

London Borough of Redbridge Air Quality Annual Status Report for 2025

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This report provides a detailed overview of air quality in London Borough of Redbridge during 2025. It has been produced to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process¹.

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

Executive Summary: Air Quality in Our Area

Air Quality in London Borough of Redbridge

EXECUTIVE SUMMARY: AIR QUALITY IN OUR AREA

Air quality in the London Borough of Redbridge continues to improve, with long-term downward trends in nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}). Despite this progress, air pollution remains a significant public health challenge. Exposure to polluted air contributes to respiratory illness, cardiovascular disease, cancer, and premature mortality. Children, older adults, and residents with existing health conditions are particularly vulnerable.

The main pollutants of concern in Redbridge are NO₂, primarily from road transport, and PM_{2.5}, which arises from a combination of local and regional sources including vehicles, domestic heating, construction, and long-range transport of fine particles.

Redbridge operates a comprehensive monitoring network including automatic analysers, diffusion tubes, and Breathe London sensors. The borough has one declared Air Quality Management Area (AQMA) for NO₂, covering major road corridors.

Key actions delivered in 2025 include expansion of School Streets, strengthened NRMM enforcement, delivery of the We Care for Our Air community programme, improved active travel infrastructure, continued fleet electrification, air quality alerts during pollution episodes, and strong planning controls including AQN/AQP compliance.

Monitoring data for 2025 shows no exceedances of the annual mean NO₂ objective at automatic sites, PM levels remain below national objectives, and PM_{2.5} remains above WHO guidelines.

Priorities for 2026 include targeted action in roadside hotspots, continued School Streets expansion, strengthened planning enforcement, increased community engagement, ongoing fleet improvements, and maintaining high-quality monitoring data.

Residents can help improve air quality by walking, cycling, or using public transport, avoiding engine idling, reducing wood-burning, and staying informed via the UK-AIR dashboard.

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

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

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

Table ES 1 - Description of Key Pollutants

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

Actions to Improve Air Quality:

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution. Redbridge continues to implement its Air Quality Action Plan (AQAP), delivering progress across transport, planning, construction, public health, and community engagement.

Conclusions and Priorities:

Priorities for 2026 include targeted action in roadside hotspots, consultation on continued School Streets expansion, strengthened planning enforcement, increased community engagement, ongoing fleet improvements, and maintaining high-quality monitoring data.

How to get Involved:

Residents can help improve air quality by walking, cycling, or using public transport, avoiding engine idling, reducing wood-burning, and staying informed via the UK-AIR dashboard

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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
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)	200 µg m ⁻³ not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
Nitrogen dioxide (NO ₂)	40 µg m ⁻³	Annual mean	31 Dec 2005
Nitrogen dioxide (NO ₂)	WHO AQG ⁽²⁾ : 10 µg m ⁻³	Annual mean	
Particles (PM ₁₀)	50 µg m ⁻³ not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
Particles (PM ₁₀)	WHO AQG ⁽²⁾ : 45 µg m ⁻³ not to be exceeded more than 3-4 times a year	24-hour mean	
Particles (PM ₁₀)	40 µg m ⁻³	Annual mean	31 Dec 2004
Particles (PM ₁₀)	WHO AQG ⁽²⁾ : 15 µg m ⁻³	Annual mean	
Particles (PM _{2.5})	10 µg m ⁻³ ⁽³⁾	Annual mean	2040
Particles (PM _{2.5})	London Mayoral Commitment ⁽⁴⁾ : 10 µg m ⁻³	Annual mean	2030
Particles (PM _{2.5})	WHO AQG ⁽²⁾ : 5 µg 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⁾ : 15 µg m ⁻³	24-hour mean	
Sulphur dioxide (SO ₂)	266 µg m ⁻³ not to be exceeded more than 35 times a year	15-minute mean	31 Dec 2005
Sulphur dioxide (SO ₂)	350 µg m ⁻³ not to be exceeded more than 24 times a year	1-hour mean	31 Dec 2004
Sulphur dioxide (SO ₂)	125 µg m ⁻³ not to be exceeded more than 3 times a year	24-hour mean	31 Dec 2004
Sulphur dioxide (SO ₂)	WHO AQG ⁽²⁾ : 40 µg 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) Environmental Target Regulations under the Environment Act 2021
- (4) London Mayoral Commitment

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2025

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) ^(1,2)	Distance to kerb of nearest road (m) ⁽²⁾	Inlet Height (m)
RB7	Redbridge 7 Ley Street	Urban background	544454.8	187681.9	NO ₂ , PM ₁₀ , PM _{2.5}	Y	Chemiluminescent; BAM	2.0	40.0	2.7
RB4	Redbridge 4 Gardner Close	Roadside	540828.3	188367.9	NO ₂ , PM ₁₀	Y	Chemiluminescent; BAM	11.0	4.2	2

Notes:

Note : In table B above, PM_{2.5} monitoring at RB4 was done by a PM_{2.5} unheated BAM instrument located at Gardner Close, and is not approved for measuring PM_{2.5} in the UK and, as stipulated under paragraph 7.169 within LAQM Technical Guidance (TG22), May 2025, PM_{2.5} is no longer being measured at Gardner Close.

