

London Borough of Tower Hamlets Air Quality Annual Status Report for 2018

Date of publication: 3 July 2019



This report provides a detailed overview of air quality in the London Borough of Tower Hamlets during 2018. It has been produced to meet the requirements of the London Local Air Quality Management statutory process¹.

Contact details

Nick Marks & Peter Bond Air Quality Officer
Environmental Health and Trading Standards
John Onslow House, 1 Ewart Place, London E3 5EQ
nicholas.marks@towerhamlets.gov.uk
020 7364 6668

¹ LLAQM Policy and Technical Guidance 2016 (LLAQM.TG(16)). <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs>

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Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
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
PM10	Particulate matter less than 10 micron in diameter
PM2.5	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

Table A. Summary of National Air Quality Standards and Objectives

Pollutant	Objective (UK)	Averaging Period	Date¹
Nitrogen dioxide - NO ₂	200 µg m ⁻³ not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
	40 µg m ⁻³	Annual mean	31 Dec 2005
Particles - PM ₁₀	50 µg m ⁻³ not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 µg m ⁻³	Annual mean	31 Dec 2004
Particles - PM _{2.5}	25 µg m ⁻³	Annual	2020
	Target of 15% reduction in concentration at urban background locations	mean 3 year mean	Between 2010 and 2020
Sulphur Dioxide (SO ₂)	266 µg m ⁻³ not to be exceeded more than 35 times a year	15 minute mean	31 Dec 2005
	350 µg m ⁻³ not to be exceeded more than 24 times a year	1 hour mean	31 Dec 2004
	125 µg m ⁻³ not to be exceeded more than 3 times a year	24 hour mean	31 Dec 2004

Note: ¹ by which to be achieved by and maintained thereafter

1. Air Quality Monitoring

Within this section it is obligatory to complete all tables with monitoring data if you have monitors for the specified pollutants. It is not obligatory to include narrative on trends or any graphs, although you are encouraged to do so if you wish.

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2018

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
	Poplar	537509	180867	Roadside	Y	N/A	N/A	4	NO ₂ , PM ₁₀ , O ₃	Station closed
TH2	Mile End	535927	182221	Roadside	Y	1m (offices) (40m residential)	3	3	NO ₂	Chemiluminescence
TH0 04	Blackwall ²	538290	181452	Roadside	Y	29m (residential)	3	3	NO ₂ , PM ₁₀ , PM _{2.5} , O ₃	Chemiluminescence UV photometric FDMS (for PM)
TH0 02	Victoria Park	536487	184238	Background	Y	290m (residential)	300	2	NO ₂ , SO ₂ , PM ₁₀	Chemiluminescence UV fluorescence TEOM
TH0 01	Milwall Park	538052	178559	Background	Y	60m (residential)	60	1.5	NO ₂ , PM ₁₀ , O ₃	Chemiluminescence BAM; UV absorption

Table C. Details of Nitrogen Dioxide Non-Automatic Monitoring Sites for 2018

² Site operated by Transport for London

Table C. Details of Non-Automatic Monitoring Sites for 2018

Site ID	Site name/Location	X	Y	Site Type	Distance to relevant exposure (meters)	Distance to kerb (meters)	Inlet Height (meters)
1	Colombia Rd/Gossett Street	533883	182815	Kerbside	5	0.5	2.4
2	Calvert Ave/Boundary Street	533507	182569	Kerbside	4	0.5	2.3
3	Bethnal Green Rd/ Brick Lane	533860	182442	Kerbside	3	0.5	2.3
4	Commercial St/Calvin St	533611	182037	Kerbside	7	0.5	2.4
5	Whitechapel High St (KFC)	533985	181426	Kerbside	3	0.5	2.3
6	Mansell St	533800	181021	Kerbside	6	0.5	2.2
7	St Katherine's Way	533992	180376	Roadside	10	10	2.3
8	Wapping High St/Sampson St	534444	180122	Kerbside	3	0.5	2.4
9	Cartwright Street	533955	180805	Kerbside	5	0.5	2.4
10	Whitechapel Rd/Adler St	534133	181509	Kerbside	6	0.5	2.3
11	Brick Lane/Princelet St	533866	181860	Kerbside	5	0.5	2.3
12	Buckfast St/Bethnal Green Rd	534259	182580	Kerbside	4	0.5	2.5
13	Squirries St/Gosset St	534313	182810	Kerbside	4	0.5	2.3
14	Warner Place/Hackney Rd	534255	183130	Kerbside	17	0.5	2.4
15	Parmiter St/ Cambridge Heath Road	534881	183240	Kerbside	4	0.5	2.2

16	Paradise Row/Bethnal Green Rd	534959	182757	Kerbside	3	0.5	2.3
17	Finnis St/Three Colts Lane	534783	182385	Kerbside	2	0.5	2.2
18	Sidney St/Mile End Rd	534968	181878	Roadside	6	2	2.3
19	Philpot St/Commercial Road	534816	181321	Kerbside	8	0.5	2.3
20	Dellow St/The Highway	534951	180779	Roadside	4	2	2.2
21	Queensbridge Rd/Hackney Rd	533985	183122	Kerbside	4	0.5	2.2
22	Wapping Wall/Garnet St	535133	180376	Kerbside	3	0.5	2.4
23	Brodlove Lane	535598	180816	Kerbside	3	0.5	2.2
24	Jubilee Street/Commercial Rd	535174	181290	Kerbside	5	0.5	2.3
25	Cavell St/Stepney Way	534884	181667	Kerbside	20	1	2.3
26	Hannibal Rd/Mile End Rd	535386	182021	Kerbside	3	0.5	2.2
27	Roman Rd/Globe Road	535296	182793	Kerbside	12	0.5	2.2
28	Bonner Road	535356	183223	Kerbside	7	0.5	2.7
29	Grove Rd/Old Ford Rd	535930	183385	Kerbside	12	0.5	2.4
30	Fieldgate Street	534239	181565	Kerbside	8	0.5	2.3
31	Whitechapel Market	534516	181744	Roadside	15	1.5	2.2
32	Globe Rd/Mile End Rd	535634	182148	Kerbside	4	0.5	2.3
33	Stepney Green	535545	181604	Urban background	30	15	2.4

