London Borough of Barking and Dagenham Air Quality Annual Status Report for 2024

Date of publication: May 2025

This report provides a detailed overview of air quality in 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))

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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
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)	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 ($PM_{2.5}$)	20 µg m^{-3}	Annual mean	2020
Particles ($PM_{2.5}$)	London Mayoral Objective[(3)]: 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} mot 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) London Mayoral Objective

1. Air Quality Monitoring

London Borough of Barking and Dagenham (LBBD) operates 2 automatic monitoring stations (Table B), which are both located at suburban background and within 24 and 28meters respectively from relevant exposure.

1.1 Locations

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? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
(BG1)	Rush Green Primary School	Suburban Background	550652	186836	NO_2 SO2	Y	Chemiluminescent, UV Florescence	28	50	4
(BG2)	Scrattons Farm	Suburban Background	548043	183320	NO_2 PM10	Y	Chemiluminescent, Teom	24	24	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

The Council started monitoring for nitrogen dioxide by diffusion tube in the borough in 2020 at eight monitoring locations.
This was increased by another twenty locations in 2021 and have since increased again by another twenty monitoring locations in 2023.
The council now have forty-eight monitoring locations spread throughout the borough with one of it a triplicate location at Rush Green Primary School which is co-located with one of the council automatic monitoring stations.
Table C below gives individual site details, locations for the 2024 monitoring round. All diffusion tube sites are indicative of relevant exposure from roadside, background, and urban background sites. The diffusion tubes are located at building facades of residential properties and schools or adjacent to hotspot locations where possible.

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? 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)
DT1	Ripple Road Primary School	Roadside	544793	183783	NO_2	Y	17	2	N	2.5
DT2	1A Westminster Gardens	Roadside	545032	183193	NO_2	Y	3	1	N	2.5
DT3	6/7 Scrattons Terrace	Roadside	547806	183543	NO_2	Y	5	1	N	2.5
DT4	291 Dagenham Heathway	Roadside	549035	184813	NO_2	Y	6	1	N	2.5
DT5	Wood Lane/Valence Avenue Junction	Roadside	547789	185792	NO_2	Y	5	2	N	2.5
DT6a	Rush Green Primary School	Suburban Background	550652	186836	NO_2	Y	28	N/A	Y	1.5
DT6b	Rush Green Primary School	Suburban Background	550652	186836	NO_2	Y	28	N/A	Y	1.5
DT6c	Rush Green Primary School	Suburban Background	550652	186836	NO_2	Y	28	N/A	Y	1.5
DT7	Whalebone Lane South/Whalebone North/High Road Junction	Roadside	548544	188125	NO_2	Y	2	2	N	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT8	Outside No. 31 Eastern Avenue West (the A12)	Roadside	548359	189057	NO_2	Y	3	12	N	2.5
DT9	St Pauls Way (Beside Abbey Green Play Area)	Roadside	544128	183662	NO_2	Y	3	2	N	2.5
DT10	Glenny Road	Roadside	544385	184565	NO_2	Y	3	2	N	2.5
DT11	209 New Road (A1306)	Roadside	549832	183208	NO_2	Y	5	2	N	2.5
DT12	40 – 38 Thames Road	Roadside	546501	182713	NO_2	Y	5	2	N	2.5
DT13	2 Choats Road	Roadside	547081	183053	NO_2	Y	5	2	N	2.5
DT14	High Road (Chadwell Health) A118	Roadside	548065	187998	NO_2	Y	5	2	N	2.5
DT15	102 Renwick Road	Roadside	546935	183135	NO_2	Y	6	2	N	2.5
DT16	1 River Road	Roadside	545296	183204	NO_2	Y	5	2	N	2.5
DT17	95 Bastable Avenue	Roadside	545842	183144	NO_2	Y	5	2	N	2.5
DT18	463 Lodge Avenue	Roadside	546415	183717	NO_2	Y	5	2	N	2.5
DT19	835a Longbridge Road (A124)	Roadside	546744	185774	NO_2	Y	5	2	N	2.5
DT20	1 Althorne Way/ Wood Lane (A124)	Roadside	549173	186755	NO_2	Y	3	1	N	2.5
DT21	217 Whalebone Lane South (A1112)	Roadside	548733	187586	NO_2	Y	6	2	N	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT22	1249 Chequers Lane	Roadside	549078	183327	NO_2	Y	6	1	N	2.5
DT23	623 Rainham Road South	Roadside	550263	184902	NO_2	Y	5	2	N	2.5
DT24	Cook Road	Roadside	548487	183557	NO_2	Y	20	2	N	2.5
DT25	Fiske Court, Kings Edward's Road (Adjacent to A13)	Roadside	544699	183650	NO_2	Y	6	1	N	2.5
DT26	251 Valence Avenue	Roadside	547762	186888	NO_2	Y	5	1	N	2.5
DT27	145 Fanshawe Avenue	Roadside	544339	184702	NO_2	Y	5	1	N	2.5
DT28	102 Maplestead Road	Roadside	546731	183684	NO_2	Y	5	1	N	2.5
DT29	143 Grafton Road	Roadside	548422	186431	NO_2	Y	2	5	N	2.5
DT30	947 Longbridge Road	Roadside	544631	184553	NO_2	Y	3	1	N	2.5
DT31	St Vincent's Catholic Primary School	Roadside	547209	186599	NO_2	Y	10	1	N	2.5
DT32	Opposite 131 Upney Lane	Roadside	545942	184073	NO_2	Y	10	2	N	2.5
DT33	196 Longbridge Road	Roadside	545124	184935	NO_2	Y	7	2	N	2.5
DT34	150 London Road (Opposite Shell Petrol Station)	Roadside	554097	184196	NO_2	Y	2	1	N	2.5
DT35	29 London Road	Roadside	544206	184158	NO_2	Y	5	1	N	2.5
DT36	39 Alfred's Gardens	Roadside	545536	183446	NO_2	Y	5	1	N	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT37	Gascoigne Wharf, Alfreds Way, (Opposite Bestway)	Roadside	544667	183104	NO_2	Y	5	1	N	2.5
DT38	6 William Hope Close	Suburban Background	545495	183310	NO_2	Y	10	N/A	N	2.5
DT39	308 Lodge Avenue	Roadside	546618	184605	NO_2	Y	8	1	N	2.5
DT40	91 Markyate Road	Roadside	546968	185087	NO_2	Y	6	1	N	2.5
DT41	Goresbroook School, Cook Road	Roadside	548056	183606	NO_2	Y	10	2	N	2.5
DT42	60 Arnold Road	Roadside	548974	184041	NO_2	Y	5	2	N	2.5
DT43	Connections, Shankar Road, House of Faith	Roadside	549537	183284	NO_2	Y	10	2	N	2.5
DT44	Leys Infants School, 9 Leys Avenue	Roadside	550508	184123	NO_2	Y	7	2	N	2.5
DT45	463 Rainham Road South	Roadside	550289	184928	NO_2	Y	8	1	N	2.5
DT46	116 Alibon Road	Roadside	548935	185402	NO_2	Y	7	2	N	2.5
DT47	830 Dagenham Road	Roadside	550002	185912	NO_2	Y	8	1	N	2.5
DT48	65 Marston Avenue	Roadside	549154	186114	NO_2	Y	6	1	N	2.5

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.

1.2 Comparison of Monitoring Results with AQOs

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.

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
(BG1)	551053	187233	Suburban Background	68	-	-	-	-	17	17	16	15
(BG2)	548043	183320	Suburban Background	-	83	-	-	-	20	21	18	18

Notes:

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

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

NO_2 annual means in excess of 60 µg 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 was carried out for six months the maximum data capture for the full calendar year would be 50%).

At both (LBBD) automatic monitoring station, the NO_2 trend remains steady in the last three years whilst also continued to fall in concentration or remain stable in the last two years.

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
DT1	544793	183783	Roadside	-	83.3	-	-	28.5	30.05	29.76	27.1	24.52
DT2	545032	183193	Roadside	-	91.7	-	-	26.7	28.88	24.07	23.2	22.95
DT3	547806	183543	Roadside	-	100.0	-	-	29.0	30.88	28.63	26.8	26.29
DT4	549035	184813	Roadside	-	100.0	-	-	37.3	**41.65**	39.57	38.7	39.10
DT5	547789	185792	Roadside	-	100.0	-	-	31.1	38.94	35.12	31.0	29.04
DT6a	550652	186836	Urban Background	-	91.7	-	-	19.8	17.11	13.58	13.4	12.69
DT6b	550652	186836	Urban Background	-	83.3	-	-	19.8	18.01	13.47	13.3	13.23
DT6c	550652	186836	Urban Background	-	83.3	-	-	19.8	15.18	13.50	13.1	13.07
DT7	548544	188125	Roadside	-	100.0	-	-	29.8	34.35	30.80	27.5	25.86
DT8	548359	189057	Roadside	-	100.0	-	-	26.8	31.68	27.69	25.3	24.29
DT9	544128	183662	Roadside	-	83.3	-	-	-	28.88	27.00	24.3	21.62
DT10	544385	184565	Roadside	-	83.3	-	-	-	25.91	24.47	23.8	23.69
DT11	549832	183208	Roadside	-	100.0	-	-	-	31.34	28.08	27.1	25.34
DT12	546501	182713	Roadside	-	100.0	-	-	-	26.51	23.40	24.4	21.67
DT13	547081	183053	Roadside	-	100.0	-	-	-	28.66	21.69	20.2	18.98
DT14	548065	187998	Roadside	-	100.0	-	-	-	32.02	32.98	33.2	28.59
DT15	546935	183135	Roadside	-	83.3	-	-	-	28.25	21.64	20.5	19.55
DT16	545296	183204	Roadside	-	91.7	-	-	-	34.63	34.86	30.9	29.62
DT17	545842	183144	Roadside	-	100.0	-	-	-	25.63	23.32	20.9	20.25
DT18	546415	183717	Roadside	-	100.0	-	-	-	39.09	36.83	34.4	32.91
DT19	546744	185774	Roadside	-	100.0	-	-	-	38.98	29.53	27.2	25.18
DT20	549173	186755	Roadside	-	100.0	-	-	-	27.02	25.97	27.0	27.05