Table C. Details of Non-Automatic Monitoring Sites for 2025

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT A	Mayfield School	Urban Background	547022.3	187232.3	NO ₂	Y	8.0	2.0	N	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT B	Ilford Lane	Roadside	543688.0	186139.6	NO2	Y	4.0	4.0	N	3.1
DT C	Ilford Lane BP	Roadside	544132.4	184945.6	NO2	Y	3.0	4.0	N	2.7
DT D	Ley Street	Urban Background	544454.8	187681.9	NO2	Y	2.0	40.0	Y	2.7
DT E	Gardner Close	Roadside	540828.3	188367.9	NO2	Y	11.0	4.2	Y	2.6
DT F	Fulwell Cross	Roadside	544560.7	190400.8	NO2	Y	11	1.0	N	1.7
DT G	Perth Road	Roadside	543421.7	188322.6	NO2	Y	3.0	4.0	N	2.8
DT H	WestB Eastern Ave	Roadside	543450.6	188371.1	NO2	Y	1.0	4.0	N	2.4
DT I	Central Res	Roadside	543453.7	188384.4	NO2	Y	12.0	3.0	N	2.5
DT J	EastB Eastern Ave	Kerbside	543442.0	1888400. 2	NO2	Y	6.0	3.0	N	2.7
DT K	Parham Drive	Near Road	543498.3	188427.6	NO2	Y	7.0	2.0	N	2.6
DT L	NCR Nth Royston Gdns	Roadside	541816.3	188161.3	NO2	Y	21.0	6.0	N	2.8
DT M	NCR Sth Wanstead Park	Roadside	541887.8	188136.2	NO2	Y	17.0	0.5	N	3.0
DT N	Ethal Davis School	Near Road	546675.6	188886.1	NO2	Y	2.0	0.0	N	2.8
DT O	Grove Road	Roadside	540025.7	190494.3	NO2	Y	20.0	1.0	N	2.7
DT P	High Road Woodford	Roadside	540076.0	190682.6	NO2	Y	14.0	0.5	N	2.6
DT Q	Chigwell Rd M11	Near Road	541992.1	191799.9	NO2	Y	3.0	3.0	N	2.4
DT R	Winston Way Primary	Roadside	544364.1	186597.4	NO2	Y	0.0	6.0	N	2.8
DT S	Winston Way Gyratory	Kerbside	544360.4	186615.3	NO2	Y	3.0	1.0	N	2.6
DT T	Chadwell Heath Primary	Kerbside	547158.3	187699.4	NO2	Y	4.0	0.0	N	2.8

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT U	Goodmayes Primary	Roadside	546665.3	187046.3	NO2	Y	2.0	3.0	N	2.6
DT V	Isaac Newton Academy	Near Road	545030.2	186919.8	NO2	Y	4.0	0.5	N	2.6
DT W	Inside Winston Way Prim.	Near Road	544332.3	186571.3	NO2	Y	4.0	1		3.0

Notes:

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

(2) N/A if not applicable.

1.2 Comparison of Monitoring Results with AQOs

Table D. Annual Mean NO₂ 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 2025 % ^(b)	2019	2020	2021	2022	2023	2024	2025
RB7	544454.8	187681.9	Automatic Background (Ley Street)	91.7	91.6	30.6	30	21	25	21.5 annualized	15	16.6
RB4	540828.3	188367.9	Roadside (Gardner Close)	99.0	99.0	37.4	37	27	26	24	22	20.7

Notes:

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the NO₂ annual mean AQO of 40 µg m⁻³ are shown in **bold**.

NO₂ annual means in excess of 60 µg m⁻³, indicating a potential exceedance of the NO₂ 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 was carried out for six months the maximum data capture for the full calendar year would be 50%).

Comment data trends:

In general, the NO₂ concentrations monitored at all monitored locations have decreased. This can most likely be attributed to the London wide ULEZ expansion, the impact of EURO vehicle emissions improvements and uptake of ultra-low emission vehicles.

Similarly RB4 (roadside) and RB7 (background) sites have decreased, are below the limit value and lower than 2024 concentrations at RB4. **Figures C, D, and E** below show in graphical form the NO₂ trend decrease in automatic and diffusion tube data between 2019 and 2025.

Table E. Annual Mean NO₂ 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 2025 (%) ⁽²⁾	2019	2020	2021	2022	2023	2024	2025
DT A	547022.3	187232.3	Urban Background		100.0	25.1	20.4	18.6	17.7	17.6	15.9	16.9
DT B	543688	186139.6	Roadside		100.0	43.0	36.5	34.9	31.6	31.8	29.1	30.1
DT C	544132.4	184945.6	Roadside		100.0	43.2	34.4	34.7	31.5	31.9	29.1	28.7
DT D	544454.8	187681.9	Urban Background		100.0	25.0	20.7	21.0	19.0	17.8	14.9	15.7
DT E	540828.3	188367.9	Roadside		100.0	35.7	28.0	26.1	25.8	24.0	22.3	22.5
DT F	544560.7	190400.8	Roadside		100.0	37.4	29.4	30.2	27.6	27.6	28.2	23.9
DT G	543421.7	188322.6	Roadside		100.0	42.2	35.9	34.4	34.7	31.0	29.7	26.0
DT H	543450.6	188371.1	Roadside		100.0	41.3	37.2	32.5	29.8	31.4	26.3	25.7
DT I	543453.7	188384.4	Roadside		100.0	47.5	34.7	34.3	32.7	31.2	28.6	25.6
DT J	543442	188161.3	Kerbside		100.0	41.4	37.1	33.5	33.9	30.1	30.2	28.8
DT K	543498.3	188840.2	Near Road		100.0	43.4	31.9	34.0	29.7	29.9	27.8	24.4
DT L	541816.3	188161.3	Roadside		100.0	36.7	27.6	28.7	22.5	22.3	23.2	22.8
DT M	541887.8	188136.2	Roadside		100.0	61.4	50.3	45.7	40.7	39.6	38.1	36.9
DT N	546675.6	188886.1	Near Road		100.0	23.5	19.3	18.8	19.4	20.3	17.2	17.2
DT O	540025.7	190494.3	Roadside		100.0	47.4	44.7	41.3	28.4	26.8	24.2	25.8
DT P	540076	190682.6	Roadside		100.0	37.6	34.8	32.0	21.8	20.0	20.1	19.8
DT Q	541992.1	191799.9	Near Road		100.0	43.9	36.7	34.7	22.4	21.5	19.8	19.6
DT R	544364.1	186597.4	Roadside		100.0	54.5	53.4	47.5	39.2	39.0	36.3	31.6
DT S	544360.4	186615.3	Kerbside		100.0	55.5	54.2	45.7	38.0	38.9	36.2	31.6
DT T	547158.3	187699.4	Kerbside		100.0	43.3	44.8	39.4	32.0	32.6	27.2	23.4
DT U	546665.3	187046.3	Roadside		100.0	36.1	36.5	32.6	25.8	26.9	23.6	21.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2025 (%) ⁽²⁾	2019	2020	2021	2022	2023	2024	2025
DT V	545030.2	186919.8	Near Road		100.0	32.8	31.1	29.2	21.2	21.0	19.1	18.9
DT W	544332.3	186571.3	Near Road		100.0	35.8	37.1	30.4	23.0	24.0	20.1	22.0

☐ 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 $\mu\text{g m}^{-3}$.

