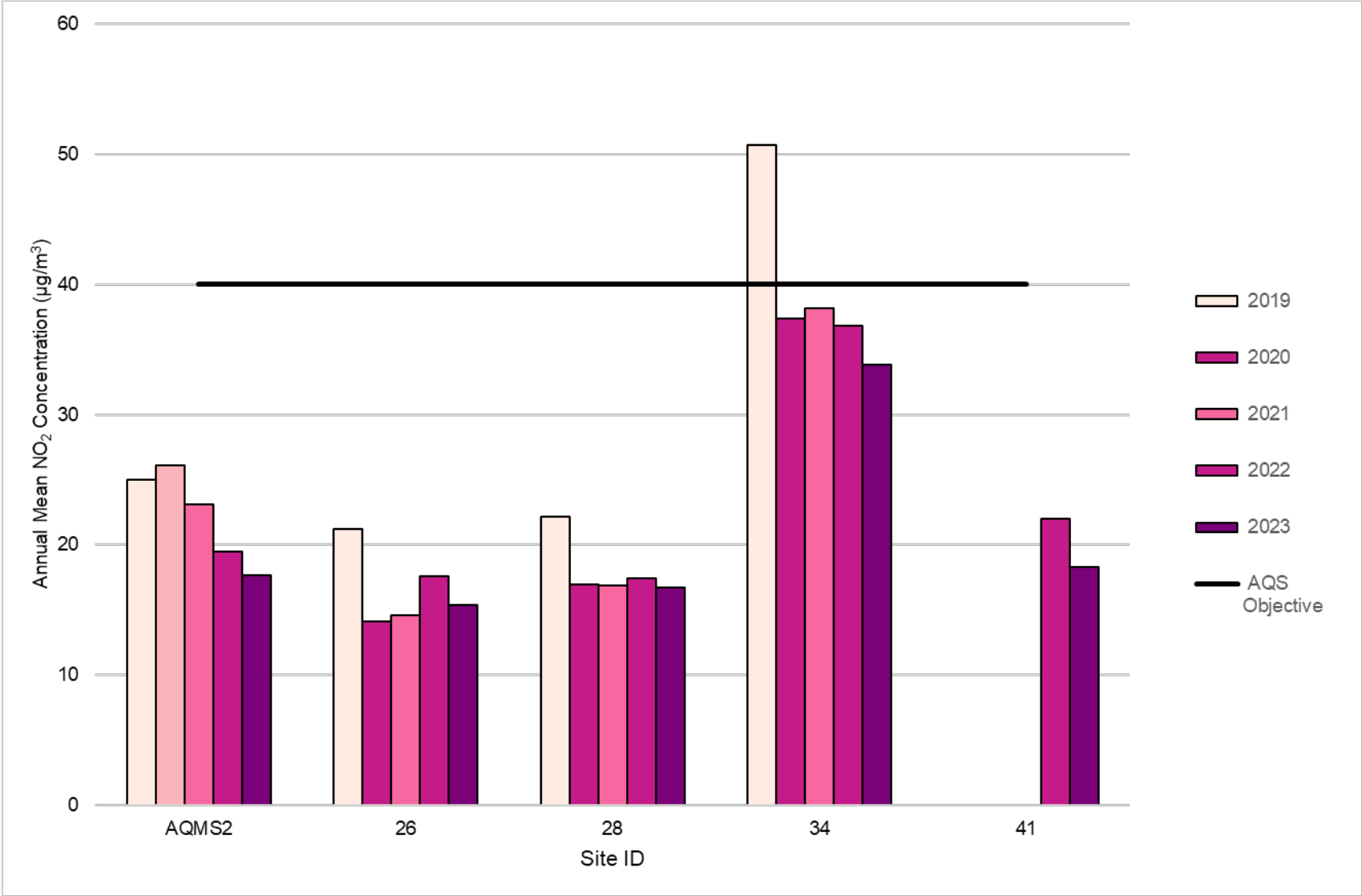
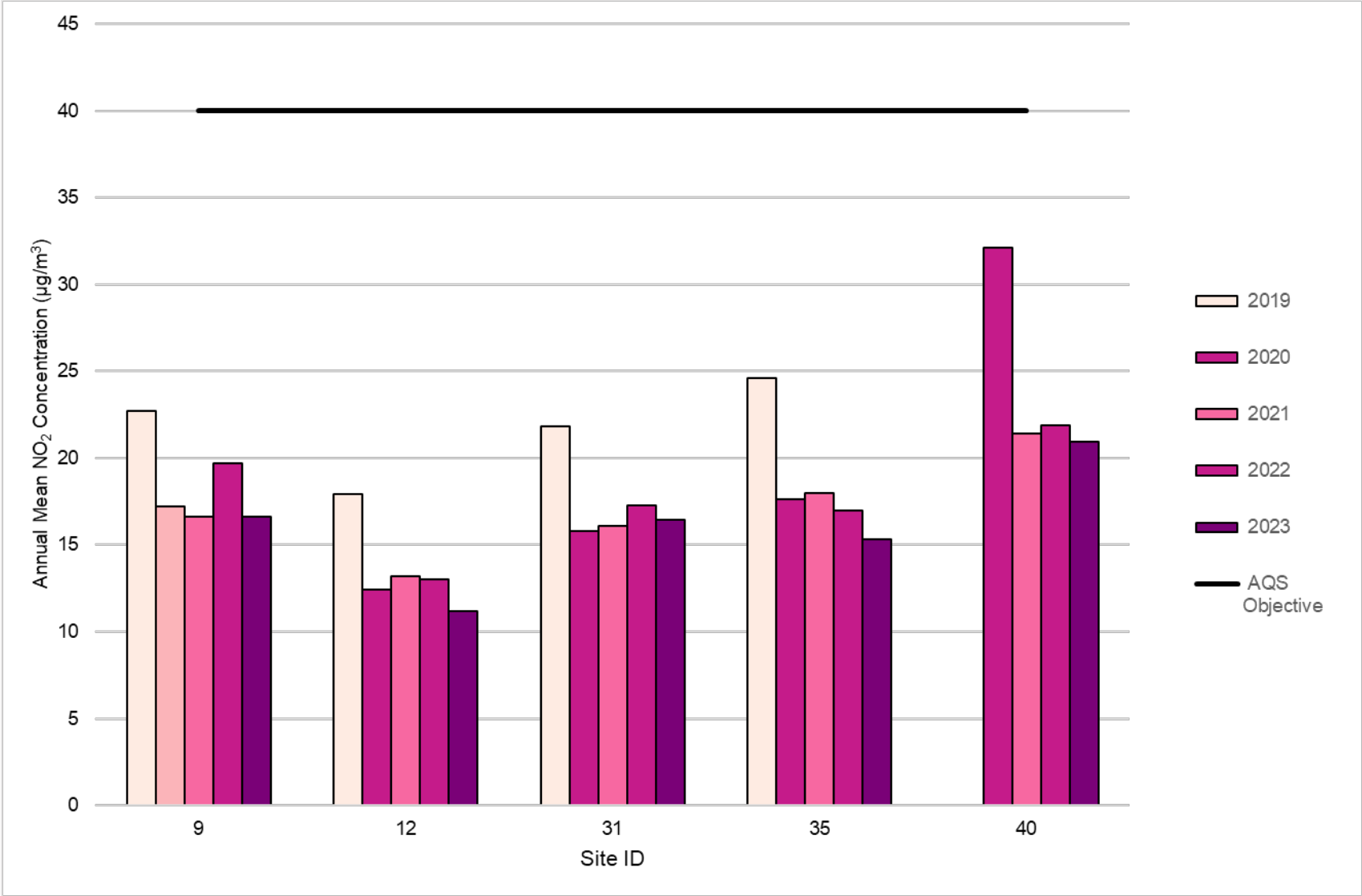