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
DT21	548733	187586	Roadside	-	100.0	-	-	-	37.00	35.83	31.5	30.00
DT22	549078	183327	Roadside	-	100.0	-	-	-	20.59	21.76	20.0	20.18
DT23	550263	184902	Roadside	-	100.0	-	-	-	35.18	32.78	30.1	29.35
DT24	548487	183557	Roadside	-	91.7	-	-	-	31.46	32.87	30.8	26.68
DT25	544699	183650	Roadside	-	91.7	-	-	-	39.66	37.49	35.4	**41.68**
DT26	547762	186888	Roadside	-	100.0	-	-	-	32.76	28.07	27.3	24.88
DT27	544339	184702	Roadside	-	91.7	-	-	-	32.61	29.25	26.6	26.36
DT28	546731	183684	Roadside	-	100.0	-	-	-	31.91	30.79	29.0	28.00
DT29	548422	186431	Roadside	-	83.3	-	-	-	-	-	18.4	15.80
DT30	544631	184553	Roadside	-	91.7	-	-	-	-	-	24.5	21.85
DT31	547209	186599	Roadside	-	100.0	-	-	-	-	-	19.4	16.95
DT32	545942	184073	Roadside	-	100.0	-	-	-	-	-	24.4	22.22
DT33	545124	184935	Roadside	-	100.0	-	-	-	-	-	23.5	20.85
DT34	554097	184196	Roadside	-	75.0	-	-	-	-	-	37.7	27.72
DT35	544206	184158	Roadside	-	91.7	-	-	-	-	-	32.1	30.17
DT36	545536	183446	Roadside	-	100.0	-	-	-	-	-	27.3	24.72
DT37	544667	183104	Roadside	-	100.0	-	-	-	-	-	29.2	26.81
DT38	545495	183310	Urban Background	-	91.7	-	-	-	-	-	22.8	21.52
DT39	546618	184605	Roadside	-	100.0	-	-	-	-	-	29.9	26.57
DT40	546968	185087	Roadside	-	100.0	-	-	-	-	-	19.7	16.71
DT41	548056	183606	Roadside	-	100.0	-	-	-	-	-	31.9	26.55
DT42	548974	184041	Roadside	-	75.0	-	-	-	-	-	21.0	20.06
DT43	549537	183284	Roadside	-	100.0	-	-	-	-	-	25.7	24.51
DT44	550508	184123	Roadside	-	91.7	-	-	-	-	-	19.6	16.32
DT45	550289	184928	Roadside	-	100.0	-	-	-	-	-	23.9	22.83
DT46	548935	185402	Roadside	-	100.0	-	-	-	-	-	22.3	18.88

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
DT47	550002	185912	Roadside	-	100.0	-	-	-	-	-	30.4	27.21
DT48	549154	186114	Roadside	-	91.7	-	-	-	-	-	19.6	18.08

☒ **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%).

Neither of the two automatic monitoring stations exceeds the annual AQ objectives of 40 µg m-3 but exceeded the WHO guidelines of 10 µg m-3. Therefore, the annual objective has been achieved but the WHO guidelines has not been met. The hourly NO_2 objective was achieved at both monitoring locations.

All the diffusion tube results have been appropriately bias adjusted, using the Gradko Environmental national adjustment factors. Exceedances of the annual AQ objective of 40 µg m-3 is highlighted in bold. Only one of the passive monitoring locations (diffusion tubes) i.e. Fiske Court, Kings Edward's Road (DT25) exceeded the air quality objective whilst the Dagenham Heathway (DT4) was very close to the annual air quality objective with the concentration also slightly higher than last year. Fiske Court, Kings Edward's Road (DT25) is directly adjacent to A13, which is a major road.

Moreover, all the passive monitoring locations (diffusion tubes) exceed the WHO guidelines.

At all the (LBBD) 48 passive monitoring locations between 2021 - 2024, the NO_2 trend remains steady in the last three years whilst also continued to fall in concentration with higher percentage in the last two years. Only 2 monitoring location increased in concentration in 2024 i.e. (DT4 & DT25) which has previously stated is directly adjacent to A13. These were down from three monitoring locations in 2023 i.e. (DT12, DT14 and DT20).

Most of the data presented represents monitoring results for a 12-month period (January – December) and tubes are exposed in accordance with the UK Defra guidance LAQM TG (22).

Table F. NO_2 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 2024 %([b])	2018	2019	2020	2021	2022	2023	2024
(BG1)	550652	186836	Suburban Background	68	-	0	0	0	0	0	0	0
(BG2)	548043	183320	Suburban Background	-	83	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 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 was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table F shows that there have been no exceedances of the hourly NO_2 objective in 2024 whilst this has remain consistent at 0 in the last seven years.

The 2024 annual Mean NO_2 Concentration in the London Borough of Barking and Dagenham is attached to this report (Appendix B).

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
(BG2)	548043	183320	Suburban Background	-	86	19	18	18	18	18	17	16

Notes

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

Exceedances of the PM_{10} 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%).

There is no exceedance of the annual PM_{10} objective in 2024 but the WHO guidelines annual mean of 15 µg m-3 was exceeded.

The PM_{10} trend remains steady in the last seven years whilst also continued to fall in concentration in the last three years.

Table H. PM_{10} Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM_{10} 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 2024 %[b]	2018	2019	2020	2021	2022	2023	2024
(BG2)	548043	183320	Suburban Background	-	86	0	6	3	2	2	2	2

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

The 24-hour mean AQ objective was not exceeded in 2024 and the WHO guidelines of 45 µg m-3 of not more than 3-4 times a year was not exceeded either.

Table I. 2024 SO_2 Automatic Monitoring Results: Comparison with Objectives

Site ID	Valid data capture for monitoring period %[(a)]	Valid data capture 2024 %[(b)]	Number of 15-minute means > 266 µg m^{-3}	Number of 1-hour mean > 350 µg m^{-3}	Number 24-hour mean > 125 µg m^{-3}
(BG1)	-	75	3	0	0

Notes

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

Exceedances of the SO_2 objectives are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year).

If the period of valid data is less than 85%, the relevant percentiles are provided in brackets.

(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%).

None of the SO_2 objectives were exceeded for the year 2024. The WHO guidelines were not exceeded either.

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 AQMAs declared by London Borough of Barking and Dagenham can be found in Table J. The table presents a description of the 2 AQMA(s) that are currently designated within an area encompassing the whole London Borough of Barking and Dagenham with unspecified road transport as its major source declared 16th December 2008. Appendix C provides maps of AQMA(s) and the air quality monitoring locations in relation to the AQMA(s). The air quality objectives pertinent to the current AQMA designation(s) for the two pollutants are as follows:

- 200 µg m-3 not to be exceeded more than 18 times a year for 1-hour mean and 40 µg m-3 Annual mean for NO_2.
- 50 µg m-3 not to be exceeded more than 35 times a year for PM10 24-hour mean.

Table J. Declared Air Quality Management Areas

	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
Nitrogen dioxide (NO_2)	Declared 16th December 2008	200 µg m-3 not to be exceeded more than 18 times a year for 1-hour mean and 40 µg m-3 Annual mean for NO_2.	An area encompassing the whole borough.	Unspecified	-	33.70 (Not Exceeded)	13 years	AQAP for AQMA, 2020 - 2025	https://www.lbbd.gov.uk/community-safety-and-crime/make-report/report-air-quality-issues
Particles (PM10)	Declared 16th December 2008	50 µg m-3 not to be exceeded more than 35 times a year for PM10 24-hour mean.	An area encompassing the whole borough.	Unspecified	-	2 (Not Exceeded)	13 years	AQAP for AQMA, 2020 - 2025	https://www.lbbd.gov.uk/community-safety-and-crime/make-report/report-air-quality-issues

☒ **London Borough of Barking and Dagenham confirm the information on UK-Air regarding their AQMA(s) is up to date.**

☒ **London Borough of Barking and Dagenham confirm that all current AQAPs have been submitted to GLA.**

2.2 Air Quality Action Plan Progress

Table K provides a summary of London Borough of Barking and Dagenham progress against the Air Quality Action Plan, showing progress made this year.