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

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

Means for diffusion tubes have been corrected for bias. All means have been “annualised” 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. NO₂ Automatic Monitoring Results: Comparison with 1-hour Mean Objective, Number of 1-Hour Means > 200 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 2025 % ^(b)	2019	2020	2021	2022	2023	2024	2025
RB7	544454.8	187681.9	Automatic Background (Ley Street)	91.7	91.6	1	0	0	0	0	0	0
RB4	540828.3	188367.9	Roadside (Gardner Close)	99.0	99.0	0	0	0	0	0	0	0

Notes

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

Exceedance of the NO₂ 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 was carried out for six months the maximum data capture for the full calendar year would be 50%)

Figure C: Long term NO₂ trends 2018 to 2025 Automatic Station Gardner Close RB4

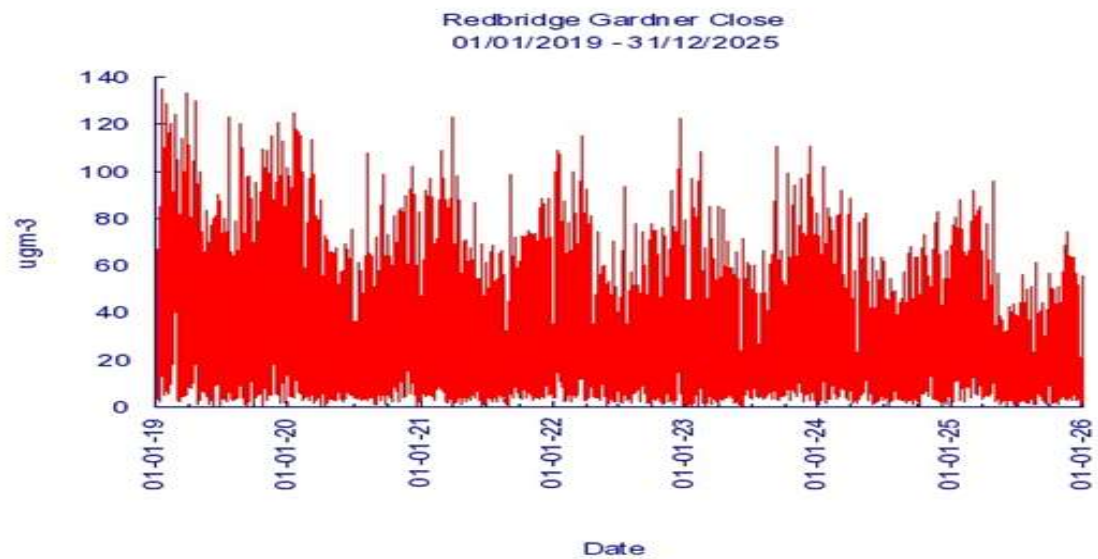


Figure D: Long term NO2 trends 2019 to 2025 Automatic Station Ley Street RB7

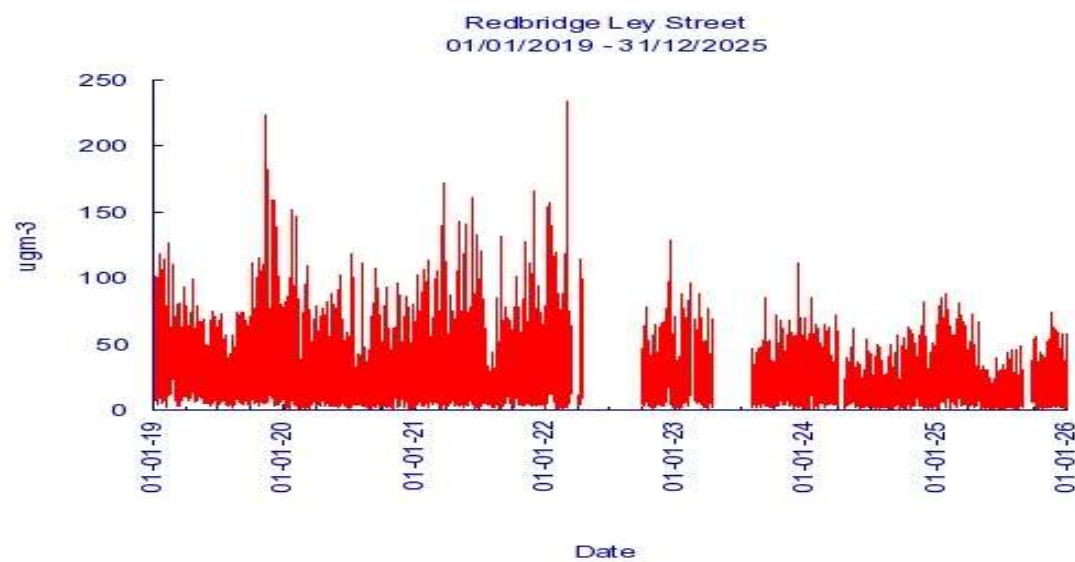
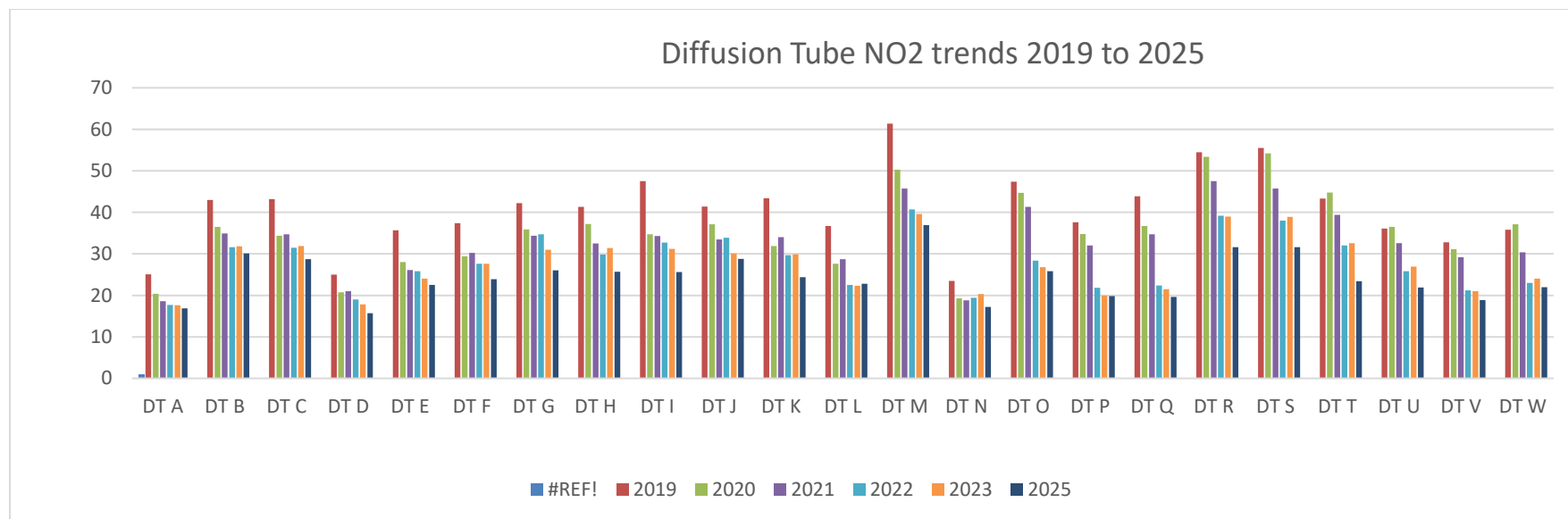


Figure E: Long term NO2 trends 2019 to 2025 Diffusion Tube NO2 annual mean concentrations



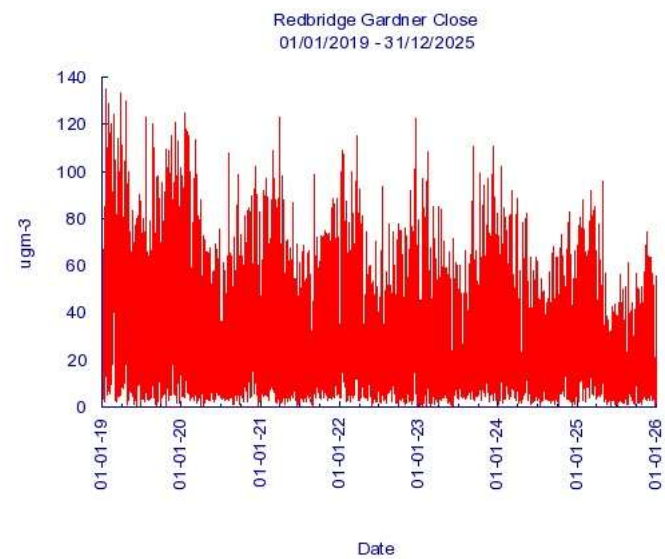
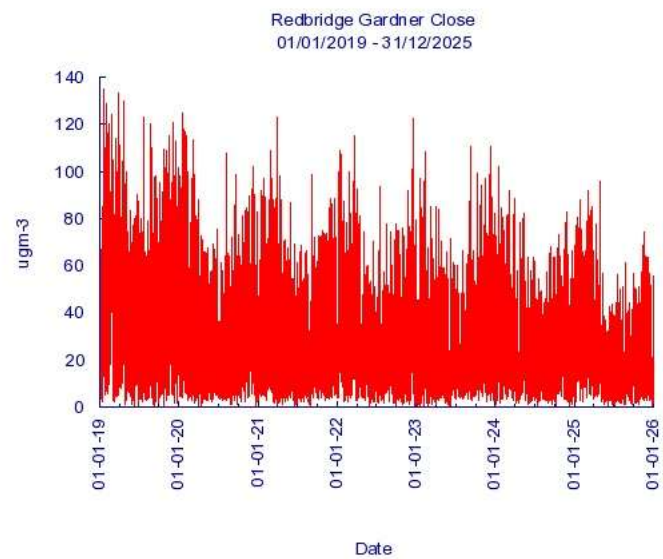


