# London Borough of Bromley
# Air Quality Annual Status Report for 2024

Date of publication: May 2025

This report provides a detailed overview of air quality in the London Borough of Bromley during 2024. It has been produced to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process[1].

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[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19))

**Contents**

**Tables**

**Figures**

## Abbreviations

| Abbreviation | Description |
|---|---|
| AQAP | Air Quality Action Plan |
| AQMA | Air Quality Management Area |
| AQN | Air Quality Neutral |
| AQO | Air Quality Objective |
| AQP | Air Quality Positive |
| BEB | Buildings Emission Benchmark |
| CAB | Cleaner Air Borough |
| EV | Electric Vehicle |
| GLA | Greater London Authority |
| LAEI | London Atmospheric Emissions Inventory |
| LAQM | Local Air Quality Management |
| LLAQM | London Local Air Quality Management |
| NRMM | Non-Road Mobile Machinery |
| $PM_{10}$ | Particulate matter less than 10 micron in diameter |
| $PM_{2.5}$ | Particulate matter less than 2.5 micron in diameter |
| TEB | Transport Emissions Benchmark |
| TfL | Transport for London |

## Table A. Summary of National Air Quality and International Standards, Objectives and Guidelines

| Pollutant | Standard / Objective / Guideline | Averaging Period | Date [1] |
|---|---|---|---|
| Nitrogen dioxide ($NO_2$) | 200µg $m^{-3}$ not to be exceeded more than 18 times a year | 1-hour mean | 31 Dec 2005 |
| Nitrogen dioxide ($NO_2$) | 40µg $m^{-3}$ | Annual mean | 31 Dec 2005 |
| Nitrogen dioxide ($NO_2$) | WHO AQG [2]: 10µg $m^{-3}$ | Annual mean | |
| Particles ($PM_{10}$) | 50µg $m^{-3}$ not to be exceeded more than 35 times a year | 24-hour mean | 31 Dec 2004 |
| Particles ($PM_{10}$) | WHO AQG [2]: 45µg $m^{-3}$ not to be exceeded more than 3-4 times a year | 24-hour mean | |
| Particles ($PM_{10}$) | 40µg $m^{-3}$ | Annual mean | 31 Dec 2004 |
| Particles ($PM_{10}$) | WHO AQG [2]: 15µg $m^{-3}$ | Annual mean | |
| Particles ($PM_{2.5}$) | 10µg $m^{-3}$ [3] | Annual mean | 2040 |
| Particles ($PM_{2.5}$) | London Mayoral Objective [4]: 10µg $m^{-3}$ | Annual mean | 2030 |
| Particles ($PM_{2.5}$) | WHO AQG [2]: 5µg $m^{-3}$ | Annual mean | |
| Particles ($PM_{2.5}$) | Target of 15% reduction in concentration at urban background locations | 3-year mean | Between 2010 and 2021 |
| Particles ($PM_{2.5}$) | WHO AQG [2]: 15µg $m^{-3}$ | 24-hour mean | |
| Sulphur dioxide ($SO_2$) [5] | 266µg $m^{-3}$ not to be exceeded more than 35 times a year | 15-minute mean | 31 Dec 2005 |
| Sulphur dioxide ($SO_2$) | 350µg $m^{-3}$ not to be exceeded more than 24 times a year | 1-hour mean | 31 Dec 2004 |
| Sulphur dioxide ($SO_2$) | 125µg $m^{-3}$ mot to be exceeded more than 3 times a year | 24-hour mean | 31 Dec 2004 |
| Sulphur dioxide ($SO_2$) | WHO AQG [2]: 40µg $m^{-3}$ not to be exceeded more than 3-4 times a year | 24-hour mean | |

## Notes:

(1) Date by which to be achieved by and maintained thereafter

(2) 2021 World Health Organisation Air Quality Guidelines

(3) Air quality target under the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 under the Environment Act 2021.

(4) London Mayoral Objective

# 1. Air Quality Monitoring

## 1.1 Locations

The London Borough of Bromley has historically monitored at 6 continuous monitoring sites within the Borough, 5 of which are now closed. The remaining operational monitoring station is located at Harwood Avenue, in central Bromley, monitoring $NO_2$, $PM_{10}$ and $PM_{2.5}$. Table B and Figure 1 provide details of this monitoring site. Monitoring at the site has been operated by the Council since July 2011. Details of the relevant Quality Assurance/Quality Control (QA/QC) procedures that have been followed throughout the monitoring period are provided in Appendix A.

Bromley carries out passive monitoring using $NO_2$ diffusion tubes at 32 locations in the Borough. All the diffusion tube sites are either at roadside or kerbside locations. The Harwood Avenue diffusion tube site is co-located with the Harwood Avenue automatic monitor. Up until the end of 2020, there were 10 triplicate diffusion tube monitoring locations, at which point 22 additional diffusion tube locations were installed with all monitoring locations commissioned with one tube. Table C and Figure 1 provide details of the operational diffusion tube sites within the Borough during 2024.

**Table B. Details of Automatic Monitoring Sites for 2024**

| Site ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In AQMA? | Monitoring Technique | Distance to Relevant Exposure (m) (1) | Distance to kerb of nearest road (m) (2) | Inlet Height (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | Harwood Avenue | Kerbside | 540523 | 169326 | $NO_2$, $PM_{2.5}$ and $PM_{10}$ | YES | Chemiluminescence, Beta attenuation monitoring (BAM) | 10.8 | 0.4 | 3.5 |

**Notes:**

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

(2) N/A if not applicable

## Table C. Details of Non-Automatic Monitoring Sites for 2024

| Diffusion Tube ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In 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 | Homesdale Road | Kerbside | 541047 | 168231 | $NO_2$ | Yes | 4.3 | 0.7 | No | 2.2 |
| 2 | Chatterton Road | Roadside | 541679 | 167931 | $NO_2$ | Yes | 5.4 | 1.7 | No | 2.5 |
| 3 | Hastings Road, McDonalds | Kerbside | 542402 | 166012 | $NO_2$ | Yes | 19.0 | 0.8 | No | 2.1 |
| 4 | College Road | Kerbside | 540336 | 170258 | $NO_2$ | Yes | 10.0 | 0.5 | No | 2.3 |
| 5 | London Road | Roadside | 539790 | 170050 | $NO_2$ | Yes | 7.1 | 1.4 | No | 2.3 |
| 6 | Shortlands Road | Roadside | 539486 | 169399 | $NO_2$ | Yes | 8.2 | 1.8 | No | 2.2 |
| 7 | Beckenham Road | Kerbside | 535947 | 169765 | $NO_2$ | Yes | 12.2 | 0.4 | No | 2.3 |
| 8 | Worsley Bridge Road | Kerbside | 536941 | 171320 | $NO_2$ | Yes | 7.2 | 0.9 | No | 2.2 |
| 9 | Links Way | Kerbside | 537511 | 167277 | $NO_2$ | Yes | 11.5 | 0.8 | No | 2.3 |
| 10 | Elmers End Road | Roadside | 536076 | 168434 | $NO_2$ | Yes | 6.5 | 1.6 | No | 2.3 |
| 11 | Anerley Road | Kerbside | 535006 | 169590 | $NO_2$ | Yes | 16.2 | 0.7 | No | 2.2 |

| Diffusion Tube ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | Anerley Hill | Kerbside | 533949 | 170624 | $NO_2$ | Yes | 7.2 | 0.5 | No | 2.2 |
| 13 | Hamlet Road | Kerbside | 534052 | 170237 | $NO_2$ | Yes | 13.4 | 0.6 | No | 2.3 |
| 14 | Belvedere Road | Kerbside | 533702 | 170354 | $NO_2$ | Yes | 12.3 | 0.7 | No | 2.5 |
| 15 | Glebe Way | Kerbside | 538398 | 165925 | $NO_2$ | Yes | 9.9 | 0.5 | No | 2.3 |
| 16 | Ridgeway | Kerbside | 540228 | 165941 | $NO_2$ | Yes | 13.4 | 0.5 | No | 2.2 |
| 17 | Crofton Road | Kerbside | 543303 | 165256 | $NO_2$ | Yes | 15.1 | 0.7 | No | 2.3 |
| 18 | Towncourt Lane | Roadside | 544779 | 166831 | $NO_2$ | Yes | 3.8 | 2.3 | No | 2.3 |
| 19 | High Street, Orpington | Roadside | 546190 | 166135 | $NO_2$ | Yes | 6.2 | 2.7 | No | 2.6 |
| 20 | Cardinham Road | Roadside | 545861 | 164813 | $NO_2$ | Yes | 5.6 | 1.6 | No | 2.2 |
| 21 | Farnborough Hill | Kerbside | 545439 | 164034 | $NO_2$ | Yes | 9.6 | 0.8 | No | 2.4 |
| 22 | Poverest Road | Roadside | 546821 | 167564 | $NO_2$ | Yes | 10.9 | 1.6 | No | 2.2 |
| 23 | High Street, St Mary Cray | Roadside | 547168 | 167471 | $NO_2$ | Yes | 51.0 | 1.3 | No | 2.2 |

| Diffusion Tube ID | Site Name | Site Type | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Pollutants Monitored | In 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| 24 | Midfield Way | Kerbside | 546984 | 169905 | $NO_2$ | Yes | 18.9 | 0.7 | No | 2.2 |
| 25 | Ashfield Lane | Roadside | 544437 | 170464 | $NO_2$ | Yes | 11.9 | 1.6 | No | 2.2 |
| 26 | Park Road | Kerbside | 543930 | 170934 | $NO_2$ | Yes | 3.6 | 0.9 | No | 2.3 |
| 27 | Harwood Avenue | Kerbside | 540525 | 169325 | $NO_2$ | Yes | 10.8 | 0.4 | Yes | 2.3 |
| 28 | Widmore Road | Roadside | 540519 | 169403 | $NO_2$ | Yes | 15.0 | 3.8 | No | 2.3 |
| 29 | Blackbrook Lane | Roadside | 542980 | 167735 | $NO_2$ | Yes | 14.0 | 1.4 | No | 2.2 |
| 30 | Old Hill | Kerbside | 543452 | 169793 | $NO_2$ | Yes | 6.7 | 0.4 | No | 2.2 |
| 31 | Mottingham Road | Roadside | 542847 | 172021 | $NO_2$ | Yes | 19.6 | 1.8 | No | 2.2 |
| 32 | Page Heath Lane | Kerbside | 541960 | 168841 | $NO_2$ | Yes | 2.8 | 0.5 | No | 2.4 |

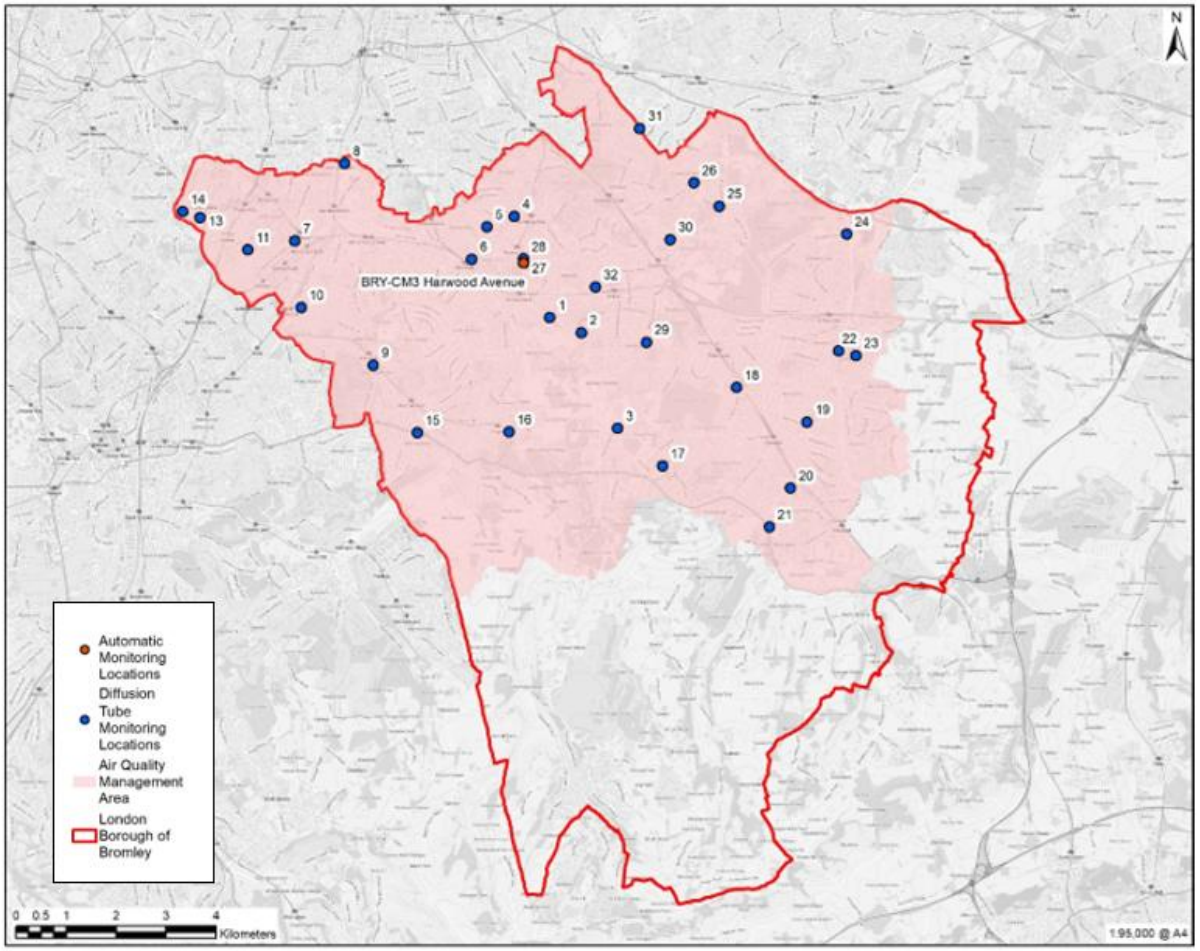
**Notes:**

(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.