Table K. Delivery of Air Quality Action Plan Measures

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
1	Monitoring and core statutory duties	Maintain the borough's monitoring network, and add an additional 20 diffusion tubes	2023	Local Authority - Environmental Protection Team.	• In addition to the existing 30 NOx Diffusion Tubes in our last monitoring report, the Council also continues to maintain the additional 20 NOx tubes added from July 2023 and in the year 2024, we were able to have a full year of monitoring in all the 48 locations. In 2024, we have 100% data capture at 30 of the 48 monitoring locations, 91.7% at 11 locations, 83.3% at 7of the locations and 75% at 2 of the remaining locations. This is nearly 50% improvement in our 100% data capture compared to the year 2023.
2	Monitoring and core statutory duties	Work with and support relative emerging AQ monitoring projects to integrate new/modern monitoring techniques, including the £1m	2025	Local Authority - Environmental Protection Team.	• In 2024 the council continued to be fully involved in publicising the free air quality sensors for communities: Breathe London Communities Programme Round 3 as well as

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		C40 project delivered in partnership with the GLA.			continue to participate in its collaboration on the project with the Mayor's office, Imperial College London and other Stakeholders. The programme which provides 20 fully funded air quality sensors to community groups, as part of the Breath London network. The Council advertise this opportunity to our communities through our various available comms channels, e.g. residents' newsletters, social media as well as through the borough website etc. and leaving the flyer in places such as libraries and community sensors to expand the reach. • The Council also continue to publicise and promote its project – Community Air Quality: Breathing in Barking and Dagenham running with the help of Imperial College. This was done through the social media spaces to promote the project, gather interest and get more involvement wherever possible. The project was also publicised through press release, newsletter copy, facebook, twitter

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					and LinkedIn post. https://bd.communityairquality.com/
3	Monitoring and core statutory duties	IPPC duties and inspections under the Environmental Permitting Regulations 2010	2025	Local Authority - Environmental Protection Team.	• The council continue to deliver its statutory obligations regarding this action. • Annual data statistical return on environmental permitting functions returned to Defra including number of permitted processes (A2, Schedule 13 and Part B processes) in 2024.
4	Emissions from developments and buildings	Raising awareness of and enforce the borough's Smoke Control Zone (SCZ). To include: an awareness campaign using Communications Team media platforms and active enforcement	2025	Local Authority - Environmental Protection Team.	• Our enforcement officers continue to investigate complaint of smoke nuisance and. • In 2024 the Council continued its communication with the London Port Health Authority (City of London Corporation) as regards including permanent moorings within its existing SCA.
5	Emissions from developments and buildings	Ensuring emissions from construction are minimised. All major developments must carry out an Air Quality Assessment in accordance with the GLA's guidance	2025	Local Authority - Environmental Protection Team.	• 100% of major planning applications adjoined with AQ. assessments, or conditioned gained through local policy mechanism.
6	Emissions from developments and buildings	Include Greater London Authority (GLA) guidance on environmental and construction best practices into	2025	Local Authority - Environmental Protection and Planning Team.	• All major planning applications conditioned with GLA best practice guidance in 2024. • The Draft Local Plan requires development to submit a

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		BeFirst/LBBD and other major developments			Construction Management Plan to mitigate the adverse effects of construction. Be First published their public realm guidelines for new developments in 2020, and planning applications are required to meet guidance through conditions or legal obligations also in 2024. • Design Team use BIM & MMC to deliver to borough's 2030 net zero objectives.
7	Emissions from development and building	Ensuring enforcement of non-road mobile machinery (NRMM) air quality policies. Include NRMM requirements within local planning guidance. Planning conditions imposed asking for NRMM compliance for all relevant major developments.	2025	Local Authority - Environmental Protection and Planning Team.	• NRMM is part of the Local Plan included into Regulation 19. All relevant planning applications in 2024 include NRMM conditions with relevant sites in the borough also registered on GLA NRMM website for the year. • Of the 17 sites audited for NRMM in 2024, 14 of the sites were compliant whilst 2 were not and there is no NRMM at the other 1 site. • Policy DMSI 4 of the Draft Local Plan states the whole borough is an air quality management area, which requires the appropriate use of plant machinery and technology. Relevant planning applications include NRMM conditions.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
8	Emissions from development and building	Reducing emissions from Combined heat and power (CHP) by ensuring that air quality as well as carbon emissions are considered when assessing planning applications or where existing schemes require new or upgraded heat sources	2021	Local Authority - Environmental Protection Team.	• We continue to maintain the register of CHPs plant within the borough.
9	Emissions from development and building	Enforce the GLA 'Air Quality Neutral' (AQN) policy or any preceding changes to this regional measure to all major developments	2020	Local Authority - Environmental Protection Team.	• In 2024, all the major planning applications meet GLA policy on AQN.
10	Emissions from development and building	Ensuring adequate appropriate, and well-located green space and infrastructure is included in new large-scale developments	2020	Local Authority - Planning Team.	• In 2023, Thames Road /Crossness development incorporates local green spaces as part of the movement strategy whilst, Barking Riverside has created The Wilds eco park as a green space.
11	Emissions from developments and buildings	Ensure that planning and development teams implement policies on Healthy Streets at an early stage for larger developments (as defined by the GLA)	2021	Local Authority - Environmental Protection and Planning Team.	• In 2023, Thames Road redevelopment is using the Healthy Streets principles to create a healthy street with active travel connections. • Proposals for Valence Avenue, Dagenham Road include Healthy Streets principals.
12	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in	2025	Local Authority - Inclusive Growth Team.	• The Council has adopted its Zero Carbon Roadmap and Climate Change Action Plan whilst, many

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		workplaces and homes through retrofit programmes such as Retrofit Accelerator and Cosy Homes. LBBD to be zero carbon from Council operations (e.g., housing and fleet) by 2030, and zero carbon Borough wide by 2050			of the workstreams mentioned in it are currently under way. • The Cosy Homes scheme with EON have continued to delivered energy efficiency measures, such as loft, cavity and external insulation and solar panels to almost 2,000 homes between 2020/22, across tenure, saving more than 15tCO2e. This was largely funded by ECO3 and Green Homes Grant. • The Council is now working with EON to deliver additional insulation and energy conservation measures to 350 properties through Green Homes Grant LAD3 and has launched its next iteration of Cosy Homes delivering installs under ECO4 and the Great British Insulation Scheme. • Deep retrofit pilots have begun on the Becontree Estate, funded in part by Social Housing Decarbonisation Demonstrator Fund, with 3 completed and 17 more underway. • The Council have contracted to deliver Phase 1 of the Corporate

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					Estate Retrofit Programme which will deploy ECMs across 15 of the most energy consuming buildings in the Council's buildings portfolio. This is expected to commence in June 2023.
13	Emissions from developments and buildings	Improve air quality in the Borough by delivering improvements to reduce building emissions and increase uptake of Decentralised Energy Networks.	2025	Local Authority - Environmental Protection and Inclusive Growth Team.	• The council continues to work towards reducing emission from new development by ensuring relevant conditions are recommend at the planning stage as well as ensuring energy efficient measures are adopted for the site energy source. Installation of biomass is discouraged whilst the use of solar panel and Air Source Heat pump are encouraged.
14	Emissions from developments and buildings	Participate in the Pan-London Non-Road Mobile Machinery registration campaign in conjunction with lead Borough (London Borough of Merton), to reduce emissions from construction vehicles in line with GLA guidance.	2020	Local Authority - Environmental Protection Team.	• We continue to maintain our membership of Pan-London Non-Road Mobile Machinery registration campaign. • Of the 17 sites audited for NRMM in 2024, 14 of the sites were compliant whilst 2 were not and there is no NRMM at the other 1 site.
15	Public health and awareness raising	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plan.	2020	Local Authority - Environmental Protection and Public Health Team.	• Our colleagues in Public Health continued to deliver on their aspect of the AQAP in 2024. • The Council publicised and promoted its involvement in on-

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		11a, Directors of Public Health (DPHs) regularly briefed on the scale of the problem in their area. 11b, DPHs incorporate up to date air quality information in their Joint Strategic Needs Assessment 11c, Air Quality Action Plans are formally signed off by the DPH. 11d, At least one Consultant grade public health specialist with air quality responsibilities in their job profile			going project – Community Air Quality: Breathing in Barking and Dagenham running with the help of Imperial College. This was done through the social media spaces to promote the project, gather interest and get more involvement wherever possible. https://bd.communityairquality.com/ • The council continuing to engage with businesses on how to improve the local AQ as agreed in the council AQAP.
16	Public health and awareness raising	Engage with local businesses and support access to business-specific funding schemes which promote, sustainable transport, collaborative delivery and low emission procurement practices through business forums and newsletters distribution.	2025	Local Authority - Inclusive Growth Team.	• The council continuing to engage with businesses on how to improve the local AQ as agreed in the council AQAP.
17	Public health and awareness raising	Develop and implement a communications strategy to disseminate air quality information to raise awareness	2020	Local Authority - Environmental Protection, Communication and Public Health Team.	• Clean Air Day disseminated via Comms in 2024. • Assist in promoting the clean air day through our comms team by council-wide email regarding the