Table G. Annual Mean PM₁₀ Automatic Monitoring Results (µg m⁻³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period % ^(a)	Valid data capture 2025 % ^(b)	2019	2020	2021	2022	2023	2024	2025
RB7	544454.8	187681.9	Automatic Background (Ley Street)	92.4	91	16	15	13.3 (annualised)	15	13	14	16
RB4	540828.3	188367.9	Roadside (Gardner Close)	85.9	85.9	19	17	16 (annualised)	-	16	14	16.5

Notes

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the PM₁₀ annual mean AQO of 40 µg 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 was carried out for six months the maximum data capture for the full calendar year would be 50%).

RB7 and RB4 had no exceedances of the annual mean objective and the trend is downwards. AQ objectives met at both sites

Table H. PM₁₀ Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM₁₀ 24-Hour Means > 50 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 2025 % ^(b)	2019	2020	2021	2022	2023	2024	2025
RB7	544454.8	187681.9	Automatic Background (Ley Street)	92.4	91	2	1	- data capt 59%	0	0	0	1
RB4	540828.3	188367.9	Roadside (Gardner Close)	85.9	85.9	2	1	- data capt 70%	-	1	0	2

Note

Exceedances of the PM₁₀ 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 was carried out for six months the maximum data capture for the full calendar year would be 50%).