**Figure 1. Map of Monitoring Sites**

The monitoring site numbers indicated on the map below correlate to the Diffusion Tube Identification numbers listed in Table C.



## 1.2 Comparison of Monitoring Results with AQOs

Annual mean $NO_2$ concentration results from the automatic monitoring station and diffusion tube monitoring locations, since 2018, are presented in Tables D to I. These results have been adjusted for annualisation and bias, with detailed explanations provided in Appendix A.

The BRY-CM3 Harwood Avenue $NO_2$ automatic monitor did not exceed the $NO_2$ annual mean objective of 40µg $m^{-3}$ in 2024 and achieved an 85% data capture rate. This rate falls below the 90% required by Defra, meaning the annual mean $NO_2$ value for 2024 may not fully represent the entire year and should be used as guidance only. Table F shows the number of 1-Hour means exceeding 200µg $m^{-3}$. No exceedances were recorded in 2024. All data has been ratified, with details of the ratification process provided in Appendix A.

The 2024 diffusion tube monitoring results have been adjusted for annualisation and bias, with detailed explanations in Appendix A. Since the data capture for the diffusion tubes was 75% or higher, annualisation was not necessary. Appendix A also summarises the QA/QC procedures applied to the diffusion tube results.

In 2024, all but one $NO_2$ diffusion tube monitoring locations met the annual mean concentration objective of 40µg $m^{-3}$. The diffusion tube located at Site 19 in Orpington High Street recorded an annual mean $NO_2$ concentration of 40.1µg $m^{-3}$, marginally exceeding the objective. As this site is not a point of relevant exposure, Defra's Diffusion Tube Data Processing Tool[2] has been used to estimate the annual mean $NO_2$ concentration at the nearest location of relevant exposure reducing this to 31.8µg $m^{-3}$, this is detailed in Appendix A.

No diffusion tube locations recorded an annual mean concentration above 60µg $m^{-3}$, indicating that the 1 hour mean $NO_2$ objective is unlikely to have been exceeded.

Concentration values are those at the location of the monitoring site (bias adjusted and annualised, as required), not those following any fall-off with distance correction.

[2] Defra (2025), Diffusion Tube Data Processing Tool (V5). Available at: Diffusion Tube Data Processing Tool | LAQM (defra.gov.uk) Accessed 28/03/2025.

## Table D. Annual Mean $NO_2$ Monitoring Results: Automatic Monitoring (µg $m^{-3}$)

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid data capture for monitoring period %[(a)] | Valid data capture 2024 %[(b)] | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | 540523 | 169326 | Kerbside | 85.0 | 85.0 | 25.7 | 24.7 | 21.3 | 21.8 | 20.1 | 19.0 | 20.0 | ↑ |

### Notes:

The annual mean concentrations are presented as µg $m^{-3}$.

Exceedances of the $NO_2$ annual mean AQO of 40µg $m^{-3}$ are shown in **bold**.

$NO_2$ annual means more than 60µg $m^{-3}$, indicating a potential exceedance of the $NO_2$ hourly mean AQS objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias.

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

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

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

(b) Data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%).

**Table E. Annual Mean $NO_2$ Monitoring Results: Non-Automatic Monitoring (µg $m^{-3}$)**

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) (1) | Valid Data Capture 2024 (%) (2) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 541047 | 168231 | Diffusion tube | 100.0 | 100.0 | **43.5** | 39.4 | 29.3 | 30.9 | 28.6 | 24.2 | 22.6 | ↓ |
| 2 | 541679 | 167931 | Diffusion tube | 100.0 | 100.0 | - | - | - | 18.3 | 18.1 | 14.8 | 13.6 | ↓ |
| 3 | 542402 | 166012 | Diffusion tube | 100.0 | 100.0 | - | - | - | 27.5 | 27.6 | 24.1 | 24.6 | ↑ |
| 4 | 540336 | 170258 | Diffusion tube | 92.4 | 92.4 | 35.6 | 33.1 | 25.7 | 25.5 | 25.6 | 23.0 | 21.8 | ↓ |
| 5 | 539790 | 170050 | Diffusion tube | 100.0 | 100.0 | 37.6 | 37.6 | 27.7 | 26.8 | 24.6 | 22.4 | 18.6 | ↓ |
| 6 | 539486 | 169399 | Diffusion tube | 90.8 | 90.8 | 35.3 | 36.0 | 27.7 | 27.1 | 25.4 | 22.4 | 21.9 | ↓ |
| 7 | 535947 | 169765 | Diffusion tube | 100.0 | 100.0 | 38.2 | 36.0 | 28.6 | 30.2 | 28.8 | 25.7 | 24.1 | ↓ |
| 8 | 536941 | 171320 | Diffusion tube | 100.0 | 100.0 | - | - | - | 20.6 | 20.0 | 17.8 | 14.7 | ↓ |
| 9 | 537511 | 167277 | Diffusion tube | 92.4 | 92.4 | - | - | - | 25.4 | 24.6 | 21.9 | 22.2 | ↑ |
| 10 | 536076 | 168434 | Diffusion tube | 100.0 | 100.0 | **51.3** | **48.1** | 39.5 | 37.5 | 35.4 | 31.6 | 29.5 | ↓ |
| 11 | 535006 | 169590 | Diffusion tube | 75.0 | 75.0 | 35.2 | 36.4 | 27.9 | 29.2 | 26.3 | 24.5 | 23.0 | ↓ |
| 12 | 533949 | 170624 | Diffusion tube | 90.8 | 90.8 | 39.0 | **42.5** | 35.1 | 35.9 | 36.2 | 30.2 | 27.8 | ↓ |
| 13 | 534052 | 170237 | Diffusion tube | 100.0 | 100.0 | - | - | - | 26.6 | 26.0 | 23.4 | 19.1 | ↓ |
| 14 | 533702 | 170354 | Diffusion tube | 100.0 | 100.0 | - | - | - | 18.2 | 16.5 | 14.8 | 13.5 | ↓ |

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) (1) | Valid Data Capture 2024 (%) (2) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 538398 | 165925 | Diffusion tube | 90.8 | 90.8 | - | - | - | 27.9 | 27.9 | 23.4 | 20.7 | ↓ |
| 16 | 540228 | 165941 | Diffusion tube | 92.2 | 92.2 | - | - | - | 16.2 | 15.3 | 12.5 | 11.1 | ↓ |
| 17 | 543303 | 165256 | Diffusion tube | 100.0 | 100.0 | - | - | - | 25.0 | 25.7 | 23.4 | 19.7 | ↓ |
| 18 | 544779 | 166831 | Diffusion tube | 90.8 | 90.8 | - | - | - | 15.4 | 14.6 | 12.8 | 12.4 | ↓ |
| 19 | 546190 | 166135 | Diffusion tube | 90.5 | 90.5 | - | - | - | **41.9** | **40.6** | 38.8 | **40.1** | ↑ |
| 20 | 545861 | 164813 | Diffusion tube | 100.0 | 100.0 | - | - | - | 19.4 | 18.3 | 16.0 | 14.8 | ↓ |
| 21 | 545439 | 164034 | Diffusion tube | 100.0 | 100.0 | - | - | - | 33.3 | 30.5 | 27.4 | 28.5 | ↑ |
| 22 | 546821 | 167564 | Diffusion tube | 100.0 | 100.0 | - | - | - | 22.4 | 19.8 | 17.7 | 15.0 | ↓ |
| 23 | 547168 | 167471 | Diffusion tube | 100.0 | 100.0 | - | - | - | 25.1 | 23.7 | 21.7 | 18.4 | ↓ |
| 24 | 546984 | 169905 | Diffusion tube | 100.0 | 100.0 | - | - | - | 24.7 | 24.0 | 19.6 | 18.2 | ↓ |
| 25 | 544437 | 170464 | Diffusion tube | 100.0 | 100.0 | - | - | - | 19.6 | 18.9 | 15.2 | 13.7 | ↓ |
| 26 | 543930 | 170934 | Diffusion tube | 100.0 | 100.0 | - | - | - | 21.0 | 19.8 | 16.2 | 14.9 | ↓ |
| 27 | 540525 | 169325 | Diffusion tube | 100.0 | 100.0 | 27.3 | 28.3 | 21.4 | 21.1 | 20.5 | 19.4 | 20.3 | ↑ |
| 28 | 540519 | 169403 | Diffusion tube | 100.0 | 100.0 | 39.1 | 38.4 | 30.9 | 32.8 | 31.1 | 28.8 | 30.5 | ↑ |
| 29 | 542980 | 167735 | Diffusion tube | 100.0 | 100.0 | - | - | - | 23.0 | 21.5 | 17.8 | 17.0 | ↓ |

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid Data Capture for Monitoring Period (%) (1) | Valid Data Capture 2024 (%) (2) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 543452 | 169793 | Diffusion tube | 100.0 | 100.0 | - | - | - | 26.6 | 23.3 | 20.4 | 18.1 | ↓ |
| 31 | 542847 | 172021 | Diffusion tube | 92.4 | 92.4 | - | - | - | 29.7 | 26.4 | 24.6 | 24.7 | ↑ |
| 32 | 541960 | 168841 | Diffusion tube | 100.0 | 100.0 | - | - | - | 25.3 | 23.9 | 21.3 | 17.8 | ↓ |

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19.**

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

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

## Notes:

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

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

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

Means for diffusion tubes have been corrected for bias. All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

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 F. $NO_2$ Automatic Monitoring Results: Comparison with 1-hour Mean Objective, Number of 1-Hour Means >200µg $m^{-3}$**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid data capture for monitoring period %([a]) | Valid data capture 2024 %([b]) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | 540523 | 169326 | Kerbside | 85.0 | 85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## Notes

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

Exceedance of the $NO_2$ short term AQO of 200 µg $m^{-3}$ over the permitted 18 hours per 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.

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

(b) Data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%)

Figure 2 below shows the trend in annual mean $NO_2$ concentration at BRY-CM3 Harwood Avenue Automatic Monitor for the 2018 – 2024 period. This location exhibits an overall decreasing trend other than a slight increase from 2020-2021 and an increase of 1.0µg $m^{-3}$ in 2024, from 19.0µg $m^{-3}$ in 2023 to 20.0µg $m^{-3}$.

**Figure 2. Annual Mean $NO_2$ concentrations at the Harwood Avenue Automatic Monitoring Site**

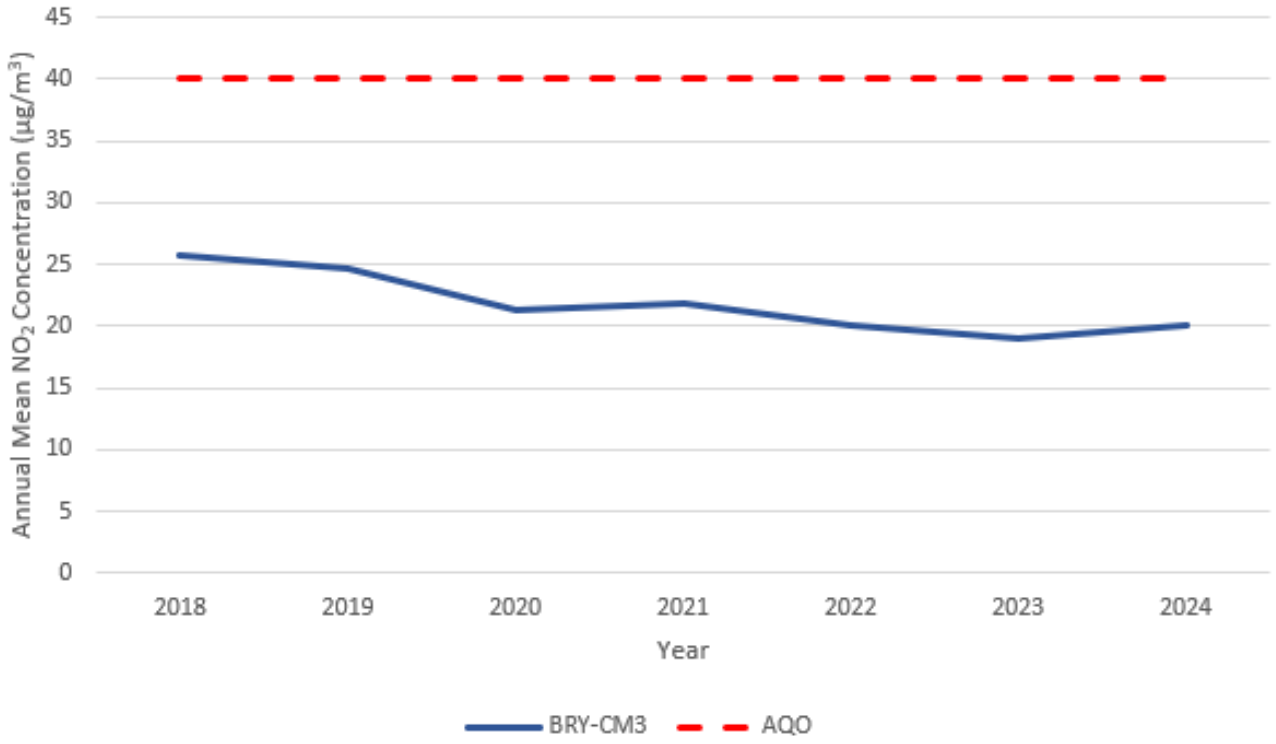


Figure 3 below shows the trend in annual mean $NO_2$ concentrations for the original 10 non-automatic monitoring diffusion tube sites for the 2018 – 2024 period. Please refer to Table E for full results.