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		and encourage behaviour change – may include, messages to residents with heart and lung diseases (working in partnership with local NHS services). E.g., re publicising the Mayor's pollution alerts, promotion of active travel/sustainable transport, green home grants and anti-idling messages etc.			day as well as its launch in the Reg Services Newsletter. • We were also involved in its publicity through community engagement by having a stand in the market on the day. • We also engage our education service and schools to take part.
18	Public health and awareness raising	Encourage schools to join the TfL STARS accredited travel planning programme. Promotes sustainable approach to active travel therefore reducing vehicle emissions and increasing physical activity.	2025	Local Authority - Planning Team.	• In 2024, all School Streets Schools have bronze (or above) accreditation whilst current bronze accredited schools are working towards silver/gold accreditation (for July 2025 submission) and 25 schools are currently engaged.
19	Public health and awareness raising	Air quality in and around schools: Apply to the funding made available through TfL for LIPs to deliver the recommendations from the 'school streets.	2025	Local Authority - Transport Planning and Planning Team.	• Be First continues to conduct consultation on all schemes and has monitored the operation of the School Streets in place. • New School Streets are implemented on an experimental basis, and residents continue to have six months to give their views on the School Streets. • Schemes expected to launch in 2024 were delayed due to ongoing

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					procurement of new borough-wide camera supplier. • Five schemes are programmed to launch in 2025. A decision on the value and usability of diffusion tube from schools is forthcoming. • Funding has been secured for 2025-26 and we expect to invite Expressions of Interest from schools in the spring for consideration for the next round of School Streets (to be delivered in 2026).
20	Public Health and awareness raising	Use council lobbying power to increase/encourage local and regional action using a health in all policies approach. Lobbying within the BHR and NEL partnerships (including NHS and LA) to encourage other partners to consider measures to improve air quality – including their staff, residents, in their procurements and their in-house services. Lobby and work with TFL to reduce NO_2 & PM emissions from buses in LBBD, and to reduce air quality	2021	Local Authority - Environmental Protection and Public Health Team.	• Environmental Health contributed to, and supported, the lobbying work undertaken by the East London AQ Cluster Group in response to the proposed changes consulted on within the Environment Bill, 2020 and continue to do so in 2024. • Shared opportunities to work together with following stakeholders. Air quality/ active travel and health collaboration with NHS colleagues and Be First. Be First on liaison with TfL. The team fed into the NEL ICB Green Plan for LBBD.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		concentrations from TfL regulated roads.			
21	Public Health and Awareness Raising	Submit responses to relevant government and regional consultations – ensure responses focus on reducing emissions of local air pollutants and CO2.	2025	Local Authority - Environmental Protection and Public Health Team.	• In 2024 the team responded to relevant government and regional consultations – ensure responses focus on reducing emissions of local air pollutants and CO2. • The team also participated in various stakeholders meeting to discuss issues relevant to local air quality.
22	Public Health and Awareness Raising	Continued implementation of the Barking Riverside Travel Plan, to accelerate uptake of cycling walking and sustainable transport.	2020	Local Authority - Planning Team.	• Initial target of 36% of residents travelling to work by car, 5% on foot and 7% by bicycle by end of 2021. – • On the issue of no. of Pedestrian and cycle provisions, this is a bit complicated we have no record of direct improvement schemes on BR. However, Be First schemes include 1 on going on Renwick Rd/Merz Rd Junction and 2 proposed on River Rd and Dagenham Dock Quietway. • On the no. of registered members of Cycle Hub, we don't have registered numbers but there are average of 100 attendees monthly.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					• On the issue of no. of registered members of Car club on site; as of May 2024, there are currently 4 car club spaces in BR, based on usage data of the current provision, an indicative maximum provision of the car club bays for the site is expected to be 40 spaces.
23	Public Health and Awareness Raising	Prepare and deliver Council-wide (LBBD) and BeFirst Travel Plans encouraging sustainable transport modes for staff and visitors.	2021	Local Authority - Planning Team.	• There is no update for BFTP. Process will recommence after People Strategy is implemented.
24	Public Health and Awareness Raising	Deliver the 'Ways of Working' (LBBD Staff) Travel to Work Plan and implement deliverables for staff to travel more sustainably and safely (in response to Covid19)	2020	Local Authority - Inclusive Growth Team.	• Ways of Working Travel plan still ongoing.
25	Delivery servicing and freight	Review of the process documentation templates (procurement strategy document, delegated authority documents and award contract documents) to include air quality requirements for reducing vehicle emissions.	2020	Local Authority - Procurement Team.	• This measure is still on-going following the AQAP adoption in February 2021.
26	Delivery servicing and freight	Review, implementation, and approval of the 'contract rules' in tandem with Council legal	2021	Local Authority - Procurement Team.	• This measure is still on-going following the AQAP adoption in February 2021.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		department with a view to adding air quality requirements for reducing vehicle emissions.			
27	Delivery servicing and freight	Reducing emissions from deliveries to local businesses and residents. Work with and support TfL to install rapid electric vehicle charging points to encourage low emission vehicles.	2020	Local Authority - Planning Team.	• We continue to secure on-site ECVP points on major applications in 2024.
28	Borough Fleet	Reducing emissions from council fleet. Undertake 'Grey' Fleet review with Energy Saving Trust to inform future vehicle choice and infrastructure	2020	Local Authority - Planning and Inclusive Growth Team.	• Regarding the grey fleet, a review was undertaken by EST in 2020 and the Council's policies are continuing to be reviewed to follow their recommendations.
29	Borough Fleet	Investigate the feasibility of, and implement the best environmentally performing, alternative fleet vehicle fuel (e.g., Hydrogen, Electric, Gas-to Liquid)	2021	Local Authority - Fleet Management Team.	• As previously advised, the EV plans were scrapped along with the procurement of the vehicles. • Cost was the main issue with the installation of the infrastructure not being the most straightforward. Cabinet rejected the proposals because of the council's financial situation. • The current fleet plans are due to be drawn up but will be conservative and unlikely to include Electric vehicles for the next few years.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
30	Borough Fleet	Undertake an infrastructure and operational review for the Council fleet depot land space charging in the Borough to incentivise EV charging uptake at the workplace	2020	Local Authority - Inclusive Growth and Fleet Management Team.	• As previously advised, the EV plans were scrapped along with the procurement of the vehicles. • Cost was the main issue with the installation of the infrastructure not being the most straightforward. Cabinet rejected the proposals because of the council's financial situation. • The current fleet plans are due to be drawn up but will be conservative and unlikely to include Electric vehicles for the next few years.
31	Borough Fleet	Undertake annual fleet audits with a vehicle replacement programme to show continued progress in phasing out older and more polluting vehicles by 2030	2020	Local Authority - Fleet Management Team.	• The EV plans had been scrapped along with the procurement of the vehicles. However, as of December 2023, the council have 9 Electric Vehicles in its fleet.
32	Borough Fleet	Complete an industry-recognised fleet driver training programme (e.g., Freight Transport Association) to improve driver/vehicle operations and reduce fleet emissions	2021	Local Authority - Fleet Management Team.	• In January 2021 Fleet services undertook anti-idling training in conjunction with the pan-London (anti idling) scheme led by Camden – Nothing further.
33	Borough Fleet	25% of total fleet vehicles to be fully electrified (Battery Electric Vehicle) by 2025.	2021	Local Authority - Fleet Management Team.	• The EV plans had been scrapped along with the procurement of the vehicles.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		Long term target to have Council operations zero carbon by 2030 including fleet vehicles being zero tailpipe emission or as close as possible to zero tailpipe emissions using Best Available Technology.			
34	Localised Solutions	19a) Implement the published Green Infrastructure Strategy. 19b) Apply for Green Space Grants / Community Tree Planting 19c) Develop and implement a tree planting delivery programme which strategically targets high pollution areas (roads) where feasible	2025	Local Authority - Leisure Parks and Heritage/Public Realm Team.	• **As regards action19a:** Parks Commissioning is responsible for delivering the borough's Parks and Green Spaces Strategy (POSS) and associated Action Plan which in turn supports the implementation of the borough's GI and Biodiversity Strategy and related corporate strategies including the Air Quality Action Plan. • Since it was adopted in 2017 Parks Commissioning has implemented the POSS and associated Action Plan. Parks Commissioning has delivered most improvements through external partnerships which have leveraged in £24M of grant, rather than the General Fund. • Park activities and what they offer through sport, recreation, nature, and mental health are estimated to save the NHS £111M a year in people not referring to their GP

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					and providing £34billion in wellbeing benefit. • The Corporate Natural Capital Account balance sheet shows that when £1 is invested in parks, the return to communities in terms of the value of benefits delivered by parks is in excess of £27. • In 2023 funding was identified to support a review/refresh of the Borough's POSS. • This work, which was commissioned in February 2024, and Arkwood Ltd was appointed in March 2024. • Significant progress has been made and an initial draft of the revised POSS is expected to be completed in April 2025. • **As regards action19b:** In November 2024, Parks Commissioning secured £182,000 funding from the Carbon Offset Fund, Trees for Climate, Ward Councillors in addition to corporate investment. • Partnering with Parks & Environment, Thames Chase Community Forest and SUGi Projects Parks Commissioning aims to significantly increase tree