RB7 and RB4 had 1 to 2 exceedances of the hourly mean objective and the trend is downwards. AQ objectives met at both sites

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 2025 % ^(b)	2019	2020	2021	2022	2023	2024	2025
RB7	544454.8	187681.9	Automatic Background (Ley Street)	97.8	97.8	11	13	10	9	7	6	9.9

Notes

The annual mean concentrations are presented as µg m⁻³.

Exceedances of the PM_{2.5} annual mean concentration target of 10 µg 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 was carried out for six months the maximum data capture for the full calendar year would be 50%).

The 7 year trend of the PM_{2.5} annual mean at RB7 is decreasing. The 2024 annual mean for PM_{2.5} is 9.9 µg m⁻³. This result is significantly below the legal limit value of 20 µg m⁻³ and the 2028 target value of 12 µg m⁻³

2. Action to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months. 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 AQMA declared by Redbridge can be found in Table J. The table presents a description of the one borough wide AQMA(s) that is currently designated within Redbridge Appendix C provides maps of AQMA and also the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designation are as follows:

- NO₂ annual mean;
- PM₁₀ 24-hour mean;

Table J. 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
Redbridge AQMA	31/12/2003,	Nitrogen dioxide NO ₂ - Annual Mean Particulate Matter PM ₁₀ - 24-Hour Mean	Borough wide AQMA	YES	NO 2 : 55 PM 10: 59 days	None	7 years	AQAP 2026-2031 Pending subject to public consultation and final agreement by the council.	TBC

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

☒ Redbridge confirm that all current AQAPs have been submitted to GLA

2.2 Air Quality Action Plan Progress

Table M: At the time of writing, Redbridge are in the process going out to public consultation on new Draft Air Quality Action Plan for 2026-2031. Once this has been completed, Redbridge will amend and agree the published draft and subsequently report on action progress in the next ASR for 2027. The AQAP progress will be scrutinised and monitored by the council's Air Quality Steering Group

Table K: To be confirmed after consultation on proposed measures.

2026 - 2031 Draft Action Plan measures currently subject to public consultation. Agreed final published AQAP will be reported on for ASR 2027 with finalised published measures in Table M.

3. Planning Update and Other New Sources of Emissions

Table L. Planning requirements met by planning applications in Redbridge in 2025

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	142
Number of planning applications required to undertake construction dust monitoring and reporting (Please specify how you get access to dust monitoring data i.e. online tool or CSV file)	<u>57 online tool</u>
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 as detailed in Air Quality Neutral LPG (london.gov.uk) point 3.1.5.	0
Number of developments required to install Ultra-Low NO _x boilers	<u>48</u>
Number of developments where an AQ Positive, AQ Neutral building and/or transport assessments undertaken	<u>52</u>
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	52
Number of planning applications with S106 agreements including other requirements to improve air quality	0
Number of planning applications with CIL payments that include a contribution to improve air quality	<u>0</u>
NRMM: Number of planning applications with conditions related to NRMM included. Number of developments registered at www.nrmm.london . Number of audits (based on the pan-London project report and / or inhouse auditing programme) % of sites unregistered prior to audit % of sites compliant with the NRMM LEZ policy standards.	NRMM Conditions 16 Number of Audits : 16 Self-compliant : 4 Non-compliant: 0 No NRMM: 2 Site Complete 1

3.1 New or significantly changed industrial or other sources

4. Additional Activities to Improve Air Quality

4.1 London Borough of Redbridge Fleet

There are 285 vehicles in Redbridge's fleet 11 are electric and 5 are hybrid. Redbridge are seeking to increase the number of electric, hybrid and cleaner vehicles in the boroughs' fleet. Redbridge are compliant with the ULEZ standard.

The figures for number electric chargers installed up to 2025 are:

Slow (<7kW) 233

Fast (7-22kW) 230

Rapid (22-50kW) 4

Ultra-rapid (<50kW) 2

Total 469

Redbridge School Streets:

The Council has introduced clean air zones, known as School Streets, around some Redbridge Schools as part of our plans to deliver a healthier, safer, greener and cleaner borough.

Redbridge School Streets aim to:

- Reduce air pollution around our schools, making the air children breathe cleaner;
- Protect children from the dangers of traffic at the school gate, preventing accidents and keeping children safe;
- Encourage families to walk and cycle to school, improving health and fitness.

Redbridge School Streets prevent non-residential vehicle traffic from outside the zone from entering School Street zones and travelling past schools during school start and finish times, during term time only.

Vehicles parked within the School Streets zone can exit the School Streets zone without penalty, at any time, even during the restricted period.

Residents and business located within the zone are entitled to a free vehicle exemption allowing them to enter the area during restricted times.

Across Redbridge there are currently twenty-six School Streets schemes in operation at twenty-six schools and results show they have been successful at reducing traffic at the school gate, making the area safer for children and encouraging them to walk, scoot and cycle to school.

We Care for Our Air Project:

Redbridge Council was awarded funding from to help reduce air pollution to make the borough's air cleaner and healthier for local people. The funding, announced on 9 February 2023 by the Department of Environment, Food and Rural Affairs (DEFRA), supported the Council's drive to improve air quality in the borough.

The project entitled **We Care for Our Air** delivered several initiatives, encouraging and supporting local people and businesses to take part in active travel schemes. The project also bolstered information and knowledge about Redbridge's air quality, focusing on children and vulnerable groups who are particularly susceptible to poor air quality.