Figures 4 & 5 below show the trends in annual mean $NO_2$ concentrations for the additional 22 non-automatic monitoring diffusion tube sites installed in 2021 for the 2021 – 2024 period. Please refer to Table E for full results.

**Figure 3. Annual Mean $NO_2$ concentrations for the original 10 Non-Automatic Monitoring Sites**

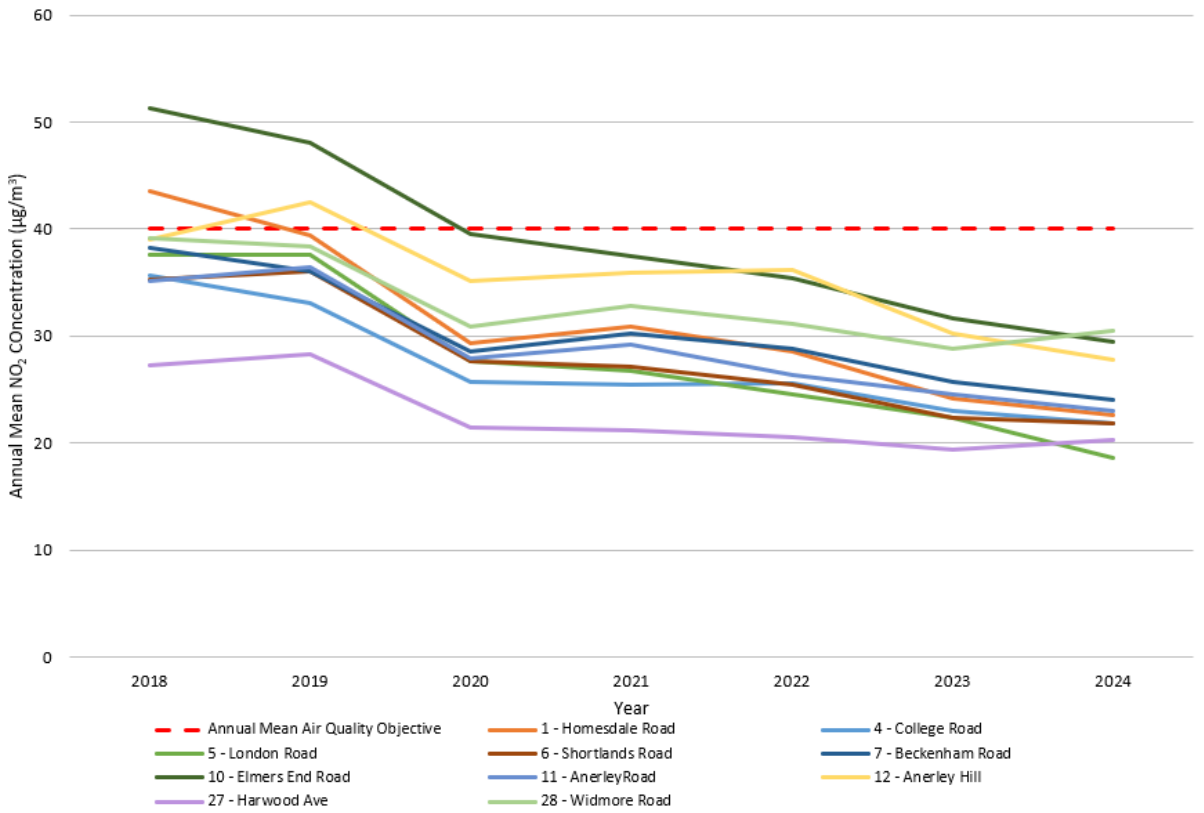


**Figure 4. Annual Mean $NO_2$ concentrations for the additional Non-Automatic Monitoring Sites (Tubes 2-19)**

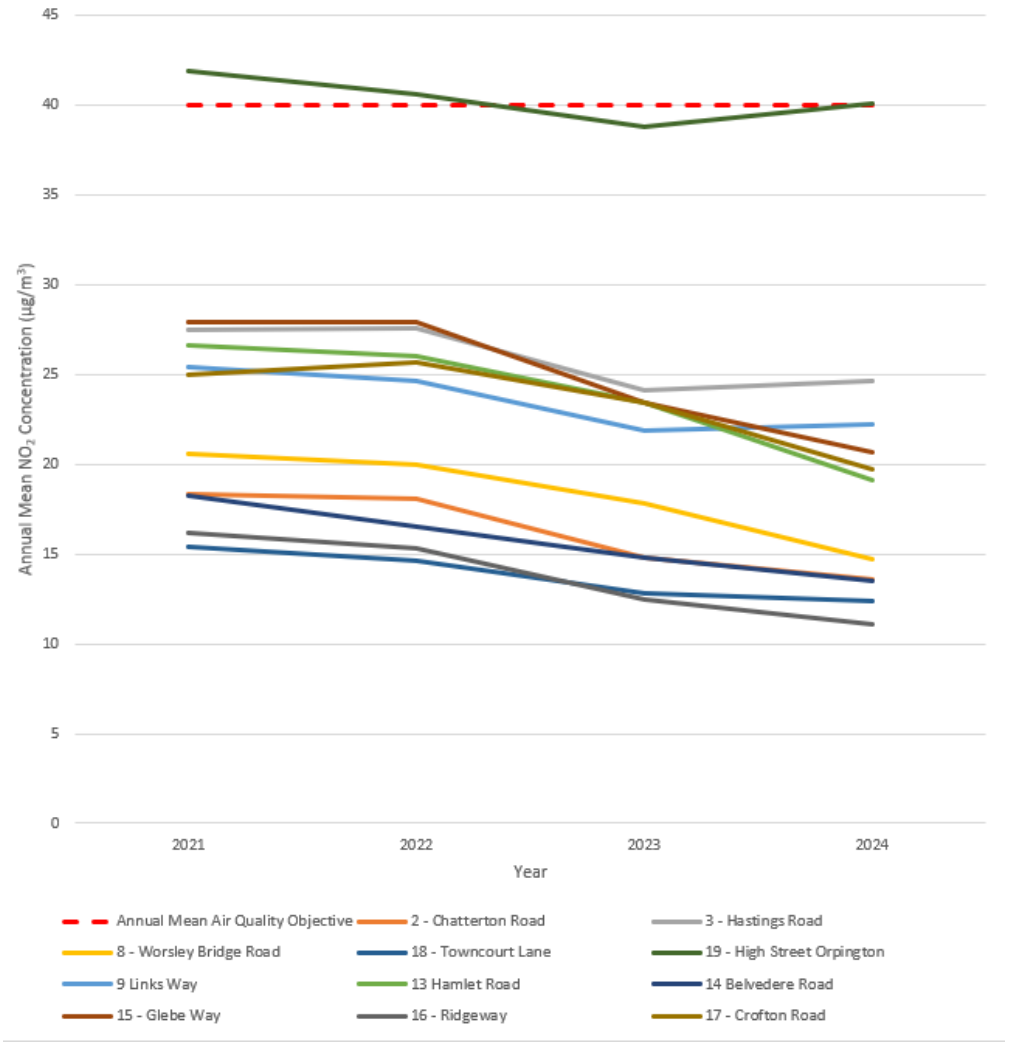


**Figure 5. Annual Mean $NO_2$ concentrations for the additional Non-Automatic Monitoring Sites (Tubes 20-32)**

## 1.3 Annual Mean $NO_2$ concentrations - Non-Automatic Monitoring Sites

Table E demonstrates that all diffusion tube sites have experienced a decrease in $NO_2$ concentrations from 2018 to 2024.

In 2024, all bias adjusted diffusion tube concentrations were below the AQO, except for Tube 19 in Orpington High Street which marginally exceeded the AQO with an annual mean $NO_2$ concentration of 40.1µg $m^{-3}$, before adjusting for relevant exposure.

Most diffusion tube sites demonstrated a downward trend in $NO_2$ from 2023 to 2024, except for seven sites that recorded the following increases in annual mean $NO_2$ concentration:

Site 3: Hastings Road, McDonalds: +0.5µg $m^{-3}$
Site 9: Links Way: +0.3µg $m^{-3}$
Site 19: Orpington High Street: +1.3µg $m^{-3}$
Site 21: Farnborough Hill: +1.1µg $m^{-3}$
Site 27: Harwood Avenue: +0.9µg $m^{-3}$
Site 28: Widmore Road: +1.7µg $m^{-3}$
Site 31: Mottingham Road: +0.1µg $m^{-3}$

This is a deviation from last year when all diffusion tube sites demonstrated a reduction in $NO_2$ levels.

The highest decrease in $NO_2$ concentration from 2023-2024 of 4.3µg $m^{-3}$ was observed at Site 13 – Hamlet Road. The most significant decreases in $NO_2$ concentrations when compared to last year were also observed at the following sites, where 50% of these sites are at school locations:
Site 5: London Road: -3.8µg $m^{-3}$
Site 17: Crofton Road: -3.7µg $m^{-3}$
Site 32: Page Heath Lane: -3.5µg $m^{-3}$
Site 23: St Mary Cray: -3.3µg $m^{-3}$
Site 8: Worsely Bridge Road: -3.1µg $m^{-3}$

All other diffusion tube sites reported decreases in $NO_2$ levels ranging from 0.4 to 2.7µg $m^{-3}$. The decrease at Site 10, Elmers End Road, which historically was declared an Air Quality Focus Area (AQFA) is particularly notable with a reduction of 2.1µg $m^{-3}$, following an additional decrease of 3.8µg $m^{-3}$ in 2023. This improvement is likely due to a change in bus movement configurations for the number 289 bus, which has had priority turning right since the end of 2022.

The bias adjusted $NO_2$ concentration at Site 19 on High Street, Orpington was 40.1µg $m^{-3}$ in 2024, marginally exceeding the AQO 40µg $m^{-3}$. In accordance with the technical guidance, this requires distance correction for the location of relevant exposure. After

applying this correction, the predicted concentration at the nearest sensitive receptor is 31.8µg $m^{-3}$ (further details of this calculation are presented in Appendix A). In 2023, Site 19 recorded a bias adjusted $NO_2$ concentration of 38.8µg $m^{-3}$, and after distance correction, the concentration was predicted to be 31.5µg $m^{-3}$. This demonstrates a bias adjusted increase of 1.3µg $m^{-3}$ in $NO_2$ concentration from 2023 to 2024 and a distance corrected increase of 0.3µg $m^{-3}$. This site is affected by high traffic flows, including a significant number of buses which may contribute to higher $NO_2$ concentrations in the area.

Overall, there was a significant reduction in $NO_2$ concentrations during the Covid-19 pandemic restrictions in 2020. Since then, $NO_2$ concentrations have slightly increased from those lows but have not returned to pre-pandemic levels, this is likely due to the cumulative impact of changes in work patterns and a reduction in commuting by car in addition to local and national policies to improve air quality.

The diffusion tube data demonstrates that the average reduction in $NO_2$ concentration from 2022-2023 was 2.9µg $m^{-3}$. The average reduction in $NO_2$ concentration from 2023-2024 was 1.4µg $m^{-3}$. The diffusion tube data demonstrates that although Bromley has reported an average reduction in $NO_2$ concentration in 2024 from the diffusion tubes sites, the rate of reduction is less than the previous year.

Overall, $NO_2$ concentrations observed in 2024 demonstrated reductions across the majority of sites, with the exception of seven. The longer-term trend from 2018 to 2024 shows $NO_2$ concentrations have reduced.

**Table G. Annual Mean $PM_{10}$ Automatic Monitoring Results (µg $m^{-3}$)**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid data capture for monitoring period %(a) | Valid data capture 2024 %(b) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | 540523 | 169326 | Kerbside | 98.0 | 98.0 | 16.5 | 18.8 | 15.8 | 15.4 | 14.7 | 13.0 | 16.0 | ↑ |

## Notes

The annual mean concentrations are presented as µg $m^{-3}$.

Exceedances of the $PM_{10}$ annual mean AQO of 40µg $m^{-3}$ are shown in **bold**.

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture is less than 75% and more than 25%.

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

(b) Data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%).

The Council has been monitoring $PM_{10}$ within the Borough since October 1999. The only operational monitoring station is at Harwood Avenue. A Beta Attenuation Monitor (BAM) is used for monitoring $PM_{10}$. The annual mean $PM_{10}$ results are shown in Table G and the 24-hour mean $PM_{10}$ results are presented in Table H. Data capture at the site in 2024 was 98%.

The annual mean $PM_{10}$ concentration in 2024 was 16.0µg $m^{-3}$, which is below the annual mean objective of 40µg $m^{-3}$. Annual mean concentrations decreased steadily between 2019-2023, but have increased by 3.0 µg $m^{-3}$ in the last year reflecting levels last observed pre-2020. The overall trend in $PM_{10}$ annual mean concentrations is demonstrated in Figure 6. There were no days where the average concentration was above the 24-hour mean air quality objective value of 50µg $m^{-3}$.