34	Pitsea St/Commercial Rd	535797	181164	Kerbside	4	0.5	2.3
35	Narrow St/Limehouse Link	535977	180879	Roadside	15	1.5	2.6
36	Locksley St/St Paul's Way	536704	181647	Kerbside	40	0.5	2.9
37	Rhodeswell Rd	536577	181379	Kerbside	40	1	2.4
38	Ben Johnson Road	536080	181721	Kerbside	4	0.5	2.6
39	Harford St/Mile End Rd	536089	182258	Roadside	3	1.5	2.2
40	Thoydon Rd	536105	183049	Kerbside	7	0.5	2.4
41	Ford Close/Roman Rd	536457	183301	Roadside	2	1.5	2.3
42	Victoria Park (Co-location site)	536494	184170	Urban background	330	320	2.15
43	Victoria Park (Co-location site)	536494	184170	Urban background	330	320	2.1
44	Parnell Rd/Old Ford Rd	536875	183740	Kerbside	4	0.5	2.4
45	St Stephen's Rd/Tredegar Rd	536713	183070	Kerbside	3	0.5	2.3
46	Rhondda Grove/Mile End Rd	536542	182589	Kerbside	5	0.5	2.5
47	Wentworth Mews	536452	182454	Kerbside	15	0.5	2.5
48	Ackroyd Drive	536768	181772	Kerbside	40	0.5	2.5
49	Dod St/Burdett Rd	537049	181292	Kerbside	5	0.5	2.5
50	Rich Street	536937	180987	Roadside	3	1.5	2.2

51	Watney Market	534938	181257	Roadside	10	15	2.2
52	Wick Lane/Autumn St	537304	183619	Kerbside	3	0.5	2.4
53	Fairfield Road/Tredegar Road	537159	183415	Kerbside	4	0.5	2.4
54	Bow Rd /Glebe Terrace	537525	182887	Kerbside	5	0.5	2.4
55	TH Cemetery Park	536732	182361	Roadside	15	5	2.5
56	Bow Common Lane/St Paul's Way	537248	181820	Kerbside	30	0.5	2.3
57	Augusta St/Giraud St	537516	181392	Kerbside	15	1	2.4
58	Dolphin Lane	537539	180688	Kerbside	7	1	2.9
59	Westferry Road/Limehouse Link jnct	537100	180791	Kerbside	7	1	2.2
60	Cascades, Westferry Road	537115	180074	Kerbside	18	0.5	2.4
61	Bow Rd/Alfred St	537056	182773	Kerbside	6	0.5	2.4
62	Mast House Terrace	537348	178690	Kerbside	5	0.5	2.7
63	Millwall Park	538246	178689	Urban background	300	250	2.3
64	Limeharbour	537953	179357	Kerbside	10	0.5	2.2
65	Manchester Road/East Ferry Road	538032	178360	Kerbside	2	0.5	2.3
66	Millwall Park	538258	178689	Urban background	300	250	2.3
67	Seyssel Street	538544	178767	Kerbside	15	0.5	2.3
68	Manchester Road/Ollife Street	538431	179044	Kerbside	3	0.5	2.3

69	Lawnhouse Close	538190	179750	Kerbside	30	0.5	2.3
70	Admirals Way	537424	179910	Kerbside	15	0.5	2.3
71	Toynbee St/Commercial St	533689	181705	Roadside	10	2	2.5
72	Prestons Road/ Coldharbour	538364	180188	Kerbside	4	0.5	2.2
73	John Smith Mews	538742	180756	Kerbside	10	0.5	2.3
74	Poplar High St/Cotton St	538244	180761	Kerbside	10	0.5	2.2
75	Hale Street	537661	180768	Kerbside	7	0.5	2.3
76	Chrip Street/E India Dock Road	537940	181021	Kerbside	20	0.5	2.7
77	Morris/Barchester Street	537731	181761	Kerbside	4	0.5	2.5
78	Devons Road / Campbell Road	537577	182232	Kerbside	10	0.5	2.4
79	Hatfield Terrace/Fairfield Road	537355	183059	Kerbside	3	0.5	2.4
80	Wrexham Road	537581	183209	Kerbside	3	0.5	2.4
81	Bromley High Street/ St Leonards	537868	182912	Kerbside	5	0.5	2.4
82	Devas Street /Devons road	537821	182332	Kerbside	7	0.5	2.4
83	Zetland Street/A12	538178	181747	Kerbside	50	0.5	2.3
84	Blair Street (End of Street)	538365	181180	Roadside	15	5	2.5
85	Portree Street	538895	181296	Kerbside	4	0.5	2.3
86	Newport Avenue	538954	180872	Kerbside	15	0.5	2.6

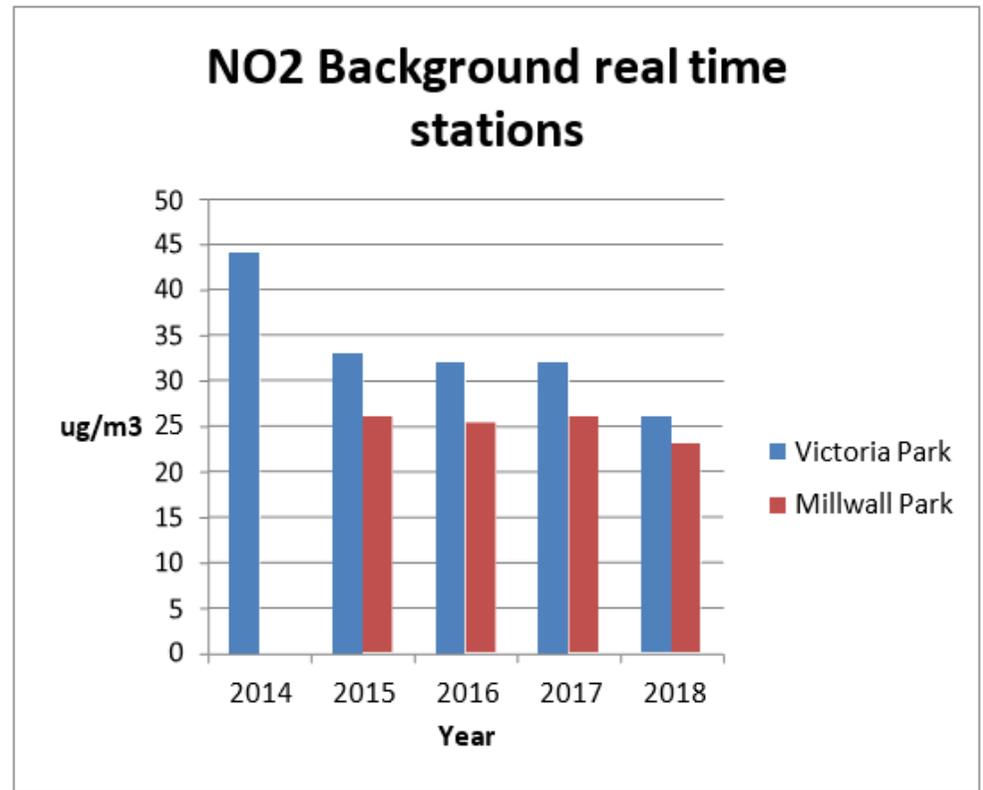
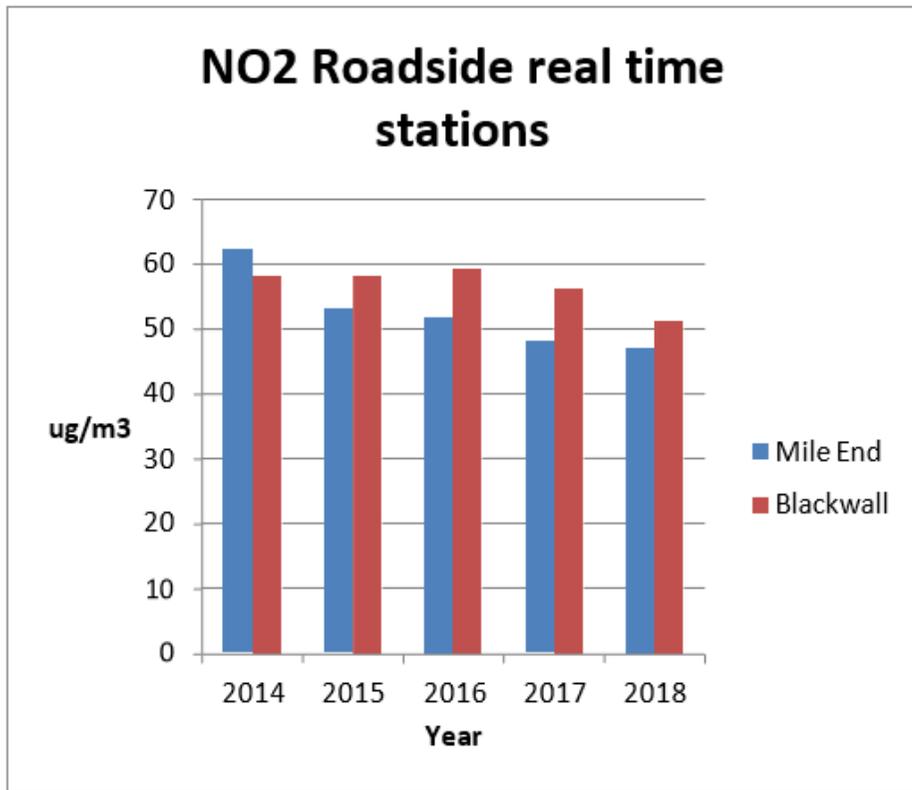
87	Mile End Road Corner Bancroft Rd	535929	182220	Kerbside	30	0.5	2.3
88	Shirbutt St o/s Holy Family School	537555	180892	Kerbside	10	0.5	2.3
89	Thames Path Storers Quay	538730	178733	Roadside	4	10	2.3
90	Sextant Avenue	538674	178888	Kerbside	4	1	2.3