Monitoring air pollution is crucial to understanding the risk that poor air quality poses. The project increased the number of Breathe London air quality monitors across the borough while enabling the Council to develop interactive air quality maps using data gathered by the community. The project also helped deliver cycle training and additional school cycle storage for pupils and parents and contributed to a reduction in anti-idling across various locations in Redbridge through awareness raising actions.

4.2 Planning Enforcement

All major planning applications and developments where future occupants may be exposed to poor air quality are reviewed by planning and environmental. Where deemed appropriate they are conditioned accordingly to address the relevant air quality impacts and mitigation is proposed to control these impacts before planning permission is granted.

4.3 Pan-London NRMM Auditing Project

Redbridge is continuing to support the pan-London NRMM auditing project in 2025-2026.

The standard wording used by Redbridge Planning department for NRMM conditions is as follows:

(Non-Road Mobile Machinery): No NRMM shall be used on the site unless it is compliant with the NRMM Low Emission Zone requirements (or any superseding requirements) and until it has been registered for use on the site on the NRMM register (or any superseding register).

Reason: To ensure that air quality is not adversely affected by the development in line with London Plan policy SI 1 and the Mayor's SPG: The Control of Dust and Emissions during Construction and Demolition.

This is applied to all major planning applications

4.4 Air Quality Alerts

Redbridge currently supports airTEXT (<https://www.airtext.info/>)

Redbridge also cascades the Mayor's air quality alert messaging

4.5 Air Quality Positive

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

Air quality monitoring data provides a measure of actual concentrations and therefore exceedances of air quality objectives. Data also provides information on trends in air pollution and can provide the basis for verifying the various models used to predict future pollution levels.

In 2024 London Borough of Redbridge undertook automatic monitoring at the following two sites:

- CM7 - Redbridge 7 (Ley Street) located northeast of Ilford – an urban background site within the Ley Street Depot that is sited on Ley Street. The site monitored nitrogen dioxide, PM₁₀ (by BAM), and ozone. Since 2016 this site began monitoring PM_{2.5} (by BAM). Redbridge 7 (Ley Street) was set up in 2014, and is also identified in this report as CM7.
- CM4 - Redbridge 4 (Wanstead) – an urban traffic site close to the A12 towards the southwest of the Borough. The site started operating in November 1999. The site monitors nitrogen dioxide, PM₁₀ and PM_{2.5} (both by BAM). Until March 2012 it also monitored carbon monoxide and sulphur dioxide.

The sites represent relevant exposure within the Borough. The sites are part of the London Air Quality Network for 2023 and therefore the standards of QA/QC are similar to those of the government's AURN sites. Fortnightly local site operator (LSO) zero/span calibrations of the gas analysers are carried out by the local authority, with subsequent data collection, validation and ratification undertaken by Ricardo. In all cases the data are fully ratified unless reported otherwise. Details of the sites can be found at [Air quality in England](#)

UKCAS accredited independent site audits are carried out every 6 months by the National Physics Laboratory (NPL). Additional six monthly equipment service visits by Enviro Technology Services Plc.

The Council previously operated three other automatic monitoring stations in the Borough: Redbridge 2 - a roadside site on Ilford Broadway closed in 2003.

Redbridge 3 – a kerbside site at Fulwell Cross closed in 2012, and Redbridge 5 – a roadside site in South Woodford closed in 2012

PM₁₀ Monitoring Adjustment

The LLAQM.TG16 guidance highlights that Met-One PM₁₀ Unheated BAM 1020 instruments conform to the equivalence criteria relating to the gravimetric European reference method. A correction using a factor of 1.2 is automatically applied to adjust for slope.

A.2 Diffusion Tubes

Diffusion Tubes are prepared and analysed by UKAS accredited Gradko International Ltd. • Diffusion Tubes are prepared using 50% triethanolamine with acetone method and analysed using UV spectrophotometry

☐ The lab follows the procedures set out in the Defra Technical Guidance for LAQM TG (22).

☐ For details attaining to 'results' – precision, bias adjustment factors; and reference methods are as follows: Results of laboratory precision (tube precision and WASP results): The LAQM website gives the following precision results for Gradko 50% TEA in acetone: 2024 Good (12 studies)

The laboratory performance of Gradko International was tested in January to February 2024 to September to October 2024 under AIR NO₂ PT Rounds AR062, AR063, AR065, AR050 , AR052, AR066,. The performance was 100% in all rounds.

The version of the bias adjustment factor database used is: 03/26

Factor from Local Co-location Studies

Gardner Close local bias adjustment factor 0.85, good precision and good data capture.

Ley Street local bias adjustment factor 0.98, good precision and good data capture.

Using the Diffusion Tube Data ~Processing tool v6.0 , the combined local bias adjustment factor from Ley Street and Gardner Close was 0.91 with good overall precision and data capture.

Discussion of Choice of Factor to Use

The local bias adjustment factor is 0.91 and the national factor is 0.92. Although national factor was derived from 12 studies, the local co-location sites have good precision for the diffusion tubes and with high quality chemiluminescence results, so the local factor has been chosen.