Figure A. 5 – Trends in Annual Mean NO<sub>2</sub> Concentrations in the south of the borough



**Table A.5 – 1-Hour Mean NO<sub>2</sub> Monitoring Results, Number of 1-Hour Means > 200µg/m<sup>3</sup>**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2023 (%) <sup>(2)</sup>	2019	2020	2021	2022	2023
AQMS2	523980	224265	Roadside	93	93	1	0	0	0	0

**Notes:**

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

Exceedances of the NO<sub>2</sub> 1-hour mean objective (200µg/m<sup>3</sup> 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 PM<sub>2.5</sub> Monitoring Results (µg/m<sup>3</sup>)**

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) <sup>(1)</sup>	Valid Data Capture 2023 (%) <sup>(2)</sup>	2019	2020	2021	2022	2023
AQMS2	523980	224265	Roadside	91	91	9	9	7	9	7

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

**Notes:**

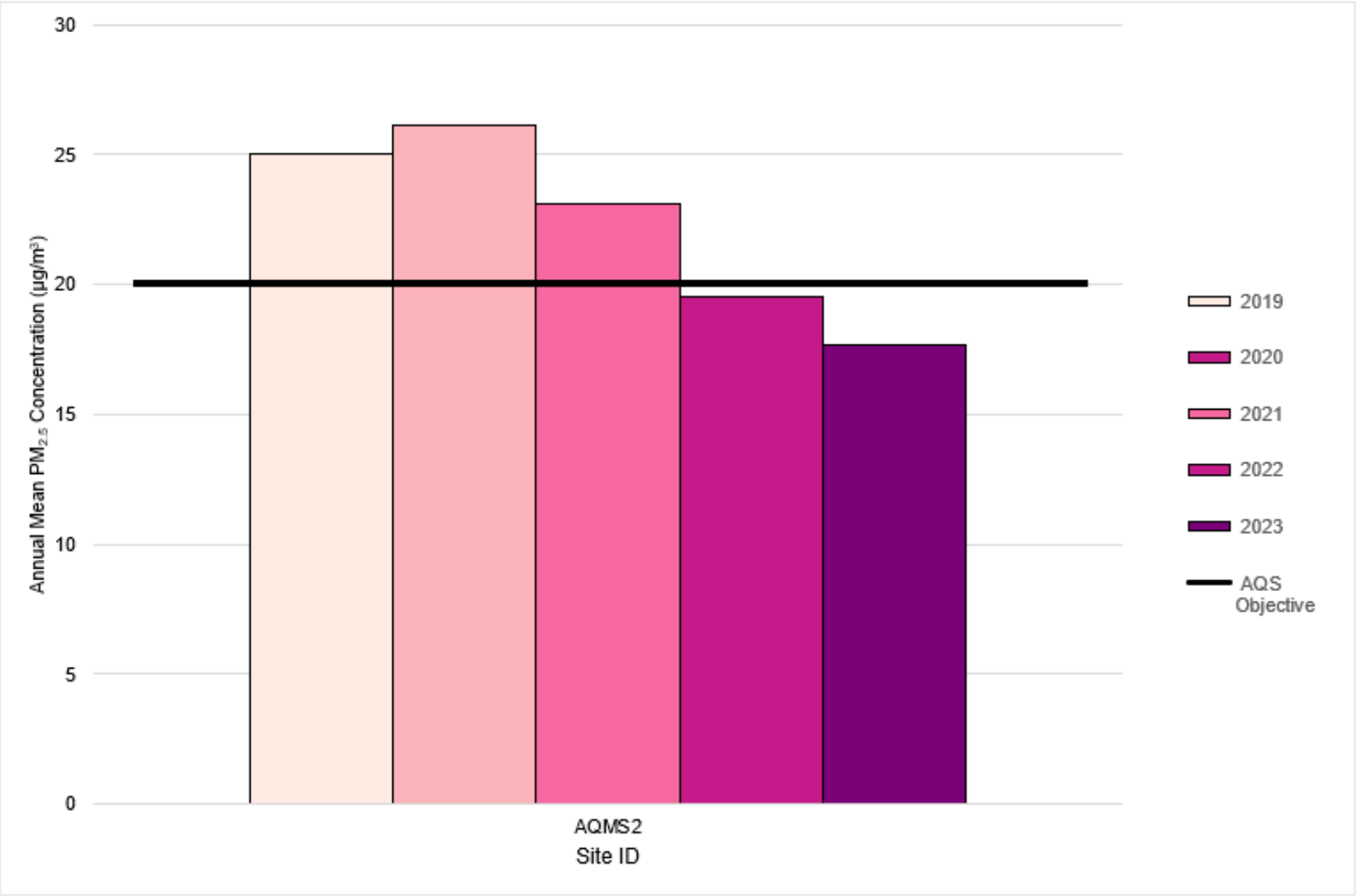
The annual mean concentrations are presented as µg/m<sup>3</sup>.

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. 6 – Trends in Annual Mean PM<sub>2.5</sub> Concentrations



## Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO<sub>2</sub> 2023 Diffusion Tube Results (µg/m<sup>3</sup>)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	523771	224090	25.3	27.4		15.2	21.7	12.7	12.2	13.3	17.4	23.0	25.1	18.4	19.2	16.0	-	
3	524345	224468	26.7	22.8	19.5	15.6	11.2	12.2	14.5	15.5	18.5	23.0	22.4	19.2	18.4	15.3	-	
4	525373	226985	27.7	26.6	17.9	13.9	12.3		10.0	12.6	17.0	20.0	22.8	13.5	17.7	14.7	-	
7	523278	225479	35.3	34.0	24.9	24.6	22.2	23.3	19.1	22.3		29.3		20.8	25.6	21.2	-	
9	526652	223438	28.3	26.6	19.8	16.8	16.1	13.5	15.5	17.7	22.0	23.2	21.4	19.4	20.0	16.6	-	
10	522075	225568	26.4	28.0	22.3	18.3	12.1	17.6	15.8	17.2	18.6	23.7	22.6	20.9	20.3	16.8	-	