**Table H. $PM_{10}$ Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of $PM_{10}$ 24-Hour Means > 50µg $m^{-3}$**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid data capture for monitoring period %[a] | Valid data capture 2024 %[b] | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | 540523 | 169326 | Kerbside | 98.0 | 98.0 | 0.0(26) | 8.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## Notes

Exceedances of the $PM_{10}$ 24-hour mean objective (50 µg $m^{-3}$ over the permitted 35 days per year) are shown in **bold.**

Where the period of valid data is less than 85% of a full year, the 90.4th percentile is provided in brackets.

(a) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

(b) data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%).

**Figure 6. Annual Mean $PM_{10}$ Concentrations at Harwood Avenue Automatic Monitoring Site**

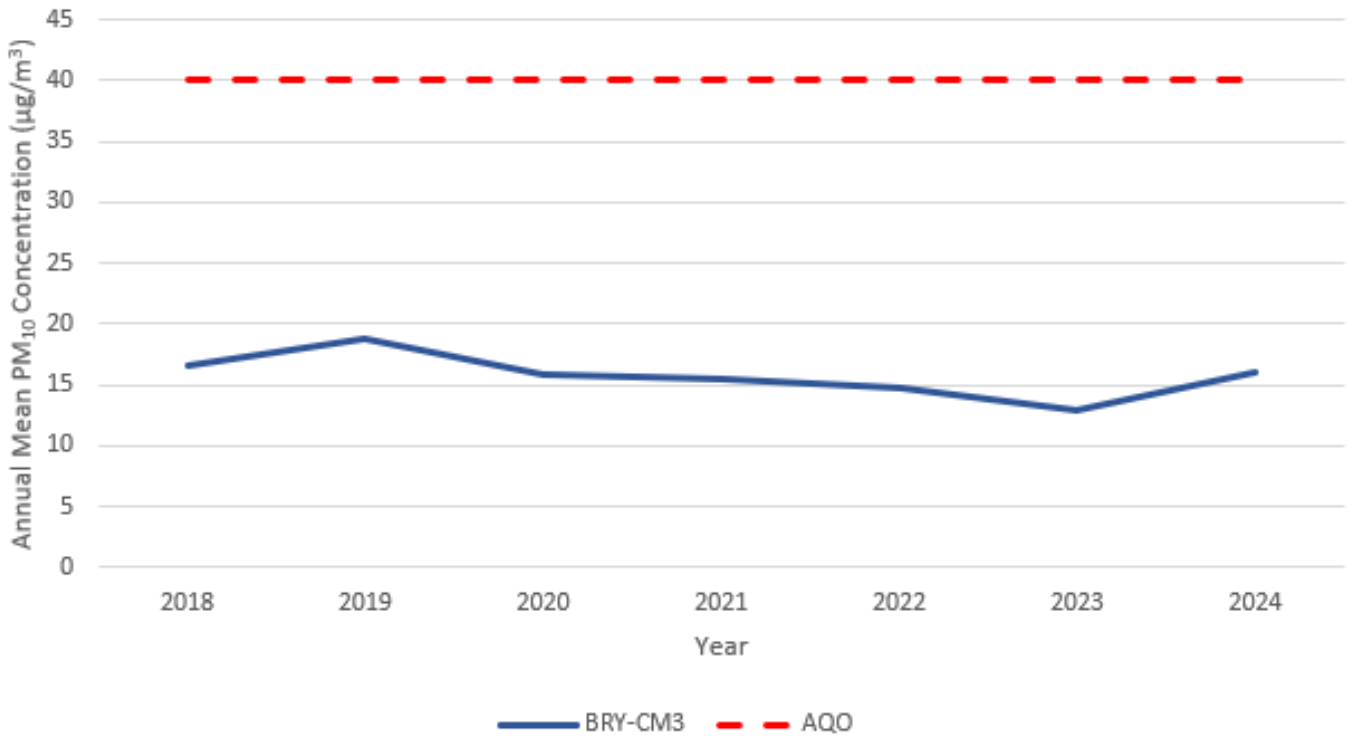


**Table I. Annual Mean $PM_{2.5}$ Automatic Monitoring Results (µg $m^{-3}$)**

| Site ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Site Type | Valid data capture for monitoring period %[(a)] | Valid data capture 2024 %[(b)] | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Trend from 2023-2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | 540523 | 169326 | Kerbside | 90.0 | 90.0 | - | - | 8.5 | 9.7 | **10.6** | 10.0 | 9.0 | ↓ |

## Notes

The annual mean concentrations are presented as µg $m^{-3}$.

Exceedances of the $PM_{2.5}$ annual mean concentration target of 10µg $m^{-3}$ are shown in **bold**.

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture is less than 75% and more than 25%.

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

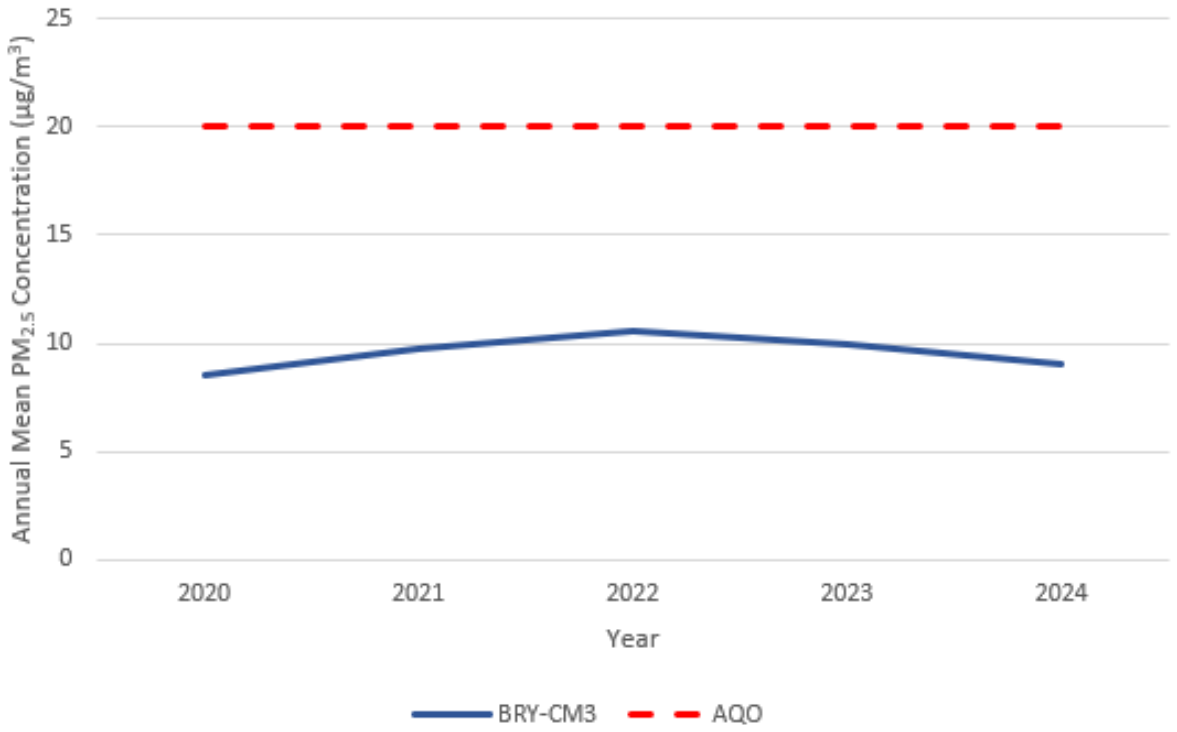
(b) Data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%).

In 2015, an inlet particle sensor was attached to the $PM_{10}$ monitor to monitor $PM_{2.5}$. This monitoring technique was not reference equivalent and as such provided indicative results. In 2020, a $PM_{2.5}$ beta attenuation monitor (BAM) was added to the existing continuous monitoring site at Harwood Avenue, to replace the $PM_{2.5}$ inlet particle sensor.

The annual mean $PM_{2.5}$ results from the BAM in 2024 are shown in Table I. Annual mean concentrations have decreased steadily since 2022 and decreased by 1.0µg $m^{-3}$ in 2024 to a concentration of 9.0µg $m^{-3}$, which is below the annual mean objective of 20µg $m^{-3}$. This also currently meets the air quality target under the Environment Act 2021, of an annual mean of 10µg $m^{-3}$ to be achieved by 2040. Data capture in 2024 was 90%. The overall trend in $PM_{2.5}$ annual mean concentrations is demonstrated in Figure 7.

It should be noted that the $PM_{2.5}$ data capture in 2020 and 2021 was below the valid data capture requirement of 90% to be used as part of the London Air Quality Network. This was largely due to the monitors installation in 2020 and technical issues resulting in periods of down time.

**Figure 7. Annual Mean $PM_{2.5}$ Concentrations at Harwood Avenue Automatic Monitoring Site**



## 1.4 Air Quality Sensors

The Breathe London Network provides 6 air quality monitors within the Borough. The Network is run by the Environmental Research Group at Imperial College London and consists of agreements between Local Government, Hospitals and Community Groups. Table J shows a list of the monitors with the annual mean for $NO_2$ and $PM_{2.5}$ in 2024. This monitoring technique is not reference equivalent and as such provides indicative results.

The locations of the Breathe London Nodes can be found here: Node Search — Breathe London

**Table J. - Annual mean of $NO_2$ and $PM_{2.5}$ of the Breathe London Nodes within the London Borough of Bromley (µg $m^{-3}$)**

| Node name | Valid data capture for operational period in 2024 (%) | NOx | | | | Trend | $PM_{2.5}$ | | | | Trend |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2021 | 2022 | 2023 | 2024 | 2023-2024 | 2021 | 2022 | 2023 | 2024 | 2023-2024 |
| Beckenham Beacon Hospital | 97.0 | - | 26.8 | 23.4 | 22.1 | ↓ | - | 7.8 | 7.2 | 6.0 | ↓ |
| Bethlam Royal Hospital | 90.0 | - | 22.9 | 21.5 | 21.1 | ↓ | - | 8.1 | 7.5 | 6.8 | ↓ |
| Orpington Hospital | 90.0 | - | 23.3 | 22.0 | 20.1 | ↓ | - | 7.7 | 7.1 | 6.1 | ↓ |
| Poverest Allotments | 100.0 | 26.2 | 23.8 | 22.4 | 19.3 | ↓ | 9.3 | 8.2 | 7.9 | 7.5 | ↓ |
| Princess Royal Hospital | 93.0 | 22.1 | 22.2 | 19.2 | 18.1 | ↓ | 10.7 | 10.0 | 8.0 | 8.4 | ↑ |
| Elmers End Church | 92.0 | - | - | - | 22.7 | - | - | - | - | 7.7 | - |

### Notes:

Beckenham Beacon, Bethlam Royal Hospital and Orpington Hospital Nodes became operational in August, July, and June 2022, respectively.

The nodes at Royal Bethlam Hospital and Orpington Hospital were not operational from 1st July 2024-31st December 2024 as a result of a pause in the Breathe London project.

The node at the Princess Royal University Hospital (PRUH) was not operational from 1st January 2024 - 30th April 2024. The site location was changed on 19th April 2024 to move the sensor to nearby the entrance to the hospital from the car park. It should be noted that construction works were ongoing at this site in 2024.

The node at Elmers End Church became operational on 20th January 2024.

# 2. Action 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 12 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 the AQMA declared by the London Borough of Bromley can be found in

Table K. The table presents a description of the AQMA that is currently designated within the London Borough of Bromley. Appendix D provides a map of the AQMA and the air quality monitoring locations in relation to the AQMA. The air quality objective pertinent to the current AQMA designation is as follows:

- $NO_2$ annual mean.

## Table K. Declared Air Quality Management Areas

| AQMA Name | Date of Declaration | Pollutants and Air Quality Objectives | One Line Description | Is air quality in the AQMA influenced by roads controlled by Highways England? | Level of Exceedance: Declaration | Level of Exceedance: Current Year | Number of Years Compliant with Air Quality Objective | Name and Date of AQAP Publication | Web Link to AQAP |
|---|---|---|---|---|---|---|---|---|---|
| London Borough of Bromley's AQMA | 09/09/2020 | $NO_2$ | E.g., An area encompassing the whole borough except for Biggin Hill, Darwin and parts of Cray Valley East and Chelsfield & Pratts Bottom | No - TFL | LAEI Model, 2020 | n/a – monitored data does not show an exceedance of distance adjusted data | 5 years (1) | Air Quality Action Plan, 19th September 2020 | Air Quality Action Plan (AQAP) |

☒ **The London Borough of Bromley confirm the information on UK-Air regarding their AQMA(s) is up to date**

☒ **The London Borough of Bromley confirm that all current AQAPs have been submitted to GLA**

(1) 5 years compliance is based on distance adjusted data which reflects predicted exposure at the nearest sensitive receptor – see data in Appendix C

## 2.2 Air Quality Action Plan Progress

Table L provides a summary of Bromley's progress against the Air Quality Action Plan, showing progress made this year.