Table N. Bias Adjustment Factor

National Diffusion Tube Bias Adjustment Factor Spreadsheet						Spreadsheet	
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.							
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, 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 in blue. If there is more than one study, use the overall factor ³ shown in blue at the foot of the table.				
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 Authority at LAQMHelpdesk@bureauveritas.com or 0800 0327953				
Analysed By ¹	Method	Year ²	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m ³)	Automatic Monitor Mean Conc. (Cm) (µg/m ³)
Gradko	50% TEA in acetone	2025	UB	City Of London Corporation	12	24	22
Gradko	50% TEA in acetone	2025	R	City Of London Corporation	12	31	28
Gradko	50% TEA in acetone	2025	R	Lb Hounslow	10	31	25
Gradko	50% TEA in Acetone	2025	UC	Falkirk Council	11	27	25
Gradko	50% TEA in Acetone	2025	UB	Falkirk Council	11	11	15
Gradko	50% TEA in acetone	2025	KS	Marylebone Road Intercomparison	12	37	31
Gradko	50% TEA in acetone	2025	SU	Redcar And Cleveland Borough Council	12	11	9
Gradko	50% TEA in Acetone	2025	R	London Borough Of Merton	12	27	22
Gradko	50% TEA in acetone	2025	UB	London Borough Of Wandsworth	12	20	18
Gradko	50% TEA in acetone	2025	R	London Borough Of Richmond Upon Thames	12	15	18
Gradko	50% TEA in acetone	2025	KS	London Borough Of Richmond Upon Thames	10	30	26
Gradko	50% TEA in acetone	2025	B	London Borough Of Richmond Upon Thames	12	13	13
Gradko	50% TEA in acetone	2025	R	Sandwell Mbc	11	28	24
Gradko	50% TEA in acetone	2025	UB	Sandwell Mbc	11	19	20
Gradko	50% TEA in acetone	2025	UB	City Of York Council	12	13	12
Gradko	50% TEA in acetone	2025	R	City Of York Council	12	20	19
Gradko	50% TEA in acetone	2025	R	City Of York Council	10	16	15
Gradko	50% TEA in acetone	2025	R	City Of York Council	11	21	18
Gradko	50% TEA in acetone	2025		Overall Factor ³ (18 studies)			

Table O: Bias Adjustment Factor			
Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	Local	03/26	0.91
2024	National	04/25	0.88
2023	National	06/24	0.83
2022	National	06/23	0.82
2021	National		0.82
2020	National		0.83
2019	National		0.89
2018	National	-	0.92
2017	National	-	0.97

Distance Adjustment

Site DTM has been distanced corrected and shown in Table T.

Table M. NO₂ Fall off With Distance Calculations

Table T Distance calculations:

<u>Site ID</u>	<u>Distance (m): Monitoring Site to Kerb</u>	<u>Distance (m): Receptor to Kerb</u>	<u>Monitored Concentration (Annualised and Bias Adjusted ($\mu\text{g m}^{-3}$))</u>	<u>Background Concentration ($\mu\text{g m}^{-3}$)</u>	<u>Concentration Predicted at Receptor ($\mu\text{g m}^{-3}$)</u>	<u>Comments</u>
<u>DTM</u>	0.5	17	36.8	17.821	25	-
	-	-	-	-	-	-

Appendix B Full Monthly Diffusion Tube Results for 2025

Table N. NO₂ 2025 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	Comment
DT A	Urban Background	547022	21.6	33.4	17.0	14.0	10.9	18.7	12.5	11.4	16.8	20.5	21.6	24.5	18.6	16.9		
DT B	Roadside	543688	34.8	46.5	32.1	26.4	30.6	31.9	33.9	26.8	35.1	29.4	40.3	29.1	33.1	30.1		
DT C	Roadside	544132	34.5	45.0	31.7	22.2	29.2	24.2	32.7	26.0	36.6	27.0	38.1	32.0	31.6	28.7		
DT D	Urban Background	544455	20.9	33.8	18.1	12.9	11.4	11.9	11.8	11.1	15.8	16.5	21.0	21.4	17.2	15.7		
DT E	Roadside	540828	31.5	39.5	23.2	22.3	17.4	22.0	18.3	19.6	28.1	20.2	28.5	26.7	24.8	22.5		
DT F	Roadside	544561	32.1	43.4	23.3	19.8	20.3	27.1	23.3	18.7	28.5	21.6	33.3	24.6	26.3	23.9		
DT G	Roadside	543422	31.2	41.4	24.6	18.4	23.4	36.0	25.2	24.1	33.8	24.6	37.1	23.2	28.6	26.0		
DT H	Roadside	543451	34.3	45.7	33.4	16.7	24.9	39.5	24.1	16.2	24.3	23.6	34.0	22.5	28.3	25.7		
DT I	Roadside	543454	40.0	36.4	22.8	18.5	27.1	25.2	33.1	17.5	38.8	22.7	31.5	24.1	28.2	25.6		
DT J	Kerbside	543442	35.4	53.0	34.6	22.5	21.4	21.5	39.4	27.1	27.2	24.0	39.1	34.1	31.6	28.7		
DT K	Near Road	543498	29.9	34.7	28.1	22.1	20.9	20.2	23.7	20.9	43.3	17.8	35.6	24.1	26.8	24.3		
DT L	Roadside	541816	28.4	35.5	32.0	27.7	17.3	20.4	19.3	18.7	28.3	16.3	25.9	31.4	25.1	22.8		
DT M	Roadside	541888	34.8	60.7	37.8	33.5	39.1	31.6	42.4	30.9	48.3	42.8	40.3	44.3	40.5	36.8		
DT N	Near Road	546676	23.6	35.1	16.9	13.4	12.9	17.1	13.4	13.9	16.4	15.9	22.3	26.2	18.9	17.2		
DT O	Roadside	540026	36.0	34.7	29.3	19.9	22.8	21.1	22.8	20.6	33.3	26.2	32.7	40.7	28.3	25.8		
DT P	Roadside	540076	30.3	41.5	17.1	15.1	15.5	17.0	15.2	13.1	23.1	18.6	25.0	29.8	21.8	19.8		
DT Q	Near Road	541992	26.5	30.2	15.8	12.7	19.1	21.6	19.5	16.0	26.4	19.6	26.8	25.0	21.6	19.6		
DT R	Roadside	544364	40.1	44.9	37.1	28.2	31.8	35.1	31.0	27.4	43.8	26.2	36.3	35.2	34.7	31.6		
DT S	Kerbside	544360	43.1	44.5	38.8	24.7	31.8	30.5	39.0	29.1	44.6	29.6	29.1	31.2	34.7	31.5		
DT T	Kerbside	547158	32.9	41.0	24.3	22.9	20.9	20.4	20.5	19.2	24.6	24.5	30.4	27.1	25.7	23.4		
DT U	Roadside	546665	24.9	47.1	23.5	20.3	18.1	17.1	17.2	16.9	22.5	25.3	33.2	23.1	24.1	21.9		
DT V	Near Road	545030	25.6	36.8	20.4	15.5	15.1	16.3	16.6	14.5	24.1	19.4	22.5	22.9	20.8	18.9		
DT W	Near Road	544332	31.4	27.2	26.4	28.1	17.8	18.0	17.7	18.4	19.1	19.1	43.6	23.4	24.2	22.0		

- ☒ All erroneous data has been removed from the NO₂ diffusion tube dataset presented in Table N
- ☐ Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19
- ☒ Local bias adjustment factor used
- ☐ National bias adjustment factor used
- ☒ Where applicable, data has been distance corrected for relevant exposure in the final column

☒ Redbridge confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

Notes:

Exceedances of the NO₂ annual mean objective of 40µg m⁻³ are shown in **bold**.