1.1 Comparison of Monitoring Results with AQOs

The results presented are after adjustments for “annualisation” and for distance to a location of relevant public exposure, the details of which are described in Appendix A.

Table D (1). Annual Mean NO₂ Ratified Monitoring Results (µg m⁻³) – Automatic Sites

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m ⁻³) 2012 ^c	Annual Mean Concentration (µg m ⁻³) 2013 ^c	Annual Mean Concentration (µg m ⁻³) 2014 ^c	Annual Mean Concentration (µg m ⁻³) 2015 ^c	Annual Mean Concentration (µg m ⁻³) 2016 ^c	Annual Mean Concentration (µg m ⁻³) 2017 ^c	Annual Mean Concentration (µg m ⁻³) 2018 ^c
TH1 Poplar	Automatic	N/A		33	33	n/a	n/a	n/a	n/a	n/a
TH2 Mile End	Automatic	N/A	96.11	60	57	62	53	51.7	48	47
TH4 Blackwall	Automatic	N/A	99.16	61	58	58	58	59	56	51
TH5 Victoria Pk	Automatic	N/A	98.05	33	33	44c	33c	32.0	32	26
TH5 Millwall Pk	Automatic	N/A	99.67	-	-	-	26c	25.3	26	23



Commentary

Both roadside and background air quality monitoring stations show a slow decline in levels of NO₂. Levels remain above the National Objective standard of 40 ug/m³. This is likely to be reflected along all the borough's major roads.

Table D (2). Annual Mean NO₂ Ratified and Bias-adjusted Monitoring Results (µg m⁻³) – Diffusion Tube Sites

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m ⁻³) 2012 ^c	Annual Mean Concentration (µg m ⁻³) 2013 ^c	Annual Mean Concentration (µg m ⁻³) 2014 ^c	Annual Mean Concentration (µg m ⁻³) 2015 ^c	Annual Mean Concentration (µg m ⁻³) 2016 ^c	Annual Mean Concentration (µg m ⁻³) 2017 ^c	Annual Mean Concentration (µg m ⁻³) 2018 ^c
1	Colombia Rd/Gossett Street	N/A					38	37	39	34
2	Calvert Ave/Boundary Street	N/A					42	41	40	37
3	Bethnal Green Rd/Brick Lane	N/A					47	46	45	36
4	Commercial St/Calvin St	N/A					66	60	60	53
5	Whitechapel High St (KFC)	N/A					72	64	62	61
6	Mansell St	N/A					84	71	75	50
7	St Katherine's Way	N/A					33	34	30	28
8	Wapping High St/Sampson St	N/A					35	36	33	31
9	Cartwright Street	N/A					-			33
10	Commercial St/Adler St	N/A					-			46
11	Brick Lane/Princelet St	N/A					42	44	40	35
12	Buckfast St/Bethnal Green Rd	N/A					42	42	39	35
13	Squirries St/Gosset St	N/A					-			38
14	Warner Place/Hackney Rd	N/A					42	42	41	38
15	Parmiter St/Cambridge Heath Road	N/A					-			45
16	Paradise Row/Bethnal Green Rd	N/A					50	50	42	41

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m-3)						
				2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c	2018 ^c
17	Finnis St/Three Colts Lane	N/A					35	35	35	29
18	Sidney St/Mile End Rd	N/A					47	47	46	40
19	Philpot St/Commercial Road	N/A					54	54	51	44
20	Dellow St/The Highway	N/A					70	69	59	52
21	Queensbridge Rd/Hackney Rd	N/A					-			55
22	Wapping Wall/Garnet St	N/A					34	37	34	32
23	Brodlove Lane	N/A					47	45	46	43
24	Jubilee Street/Commercial Rd	N/A					68	65	62	64
25	Cavell St/Stepney Way	N/A					44	45	45	40
26	Hannibal Rd/Mile End Rd	N/A					72	50	50	44
27	Roman Rd/Globe Rd	N/A								36
28	Bonner Road	N/A					39	41	40	37
29	Grove Rd/Old Ford Rd	N/A					47	48	46	43
30	Fieldgate Street	N/A					53	48	42	46
31	Whitechapel Market	N/A					71	68	69	63
32	Globe Rd/Mile End Rd	N/A					55	54	52	48
33	Stepney Green	N/A					34	34	37	39
34	Pitsea St/Commercial Rd	N/A					-			37