### Table L. Delivery of Air Quality Action Plan Measures

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 1. Ensure that appropriate and effective monitoring is undertaken across Bromley to meet statutory obligations | | | |
| 1.1 | Monitoring and other core statutory duties | Ongoing maintenance of the Harwood Ave air quality monitoring station (AQMS) (%)<br>Target: data capture over 90% | Completed for 2024 |
| 1.2 | Monitoring and other core statutory duties | Publish an annual report of air quality data on Bromley's website<br>The successful submission and publication of Annual Status Reports and other statutory documents to the GLA | Completed annually |
| 1.3 | Monitoring and other core statutory duties | Seek funding where appropriate (via s106 agreements) for reference monitoring in Bromley Submissions | Bromley will continue to seek funding where appropriate |
| 1.4 | Monitoring and other core statutory duties | Review of diffusion tube network following the extension of the AQMA and add additional diffusion monitoring points (no.) | Completed. In January 2021, the number of monitoring locations increased from 10 to 32 and these have been analysed monthly since |
| 1.5 | Monitoring and other core statutory duties | Seek funding for AQMS to measure $PM_{10}$ and $PM_{2.5}$, $NO_2$ and $O_3$ at Biggin Hill by local agreement | Air quality monitoring is in place at Biggin Hill Airport for PM1, PM2.5, PM4 and PM10, Nitrogen Dioxide ($NO_2$) and Sulphur Dioxide ($SO_2$). Verification of data required before results can be shared |
| 1.6 | Monitoring and other core statutory duties | Prioritise the provision of a $PM_{2.5}$ monitor if installing new monitors | Completed. A $PM_{2.5}$ BAM was installed at Harwood Monitoring Station. There are no current plans to install further monitoring stations |
| 1.7 | Monitoring and other core statutory duties | Seek to test appropriate new smart monitoring technologies as they develop. | Part of the new Breathe London project and the use of Airly sensors, supported by CERC for the validation of data. Also installed an Airly sensor independently. Reviewing the technology as to effectiveness in use and accuracy of data |
| 1.8 | Monitoring and other core statutory duties | Continue to support major developers in siting and installing construction site dust monitors<br>Advice given though planning consultation system.<br>Outputs – number of planning conditions /reports | Completed for 2024 - see 2.9 for numbers of Construction Management Plan conditions recommended to planners which includes the management and monitoring of dust on site |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| | | provided. Reported annually in the Annual Status Report (ASR) | |
| 1.9 | Monitoring and other core statutory duties | Membership of the LAQN renewed. | Membership maintained. Bromley's site makes an essential contribution to the LAQN. This network provides published information for forecasting air quality and predictive triggers for data dissemination |
| 1.10 | Monitoring and other core statutory duties | Borough review of Part B (Environmental Permitting) processes to ensure all relevant process are captured (%)<br>Borough wide review to be completed by the end of 2021. | The Borough wide review is completed. All premises that require a permit have one in place or have applied |
| 2. Ensuring emissions from demolition and construction are minimised | | | |
| 2.1 | Emissions from developments and buildings | Require Construction Environmental Management Plans for 100% of major developments where works are likely to produce levels of dust (%) | Conditions imposed on all relevant applications |
| 2.2 | Emissions from developments and buildings | Require real-time $PM_{10}$ monitoring at high-risk sites in accordance with the Mayor of London Supplementary Planning Guidance (SPG). (%) | Air Quality Assessments accompany relevant planning applications, produced in accordance with best practice guidance |
| 2.3 | Emissions from developments and buildings | Enforcement visits when complaints received. (%) | 100% of complaints were appropriately responded to |
| 2.4 | Emissions from developments and buildings | Update Bromley's existing Code of Construction Practice (CoCP) | Completed. Bromley has adopted the GLA CoCP documents as its own CoCP) |
| 2.5 | Emissions from developments and buildings | Produce information for developers to promote low combustion and combustion free development | Completed. This information has been produced and will be available on Bromley's website in the near future |
| 2.6 | Emissions from developments and buildings | Adopt revised planning conditions and informatives regarding the use of diesel generators<br>Adoption of any additional information/Informatives. | Completed. Requirements where practicable adopted in CEMPs as part of the approved planning process. Details also included in draft CoCP. Also, a Bromley Communique for developers was produced on 21st December 2021 to promote low combustion and combustion free development (see 2.5) |
| 2.7 | Emissions from developments and buildings | Effectively manage and mitigate emissions of development taking place in the designated Air Quality Focus Area (AQFAs) through New Bromley plan | Conditions imposed on relevant applications |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 2.8 | Emissions from developments and buildings | Where appropriate, use planning obligations to secure funding from developers for monitoring compliance checks on major and/or sensitive sites. | Requested S106 funds for 5 sites, providing Construction Environmental Impact Monitoring. 1 site awaiting payment, 1 site agreed and subject to approval. 3 sites awaiting confirmation |
| 2.9 | Emissions from developments and buildings | Continue to assess all relevant planning applications for their air quality impact and condition as appropriate<br>Number of applications assessed, against no received within 28 days | No. of applications where AQ assessment: 59<br>No. of planning apps required to monitor for dust: 76<br>No. of developments required to install ultralow NOx boilers: 75<br>No. of Air Quality Neutral building and/or transport assessments undertaken: 59<br>Planning applications conditions for NRMM: 16 |
| 3.Ensuring enforcement of Non-Road Mobile Machinery (NRMM) air quality policies | | | |
| 3.1 | Emissions from developments and buildings | Apply conditions for construction sites to ensure compliance with the GLA's NRMM requirements<br>*Planning conditions to include where appropriate: Air Quality Assessment Air Quality Network (AQN) assessment Construction Environment Management Plan (CEMP) to include PM10 monitoring NRMM compliance with London LEZ Seek funding for air quality measures through S.106, Community Infrastructure Levy (CIL) where feasible | Conditions imposed on relevant applications |
| 3.2 | Emissions from developments and buildings | Ensure emissions from construction sites are minimized through cooperation with developers and site visits, including effective dust monitoring where appropriate, and compliance with GLA NRMM requirements | Provided an updated list of Major Planning sites where construction is starting or soon to start to NRMM Project Team for inspection. 8 Audits carried out in 2024. 4 self-compliant, 1 compliant and 2 with no NRMM on site and 1 non-compliant with a registration problem |
| 4. Reducing emissions from CHP and ensure smaller developments use ultra-low NOx boilers | | | |
| 4.1 | Emissions from developments and buildings | Require developments with Combined Heat and Power (CHP) to be air quality neutral as a minimum<br>Number of developments where AQ neutral is applied. | Air Quality Neutral Assessment provided at application stage and conditions imposed on the relevant applications |
| 4.2 | Emissions from developments and buildings | Require developers to meet the GLA's emissions limits for CHP and Biomass boilers | Use of CHP and biomass boilers assessed at application stage and conditions imposed on the relevant applications |
| 4.3 | Emissions from developments and buildings | Set requirement for evidence of maintenance of CHP and associated plant | Conditions imposed on relevant applications |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 5. Enforcing Air Quality Neutral Policies | | | |
| 5.1 | Emissions from developments and buildings | Apply Air Quality Positive for regeneration areas in line with the new London Plan<br>Agree standard planning conditions to require compliance with AQN standards and London Plan policy. | No relevant applications determined |
| 5.2 | Emissions from developments and buildings | Set requirement for evidence of maintenance of CHP and associated plant | Conditions imposed on relevant applications |
| 6. Ensuring adequate, appropriate, and well-located green space and infrastructure is included in new and existing developments, where appropriate | | | |
| 6.1 | Emissions from developments and buildings | Planning application / conditions - Set targets to improve levels of green infrastructure provided in new developments. *To be considered on a case-by-case basis through application of relevant London Plan Policies | Assessed at the application stage and tree and landscaping conditions imposed where relevant |
| 6.2 | Emissions from developments and buildings | Ensure that exposure to poor air quality in amenity spaces is considered at design stage and as part of the Air Quality Assessment (AQA). *To be considered on a case-by-case basis through application of relevant London Plan Policies | London Plan Policies are applied to development proposals and considered via the consultation process |
| 7. Ensuring that Smoke Control Areas (SCA) are appropriately identified and fully promoted | | | |
| 7.1 | Emissions from developments and buildings | Carry out awareness campaigns in relation to bonfires and wood burning stoves and provide advice on appropriate fuel by issuing guidance<br>Guidance to be produced by the end of 2021 and to be promoted through newsletters including 'Environment Matters'. Estimated engagement can be demonstrated through circulation outputs, website page hits. We will circulate to providers of fuels and relevant businesses, demonstrated through number of correspondences. | Joined the MAQF London Wood Burning Project where we contributed to the research into monitoring. Details on the Clean Air Night shared with medical practitioners via Public Health team |
| 7.2 | Emissions from developments and buildings | Effectively fulfil statutory duties as a Smoke Control Area (SCA) | 100% response to SCA related complaints. 8 of 8 complaints responded to and appropriate action taken. Includes complaints about smoke emissions from chimneys in SCAs and use of unauthorised fuels only. EXCLUDES more general enquiries about SCAs, authorised fuels, and requests for copies of SCOs |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| | | | |
| 7.3 | Emissions from developments and buildings | Continue to control emissions from permitted processes through inspections and enforcement (see also action 1) | 8 Petrol Vapour Recovery sites, 15 Dry Cleaner sites, crematorium and vehicle refinisher inspected, following risk rating requirements |
| 8.Deliver energy efficiency retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:NEW, RE:FIT and through borough carbon offset funds to replace old boilers /top-up lost insulation in combination with other energy conservation Measures | | | |
| 8.1 | Emissions from developments and buildings | Promoting and delivering energy efficiency retrofitting projects in workplaces and homes | As an organisation we continue to sign post residents to available grant funding. The councils webpages have been updated with the relevant information and these can be found at https://www.bromley.gov.uk/homepage/201/sustainability---home-energy-efficiency |
| 8.2 | Emissions from developments and buildings | Follow up proposals for inclusion in a revised policy for the retrofitting of air pollutant reduction equipment for clients living in areas identified as most likely to trigger detrimental health effects | Measure withdrawn from AQAP |
| 8.3 | Emissions from developments and buildings | Continue with the advice service for households at risk of fuel poverty in southeast London. Target- to carry out 800 home visits and 800 one-to-one advice sessions at events | Bromley continues to be part of the South London Energy Partnership and through the council's website, home energy advice tab, provides information to residents on who to contact for energy advice in the home. Further information is available at https://www.bromley.gov.uk/sustainability/sustainability-home-energy-advice-services<br>In 2024/25 up to the end of quarter three: 97 advice sessions have been provided and a further 50 healthy homes phone advice |
| 8.4 | Emissions from developments and buildings | As part of a current review of the use of discretionary grant funding linked to Disabled Facilities Grants and the Better Care Fund | The Housing Assistance Policy was drafted in June 2024 – no further updates provided. |
| 8.5 | Emissions from developments and buildings | All projects have a demonstrable carbon reduction and will be appraised independently. Overall organisational emissions reductions will be evidenced in the Council's Carbon Management Programme | The Council continues to monitor its greenhouse gas emissions on a yearly basis and report the findings to committee. The council has recently moved to new offices which have a lower carbon footprint. As projects are brought forward carbon reduction is included within the decision making process, including reviewing opportunities to purchase renewable energy as set out in the approved net zero action plan |
| 8A. Update local authority procurement policies to reduce pollution from logistics and servicing, and to maximise air pollution benefits | | | |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 8A.1 | Emissions from developments and buildings | Production of a sustainability toolkit for service leads to consider sustainability issues including carbon and air quality when initiating the procurement process. | A draft scope 3 action plan is being taken to committee for recommendation to approve a scope 3 action plan, which considers procurement and the development of an updated sustainable procurement policy and toolkit |
| 8B.1 | Emissions from developments and buildings | LB Bromley Sustainability Policy to be further developed | Completed in full: A policy has been developed and stipulates that the procurement process must consider bids “seeking to minimise any negative environmental impacts of goods and services purchased, across the whole life cycle from raw material extraction to end of life” |
| 8B.2 | Emissions from developments and buildings | Seek to influence supplier behaviour through Circular Economy principles: reduced journeys, shared services, product life extension, waste minimisation, energy recovery from waste | To enable supplier engagement and advice to be provided a carbon reduction webinar was hosted for all staff in July 2024 and staff are able to sign up to a 2hr in-house carbon awareness session. Likewise, a business advice page is being developed to provide further information to SME's on how to reduce carbon emissions and save energy and be more efficient. The Greener Bromley Pilot Scheme also allows businesses to understand and improve their environmental impact, and develop a structured framework for fostering sustainable business growth |
| 9.Ensure master planning and redevelopment areas are aligned with Air Quality Positive and Healthy Street approaches | | | |
| 9.1 | Emissions from developments and buildings | Update ASR and planning portal | No relevant applications submitted |
| 10. Public Health department taking shared responsibility for borough air quality issues and supporting implementation of Air Quality Action Plans | | | |
| 10.1 | Public health and awareness raising | The Health and Well-Being Board will include a new section within the Joint Strategic Needs Assessment (JSNA) with up-to-date information on air quality impacts on the population *Public Health Team to support engagement with local stakeholders (businesses, schools, community groups and healthcare providers) | This was not included in the Children's JSNA this year but air quality is under frequent discussion across London with teams looking after children with asthma and Public Health are actively involved in that work to ensure accurate and appropriate messaging. PH team have continued to share messages on air quality campaigns through GP Bulletin and via Education settings |
| 11. Engagement with businesses. This could be linked to the engagement with town centre BIDS proposed in the final LIP to promote active and public transport options to their members, reducing pollution in town centres through mode shift | | | |
| 11.1 | Public health and awareness raising | Promote active travel and public transport to businesses. The Council will host events such as free cycle training and Dr Bike sessions for BIDs who are | 13 Dr Bike Sessions Delivered, with 213 bikes seen up to the end of the year 2024 |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| | | proactively engaged (dependant on TFL funding and Covid restrictions) | |
| 12. Promotion of availability of airTEXT | | | |
| 12.1 | Public health and awareness raising | Public Health team to support promotion through GP practices and pharmacies Membership of airTEXT consortium | At the end of 2024 Bromley had 265 active subscribers, which was a net increase of 36 on the previous year, when there were 229 active subscribers. There were 30 alert days in Bromley in 2024, and 3,554 alert messages were sent by text, email or voicemail |
| 13. Encourage schools to join the TFLs STARS accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme | | | |
| 13.1 | Public health and awareness raising. | Use of the STARS programme in schools as a tool to promoting active travel to school | The number of schools accredited is from July 2024 and consists of 3 Bronze, 6 Silver and 75 Gold.<br>In July 2024, 65% of open schools had an active school travel plan. Total No points (1 for bronze, 2 for silver & 3 for gold). Total points 240 |
| 14. Air quality in and around schools | | | |