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints

					planting in our parks to meet the Council's Corporate Plan target of planting an additional 50,000 trees by 2030.
					• Initially, the goal was to plant 36,348 native trees in 2025 across four parks and open spaces: Castle Green, Gorsebrook Park, Heath Park Open Space, and later this year, Eastbrookend Country Park. However, with the additional funding secured, this number will increase to c42,450 native trees planted by October 2025.
					• Tree planting delivered by Parks Commissioning in 2024 included the following schemes:
					  • Eastbrookend Country Park – Miyawaki Forest 2,800 native trees.
					  • Central Park (Pitch & Putt course) –
					  ○ Phase 1 tree planting completed March 2024: 580 trees planted.
					  ○ Phase 2 tree planting completed November 2024: 60 trees planted

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					• **As regards action19c:** Parks Commissioning's remit is focused on the borough's parks and green spaces. However, whilst we haven't specifically delivered tree planting schemes which target high pollution areas (roads) we have delivered schemes which directly support this objective, and which will in due course will contribute to air quality improvements in areas adjacent parks. • The Council is committed to becoming a carbon neutral authority by 2030 and supporting the wider borough in becoming so by 2050. Therefore, in support of this above objective in September 2023 the Head of Head of Sustainability, Net Zero & Parks Commissioning appointed Thames Chase Trust and Viridis Consultancy to develop and deliver appropriate schemes and obtain match-funding. This partnership is ongoing and remains focused on the delivery and promotion of: ○ (i) strategic and targeted spend focused on nature-based solutions for carbon

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					storge such as tree-planting and habitat restoration; and; ○ (ii) the allocation of resources to employ the expertise to develop and translate the site-specific schemes identified in the borough's POSS and Green Infrastructure and Biodiversity Strategy into specific deliverable projects.
35	Localised Solutions	Continue to embed green infrastructure into LIP schemes.	2025	Local Authority - Planning Team.	• In 2024, the council completed green infrastructure for one tree along High Road.
36	Localised Solutions	Low Emission Neighbourhood (LEN): Continue to implement and project manage the TfL-funded 'Greening the Fiddlers' LEN in Becontree Heath, Dagenham, in one of the GLA's Air Quality Focus Areas.	2022	Local Authority - Planning Team.	• The LEN project has ended. • The Becontree Heath Cycle Hub continues to run two weekday mornings and every Saturday morning.
37	Cleaner Transport	Ensuring that Transport and Air Quality policies and projects are integrated. 37a) Head of Transport should sign off AQAP. 37b) Transport officers to attend air quality steering groups.	2020	Local Authority - Transport Team.	• Transport Officers continues to attend the air quality steering group meetings and are a key stakeholder in delivering the AQAP. • BAG011 Lower Roding Crossing Strategic Outline Business Case

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					will be strictly for public and active transport to reduce private car use.
38	Cleaner Transport	Use parking policy to reduce private use vehicle emissions by reviewing borough parking permit fee banding and implement a policy to incentivise lower emission vehicles/ dis-incentivise higher emitting vehicles	2021	Local Authority - Parking Team.	• New Permit charges based on emissions introduced 2020/21 continues.
39	Cleaner Transport	Review parking policy to reduce the overall number of parking permits to single household/residential tenancy. (de-incentivise higher number of cars p/house)	2021	Local Authority - Parking Team.	• This is currently under review as part of Parking Strategy 2023-2030.
40	Cleaner Transport	Introduce a policy to charge commercial vehicles parking overnight and at weekends in borough roads to reduce congestion and discourage commercial vehicles.	2021	Local Authority - Parking Team.	• Charges approved by Cabinet but legal information regarding implementation needs further investigation regarding traffic orders, signage etc. – Nothing further since last update.
41	Cleaner Transport	Review staff parking permits and implement a policy or management process to significantly reduce overall numbers, with the aim to reduce 'grey fleet' impacts	2021	Local Authority - Parking Team.	• Staff permits were reviewed in 2022. – Nothing further since last update.
42	Cleaner Transport	Installation of Ultra-low Emission Vehicle (ULEV)	2022	Local Authority - Transport Planning and Planning Team.	• In 2024 Be First continuing to support the roll out of public EV charge points, which is being

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		infrastructure to encourage low emission vehicles. e.g. On-street Electric Vehicle Charging Points			managed and delivered by Connected Kerb. • Be First received in 2024/2025 funding from the DfT for up to a sum of £34,200 to support capacity and capability in local authorities to create local EV infrastructure strategies and for the planning and delivery of local EV infrastructure. • This is a rolling programme with installations in already 10 locations in 2024 with (40 charging points)
43	Cleaner Transport	Require private developers to install Ultra-Low Emission Vehicle (ULEV) infrastructure as per the GLA London Plan for major residential and non-residential developments. E.g., electric vehicle charging points	2020	Local Authority - Planning Team.	• In 2024, the council continue to implement its ULEV infrastructure as required in the emerging Local Plan and as per existing planning policy. • New developments have to install the required GLA London Plan EV charging points for any new on-site residential parking. • There are 26 strictly car-free (no permits) developments approved in 2024.
44	Cleaner Transport	Provision of infrastructure to support walking and cycling e.g., the development of key strategic cycle routes including Barking Station to Chadwell Heath Station, cycle route CFR10 Barking Riverside to	2020	Local Authority - Transport and Planning Team.	• In 2024, the council continue to develop a new LBBD Cycling & Walking Strategy, which includes an indicative programme for infrastructure investment over the next 10 years to improve cycling & walking provision.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		Ilford (via Barking Town Centre) and Heathway to Becontree Heath. Potentially 'Liveable Neighbourhoods' ambition for the Becontree Estates subject to TfL funding.			• There are 10-15 new cycle hangars installed in 2024. • 130 Biking Becontree Hub sessions were delivered April 2024 - Jan 2025.
45	Cleaner Transport	Discourage unnecessary idling by road vehicles. Participate in the Pan-London Anti-Idling campaign/project in conjunction with the London Borough of Camden and proactively enforce regulations to reduce idling vehicles. Focus anti-idling at school sites/roads	2025	Local Authority – Education, Fleet Management and Environmental Protection Team.	• The council continue to involve in active participation in the Pan-London Anti-Idling campaign/project in conjunction with the London Borough of Camden. • With the council "Local Schools for Local Children" project; the council has been very successful in its Borough wide school expansion programme in 2024. • We are continuing to be in a position where school places are available much closer to home meaning that families will travel shorter distances to school as we hope this will encourage pupils to walk rather than be driven. • Some travel distances are down from 5km to 2km which is far more manageable. • Anti-idling information are continued to be shared with all

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					schools with a view to onward sharing with families and carers. • Many schools are continuing to be keen to develop their own “School Street” which has a significant impact on neighbourhood air quality. • The BeFirst scheme continue to push car parking away from the school and encourages walking. • More schools continued to sign up and it should be noted that feedback from schools so far is not necessarily to do with the idling issue alone but also with success in controlling inconsiderate parking and dropping off at the school gates. • 13 borough schools have a School Street with five more due to launch in 2025. • Parents and carers park further from the school and turn off their engines to walk their children to the school gate. • Schools also report that nearby families that would drive are making the switch to walking to school.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
					• However, feedback from schools requesting School Streets predominantly cite road safety and inconsiderate parking behaviour at the school gates, above air pollution concerns as the reason for requesting for one.
46	Cleaner Transport	Encourage behaviour change in transport modes to increase sustainable transport and decrease private car use: a) Campaigns to promote walking to school b) Campaigns to promote workplace travel plans	2020	Local Authority - Planning Team.	• In 2024, Schools are encouraged to participate in: • The Big Walk and Wheel • Walk to School Week • Cycle to School Week • All School Streets schools were offered subsidised places on WOW - The Walk to School Challenge with additional spaces available for non-School Street schools, subject to available funding. • For September 2024 - March 21, 2025, 12 schools (6596 pupils) participated in WoW, with 45% engagement whilst 304921 journeys recorded since September 2024, of which 75% are walk/wheel/scoot/skate and 88% of journeys overall, are 'active'.
47	Cleaner Transport	Develop a long-term strategy for the A13 to help improve traffic congestion, improve air	2020	Local Authority - Planning Team.	• Be First are part of the Strategic Working Group with TfL to ensuring the A13 Lodge Avenue

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		quality and enable sustainable growth. Require full Environmental Impacts Assessments (EIA's) for A13 development proposals including; replacement of the Lodge Avenue flyover by TfL.			flyover replacement at Castle Green brings about public realm, walking and cycling improvements to the area. TfL and Barking and Dagenham, are looking to implement a Green Bridge over the A13. • Be First are continuing to work with the City of London and consultants to produce a Strategic Transport Masterplan for the City Markets Site at Dagenham Dock. Will explore the sustainable transport options for developing the area.
48	Cleaner Transport	Work with the River Roding Trust (RRT), the Canal and River Trust or relevant bodies to raise awareness of local air pollution emissions from waterways. Engage with canal boat owners to promote sustainability, cleaner fuel burning and anti-idling to reduce emissions from boats. Two Boat Mooring sites in LBBD. 1) near Hertford Road and Gurney Close IG11 8JY (narrow boat moorings only) and,	2021	Local Authority - Environmental Protection Team.	• Series of stakeholders meeting (officers from East London cluster group) and other London local authorities with publication were implemented in 2024 to address this measure.