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m-3)						
				2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c	2018 ^c
35	Narrow St Limehouse Link	N/A					-			86
36	Locksley St/St Paul's Way	N/A					31	38	36	35
37	Rhodeswell Rd	N/A					35	39	36	34
38	Ben Johnson Road	N/A					41	45	44	36
39	Harford St/Mile End Rd	N/A					43	41	41	42
40	Thoydon Rd	N/A					-			36
41	Ford Close/Roman Rd	N/A					41	41	40	38
42	Victoria Park Co-location site	N/A					23	24	24	22
43	Victoria Park Co-location site	N/A					23	25	23	22
44	Parnell Rd/Old Ford Rd	N/A					39	41	42	35
45	St Stephen's Rd/Tredegar Rd	N/A					44	47	45	56
46	Rhondda Grove/Mile End Rd	N/A					35	41	37	48
47	Wentworth Mews	N/A					50	51	46	48
48	Ackroyd Drive	N/A					45	44	44	38
49	Dod St/Burdett Rd	N/A					37	38	38	33
50	Rich Street	N/A					42	45	42	42
51	Watney Market	N/A					38	37	34	33
52	Wick Lane/Autumn St	N/A					44	45	42	40

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m-3) 2012 ^c	Annual Mean Concentration (µg m-3) 2013 ^c	Annual Mean Concentration (µg m-3) 2014 ^c	Annual Mean Concentration (µg m-3) 2015 ^c	Annual Mean Concentration (µg m-3) 2016 ^c	Annual Mean Concentration (µg m-3) 2017 ^c	Annual Mean Concentration (µg m-3) 2018 ^c
53	Fairfield Road/Tredegar Road	N/A					52	52	50	42
54	Bow Rd /Glebe Terrace	N/A					57	49	57	60
55	TH Cemetery Park	N/A					25	26	25	23
56	Bow Common Lane/St Paul's Way	N/A					41	43	40	37
57	Augusta St/Girauld St	N/A					-			28
58	Dolphin Lane	N/A					33	36	32	29
59	Westferry Road/Limehouse Link jct	N/A					40	39	40	37
60	Cascades, Westferry Road	N/A					44	45	41	39
61	Bow Rd/Alfred St	N/A					42	44	41	35
62	Mast House Terrace	N/A					32	35	34	29
63	Millwall Park	N/A					27	29	26	22
64	Limeharbour	N/A					42	42	40	38
65	Manchester Road/East Ferry Road	N/A		-	-	-	31	34	32	28
66	Millwall Park	N/A		-	-	-	27	30	29	25
67	Seyssel Street	N/A		-	-	-	33	34	34	30
68	Manchester Road/Ollife Street	N/A		-	-	-	29	34	33	32
69	Lawnhouse Close	N/A		-	-	-	44	41	41	34

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m-3) 2012 ^c	Annual Mean Concentration (µg m-3) 2013 ^c	Annual Mean Concentration (µg m-3) 2014 ^c	Annual Mean Concentration (µg m-3) 2015 ^c	Annual Mean Concentration (µg m-3) 2016 ^c	Annual Mean Concentration (µg m-3) 2017 ^c	Annual Mean Concentration (µg m-3) 2018 ^c
70	Admirals Way	N/A		-	-	-	-			27
71	Toynbee St/Commercial St	N/A		-	-	-	-			54
72	Prestons Road/Coldharbour	N/A		-	-	-	41	39	40	39
73	John Smith Mews	N/A		-	-	-	36	38	40	32
74	Poplar High St/Cotton St	N/A		-	--	-	-		-	64
75	Hale Street	N/A		-	-	-	31	33	34	34
76	Chrisp Street/E India Dock Road	N/A		-	-	-	51	48	49	45
77	Morris/Barchester Street	N/A		-	-	-	35	39	40	37
78	Devons Road / Campbell Road	N/A		-	-	-	47	48	47	43
79	Hatfield Terrace/Fairfield Road	N/A		-	-	-	31	31	33	32
80	Wrexham Road	N/A		-	-	-	43	41	40	38
81	Bromley High Street/St Leonards	N/A		-	-	-	37	39	38	38
82	Devas Street /Devons road	N/A		-	-	-	47	50	48	45
83	Zetland Street/A12	N/A		-	-	-	66	63	62	63
84	Blair Street (End of Street)	N/A		-	-	-	52	48	52	44
85	Portree Street	N/A		-	-	-	48	48	48	45
86	Newport Avenue	N/A		-	-	-	33	34	33	30

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m ⁻³) 2012^c	Annual Mean Concentration (µg m ⁻³) 2013^c	Annual Mean Concentration (µg m ⁻³) 2014^c	Annual Mean Concentration (µg m ⁻³) 2015^c	Annual Mean Concentration (µg m ⁻³) 2016^c	Annual Mean Concentration (µg m ⁻³) 2017^c	Annual Mean Concentration (µg m ⁻³) 2018^c
87	Mile End Road Corner Bancroft Rd	N/A		-	-	-	-	-	-	49
88	Shirbutt St o/s Holy Family School	N/A		-	-	-	-	-	-	28
89	Thames Path Storers Quay	N/A		-	-	-	24	30	29	26
90	Sextant Avenue	N/A		-	-	-	16	28	28	25

Notes: Exceedance 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.

^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%)