| 14.1 | Public health and awareness raising | Ongoing co-ordination of the Heathy Schools London in Bromley project, to improve children and young people's health and well- being. Target is to add 5% more schools each year. *Over ninety schools currently participating. London Healthy Early Years (HEYL) supports and recognises achievements in child health, wellbeing, and education in early years settings. Well over one hundred Bromley Early Years settings have already registered with a target of an additional 5% year on year. | There has been no lead in the borough working on the HEYL scheme this year. Only one setting has applied for an award and they were supported by the NCB |
| 14.2 | Public health and awareness raising | The borough is currently undertaking a trial of a green screen around Valley Primary School as part of the Shortlands Friendly Village (Liveable Neighbourhood) project. If successful, consideration will be given to how the green screens can be delivered to more schools in the AQMA. *This delivers on the LIP3 commitment to look to undertake a trial of new green infrastructure, such as trees and green walls around schools in the AQMA and alongside corridors with the highest concentrations as a means of natural emissions capture | Recently research published has suggested that Green Screens are not as effective as they were hoped to be. More evidence of their efficacy will be required before Bromley looks to introduce further Green Screens |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 14.3 | Public health and awareness raising | Promote campaign on anti-idling, involving specific signage, communications activity, and increased enforcement in idling hotspots around 8 schools (see also 21). *A more targeted approach to idling, focusing on schools will be taken, which should make a difference in areas over short periods of time, utilising a variety of comms and enforcement action | 0 warnings issued |
| 15.Update local authority procurement policies to reduce pollution from logistics and servicing | | | |
| 15.1 | Deliver servicing and freight | Seek to influence supplier behaviour through circular economy principles: reduced journeys, shared services, product life extension, waste minimisation, energy recovery from waste. | The various service areas will continue to consider and assess opportunities to implement sustainable practices, in line with the relevant contracting strategies and service requirements |
| 15.2 | Deliver servicing and freight | Require environmental services suppliers with large fleets to have attained Bronze / Silver / Gold (Fleet Operator Recognition Scheme) FORS accreditation. *Bromley's LIP3 sets out a road map to reducing emissions from the London Borough of Bromley (LBB) fleet to 2041 and working with procurement, the Council will be asked to consider how they could ask contractors to innovate towards a greener fleet and to reduce emissions from the Council's fleet. | Veolia maintained FORS Bronze accreditation in September 2024 |
| 16. Reducing emissions from deliveries to local businesses and residents | | | |
| 16.1 | Deliver servicing and freight | Sustainability toolkit for service leads to consider sustainability issues including carbon and air quality when initiating the procurement process. Will require measurements that are proportional and appropriate to contract size | Sustainability continues to form part of the gateway report process. A draft scope 3 action plan is due to be taken to committee for approval which includes reviewing existing sustainable procurement policies and updating policies including reviewing opportunities for a sustainability toolkit |
| 16.2 | Deliver servicing and freight | LB Bromley Borough-Wide Emissions Strategy to be developed, as part of wider corporate Sustainability Policy | The boroughs carbon emissions continue to be reported via the sustainability pages on the council's website at https://www.bromley.gov.uk/sustainability/sustainability-reports |
| 16.3 | Deliver servicing and freight | The Council will continue to seek to work with collection locker providers to provide such facilities in some borough car parks to reduce delivery miles Provision of facilities installed. | No new lockers have been installed, however, the existing lockers have proven popular |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 16.4 | Deliver servicing and freight | Any development likely to create a significant number of trips will, where necessary, is required to enter into an agreement to submit and implement acceptable Construction Logistics Plans, and Delivery/Servicing Plans. Consideration will be given to re- organisation of freight to support consolidation (or micro-consolidation) of deliveries, by setting up or participating in new logistics facilities, and/or requiring that council suppliers participate in these. | Conditions imposed on relevant applications |
| 17. Reducing emissions from council fleets | | | |
| 17.1 | Borough fleet | Council fleet and hired fleet to meet Quality Standard. Operating data and feedback will be collected to help inform future replacements and procurement projects. | 1 additional electric hatchback car delivered and in service with Transport Operations Section. Revised plan for EV fleet chargers at new Civic offices |
| 17.2 | Borough fleet | Increase the number of plug-in hybrid and electric council vehicles through planned replacement programme | Additional EV hatchback car replaced hybrid one for Transport Operations |
| 17.3 | Borough fleet | Increase the uptake of new Euro VI vehicles in the heavier fleet, phase out older vehicles operated by our contractors by April 2020 | Two replacement Euro VI commissioned in December 2024 |
| 17.4 | Borough fleet | Promote fuel-efficient driving through the driver induction and competence checks | Ongoing approach to introducing EV's to drivers |
| 17.5 | Borough fleet | Work in partnership with our Waste contractor to ensure our infrastructure allows for a fully electric waste collection fleet in 2026<br>Improvement in infrastructure. | The target of 2026 is not achievable. A decision on electrifying the waste fleet has not been made.<br><br>Funding to contribute to the purchase of an eRCV was approved in October 2024. Veolia are managing the procurement of this vehicle with an expected lead time of 12 months from when the order was placed. eRCV estimated to arrive end of 2025 |
| 17.6 | Borough fleet | Monitor progress with vehicle manufacturers, other similar operators, and technical developments to further support the intake of alternatively fuelled vehicles. | Continue to keep abreast of developments within the industry and obtain best practice and examples<br>Approval was sought to trial an eRCV- expected end of 2025 |
| 17.7 | Borough fleet | Increase the use of pool vehicles<br>Uptake monitored and reported annually. | Two pool cars based at the Civic Centre are hybrid and used across various departments. The contract for the diesel powered van allocated |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| | | | to Neighbourhood Management has been extended until September 2025, its replacement being part of a wider review of depot-based vehicles used in the Environment Division |
| 17.8 | Borough fleet | Maintain the FORS accreditation held by the Council's Waste, Streets and Parks contractors. | Veolia maintained FORS Bronze accreditation in September 2024 |
| 17.9 | Borough fleet | Equip waste vehicles with the 'Driving Efficiently and Safely' (DES) tracking and monitoring system to monitor and minimise idling, braking, over-revving, and contravention of speed limits | Echo logistics has been updated and the Autonomise system implemented which has superseded DES. All 58 Veolia owned frontline RCVs, and all Veolia owned frontline streets vehicles (15 cages, 4 Hi-Abs and 4 LMBs) are now fitted with either 360-degree cameras or forward and rear facing cameras linked to 'smart boxes' that store telemetric data for driver behaviours to measure Idling, harsh acceleration, harsh breaking, harsh cornering, speed, and g-shock |
| 17.10 | Borough fleet | Supervisors of the waste and street cleansing service to use electric vehicles | 12 electric vehicles in use |
| 17.11 | Borough fleet | Installation of electric charging point for Heavy Goods Vehicles (HGVs) | There is currently no infrastructure in place for this. The decision to procure electric HGV's is still pending. There are 9 charging points in place for EM/Supervisor vehicles |
| 17.12 | Borough fleet | Increase the % of mobile equipment used (e.g., electric chainsaws) by the Arboriculture contractor | The Council appointed four new contractors to its supply chain in September 2024 and following mobilisation, is now looking at options for increasing the use of mobile equipment |
| 17A. Staff Lease Car Scheme | | | |
| 17A.1 | Borough fleet | Promote the uptake of alternative fuel cars via the staff lease scheme. The option to further incentivise drivers will be a discussion point when approaching the next procurement exercise | The uptake of hybrids has increased to125 with EV's now at 20 |
| 18. Expanding and improving green infrastructure | | | |
| 18.1 | Localised solutions | Through Planning process, identify opportunities for green infrastructure | Conditions imposed on relevant applications |
| 18.2 | Localised solutions | Feasibility of enhancing the public realm potentially through gyratory removal at Elmers End (see also 19). | Funding for LEN bid has not yet been identified |
| 18A. Maintain and increase Council's green infrastructure | | | |
| 18A.1 | Localised solutions | Continue to provide an annual tree planting plan and where possible consider planting trees in areas where they will be of most benefit to local air quality. | In January 2025, the Forestry Commission approved the designs for woodlands on three council owned sites. Opportunities for grant funding are now being explored with the aim to deliver these woodlands in the 2025/26 planting season |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| | | Progress a scheme to create/expand woodlands in the Borough. | |
| 18A.2 | Localised solutions | Increase the number of street and parks trees via funding | The Council has completed its Treemendous tree planting programme and planted an additional 5000 street trees between 2021 and 2025. In 2024/25, an additional 8000 whips were planted in eight parks and open spaces, including in five micro forests, with funding from the Local Authority Treescapes Fund and the Water Environment Improvement Fund |
| 19. Low Emission Neighbourhoods (LENs) | | | |
| 19.1 | Localised solutions | Review previously unsuccessful bid to the Mayor's Air Quality Fund for a Low Emission Neighbourhood in Birkbeck village in Bromley's AQMA, which is bounded by the A213 and A214 *Options are being considered for how the benefits of the scheme can be derived without LEN funding | No funding secured for LENs in LBB |
| 19.2 | Localised solutions | Feasibility study for enhancing the public realm potentially through gyratory removal at Elmers End. | Funding has not yet been secured for this project |
| 19A. Provide waste and recycling collections specifically to reduce need for residents to make trips to Council Household Reuse and Recycling Centres | | | |
| 19A.1 | Localised solutions | Continue to provide existing comprehensive waste and recycling collection service | Maintained comprehensive waste and recycling collection service |
| 19B. Reduce the Council's Environmental Services contractors transport to work emissions | | | |
| 19B.1 | Localised solutions | Provide a kerbside collection service for textiles, batteries and small electrical items*The Council provides a collection service for the Core Materials as required within the London Environment Strategy | Kerbside collection of textiles, batteries and small waste electronic and electrical items provided |
| 19B.2 | Localised solutions | Liaise with Council's contractor to expand on materials accepted at the kerbside and promote the Council's chargeable garden waste service | List of materials accepted available at www.bromley.gov.uk/wastenews<br><br>Comprehensive kerbside collection service provided for the core (dry) materials, plus textiles, batteries, and small waste electricals.<br><br>Promotion of garden waste is a contractual requirement and was promoted in 2024 through targeted letters, the website, social media, and articles in Environment Matters. Current number of subscriptions (Feb 2025) is 47,000 |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 19C. Minimise dust generation at Council's Waste Transfer Stations | | | |
| 19C.1 | Localised solutions | Promote dust management at sites – using the accordance with the Mayor of London SPG as an exemplar | Dust management is in accordance with the environmental permit |
| 19D. Reduce emissions from closed landfill site | | | |
| 19D.1 | Localised solutions | Monitor and manage landfill gas generated by closed landfill site through existing network of pipes and landfill gas flare | Landfill gas and leachate are managed at the closed landfill site in accordance with Environment Agency best practice. Management of the site is reported on a monthly basis and discussed via monthly Service Operations Board.<br>Six monthly site visits to the closed landfill site take place |
| 19E. Reduce arboriculture haulage movements | | | |
| 19E.1 | Localised solutions | Install wood chip bins within the borough's parks instead of transporting woodchip outside the borough*Parks Contractor will be able to use woodchip for bedding, path creation rather than woodchip being used as biomass | There is a permanent woodchip store on the High Elms Estate and woodchip deliveries are carried out to Brook Lane Community Gardens on an ad hoc basis by the Council's Tree contractors. The Council has decided not to proceed with permanent woodchip bins at Brook Lane Community Gardens and Whitehall recreation ground due to concerns around fly tipping and potential damage to infrastructure by vehicles accessing these bins |
| 20. Ensure that Transport and Air Quality policies and projects are integrated | | | |
| 20.1 | Cleaner transport | Through this AQAP and Bromley's LIP3 officers will continue dialogue regarding project and policy implementation. *Transport and Environmental Health staff form part of core AQAP Steering Group | Completed. This is also supported by involvement in the Green Recovery Group and other climate change discussion groups |
| 21. Discouraging unnecessary idling by taxis, coaches, and other vehicles | | | |
| 21.1 | Cleaner transport | The Council is participating in the London-wide anti-idling campaign funded from the Mayor's Air Quality Fund with eight schools in the borough to hold anti-idling campaigns per annum. PCN enforcement will allow for a significantly higher penalty for idling to be applied | We now have signage at 65 school locations in the Borough with enforcement taking place |
| 21.2 | Cleaner transport | The borough has adopted powers to enforce against idling vehicles but will look to create a Borough-wide Traffic Management Order (TMO) to allow for PCN enforcement which will be easier to enforce with existing and widely allocated Civil Enforcement Officer (CEO) resources | Individual TMO's still currently being used |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 22.Temporary car free days | | | |
| 22.1 | Cleaner transport | Work with BIDs to support a suitable programme of weekend road closures to allow town centres and high streets to be used in new and innovative ways, supporting vibrant town centres and communities | Completed. A programme of weekend closures has not been taken forward. Instead, the Council has promoted street party road closures, and these have become more popular than ever before, primarily in the summer months |
| 22.2 | Cleaner transport | Continue with Street Party events and engage with residents in discussions about possible changes in the locality that would enhance walking and cycling | Over 250 events in 2024 |
| 23.Using parking policy to reduce pollution emissions | | | |
| 23.1 | Cleaner transport | The use of electric vehicles will be promoted by providing the appropriate infrastructure | Completed. An Electric Vehicle Charging Strategy has now been produced with the intention to introduce pilot schemes for on street charge points and residential gullies |
| 24. Installation of Ultra-low Emission Vehicle (ULEV) infrastructure such as electric vehicle charging points, rapid electric vehicle charging points and hydrogen refuelling stations | | | |
| 24.1 | Cleaner transport | Work with Bluepoint London to continue to roll out electric vehicle charging infrastructure. *There are national policies in place to influence road users' choice of vehicle, but parking policy is not considered to have an impact on the use of those vehicles | Bluepoint are now Source/Total, roll out of further infrastructure is on hold for the purpose of the LEVI scheme |
| 24.2 | Cleaner transport | Install 4 Rapid Charge Points as part of the TFL scheme by March 2020 along with the 4 installed on the A232 TLRN in Coney Hall and West Wickham | Completed in 2020, additional charge points are planned for this location |
| 24.3 | Cleaner transport | Policy 30 of the Local Plan requires 1 in 5 car parking spaces to be provided with electric vehicle charge points | Completed in full. Conditions imposed on relevant applications prior to being superseded by Approved document S to expand scope within the Buildings Regulations. Planning conditions no longer required as a result and replaced with informative on development applications |
| 24.4 | Cleaner transport | Implementation of a pilot for lamp post charging points, including £30K Local Implementation Plan investment match funded by Go Ultra Low City Scheme | GULCS has been superseded by LEVI/OZEV which the Council are currently working with 4 other Boroughs on a joint bid |
| 25.Provision of infrastructure to support walking and cycling and encourage mode shift away from private vehicle usage | | | |
| 25.1 | Cleaner transport | Development of new cycle routes, both as part of TfL's strategic cycle network and local routes | The outline design for the Kent House to Croydon Cycleway has been completed and has been Safety Audited. The next stage is for the project to be subject to a public consultation exercise |