Measure	LLAQM Action Matrix Theme	Action	Estimated / Actual Completion Date	Organisations Involved	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		2) (static) barge mooring only, near Barking Creek IG11 7BW (all electrically powered only).			
49	Cleaner Transport	1) Promote World Car-Free day (22nd September) through Communications Department 2) Explore gaining funding though the Greater London Authority Mayor's Air Quality Fund (or other funding source) to promote car free days in LBBD streets Explore allowing residents to apply for 'Play Streets' or similar that allow streets/roads to be closed from traffic and encourage community engagement	2021	Local Authority - Environmental Protection Team.	• Be First continuing to monitor and apply for funding opportunities, however the number of funding opportunities in the last four years have been fewer. • With respect to World Car Free Day - schools are encouraged to participate via e-comms from the Be First Green Travel Coordinator. • Be First Transport Officers continue to monitor funding opportunities alongside colleagues in Highways, Public Health, Education.

3. Planning Update and Other New Sources of Emissions

Table L. Planning requirements met by planning applications in London Borough of Barking and Dagenham in 2024

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	13
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)	8
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	0
Number of developments where an AQ Neutral building and/or transport assessments undertaken	13
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	0
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 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 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) 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 Stage IIIB of the Directive and/or exemptions to the policy.	8 Whilst all relevant sites in the borough were registered on GLA NRMM website for the year, 17 of the sites were audited for NRMM in 2024, out of which14 of the sites were compliant, 2 were not and there is no NRMM at the other 1 site.

Records of the above information on planning applications are kept in the London Borough of Barking and Dagenham internal database called Flare. This is also duplicated in the Environmental Protection Team planning folder for officers' comments and recommendations.

The council received 13 major planning applications that required AQ assessment in 2024. The NRMM record is from the annual audit report submitted to the council through its membership of Pan London NRMM as well as from the registered information on the nrmm.london website for the council.

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 Barking and Dagenham Fleet

The London Borough of Barking and Dagenham will like to confirm that, we have no update beyond of the 324-council fleet as of December 2023, eight of which were electric van and one of which was a hybrid car representing 2.7% of the overall fleet that are of a) zero emission and b) zero emission capable vehicles.

4.2 Planning Enforcement

Whilst our Environmental Protection Team is responsible for the review of every applicable submitted planning applications and recommend relevant planning conditions on environmental issues following consultation as one of the internal statutory consultees, Enforcement of such condition is the responsibility of our Planning Enforcement Team which is undertaken where such conditions have not been complied with following site visit or complaints.

4.3 Pan-London NRMM Auditing Project

We can confirm that London Borough of Barking and Dagenham will continue to support the Pan-London NRMM Auditing project in 2025 – 2026.
The standard wording use for NRMM conditions on construction/demolition sites are:

- **Non-Road Mobile Machinery- standard condition**

a. No works shall commence on the site until all plant and machinery to be used at the demolition and construction phases have been submitted to, and approved in writing by, the LPA. Evidence is required to meet Stage IIIB of EU Directive 97/68/EC for both NOx and PM. No works shall be carried out on site until all Non-Road Mobile Machinery (NRMM) and plant to be used on the site of net power between 37kW and 560 kW has been registered at http://nrmm.london/. Proof of registration must be submitted to the LPA prior to the commencement of any works on site.

b. An inventory of all NRMM must be kept on site during the course of the demolitions, site preparation and construction phases. All machinery should be regularly serviced, and service logs kept on site for inspection. Records should be kept on site which details proof of emission limits for all equipment.

This documentation should be made available to local authority officers as required until development completion.

Reason: To protect local air quality and comply with Policy 7.14 of the London Plan and the GLA NRMM LEZ

- The NRMM condition is normally apply in the decision notice and this is,
- Applicable to all relevant sites.

4.4 Air Quality Alerts

We can confirm that London Borough of Barking and Dagenham did not sign up for *air*TEXT, but its AQ direct alerts service can be accessed through the UK-AIR available through the link below on our website.

https://uk-air.defra.gov.uk/forecasting/locations?q=barking%20and%20dagenham

4.5 Air Quality Positive

Whilst London Borough of Barking and Dagenham strongly encourage how to maximise benefits to local air quality in and around a large-scale development sites and masterplan area while also minimising exposure to existing sources of poor air quality, we wouldn't be able provide you a specific development site for this in the current report.

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

In 2024, The automatic monitoring sites routine calibrations were undertaken by Enviro Technology for the full year monthly whilst LSO duties, Audits and service/upkeep/maintenance was also contracted to the same company (Enviro Technology).

PM_{10} Monitoring Adjustment

No PM_{10} monitoring adjustment was done in 2024.

A.2 Diffusion Tubes

• Gradko is responsible for supplying and analysing the tubes.

• TEA 50/50

• Confirmation is given that Gradko follows the procedures set out in the Practical Guidance.

• National Bias adjustment factor of 0.88 of the spreadsheet versions issued 04/2025 was used rather than 0.96 for the local bias adjustment factor.

Discussion of Choice of Factor to Use

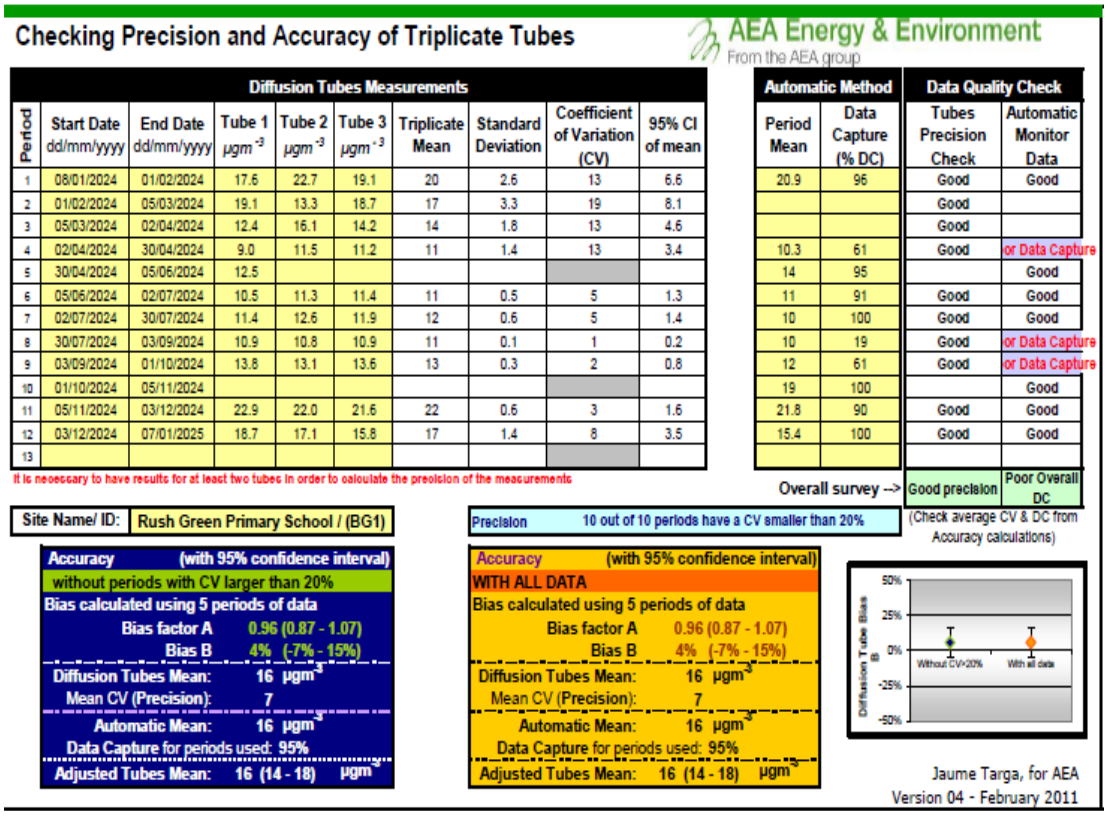
For the Bias adjustment factor, the national figure was used as the survey consists of tubes exposed over a range of settings, which differ from the co-location site, (see TG22 Box 7-13). Moreover, data capture from the co-location automatic analyser is less than 90%, with poor overall data capture.