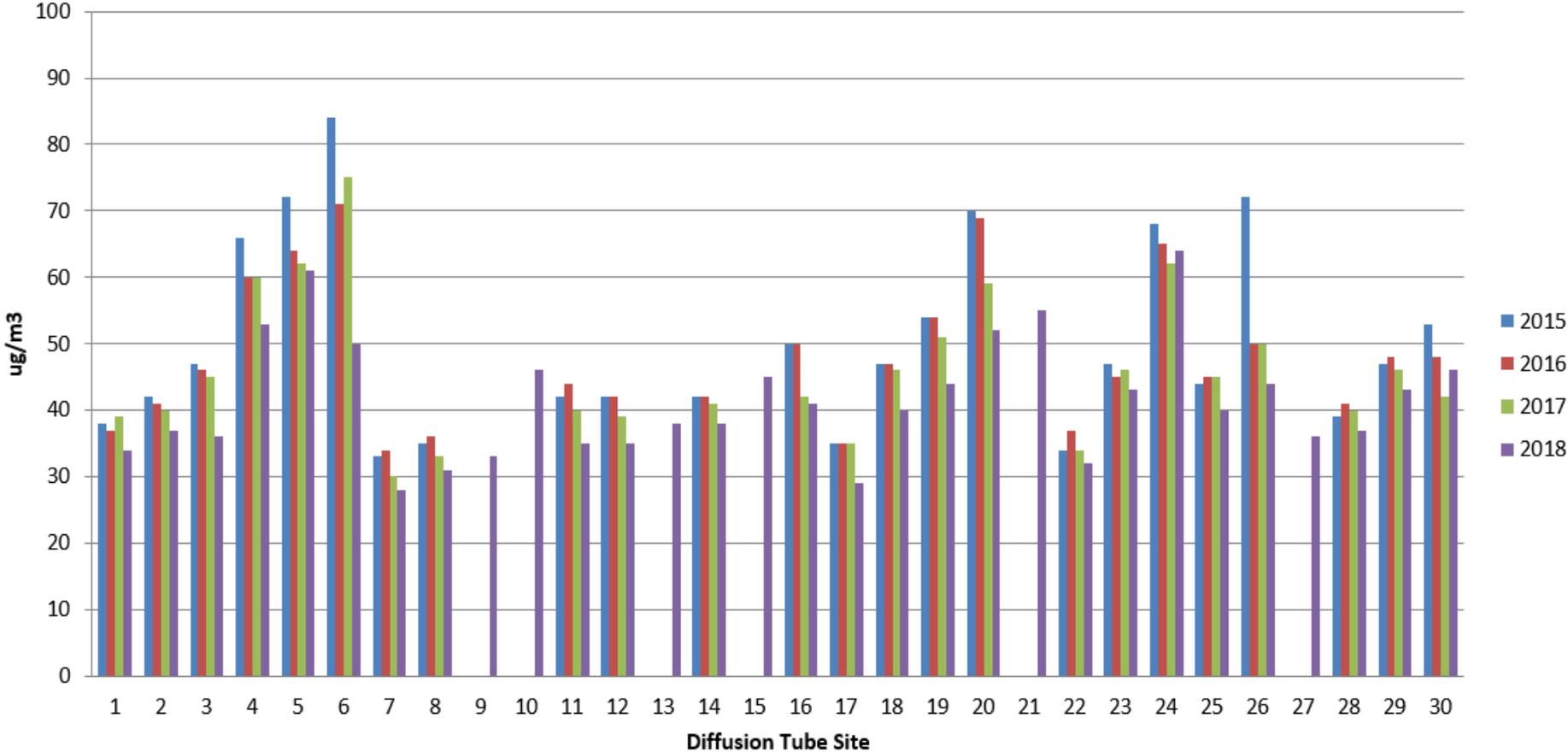
^c Means should be "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

Table D (1) above shows the NO₂ concentrations at our continuous monitors for the past 8 years. Within that period one station was closed (Poplar). All sites have been showing a reduction in NO₂ levels

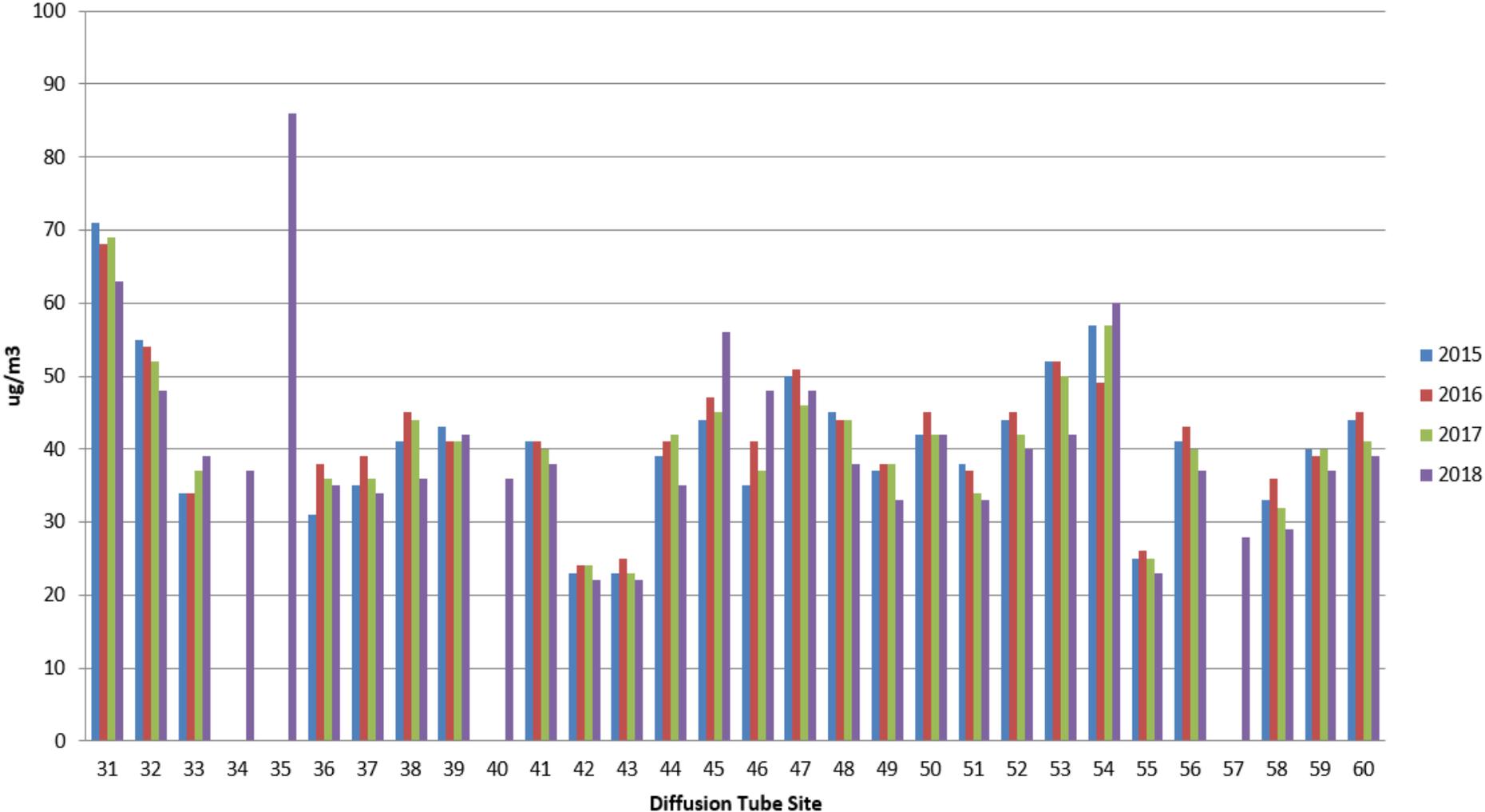
Table D(2) above shows the diffusion tube monitoring network. The network was reactivated in 2015. The NO₂ objective is still exceeded at many roadside sites across the borough. Concentrations at background locations are low and below the Annual Objective. Monthly data for all diffusion tube sites can be found in table M at the end of this report. Most sites are showing a downward trend. There have been some exceptions to this in the Bow area where there has been a small increase.