| Measure | LLAQM Action Matrix Theme | Action | Progress |
|---|---|---|---|
| 25.2 | Cleaner transport | Delivery of the 'Shortlands Friendly Village Scheme' to include schemes to reduce traffic volumes on residential streets to facilitate a safer and more inviting environment for walking and cycling. | Although funding for this Liveable Neighbourhood was withdrawn by TfL, many of the projects associated with it have been installed as separate items, such as several zebra crossings and a cycle route |
| 25.3 | Cleaner transport | Delivery of area-based schemes that promote walking and reduce road danger, including a new footpath to Valley Primary School, a parallel zebra crossing outside Bishop Challoner School and a segregated cycle route in Albemarle Road and Beckenham Road to connect Shortlands with Beckenham, plus a cycle route in Valley Road to Harris Primary. | The following projects were delivered in 2024:<br>• Albermarle Road/ Westgate Road pedestrian refuge<br>• Station Approach/Warren Road improved footway and crossing over Warren Road - dropped kerbs and buff surfacing<br>• Upper Elmers End Road pedestrian refuge<br>• Farnaby Road junction tightening and pedestrian refuge |
| 25.4 | Cleaner transport | Improve pedestrian safety- installation of new pedestrian crossings | The following projects were delivered in 2024:<br>• 4x Parallel crossings were installed at South Eden Park Road/Monks Orchard Road/ Eden Way Roundabout<br>• 1 Zebra crossing at South Eden Park Road/ St Davids Close |
| 25.5 | Cleaner transport | Improve pedestrian infrastructure to encourage walking to school | The following projects were delivered in 2024:<br>• South Eden Park Road Roundabout - 4x parallel crossings<br>• South Eden Park Road/ St Davids Close zebra crossing<br>• Upper Elmers End Road pedestrian refuge<br>• Farnaby Road junction tightening and pedestrian refuge |
| 25.6 | Cleaner transport | Provide high quality cycle hubs at stations and continue to deliver on-street cycle parking and Bike hangers | 4 bike hangars were installed in 2024 |

# 3. Planning Update and Other New Sources of Emissions

## Table M. Planning requirements met by planning applications in the London Borough of Bromley in 2024

| Condition | Number |
|---|---|
| Number of planning applications where an air quality impact assessment was reviewed for air quality impacts | 59 |
| Number of planning applications required to monitor for construction dust | 76 |
| Number of CHPs/Biomass boilers refused on air quality grounds | 0 |
| Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions | 0 |
| Number of developments required to install Ultra-Low $NO_X$ boilers | 75 |
| Number of developments where an AQ Neutral building and/or transport assessments undertaken | 59 |
| Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation | 4 |
| Number of planning applications with S106 agreements including other requirements to improve air quality | 2 |
| Number of planning applications with CIL payments that include a contribution to improve air quality | 0 |
| **NRMM: Central Activity Zone, Canary Wharf and Opportunity Areas**<br>Number of planning applications with conditions related to NRMM included.<br>Number of developments registered at www.nrmm.london.<br>Number of audits (based on the pan-London project report and / or inhouse auditing programme)<br>% of sites unregistered prior to audit<br>% of sites compliant<br>with Stage IV of the Directive and/or exemptions to the policy. | N/A |
| **NRMM: Greater London (excluding Central Activity Zone, Canary Wharf and Opportunity Areas)**<br>Number of planning applications with conditions related to NRMM included.<br>Number of developments registered at www.nrmm.london.<br>Number of audits (based on the pan-London project report and / or inhouse auditing programme)% of sites unregistered prior to audit<br>% of sites compliant with<br>Stage IIIB of the Directive and/or exemptions to the policy. | 16 conditions included<br>21 registered<br>8 audits<br>12.5% sites unregistered prior to audit<br>100% sites compliant after audit |

## 3.1 New or significantly changed industrial or other sources

No new sources identified.

# 4. Additional Activities to Improve Air Quality

## 4.1 London Borough of Bromley Fleet

Two electric hatchback cars are in service within the Highways Division, two Plug-in hybrid Mayoral Cars are in service and one fully electric van has been in service in Public Protection & Enforcement since in 2021.

## 4.2 Planning Enforcement

Bromley's Planning Department refer all applications that may have air quality impacts to the Environmental Protection Team to assess, provide recommendations and suggested planning conditions. It is the decision of the planning officer as to whether the recommendations and conditions are applied.

Enforcement of NRMM is delivered via Bromley's membership of the Merton consortium which is match funded by the GLA.

## 4.3 Pan-London NRMM Auditing Project

Bromley is an active member of the GLA Pan-London NRMM and will be continuing to support the NRMM Enforcement project in 2025 – 2026 through match funding.

Bromley has a standard NRMM condition for construction/demolition sites, which is worded as follows:

> "All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards as published on the NRMM Website (https://nrmm.london/). Unless it complies with the standards set out on the website, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority. The developer shall keep an up to date list of all NRMM used during the demolition, site preparation and construction phases of the development on the online register at https://nrmm.london/.
>
> Reason: The London Plan 2021 Policy SI 1 Improving air quality''

The wording is applied on the Decision Notice and the condition is applied to all relevant sites.

## 4.4 Air Quality Alerts

Bromley is a member of the AirTEXT consortium. At the end of 2024, we had 265 active subscribers.

The Mayor's air quality alert messaging is sent directly to schools and hospitals in the Borough.

## 4.5 Air Quality Positive

Air Quality Positive (AQP) is a planning strategy aimed at large-scale developments. Development proposals that are subject to an Environmental Impact Assessment (EIA) are required to be air quality positive and therefore should consider and implement measures that enhance air quality during the design and planning stages.

An AQP Statement should be submitted as part of the EIA and updated as appropriate for reserved matters applications, outlining the Air Quality Positive approach taken. This should demonstrate how benefits to local air quality have been maximised, and how measures to minimise pollution exposure will be implemented.

Bromley did not have any relevant developments that submitted an air quality positive statement in 2024.

# Appendix A Details of Monitoring Site Quality QA/QC

## A.1 Automatic Monitoring Sites

During 2024, the Harwood Avenue station was operated by the London Borough of Bromley. QA/QC procedures involve a minimum monthly calibration visit and filter change when required by LB Bromley as the local site operator, and regular service checks by Matts Monitors. All data has been fully ratified according to Defra LAQM Technical Guidance standards. Ratification of data is undertaken by Imperial College in accordance with membership to the LLAQM.

## A.2 Diffusion Tubes

Air proficiency testing (AIR-PT) is an independent analytical proficiency-testing scheme, operated by Laboratory of Government Chemists (LGC) Standards and supported by the Health and Safety Laboratory (HSL). AIR-PT is a scheme that has run from April 2014 to combine two long running PT schemes: LGC Standards Stack emission proficiency testing scheme and HSL Workplace Analysis Scheme for Proficiency scheme.

Gradko International participates in the AIR $NO_2$ PT scheme[3]. AIR $NO_2$ PT forms an integral part of the UK $NO_2$ Network's QA/QC and is a useful tool in assessing the analytical performance of those laboratories supplying diffusion tubes to Local Authorities for use in the context of Local Air Quality Management (LAQM). 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.

The results for Gradko International were overall satisfactory as stated here:

AR050 (May – June 2022) – 100%

AR052 (July – August 2022) – 100%

AR053 (September – October 2022) – 100%

AR055 (January – February 2023) – 100%

AR056 (May – June 2023) – 100%

AR058 (July – August 2023) – 100%

AR059 (September – October 2023) – 100%

[3] LGC (2024) Summary of Laboratory Performance in AIR $NO_2$ Proficiency Testing Scheme (May 2022 – June 2024) Available at: WASP – Annual Performance Criteria for NO2 Diffusion Tubes Accessed: 31/03/2025

AR062 (January – February 2024) – 100%

AR063 (April – June 2024) – 100%

## Bias Adjustment

Bias adjustment is effectively a calculated factor which shows whether diffusion tubes are over-reading or under-reading ambient concentrations, and therefore allows for a correction to be made.

## Factor from National Bias Adjustment

The national bias adjustment factor spreadsheet for 2024 is available from the Defra website. The results of multiple co-location studies are collated, and the average bias adjustment factor is taken for studies using the 20% TEA/water preparation method, analysed by Gradko. The national bias adjustment factor for 2024 version 04/25 is 0.84, based on 27 studies, using the LAQM national bias adjustment spreadsheet[4] which is shown in Figure 8.

**Figure 8. National Bias Adjustment Factor Spreadsheet (v03/25)**

**National Diffusion Tube Bias Adjustment Factor Spreadsheet** — Spreadsheet Version Number: 04/25

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2025

LAQM Helpdesk Website

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 | Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column. | | | | | | | | |
| 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[2] | If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953 | | | | | | | | |
| Analysed By[1] | Method | Year | Site Type | Local Authority | Length of Study (months) | Diffusion Tube Mean Conc. (Dm) (µg/m3) | Automatic Monitor Mean Conc. (Cm) (µg/m3) | Bias (B) | Tube Precision[5] | Bias Adjustment Factor (A) (Cm/Dm) |
| Gradko | 20% TEA in water | 2024 | | Overall Factor[3] (27 studies) | | | | Use | | 0.84 |

## Discussion of Choice of Factor to Use

During 2024 there was only one diffusion tube co-located with the continuous monitoring at Harwood Avenue. Therefore, no local bias adjustment factor is available for 2024 due to the lack of co-location duplicate or triplicate sites. Therefore, the national bias adjustment factor of 0.84 (version 04/25) for the diffusion tube method 20% triethanolamine in water, analysed by Gradko was used.

[4] Defra (2025), LAQM, National bias adjustment factor spreadsheet. Available at: Database_Diffusion_Tube_Bias_Factors_v04_25.xlsx Accessed: 25/04/2025.

**Table N. Bias Adjustment Factor**

| Year | Local or National | If National, Version of National Spreadsheet | Adjustment Factor |
|---|---|---|---|
| 2024 | National | 04/25 | 0.84 |
| 2023 | National | 03/24 | 0.81 |
| 2022 | National | 03/23 | 0.83 |
| 2021 | National | 03/22 | 0.84 |
| 2020 | Local | - | 0.82 |
| 2019 | National | 03/20 | 0.93 |
| 2018 | National | 03/19 | 0.93 |

## A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Where data capture is less than 75% and greater than 25% of a full calendar year (between 3 and 9 months), the mean should be "annualised" – i.e., adjusted using the methodology outlined in LLAQM.TG(19) before being compared to annual mean objectives.

All data capture for 2024 was 75% or greater of the full calendar year and, therefore, no annualisation was required.

Distance Adjustment

The monitoring sites that have been bias adjusted and shown to be within 10% of the $NO_2$ annual objective of 40µg $m^{-3}$ (i.e., above 3µg $m^{-3}$) or above should be accounted for the inherent uncertainty in diffusion tube monitoring concentration data as advised in the LAQM technical guidance produced by Defra (LAQM.TG(22)).

One site falls within the 10% of the $NO_2$ annual objective of 40µg $m^{-3}$ (DT19, High Street, Orpington) and is considered not representative of relevant exposure. The distance-corrected annual mean $NO_2$ concentration is shown below.

The local annual mean background concentrations in 2024 from the Defra 2018-based background maps[5] have been used for the calculation.

Table O presents the output from the $NO_2$ fall off with distance tool.