11	522126	224862	20.9	23.8	15.4	12.3	10.1	10.0	10.7	11.9	14.9	18.2	19.6	14.4	15.2	12.6	-	
12	522955	223335	15.4	18.1	16.6	13.8	13.7	11.9	6.9	9.8	11.8	14.4	17.4	11.7	13.5	11.2	-	
13	523070	226070	26.8	26.1	21.6	14.5	10.2	11.5	16.3	14.8	19.2	23.4	26.9	19.7	19.2	16.0	-	
17	522700	226550	48.3	47.0	39.3	35.9	34.1	34.9	34.3	22.3	40.2	41.0	44.0	36.8	38.2	31.7	-	
18	525425	224183	18.2	18.1	12.1	8.4	5.9	6.1	8.0	8.5	10.8	12.3	8.5	13.0	10.8	9.0	-	
19	522700	226570	36.6	40.8	34.0	31.1	27.1	27.4	25.7	27.9	32.3	33.4	36.8	30.5	32.0	26.5	-	
21	523128	225677	26.4	24.8	21.1	20.6	17.8	16.4	13.1	17.2	21.6	21.4	24.9	17.2	20.2	16.8	-	
22	523360	224786	29.2	29.3	21.8	19.3	20.7	20.7	13.3	26.7	19.5	23.4	24.4	17.9	22.2	18.4	-	
23	523014	226029	32.4	37.2	30.2	30.4	32.9	33.1	18.9	23.9	18.1	31.1	32.5	19.7	28.4	23.5	-	
24	525987	226368	31.7	33.6	25.5	24.5	25.2	25.5	22.6	12.7	13.8	31.2	27.6	23.0	24.7	20.5	-	
26	524542	225654	20.8	28.1	17.9	15.0	10.0	9.7	12.4	14.6	33.1	22.2	18.8	19.7	18.5	15.4	-	
28	526078	224818	26.9	26.7	20.9	18.7	15.4	16.1	13.9	14.5	21.3	22.7	25.5	18.8	20.1	16.7	-	
31	525160	223069	24.7	22.6	16.0	16.8	15.2	14.7	13.3	37.7	16.7	22.6	20.2	17.5	19.8	16.5	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
34	523695	222594	51.6	51.5	41.9	40.5	33.0	39.9	39.5	18.6	47.4	45.3	45.0	35.1	40.8	33.8	-	
35	527020	221097	22.9	23.0	18.2	16.0	18.6	19.1	13.5	13.2	20.4	17.4	25.1	14.3	18.5	15.3	-	
37	522608	225880	25.8	27.7	18.5	17.4	14.1	12.7	12.6	0.8	18.0	22.8	23.9	18.1	17.7	14.7	-	
38	523397	225028	26.0	30.8	26.7		23.3	21.3	16.1	16.3		27.7	28.9	24.1	24.1	20.0	-	
39	523319	225021	27.8	31.7	24.9	21.4	20.8	19.4	19.4		26.0	28.1	28.1	20.9	24.4	20.3	-	
40	524097	222765	29.9	33.3	25.9	24.5	25.0	22.8	18.5	16.7	29.1	23.3	31.7	22.0	25.2	20.9	-	
41	523980	224265	30.9	34.5	25.2	20.7	12.2	19.3	15.4	19.4	21.0	22.9	21.1	22.5	22.1	18.3	-	