Table M. Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.88
2023	National	03/24	0.83
2022	National	03/23	0.82
2021	National	03/22	0.83
2020	National	06/21	0.82

Diffusion Tube Bias Adjustment Factors 04/25 Issue of the Spreadsheet				
			New (04/25) Factor	
Laboratory	Method	Year	No. of Studies	Factor
Gradko	50% TEA in acetone	2024	12	0.88

Local Bias adjustment Factor using Rush Green Primary School



Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements

Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm^{-3}	Tube 2 µgm^{-3}	Tube 3 µgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean
1	08/01/2024	01/02/2024	17.6	22.7	19.1	20	2.6	13	6.6
2	01/02/2024	05/03/2024	19.1	13.3	18.7	17	3.3	19	8.1
3	05/03/2024	02/04/2024	12.4	16.1	14.2	14	1.8	13	4.6
4	02/04/2024	30/04/2024	9.0	11.5	11.2	11	1.4	13	3.4
5	30/04/2024	05/06/2024	12.5						
6	05/06/2024	02/07/2024	10.5	11.3	11.4	11	0.5	5	1.3
7	02/07/2024	30/07/2024	11.4	12.6	11.9	12	0.6	5	1.4
8	30/07/2024	03/09/2024	10.9	10.8	10.9	11	0.1	1	0.2
9	03/09/2024	01/10/2024	13.8	13.1	13.6	13	0.3	2	0.8
10	01/10/2024	05/11/2024							
11	05/11/2024	03/12/2024	22.9	22.0	21.6	22	0.6	3	1.6
12	03/12/2024	07/01/2025	18.7	17.1	15.8	17	1.4	8	3.5
13									

It is neoessary to have results for at least two tubes in order to calculate the precision of the measurements

Automatic Method		Data Quality Check	
Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
20.9	96	Good	Good
		Good	
		Good	
10.3	61	Good	or Data Capture
14	95		Good
11	91	Good	Good
10	100	Good	Good
10	19	Good	or Data Capture
12	61	Good	or Data Capture
19	100		Good
21.8	90	Good	Good
15.4	100	Good	Good
Overall survey -->		Good precision	Poor Overall DC

(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Rush Green Primary School / (BG1)

Precision: 10 out of 10 periods have a CV smaller than 20%

Accuracy (with 95% confidence interval)
without periods with CV larger than 20%
Bias calculated using 5 periods of data
Bias factor A 0.96 (0.87 - 1.07)
Bias B 4% (-7% - 15%)
Diffusion Tubes Mean: 16 µgm^{-3}
Mean CV (Precision): 7
Automatic Mean: 16 µgm^{-3}
Data Capture for periods used: 95%
Adjusted Tubes Mean: 16 (14 - 18) µgm^{-3}

Accuracy (with 95% confidence interval)
WITH ALL DATA
Bias calculated using 5 periods of data
Bias factor A 0.96 (0.87 - 1.07)
Bias B 4% (-7% - 15%)
Diffusion Tubes Mean: 16 µgm^{-3}
Mean CV (Precision): 7
Automatic Mean: 16 µgm^{-3}
Data Capture for periods used: 95%
Adjusted Tubes Mean: 16 (14 - 18) µgm^{-3}

Jaume Targa, for AEA
Version 04 - February 2011

Adjustment of DUPLICATE or TRIPLICATE Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements

Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 μgm^{-3}	Tube 2 μgm^{-3}	Tube 3 μgm^{-3}	Triplicate Average	Standard Deviation	CV	95% CI mean
1	08/01/2024	01/02/2024	17.6	22.7	19.1	19.8	2.64	13.34	6.57
2	01/02/2024	05/03/2024	19.1	13.3	18.7	17.0	3.27	19.20	8.12
3	05/03/2024	02/04/2024	12.4	16.1	14.2	14.2	1.85	12.95	4.58
4	02/04/2024	30/04/2024	9.0	11.5	11.2	10.6	1.35	12.76	3.35
5	30/04/2024	05/06/2024	12.5						
6	05/06/2024	02/07/2024	10.5	11.3	11.4	11.1	0.53	4.77	1.31
7	02/07/2024	30/07/2024	11.4	12.6	11.9	12.0	0.58	4.81	1.43
8	30/07/2024	03/09/2024	10.9	10.8	10.9	10.9	0.07	0.68	0.18
9	03/09/2024	01/10/2024	13.8	13.1	13.6	13.5	0.33	2.47	0.83
10	01/10/2024	05/11/2024							
11	05/11/2024	03/12/2024	22.9	22.0	21.6	22.2	0.64	2.87	1.58
12	03/12/2024	07/01/2025	18.7	17.1	15.8	17.2	1.43	8.31	3.55
13									

Data Quality Check

Diffusion Tubes Precision Check
Good
Good
Good
Good
Good
Good
Good
Good
Good
Good

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Jaume Targa, for AEA

Version 04 - February 2011

Site Name/ ID: Rush Green Primary School / (BG1)

Adjusted measurement (95% confidence level)
Without periods with CV larger than 20%
Bias calculated using 5 periods of data
Tube Precision: 7 Automatic DC: 95%
Bias factor A: 0.96 (0.87 - 1.07)
Bias B: 4% (-7% - 15%)

Information about tubes to be adjusted
Diffusion Tube average: 15 μgm^{-3}
Average Precision (CV): 8
Adjusted Tube average: 14 +/- 2 μgm^{-3}

Adjusted measurement (95% confidence level)
with all data
Bias calculated using 5 periods of data
Tube Precision: 7 Automatic DC: 95%
Bias factor A: 0.96 (0.87 - 1.07)
Bias B: 4% (-7% - 15%)

Information about tubes to be adjusted
Diffusion Tube average: 15 μgm^{-3}
Average Precision (CV): 8
Adjusted Tube average: 14 +/- 2 μgm^{-3}

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Annualisation of Nitrogen Dioxide (NO_2) at (BG1) Rush Green Primary School

Whilst the data capture for NO_2 was less than 75% with the need for annualization as advised in section 7.214 of the Local Air Quality Management Technical Guidance (TG22) , this was conducted as shown in Box 7.9 of the technical guidance using the urban and suburban background sites which are: Bexley - Belvedere West, Belvedere, Enfield – Bush Hill Park and Prince of Wales School to see the likely changes in the annual concentration.

Distance Adjustment

All monitoring locations are representative of public exposure and no distance adjustment is required apart from (DT4) at 291 Dagenham Heathway and (DT25) at 61 King Edward's Road which is directly adjacent to A13.

Table N. Automatic NO_2 Monitoring Data Adjustment

Background Site	Annual Data Capture (%)	Annual Mean (A_m)	(BG1)							
			Period Mean (P_m)	Ratio (A_m / P_m)	Period Mean (P_m)	Ratio (A_m / P_m)	Period Mean (P_m)	Ratio (A_m / P_m)	Period Mean (P_m)	Ratio (A_m / P_m)
Bexley - Belvedere West	90	13	13.4	0.989						
Bexley - Belvedere	94	15	15.4	0.967						
Enfield – Bush Hill Park	99	15	15	0.984						
Enfield – Prince of Wales School	94	14	14.1	0.998						
Average (R_a)			0.985							
Raw Data Annual Mean (M)			15							
Annualised Annual Mean (M x R_a)			14.8							

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})	Comments
DT4	1	6	39.10	16.3	30.9	
DT25	1	6	41.68	19.5	33.7	

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 (Eastings)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.88)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	544793	183783	31.71			22.45	27.38	25.25	25.24	23.01	28.77	32.41	34.74	27.64	27.86	24.52	24.52	
DT2	545032	183193	37.89	29.53	20.19	18.34	22.93		22.69	19.87	25.29	27.51	34.33	28.39	26.09	22.95	22.95	
DT3	547806	183543	37.23	26.78	31.06	26.28	28.88	25.71	24.44	23.37	31.56	33.50	40.45	29.31	29.88	26.29	26.29	
DT4	549035	184813	46.50	48.18	40.34	38.32	40.37	42.89	45.50	43.32	45.44	44.08	52.13	46.09	44.43	39.10	30.90	
DT5	547789	185792	40.13	30.59	33.10	29.18	29.81	28.17	31.65	32.77	34.50	37.40	37.59	31.07	33.00	29.04	29.04	
DT6a	551057	187231	17.61	19.12	12.40	9.03	12.53	10.46	11.41	10.91	13.78		22.85	18.66	14.43	12.69	12.69	
DT6b	551057	187231	22.74	13.26	16.09	11.48		11.29	12.56	10.77	13.13		22.03	17.07	15.04	13.23	13.23	
DT6c	551057	187231	19.07	18.70	14.24	11.24		11.44	11.93	10.88	13.58		21.60	15.81	14.85	13.07	13.07	
DT7	548544	188125	35.43	30.15	32.66	23.11	30.91	24.23	24.56	22.80	29.80	34.39	37.15	27.47	29.39	25.86	25.86	
DT8	548359	189057	34.35	30.48	27.66	20.70	26.74	25.54	23.49	23.48	28.26	30.20	31.53	28.87	27.61	24.29	24.29	
DT9	544128	183662	33.65	25.68	21.15		19.43		19.18	17.12	22.91	25.70	35.14	25.77	24.57	21.62	21.62	
DT10	544385	184565	34.41	28.75	22.88	20.88			19.59	23.94	28.43	34.68	28.52	27.22	26.93	23.69	23.69	
DT11	549832	183208	39.04	37.15	32.47	21.04	26.40	26.85	23.09	21.92	21.93	30.67	34.18	30.70	28.79	25.34	25.34	
DT12	546501	182713	34.21	26.89	23.95	20.83	22.05	20.85	21.09	18.83	20.20	27.84	30.80	28.03	24.63	21.67	21.67	