[5] Defra (n.d.), Background Maps. Available at: Background Maps | LAQM (defra.gov.uk) Accessed: 28/03/2025

## Table O. $NO_2$ Fall off With Distance Calculations

| Site ID | Distance (m): Monitoring Site to Kerb | Distance (m): Receptor to Kerb | Monitored Concentration (Annualised and Bias Adjusted (µg $m^{-3}$) | Background Concentration (µg $m^{-3}$) | Concentration Predicted at Receptor (µg $m^{-3}$) |
|---|---|---|---|---|---|
| 19 | 2.7 | 8.9 | 40.1 | 12.7 | 31.8 |

## Appendix B Full Monthly Diffusion Tube Results for 2024

**Table P. $NO_2$ 2024 Diffusion Tube Results (µg $m^{-3}$)**

| DT ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Jan | Feb | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec | Annual Mean: Raw Data | Annual Mean: Annualised and Bias Adjusted < (x.x)> | Annual Mean: Distance Corrected to Nearest Exposure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 541047 | 168231 | 27.6 | 25.3 | 26.4 | 25.4 | 27.1 | 26.1 | 22.9 | 23.1 | 29.6 | 26.2 | 33.7 | 29.1 | 26.9 | 22.6 | - |
| 2 | 541679 | 167931 | 22.0 | 17.0 | 17.7 | 12.8 | 13.4 | 11.8 | 11.8 | 12.6 | 15.9 | 18.5 | 22.5 | 18.5 | 16.2 | 13.6 | - |
| 3 | 542402 | 166012 | 30.3 | 27.9 | 29.6 | 27.2 | 30.5 | 25.3 | 25.9 | 25.6 | 31.5 | 30.6 | 37.3 | 29.9 | 29.3 | 24.6 | - |
| 4 | 540336 | 170258 | 28.7 | 24.9 | 27.9 | 23.6 | 24.0 | 22.6 | | 23.6 | 26.0 | 29.0 | 28.9 | 25.7 | 25.9 | 21.8 | - |
| 5 | 539790 | 170050 | 25.5 | 20.2 | 22.1 | 17.3 | 24.4 | 21.5 | 19.4 | 15.3 | 19.5 | 27.3 | 32.2 | 21.1 | 22.2 | 18.6 | - |
| 6 | 539486 | 169399 | 29.6 | 26.4 | 27.2 | 18.6 | 26.0 | 23.1 | 22.7 | 25.5 | 26.1 | 28.7 | 33.1 | | 26.1 | 21.9 | - |
| 7 | 535947 | 169765 | 31.7 | 28.1 | 30.6 | 27.7 | 28.7 | 28.7 | 25.1 | 24.9 | 30.6 | 28.8 | 32.1 | 27.2 | 28.7 | 24.1 | - |
| 8 | 536941 | 171320 | 22.6 | 17.1 | 20.7 | 13.7 | 15.8 | 13.3 | 12.3 | 12.6 | 17.5 | 19.3 | 26.3 | 18.6 | 17.5 | 14.7 | - |
| 9 | 537511 | 167277 | 30.3 | 23.7 | 24.3 | 23.7 | 24.6 | 21.5 | | 34.5 | 24.5 | 27.2 | 31.2 | 25.5 | 26.5 | 22.2 | - |
| 10 | 536076 | 168434 | 34.3 | 36.5 | 35.5 | 32.3 | 30.7 | 33.8 | 32.1 | 32.9 | 37.1 | 37.8 | **42.1** | 36.1 | 35.1 | 29.5 | - |
| 11 | 535006 | 169590 | 29.8 | 26.4 | 31.1 | 23.1 | 30.4 | 27.7 | 23.0 | | | | 31.2 | 23.5 | 27.4 | 23.0 | - |
| 12 | 533949 | 170624 | 32.0 | 34.2 | 39.0 | 31.7 | | 30.8 | 31.8 | 29.7 | 32.5 | 36.5 | 36.1 | 29.4 | 33.1 | 27.8 | - |
| 13 | 534052 | 170237 | 29.7 | 23.9 | 26.4 | 20.3 | 22.0 | 20.3 | 18.0 | 18.1 | 13.5 | 25.7 | 31.8 | 23.3 | 22.8 | 19.1 | - |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 533702 | 170354 | 20.6 | 16.9 | 16.8 | 12.6 | 13.5 | 8.0 | 9.9 | 11.8 | 26.3 | 16.8 | 22.2 | 17.8 | 16.1 | 13.5 | - |
| 15 | 538398 | 165925 | 25.8 | 27.0 | 25.2 | 22.7 | | 22.9 | 20.1 | 23.4 | 24.5 | 23.7 | 30.8 | 25.2 | 24.7 | 20.7 | - |
| 16 | 540228 | 165941 | 19.7 | 15.7 | 14.4 | 11.3 | 11.0 | 9.9 | 10.1 | 10.6 | 14.0 | 12.6 | | 15.9 | 13.2 | 11.1 | - |
| 17 | 543303 | 165256 | 26.7 | 24.0 | 26.4 | 20.2 | 21.8 | 20.3 | 20.2 | 20.9 | 24.6 | 25.2 | 27.6 | 23.8 | 23.5 | 19.7 | - |
| 18 | 544779 | 166831 | 20.5 | 12.9 | 15.6 | 10.8 | 14.3 | 12.6 | 12.1 | 12.3 | 13.6 | 17.5 | 20.3 | | 14.8 | 12.4 | - |
| 19 | 546190 | 166135 | **45.7** | **49.1** | **53.1** | **52.4** | **44.3** | **47.6** | **51.1** | | **46.1** | **47.6** | **46.2** | **41.6** | **47.7** | **40.1** | 31.8 |
| 20 | 545861 | 164813 | 24.5 | 18.6 | 17.3 | 16.5 | 16.2 | 15.5 | 13.3 | 15.3 | 17.9 | 18.6 | 19.7 | 17.9 | 17.6 | 14.8 | - |
| 21 | 545439 | 164034 | 31.3 | 30.7 | 36.4 | 34.1 | 35.4 | 34.3 | 33.3 | 34.3 | 36.9 | 36.2 | 37.8 | 27.3 | 34.0 | 28.5 | - |
| 22 | 546821 | 167564 | 17.4 | 18.6 | 19.6 | 14.6 | 18.0 | 14.5 | 15.0 | 16.1 | 20.6 | 22.3 | 20.0 | 17.6 | 17.9 | 15.0 | - |
| 23 | 547168 | 167471 | 26.5 | 7.7 | 24.5 | 22.5 | 22.0 | 21.1 | 18.8 | 19.5 | 23.9 | 23.8 | 29.2 | 23.6 | 21.9 | 18.4 | - |
| 24 | 546984 | 169905 | 27.2 | 21.7 | 23.6 | 17.3 | 21.3 | 18.7 | 16.8 | 18.9 | 22.6 | 24.8 | 29.4 | 17.9 | 21.7 | 18.2 | - |
| 25 | 544437 | 170464 | 21.2 | 16.9 | 17.6 | 11.9 | 14.7 | 12.9 | 13.4 | 12.5 | 15.4 | 18.0 | 24.5 | 16.3 | 16.3 | 13.7 | - |
| 26 | 543930 | 170934 | 21.3 | 18.1 | 20.0 | 16.1 | 16.6 | 12.7 | 12.5 | 12.2 | 16.9 | 19.8 | 26.7 | 20.4 | 17.8 | 14.9 | - |
| 27 | 540525 | 169325 | 26.5 | 26.6 | 26.0 | 23.8 | 19.7 | 17.7 | 23.6 | 23.9 | 23.0 | 23.3 | 29.7 | 26.2 | 24.2 | 20.3 | - |
| 28 | 540519 | 169403 | 35.2 | 33.8 | 37.4 | 37.7 | 35.6 | 37.4 | 32.0 | 32.4 | **41.3** | 31.4 | **41.1** | **40.4** | 36.3 | 30.5 | - |
| 29 | 542980 | 167735 | 24.2 | 20.5 | 20.9 | 16.8 | 20.3 | 18.5 | 16.9 | 18.1 | 19.0 | 23.0 | 25.4 | 19.5 | 20.3 | 17.0 | - |
| 30 | 543452 | 169793 | 22.6 | 25.3 | 23.5 | 17.1 | 21.8 | 21.5 | 18.3 | 17.1 | 23.0 | 18.7 | 29.4 | 20.6 | 21.6 | 18.1 | - |
| 31 | 542847 | 172021 | 32.6 | 31.0 | 29.3 | | 26.9 | 26.0 | 26.9 | 28.1 | 28.8 | 30.8 | 34.1 | 28.7 | 29.4 | 24.7 | - |
| 32 | 541960 | 168841 | 28.0 | 23.2 | 23.3 | 18.0 | 19.9 | 17.4 | 15.0 | 16.1 | 20.8 | 23.3 | 26.4 | 23.0 | 21.2 | 17.8 | - |

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

☒ **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.**

☒ **The London Borough of Bromley confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

**Notes:**

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

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

See Appendix A for details on bias adjustment and annualisation.

# Appendix C Annual Mean $NO_2$ Ratified, Bias-adjusted and Distance adjusted Monitoring Results 2018-2024

| Site ID | Site type | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|
| BRY-CM3 | Automatic | 25.7 | 24.7 | 21.3 | 21.8 | 20.1 | 19.0 | 20.0 |
| 1 | Diffusion tube | **43.5** | 39.4 | 29.3 | 30.9 | 28.6 | 24.2 | 22.6 |
| 2 | Diffusion tube | - | - | - | 18.3 | 18.1 | 14.8 | 13.6 |
| 3 | Diffusion tube | - | - | - | 27.5 | 27.6 | 24.1 | 24.6 |
| 4 | Diffusion tube | 35.6 | 33.1 | 25.7 | 25.5 | 25.6 | 23.0 | 21.8 |
| 5 | Diffusion tube | 37.6 | 37.6 | 27.7 | 26.8 | 24.6 | 22.4 | 18.6 |
| 6 | Diffusion tube | 35.3 | 36.0 | 27.7 | 27.1 | 25.4 | 22.4 | 21.9 |
| 7 | Diffusion tube | 38.2 | 36.0 | 28.6 | 30.2 | 28.8 | 25.7 | 24.1 |
| 8 | Diffusion tube | - | - | - | 20.6 | 20.0 | 17.8 | 14.7 |
| 9 | Diffusion tube | - | - | - | 25.4 | 24.6 | 21.9 | 22.2 |
| 10 | Diffusion tube | **51.3** | **48.1** | 39.5 | 37.5 | 35.4 | 31.6 | 29.5 |
| 11 | Diffusion tube | 35.2 | 36.4 | 27.9 | 29.2 | 26.3 | 24.5 | 23.0 |
| 12 | Diffusion tube | 39.0 | **42.5** | 35.1 | 35.9 | 36.2 | 30.2 | 27.8 |
| 13 | Diffusion tube | - | - | - | 26.6 | 26.0 | 23.4 | 19.1 |
| 14 | Diffusion tube | - | - | - | 18.2 | 16.5 | 14.8 | 13.5 |
| 15 | Diffusion tube | - | - | - | 27.9 | 27.9 | 23.4 | 20.7 |
| 16 | Diffusion tube | - | - | - | 16.2 | 15.3 | 12.5 | 11.1 |
| 17 | Diffusion tube | - | - | - | 25.0 | 25.7 | 23.4 | 19.7 |
| 18 | Diffusion tube | - | - | - | 15.4 | 14.6 | 12.8 | 12.4 |
| 19 | Diffusion tube | - | - | - | 35.0 | 33.9 | 31.5 | 31.8 |
| 20 | Diffusion tube | - | - | - | 19.4 | 18.3 | 16.0 | 14.8 |
| 21 | Diffusion tube | - | - | - | 33.3 | 30.5 | 27.4 | 28.5 |
| 22 | Diffusion tube | - | - | - | 22.4 | 19.8 | 17.7 | 15.0 |
| 23 | Diffusion tube | - | - | - | 25.1 | 23.7 | 21.7 | 18.4 |
| 24 | Diffusion tube | - | - | - | 24.7 | 24.0 | 19.6 | 18.2 |
| 25 | Diffusion tube | - | - | - | 19.6 | 18.9 | 15.2 | 13.7 |
| 26 | Diffusion tube | - | - | - | 21.0 | 19.8 | 16.2 | 14.9 |
| 27 | Diffusion tube | 27.3 | 28.3 | 21.4 | 21.1 | 20.5 | 19.4 | 20.3 |
| 28 | Diffusion tube | 39.1 | 38.4 | 30.9 | 32.8 | 31.1 | 28.8 | 30.5 |
| 29 | Diffusion tube | - | - | - | 23.0 | 21.5 | 17.8 | 17.0 |
| 30 | Diffusion tube | - | - | - | 26.6 | 23.3 | 20.4 | 18.1 |
| 31 | Diffusion tube | - | - | - | 29.7 | 26.4 | 24.6 | 24.7 |
| 32 | Diffusion tube | - | - | - | 25.3 | 23.9 | 21.3 | 17.8 |

## Notes:

The annual mean concentrations are presented as µg $m^{-3}$.

Exceedances of the $NO_2$ annual mean AQO of 40µg $m^{-3}$ are shown in **bold**.

$NO_2$ annual means more than 60µg $m^{-3}$, indicating a potential exceedance of the $NO_2$ hourly mean AQS objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias.

All means have been “annualised” in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Results have been distance corrected where applicable.

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

(b) data capture for the full calendar year (e.g., if monitoring were carried out for six months the maximum data capture for the full calendar year would be 50%).

## Appendix D Map of Monitoring Locations and AQMA

The monitoring site numbers indicated on the map below correlate to the Diffusion Tube Identification numbers listed in Table C.