NO₂ annual means exceeding 60µg m⁻³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Appendix C Summary of Breathe London Sensor Monitoring Data

Table O- Details of Breathe London Sensor Sites

Six Breathe London sensors operated across Redbridge in 2025, providing high-resolution indicative data for NO₂ and PM_{2.5}.

The locations are : Gants Hill, Ley Street, Gardner Close, Ley Street, Ley Street BLEN and South

NO₂ annual mean concentrations ranged from 18 to 31 µg/m³ across the network, with higher values observed near major roads. PM_{2.5} annual mean concentrations ranged from 10 to 11 µg/m³, consistent with regional background levels.

The sensors continue to support community engagement, hyperlocal analysis, and targeted interventions.

There is currently no facility to download monthly averages for data to be put in Table W.

This will be useful if breathe London can facilitate this so the trends can be analysed similarly to the Ricardo Air Quality England website for LAQM automatic data.

Table P - Monthly Air Quality Sensor Monitoring Results

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean Data

Appendix D Map(s) of Monitoring Locations and AQMAs

Figure A. Map of Non-Automatic Monitoring Site(s)

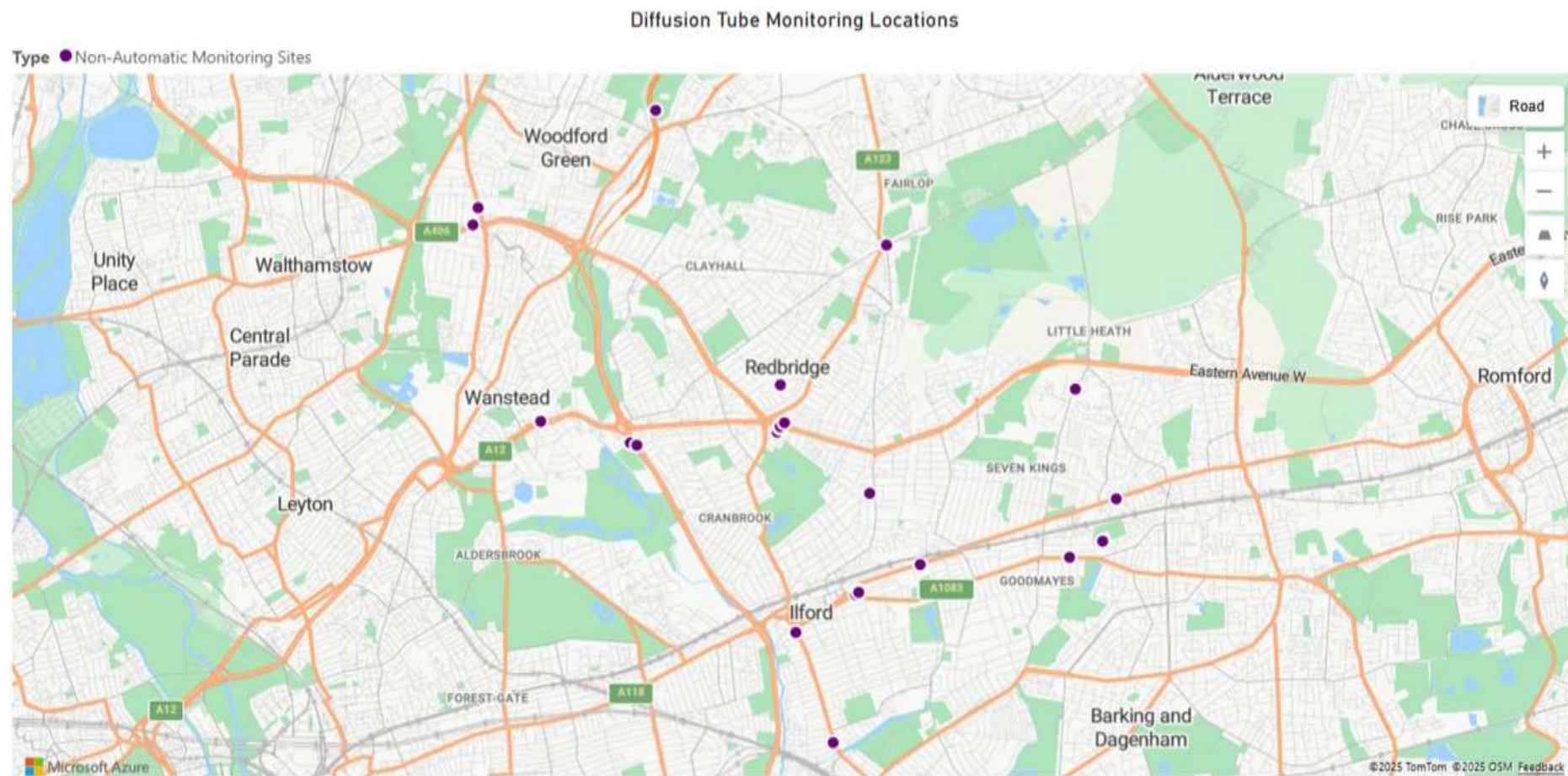


Figure B. Map of Automatic Monitoring Site(s)