All erroneous data has been removed from the NO<sub>2</sub> 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.

Stevenage Borough Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

**Notes:**

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

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

See Appendix C for details on bias adjustment and annualisation.

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

### **New or Changed Sources Identified Within Stevenage Borough Council During 2023**

Stevenage Borough Council has not identified any new sources relating to air quality within the reporting year of 2023.

### **Additional Air Quality Works Undertaken by Stevenage Borough Council During 2023**

Stevenage Borough Council has not completed any additional works within the reporting year of 2023.

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

The diffusion tubes are supplied and analysed by Gradko International Ltd. Tubes are all 50% TEA in acetone.

Gradko International Ltd is a UKAS accredited laboratory and participates in the AIR-PT Scheme for NO<sub>2</sub> tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO<sub>2</sub> concentrations reported are of a high calibre. Gradko scored 100% between January and October 2023. The percentage score reflects the results deemed to be satisfactory based upon the z-score of  $< \pm 2$ . Data from October 2023 onwards was not available at the time of writing.

### **Diffusion Tube Annualisation**

All diffusion tube monitoring locations within Stevenage Borough Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

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

The diffusion tube data presented within the 2023 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under

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

Stevenage Borough Council have applied a national bias adjustment factor of 0.83 to the 2023 monitoring data. A summary of bias adjustment factors used by Stevenage Borough Council over the past five years is presented in Table C. 1.

**Table C. 1 – Bias Adjustment Factor**

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.83
2022	National	03/23	0.82
2021	National	03/23	0.82
2020	National	06/21	0.83
2019	National	06/20	0.89



Figure C. 1 - Screenshot of National Diffusion Tube Bias Adjustment Factor Spreadsheet Tool