The three graphs below show the NO₂ concentrations at each diffusion tube monitoring point for 2015-2016. Levels above 60ug/m³ suggest possible breaches of the one-hour short term objective of 200ug/m³

NO2 Sites 1-30



NO2 Sites 31-60



NO2 Sites 61-90

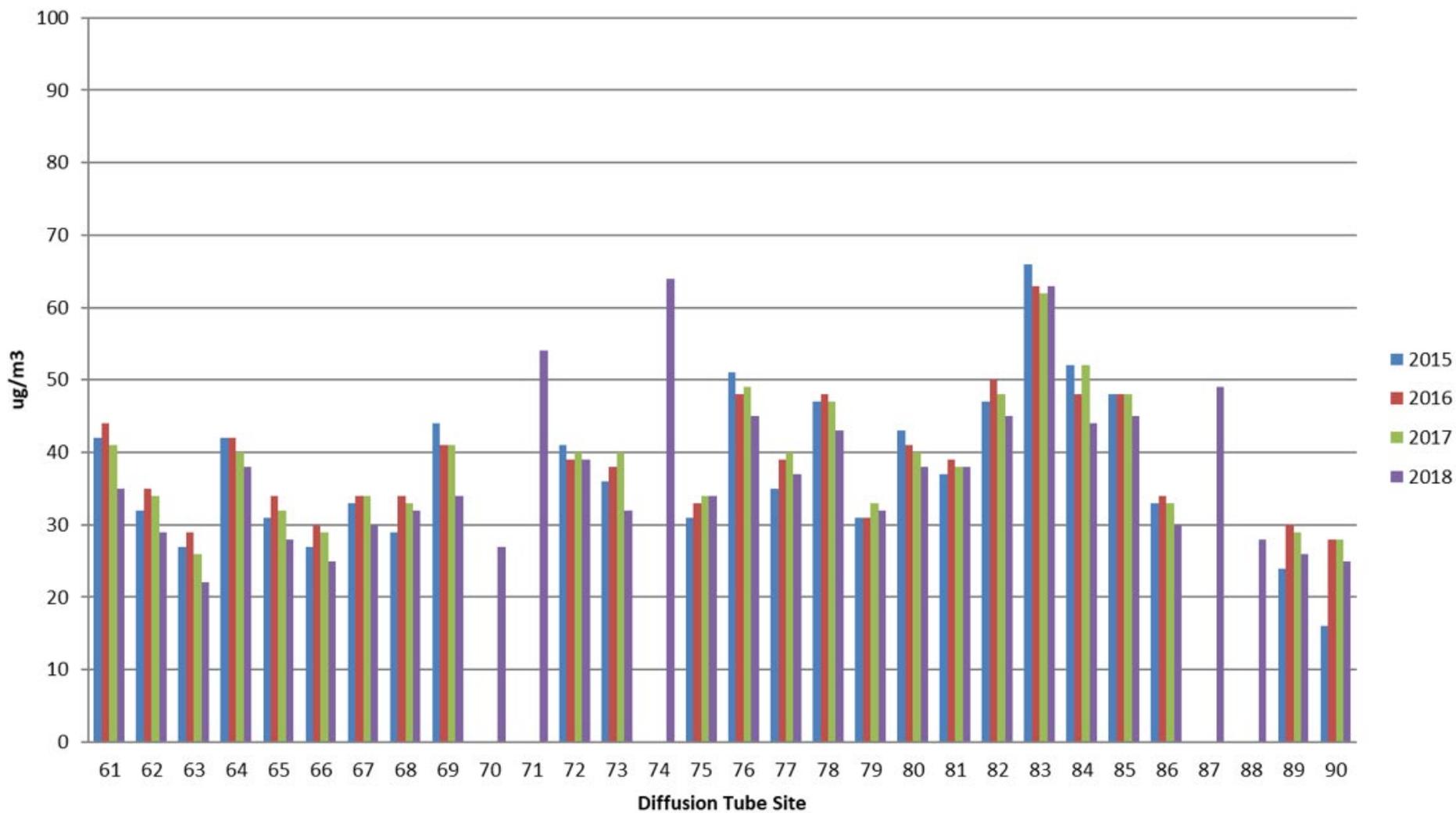


Table E. NO₂ Automatic Monitor Results: Comparison with 1-hour Mean Objective

Site ID	Valid data capture for monitoring period %^a	Valid data capture 2018 %^b	Number of Hourly Means > 200 µg m-3 2012^c	Number of Hourly Means > 200 µg m-3 2013^c	Number of Hourly Means > 200 µg m-3 2014^c	Number of Hourly Means > 200 µg m-3 2015^c	Number of Hourly Means > 200 µg m-3 2016^c	Number of Hourly Means > 200 µg m-3 2017^c	Number of Hourly Means > 200 µg m-3 2018^c
TH2 Mile End			2	1	1	0	0	2	0
TH4 Blackwall			0	0	0	0	9	0	0
TH5 Victoria Pk			0	0	0	0	0	24	1
TH5 Millwall Pk			-	-	-	0	0	0	0

Notes: Exceedance of the NO₂ short term AQO of 200 µg m⁻³ over the permitted 18 days per year are shown in **bold**.

^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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

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

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % b	Annual Mean Concentration (µg m-3) 2012 ^c	Annual Mean Concentration (µg m-3) 2013 ^c	Annual Mean Concentration (µg m-3) 2014 ^c	Annual Mean Concentration (µg m-3) 2015 ^c	Annual Mean Concentration (µg m-3) 2016 ^c	Annual Mean Concentration (µg m-3) 2017 ^c	Annual Mean Concentration (µg m-3) 2018 ^c
TH4 Blackwall	N/A	92.65	26	28	29	22	23	25	20
TH6 Millwall	N/A	98.2	-	-	-	15	17	20	18
TH5 Victoria Park	N/A	97.25	-	16	17	17	16	17	18