DT13	547081	183053	26.49	22.77	19.63	15.90	20.67	18.46	17.23	17.62	22.17	26.12	28.48	23.28	21.57	18.98	18.98	
DT14	548065	187998	42.66	43.10	41.74	26.36	35.38	25.73	26.57	26.18	26.53	33.71	33.71	28.25	32.49	28.59	28.59	
DT15	546935	183135	28.64	24.63	21.99	16.73	20.64		19.69	18.21	20.88		28.79	22.01	22.22	19.55	19.55	
DT16	545296	183204	38.15	36.38	32.65	28.00	31.45	34.07	33.28		24.59	37.03	41.41	33.23	33.66	29.62	29.62	
DT17	545842	183144	23.85	26.43	25.03	16.93	21.51	18.84	21.10	19.20	21.94	27.97	32.21	21.11	23.01	20.25	20.25	
DT18	546415	183717	42.19	44.44	35.90	34.42	35.65	37.16	37.45	32.50	37.78	36.01	39.63	35.69	37.40	32.91	32.91	
DT19	546744	185774	35.72	27.34	29.28	22.09	26.01	24.99	26.25	24.72	28.92	32.19	35.73	30.09	28.61	25.18	25.18	
DT20	549173	186755	32.26	35.52	28.24	25.20	29.44	31.26	30.42	29.84	30.14	35.29	34.00	27.22	30.74	27.05	27.05	
DT21	548733	187586	35.08	38.77	34.93	29.60	32.15	33.26	32.24	31.60	32.38	37.74	39.41	32.11	34.10	30.00	30.00	
DT22	549078	183327	32.92	24.94	23.55	18.37	22.71	19.01	19.68	15.97	19.11	26.46	29.58	22.90	22.93	20.18	20.18	
DT23	550263	184902	39.23	37.13	33.32	29.84	32.04	31.64	30.69	27.53	32.94	32.34	38.49	34.95	33.35	29.35	29.35	
DT24	548487	183557	30.82	34.02	26.50	24.86	29.25	27.71	29.02	28.36	28.91		37.65	36.41	30.32	26.68	26.68	
DT25	544699	183650	44.73	46.48	43.68	35.78	37.07		67.68	67.36	60.84	44.98	38.57	33.76	47.36	**41.68**	33.70	
DT26	547762	186888	39.89	25.08	28.82	22.77	27.22	26.11	26.11	20.75	29.98	32.27	33.55	26.63	28.27	24.88	24.88	
DT27	544339	184702	32.99	33.72	31.91		28.85	24.73	28.32	24.21	27.08	35.78	31.22	30.67	29.95	26.36	26.36	
DT28	546731	183684	37.50	39.02	31.12	26.90	30.01	29.85	28.60	32.68	25.97	33.72	34.53	31.76	31.81	28.00	28.00	
DT29	548422	186431	26.98	19.00	17.02	13.31	15.03	12.82	14.17	12.96			27.13	21.15	17.96	15.80	15.80	
DT30	544631	184553	33.66	29.90	26.20	16.96	21.30	18.76	19.08	20.79		27.98	31.89	26.61	24.83	21.85	21.85	
DT31	547209	186599	24.56	23.51	21.42	14.76	16.07	12.56	15.94	15.15	17.29	20.64	26.67	22.59	19.26	16.95	16.95	
DT32	545942	184073	33.72	24.55	25.49	19.61	24.31	20.48	22.17	20.35	24.99	33.68	29.76	23.96	25.25	22.22	22.22	
DT33	545124	184935	26.20	22.62	24.95	19.48	20.01	19.29	20.78	20.99	24.04	26.99	30.23	28.70	23.69	20.85	20.85	

DT34	543867	184106	41.49		39.66	30.35	29.49			24.50	27.98	31.46	29.24	29.37	31.50	27.72	27.72	
DT35	544206	184158	31.88	36.05	38.03		35.15	29.73	31.74	29.39	30.24	39.20	40.08	35.59	34.28	30.17	30.17	
DT36	545536	183446	35.55	35.13	26.67	21.72	27.00	24.43	27.95	23.60	24.86	28.54	32.15	29.50	28.09	24.72	24.72	
DT37	544667	183104	38.88	29.44	26.20	29.86	28.01	28.67	25.49	23.99	31.24	26.45	43.71	33.74	30.47	26.81	26.81	
DT38	545495	183310	34.17	23.31	21.65		22.38	19.85	19.61	17.70	25.66	28.05	33.60	23.03	24.46	21.52	21.52	
DT39	546618	184605	33.66	35.12	31.76	24.79	29.77	27.20	27.06	24.48	26.24	35.58	36.92	29.68	30.19	26.57	26.57	
DT40	546968	185087	25.37	22.82	23.28	12.93	14.81	12.72	15.86	13.71	17.16	22.40	26.92	19.97	18.99	16.71	16.71	
DT41	548056	183606	36.43	39.10	33.69	23.57	24.35	26.76	30.49	26.58	23.77	32.18	34.30	30.88	30.17	26.55	26.55	
DT42	548974	184041	31.23	23.62	20.56		19.65		17.23	16.20		26.67	26.54	23.49	22.80	20.06	20.06	
DT43	549537	183284	37.99	33.08	27.47	25.26	25.25	22.71	25.22	21.46	24.31	31.59	28.51	31.41	27.85	24.51	24.51	
DT44	550508	184123	24.72	23.68	19.78	12.72	15.50	13.74	15.10	15.10	16.59	23.48	23.10		18.54	16.32	16.32	
DT45	550289	184928	33.66	29.73	26.62	21.38	25.87	23.09	21.96	19.49	24.80	27.96	33.91	22.78	25.94	22.83	22.83	
DT46	548935	185402	32.03	22.27	22.68	12.53	18.30	16.45	18.32	16.97	18.25	25.82	28.68	25.09	21.45	18.88	18.88	
DT47	550002	185912	41.15	38.78	29.42	24.08	29.44	28.78	27.45	22.15	28.70	33.63	35.15	32.26	30.92	27.21	27.21	
DT48	549154	186114	23.08	22.08	19.73	17.37	17.94	14.64	15.79		17.66	25.87	27.42	24.40	20.54	18.08	18.08	

☒ **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 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.**

☒ **London Borough of Barking and Dagenham 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 B for details on bias adjustment and annualisation.

Appendix C Map(s) of Monitoring Locations and AQMAs

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

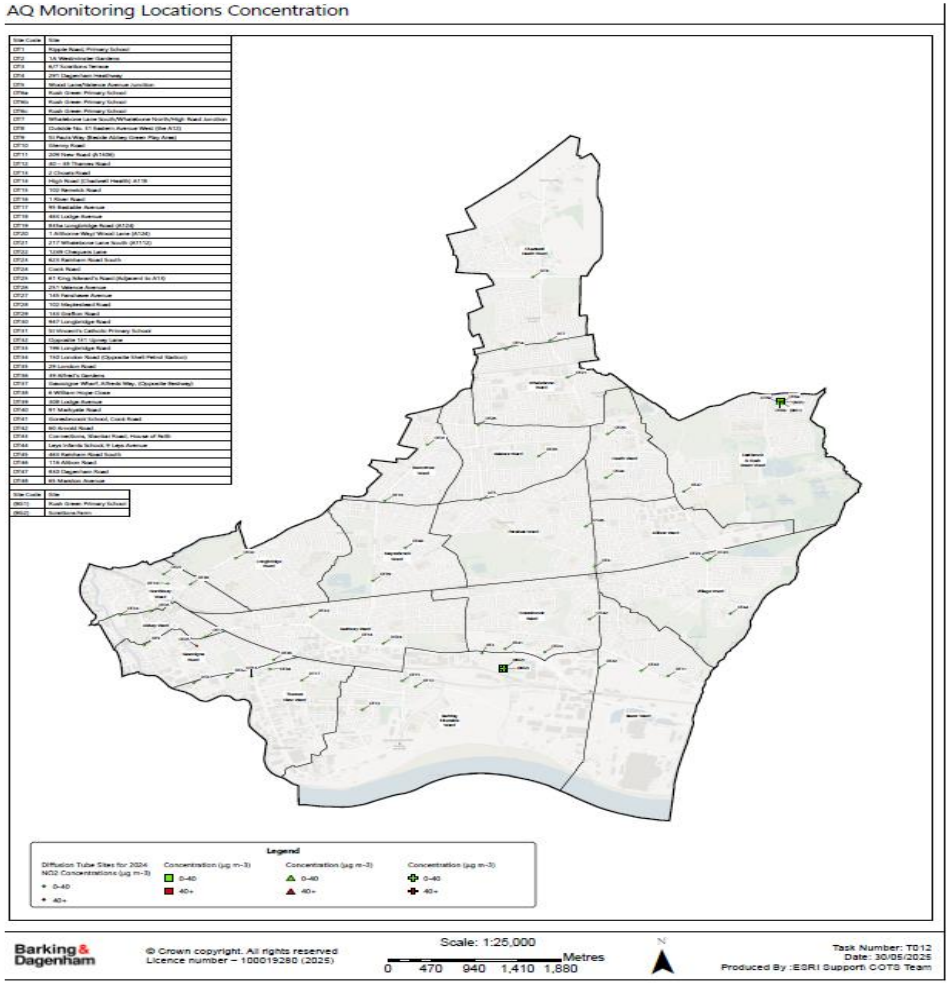


Figure B. Map of Automatic Monitoring Site(s)