National Diffusion Tube Bias Adjustment Factor Spreadsheet							Spreadsheet Version Number: 03/24			
<p>Follow the steps below <b>in the correct order</b> to show the results of <b>relevant</b> co-location studies</p> <p>Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods</p> <p>Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet</p> <p>This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.</p>								<p>This spreadsheet will be updated at the end of June 2024</p> <p><a href="#">LAQM Helpdesk Website</a></p>		
The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.						Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.				
Step 1:	Step 2:	Step 3:	Step 4:							
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	<p>Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution.</p> <p>Where there is more than one study, use the overall factor<sup>3</sup> shown in blue at the foot of the final column.</p>							
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data <sup>2</sup>	If you have your own co-location study then see footnote <sup>4</sup> . If uncertain what to do then contact the Local Air Quality Management Helpdesk at <a href="mailto:LAQMhelpdesk@bureauveritas.com">LAQMhelpdesk@bureauveritas.com</a> or 0800 0327953							
Analysed By <sup>1</sup>	Method <small>To undo your selection, choose (All) from the pop-up list</small>	Year <sup>5</sup> <small>To undo your selection, choose (All)</small>	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m <sup>3</sup> )	Automatic Monitor Mean Conc. (Cm) (µg/m <sup>3</sup> )	Bias (B)	Tube Precision <sup>6</sup>	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	50% TEA in acetone	2023	UB	City Of London Corporation	10	28	22	26.3%	G	<b>0.79</b>
Gradko	50% TEA in acetone	2023	R	City Of London Corporation	11	36	31	15.0%	G	<b>0.87</b>
Gradko	50% TEA in acetone	2023	R	LB Newham	12	27	21	28.0%	G	<b>0.78</b>
Gradko	50% TEA in acetone	2023	SU	Redcar And Cleveland Borough Council	12	14	10	48.0%	G	<b>0.68</b>
Gradko	50% TEA in Acetone	2023	R	Sandwell Mbc	12	33	26	27.6%	G	<b>0.78</b>
Gradko	50% TEA in acetone	2023	UB	Sandwell Mbc	11	21	18	15.8%	G	<b>0.86</b>
Gradko	50% TEA in acetone	2023	R	Sandwell Mbc	12	23	20	14.2%	S	<b>0.88</b>
Gradko	50% TEA in Acetone	2023	UC	Falkirk Council	12	33	29	14.9%	G	<b>0.87</b>
Gradko	50% TEA in Acetone	2023	UB	Falkirk Council	12	15	13	8.9%	G	<b>0.92</b>
Gradko	50% TEA in acetone	2023	R	London Borough Of Lewisham	11	33	27	22.7%	G	<b>0.82</b>
Gradko	50% TEA in Acetone	2023	R	London Borough Of Merton	12	37	31	18.5%	G	<b>0.84</b>
Gradko	50% TEA in acetone	2023	KS	Marylebone Road intercomparison	11	47	38	25.7%	G	<b>0.80</b>
Gradko	50% TEA in acetone	2023	R	Royal Borough Of Windsor And Maidenhead	11	27	23	21.6%	G	<b>0.82</b>
Gradko	50% TEA in acetone	2023	R	Royal Borough Of Windsor And Maidenhead	12	24	24	0.6%	G	<b>0.99</b>
Gradko	50% TEA in acetone	2023	R	London Borough Of Richmond Upon Thames	11	18	16	15.6%	G	<b>0.86</b>
Gradko	50% TEA in acetone	2023		<b>Overall Factor<sup>3</sup> (15 studies)</b>					<b>Use</b>	<b>0.83</b>

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

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

No diffusion tube NO<sub>2</sub> monitoring locations within Stevenage Borough Council required distance correction during 2023.

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

Automatic measurements of PM<sub>2.5</sub> were made using a BAM-1020, a beta attenuation mass monitor. Measurements of NO<sub>x</sub> were made using an Enviro Technology Model 200E, a chemiluminescent method analyser. All measurements were logged by the instruments themselves and collected by Enviro Technology hourly. Measurements from the monitoring Site were validated by Ricardo using the most up to date calibration factors and publicly disseminated in near real time on the Hertfordshire and Bedfordshire Air Quality Network [http://www.airqualityengland.co.uk/local-authority/?la\\_id=408](http://www.airqualityengland.co.uk/local-authority/?la_id=408).

### **PM<sub>10</sub> and PM<sub>2.5</sub> Monitoring Adjustment**

The type of PM<sub>2.5</sub> monitor utilised within Stevenage Borough Council does not require the application of a correction factor.

### **Automatic Monitoring Annualisation**

The automatic monitoring location within Stevenage Borough Council recorded data capture above 75% in 2023 and therefore does not require annualisation.

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

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO<sub>2</sub> concentration at the nearest location relevant for exposure has been estimated using the NO<sub>2</sub> fall-off with distance calculator available on the LAQM Support website. No automatic NO<sub>2</sub> monitoring locations within Stevenage Borough Council required distance correction during 2023.