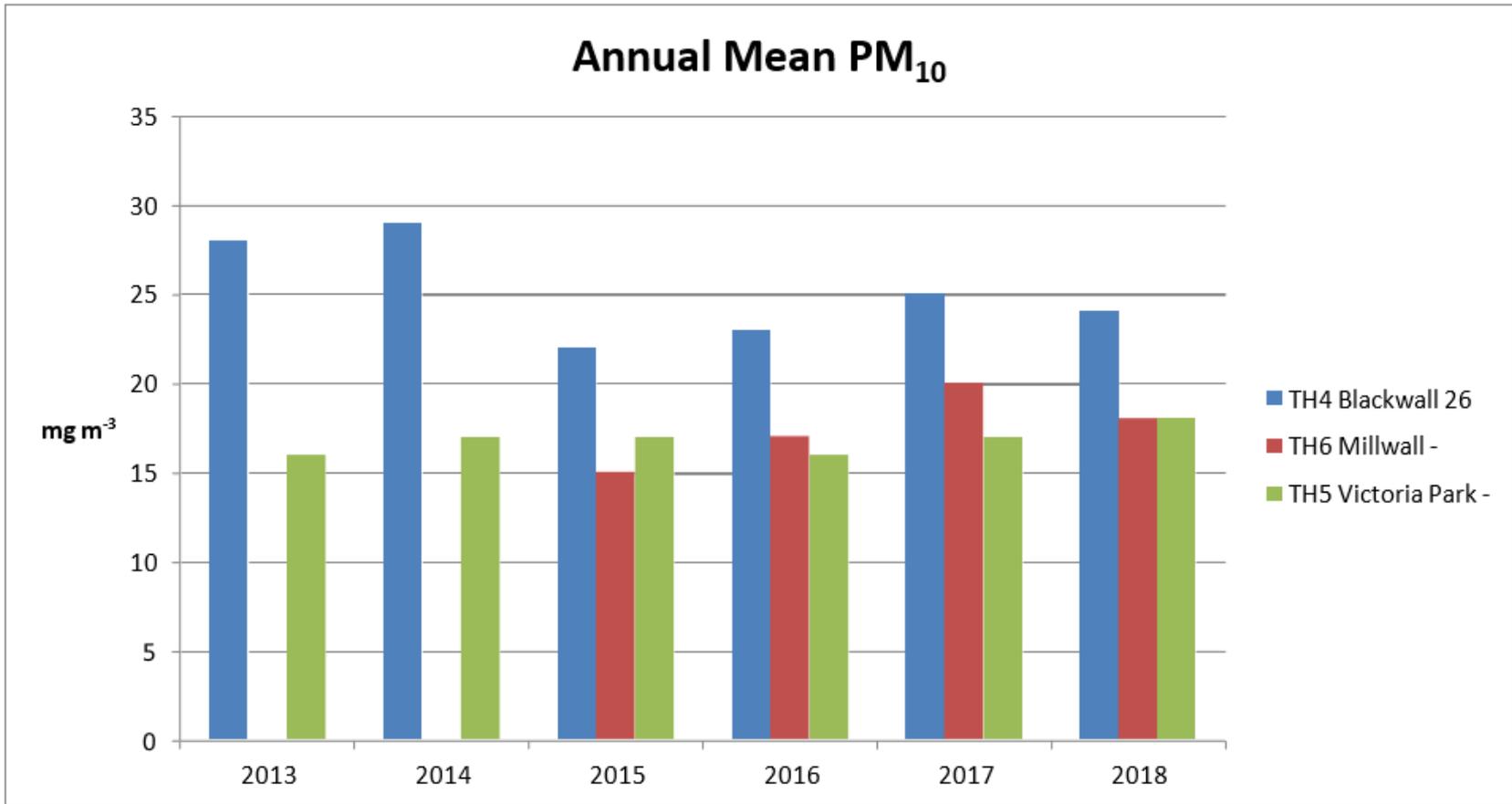
Notes: Exceedance of the PM10

annual mean AQO of 40 µg m-3 are shown in bold.

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%)

c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%



Commentary

Levels of fine particulate matter have not shown significant change since 2015. Levels are below the National Objective standard of 40/ug/m³

Table G. PM₁₀ Automatic Monitor Results: Comparison with 24-Hour Mean Objective

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Number of Daily Means >50 µg m ⁻³ 2012 ^c	Number of Daily Means > 50 µg m ⁻³ 2013 ^c	Number of Daily Means > 50 µg m ⁻³ 2014 ^c	Number of Daily Means > 50 µg m ⁻³ 2015 ^c	Number of Daily Means > 50 µg m ⁻³ 2016 ^c	Number of Daily Means > 50 µg m ⁻³ 2017 ^c	Number of Daily Means > 50 µg m ⁻³ 2018 ^c
TH4 Blackwall	N/A	92.65	24	24	16	8	10	10	10
TH5 Vic Park	N/A	98.2	0	0	0	2(32.36) ^c	3(28.6) ^c	2	1
TH6 Millwall	N/A	97.25	0	-	-	0(22.04) ^c	0(27.9) ^c	8	1

Notes: Exceedance of the PM₁₀ short term AQO of 50 µg m⁻³ over the permitted 35 days per year or where the 90.4th percentile exceeds 50 µg m⁻³ are shown in **bold**.

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

^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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

Table H. Annual Mean PM_{2.5} Automatic Monitoring Results (µg m⁻³)

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean Concentration (µg m ⁻³) 2012 ^c	Annual Mean Concentration (µg m ⁻³) 2013 ^c	Annual Mean Concentration (µg m ⁻³) 2014 ^c	Annual Mean Concentration (µg m ⁻³) 2015 ^c	Annual Mean Concentration (µg m ⁻³) 2016 ^c	Annual Mean Concentration (µg m ⁻³) 2017 ^c	Annual Mean Concentration (µg m ⁻³) 2018 ^c
TH4 Blackwall	N/A	83.3	15	16	16	14	20	13	13

Notes: Exceedance of the PM_{2.5} annual mean AQO of 25 µg m⁻³ are shown in **bold**.

^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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

Commentary

Levels of PM_{2.5} are below the National Air Quality target of 25µg/m³. Given the concern about the health impacts of PM_{2.5}, two new monitoring sites are to be opened in 2019

Table I. SO₂ Automatic Monitor Results: Comparison with Objectives

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Number of: c 15-minute means > 266 µg m ⁻³	Number of: c 1-hour mean > 350 µg m ⁻³	Number of: c 24-hour mean > 125 µg m ⁻³
TH5 Victoria	N/A	92.11	0	0	0

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

^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%)

^c Means should be "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

Commentary

Given that LBTH has consistently met the National Air Quality Objective for SO₂, the decision was made to replace the SO₂ monitor with a PM_{2.5} monitor. 2018 is the last complete year for which SO₂ data is being collected.

2. Action to Improve Air Quality

2.1 Air Quality Action Plan Progress

Table J provides a brief summary of Tower Hamlet's progress against the Air Quality Action Plan, showing progress made this year. New projects which commenced in 2018 are shown at the bottom of the table.