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

Figure D. 1 – Map of Automatic Monitoring Site AQMS2

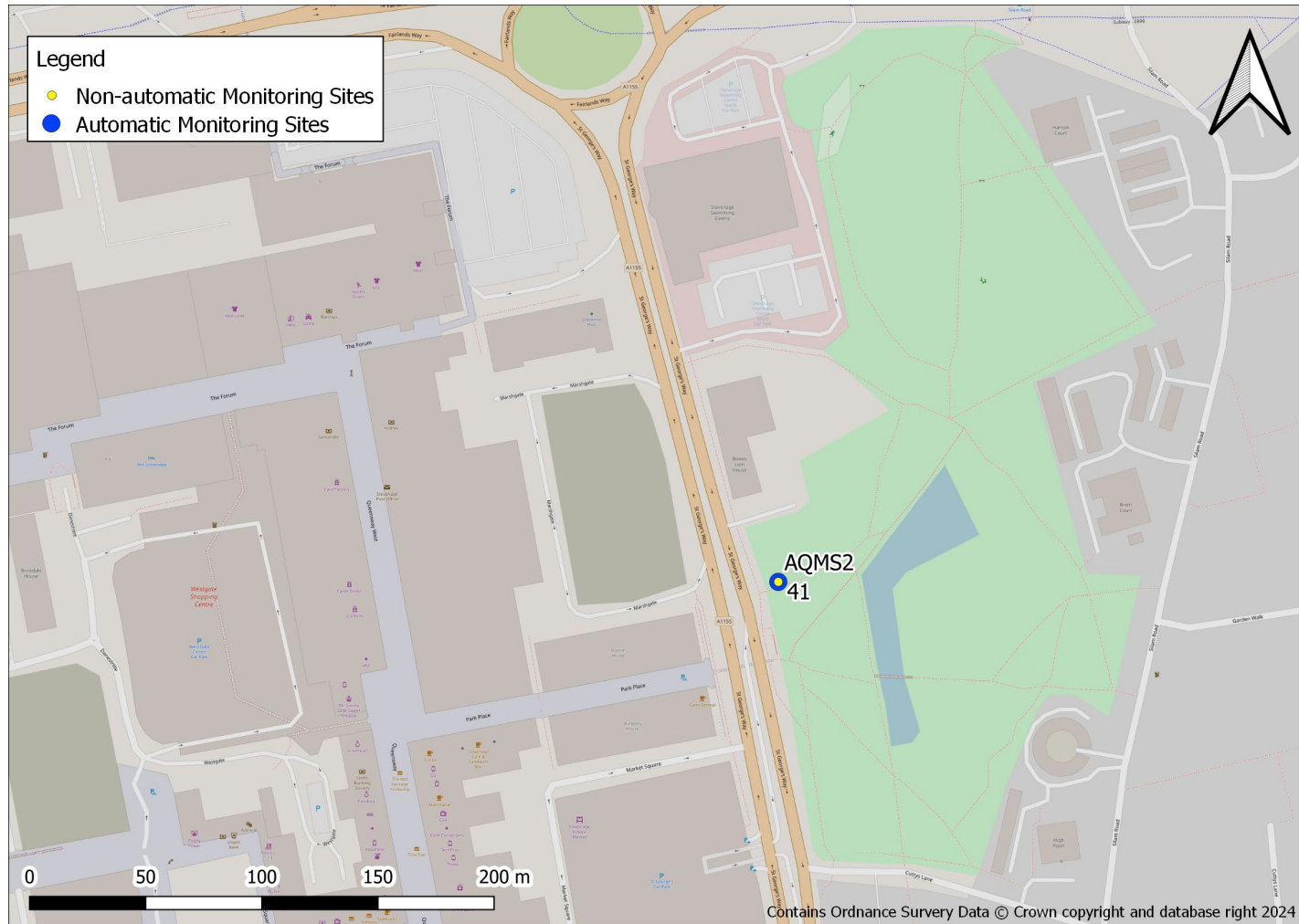


Figure D. 2 – Map of Non-Automatic Monitoring Sites in the west of the borough

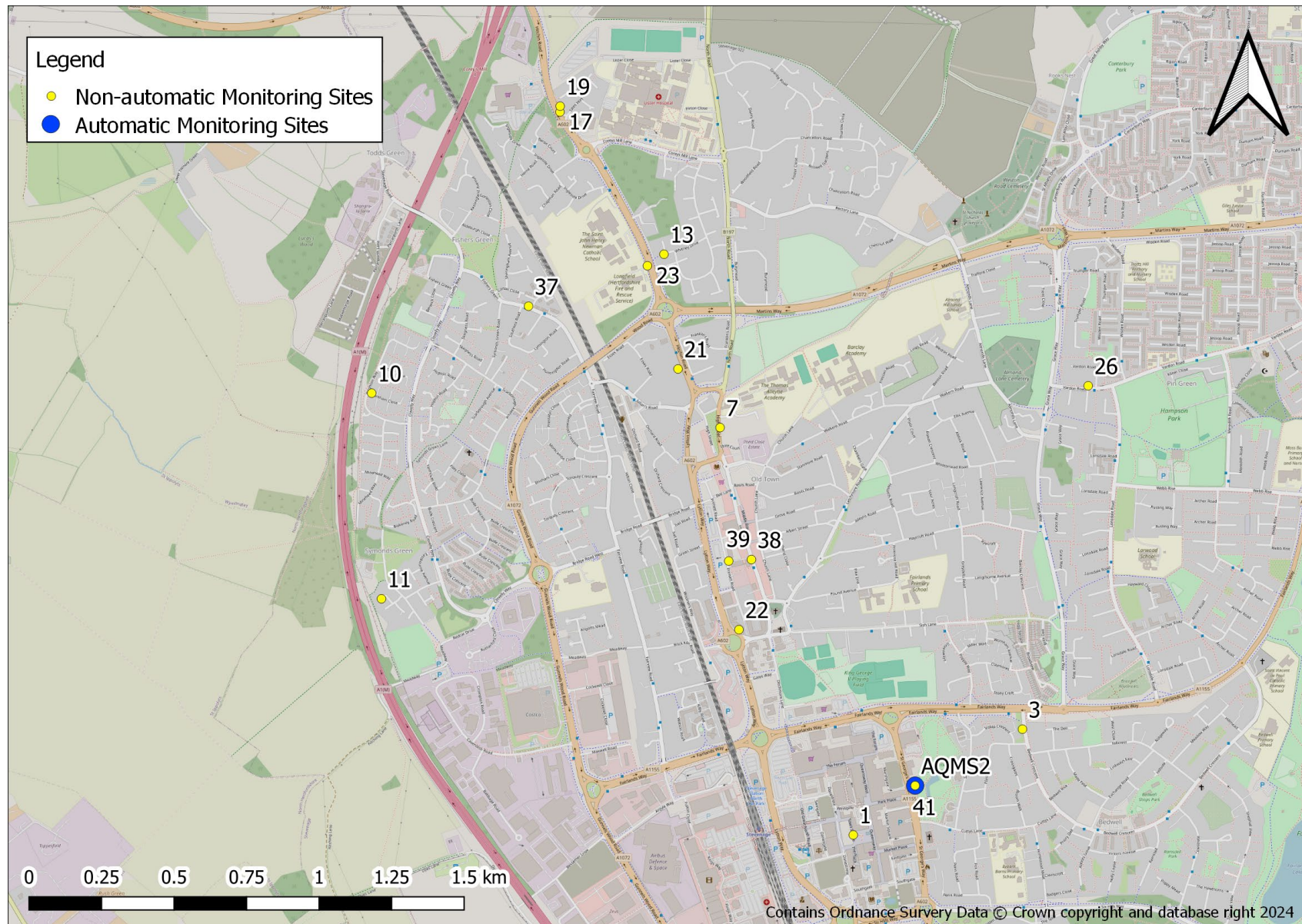


Figure D. 3 – Map of Non-Automatic Monitoring Sites in the east of the borough

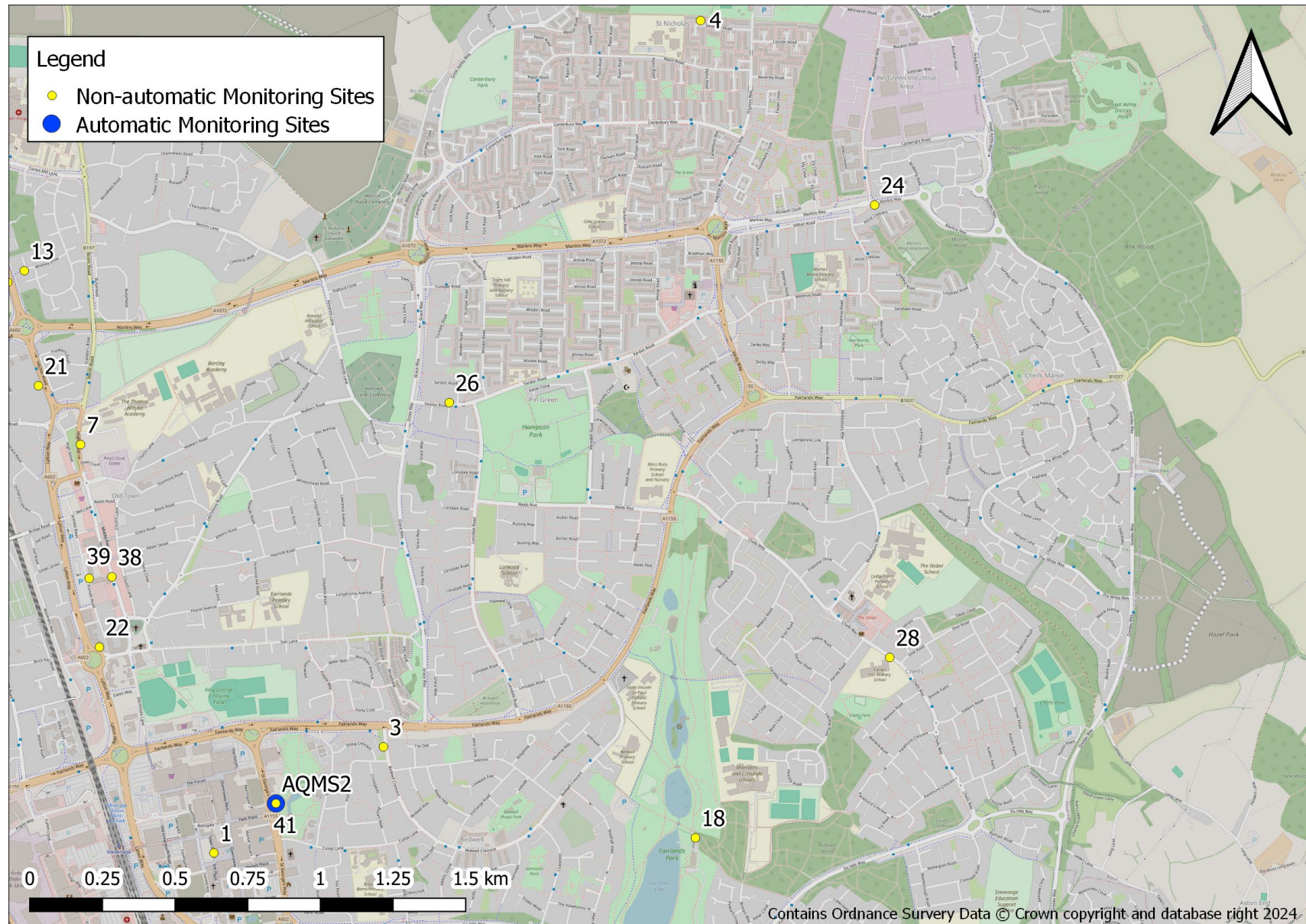
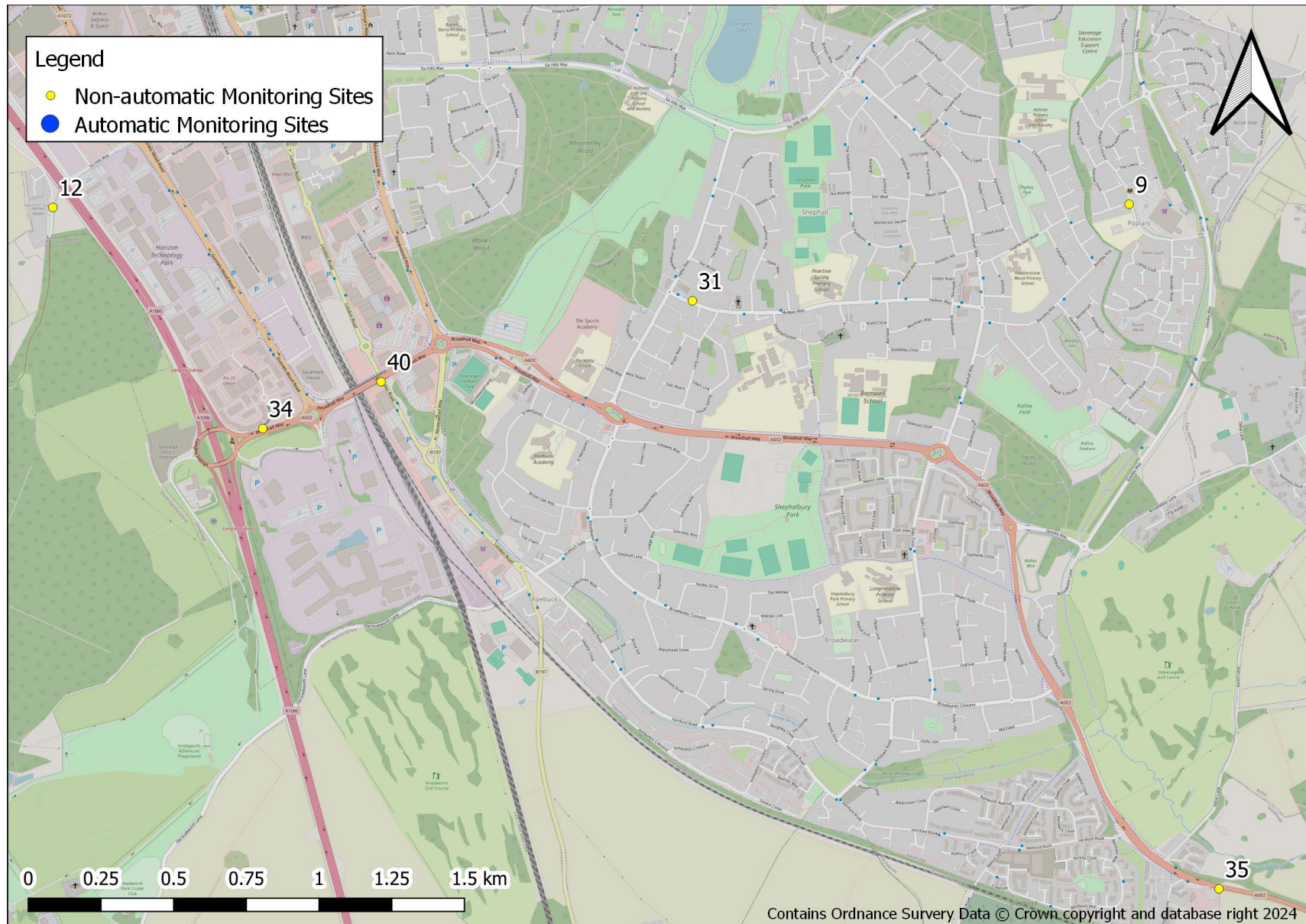


Figure D. 4 – Map of Non-Automatic Monitoring Sites in the south of the borough



## Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England<sup>9</sup>

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

<sup>9</sup> The units are in microgrammes of pollutant per cubic metre of air (µg/m<sup>3</sup>).

## Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SBC	Stevenage Borough Council
SO <sub>2</sub>	Sulphur Dioxide



## References

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- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
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- Hertfordshire County Council. Local Transport Plan (LTP4). 2018. Available at <https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/ltp4-local-transport-plan-4-complete.pdf>
- Hertfordshire and Bedfordshire Air Pollution Alert System Available at <https://www.airqualityengland.co.uk/local-authority/knr-subscription>
- Hertfordshire and Bedfordshire Air Quality Network available at [http://www.airqualityengland.co.uk/local-authority/?la\\_id=408](http://www.airqualityengland.co.uk/local-authority/?la_id=408)
- Public Health Outcomes Framework. 2022. Published by Office for Health Improvement & Disparities.