Table J. Delivery of Air Quality Action Plan Measures

ID	Action	Progress	Further information
1.	Develop and implement a communications strategy for disseminating air quality information in the borough to raise awareness of the impacts of poor air quality and encourage behaviour change.	An innovative borough wide ‘Breathe Clean’ campaign launched March 2018 to reduce pollution levels and encourage behaviour change. The campaign is using various platforms including social media to raise awareness and engage residents. The campaign has been well received so far including retweets by the government Council support for independently run ‘Wear AQ’ project at events through LBTH in March 2018. See http://umbrellium.co.uk/initiatives/wearaq/ Publicity campaign run to support anti idling campaign	
2	Director of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up to date information on air quality impacts on the population – Air Quality officer to be consulted on JSNA.	JSNA including specific reference to air quality published in 2016 See: https://www.towerhamlets.gov.uk/lgnl/health_social_care/joint_strategic_needs_assessme/joint_strategic_needs_assessme.aspx	Action complete
3.	Strengthening co-ordination with Public Health by ensuring that at least one public health specialist within the borough has air quality responsibilities outlined in their job profile.	Air quality dedicated staff in Public Health Team. <ul style="list-style-type: none"> • Somen Banerjee, Director of Public Health • Katy Scammel, Associate Director of Public Health • Matthew Quin, Programme Lead for Healthy Environments 	Action complete
4.	Director of Public Health to sign off all new Air Quality Action Plans.	Air quality action plan signed off by Public Health	Action complete

5.	Support patients with heart and lung conditions by providing air quality advice to discharged patients, particularly vulnerable & those with heart/lung conditions. This would be a continuation of the 'Protecting Patient' work stream from the Barts Project.	Public Health is working with London Hospital and Global Action Plan to develop a 'Clean Air Hospital Framework', a strategy aimed at improving air quality in and around hospitals in order to create a healthier environment for patients and their families, staff, and the local community. CAHF aims to reduce the amount of air pollution the hospital's community is exposed to. As part of this it looks at seven key areas trusts can address including travel, procurement and supply chain, local air quality, and communication and training. It is hoped that the wider NHS community will champion the framework, so patients and communities across the UK can benefit.	
6.	Support and Promotion of air quality awareness programmes such as AirTEXT	277 subscribers in LBTH (March 2019) 26 Number of <i>air</i> TEXT Tower Hamlets alert days 7699 Number of <i>air</i> TEXT alerts sent to Tower Hamlets subscribers 1 April 2018 – 31 March 2019 GLA pollution warnings are sent to selected departments in the Council when both the GLA and AirText forecasts align	Air Text funded for financial year 2019-20 Concerns have been raised by Clinicians on the appropriateness of the advice given by airTEXT and does not support it for children and was reluctant to promote the advice. Public Health and TH CCG are working collaboratively to influence National Policy to amend guidance for children Public Health and TH CCG aim to develop a adult focussed campaign to promote airTEXT in 2019/20
7.	Encourage schools to join the TfL Sustainable Travel Active Responsible Safer (STARS) accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme.	49 schools received STARS accreditation in 2017/18 and a School Travel event, attended by Cllr Denise Jones was held promoting the benefits of sustainable travel to school children. 2475 schoolchildren received cycle training	We are projected to have 50-55 schools receive STARS accreditation for 2018/19.

8.	Air quality at schools – Roll out the cleaner air for schools program that was previously run in 2 schools, to more schools in high pollution areas.	Contract with Loop labs for Bonner School Citizen Science programme complete June 2018	Proposals for a school superzone currently being worked up by Public Health
9.	Pollution Audits in schools. Support the GLA in their program to provide air quality audits in 2 primary schools.	Two schools participated in GLA audit scheme (Marner & Bonner). Reports received 2018. Two nursery schools (Alice Model & Columbia Market) undertaken in 2018. Reports due in 2019	Marner School using GLA and other funding to deliver green wall in 2019
10.	Schools anti-idling project	A total of 5 anti-idling events delivered in 2018/19 at Bonner, English Martyrs, St Lukes, Globe school and Mayflower schools. 50 anti-idling signs were delivered to schools for installation by schools.	Participation in GLA sponsored London wide anti- idling scheme planned for 2019
11.	Schools Environmental Theatre Project	Big Wheel Theatre company ran events on 20 primary schools in 2018	Project complete
12.	Investigate and invest in new technology as it becomes available to reduce pollution levels at pollution hotspots & sensitive uses e.g. schools	Poplar Detox experimental moss pollution absorbing scheme funded by LBTH Mayor aq grant.	
13.	Citizen Science air quality monitoring project	Project from April 2018 until November 2018. 79 residents registered interest in the scheme and 29 locations are being monitored by residents using NOx tubes	http://mappingforchange.org.uk/2018/03/launch-breathe-clean/
14.	Work with Residential Providers to develop and implement a strategy for disseminating air quality information to their tenants.	Presentation to LBTH Housing Forum used to agree that all housing providers will cascade our messages and opportunities for residents through their regular newsletters / social media and notice boards. (The council will coordinate and cascade all messages) Liaison with housing providers to schedule publicity	

		with their newsletters	
15.	Use Health and Wellbeing Board to get existing and future public sector and RP partners to pledge to increase	The Air Quality Partnership Board will be amalgamated with the Health and Wellbeing Board in 2019.	The new amalgamated board will progress this in 2019

	the number of, electric, hybrid, and cleaner vehicles in their fleets.		
16.	Continue to run the 3 continuous monitoring stations, monitoring pollutants of concern to ensure air quality objectives are being met and to assess the effectiveness of local and regional policies.	Monitors maintained. Data available on line and separately in this report.	Additional PM _{2.5} monitor to be purchased in 2019 to complement existing NO ₂ monitor on Mile End Road SO ₂ monitor in Victoria Park to be closed as borough compliant for this pollutant. New PM _{2.5} monitor to be purchased
17.	Continue to implement the NO _x Diffusion Tube Monitoring network across the borough. Investigate and implement further monitoring where necessary. E.g. at schools.	Diffusion tube network maintained. Additional diffusion tubes were deployed as part of the Citizen Science project. See action 13. Further AQ Mesh monitors deployed in six LBTH schools as part of the Breathe London scheme. www.breathelondon.org	Monitoring data to be made available by Breathe London in 2019
18.	Continue to ensure that all pollution monitoring data is available to the public and the website is regularly updated with the latest available data.	Data available on Council web site and separately in this report	
19.	Fulfil the GLA's criteria to retain our Cleaner Air Borough Status each year	Cleaner Air Borough Status retained for 2018	
20.	Ensuring emissions from demolition and construction are minimised via planning applications reviews and conditions attached to planning permissions requiring Construction Environmental Management Plans, including dust mitigation and monitoring and Travel Plans encouraging sustainable travel for site workers	Comments provided on major planning applications as required by GLA SPG on Control of Dust and Emissions from Construction Sites. Emerging Local Plan policy D.ES2 requires Air quality assessment for major developments and developments which will require substantial earthworks or demolition	See details on table k of this report

21.	Ensuring all major developments adhere to the GLA's Non Road Mobile Machinery Low Emission Zone. I.e. All	NRMM requirements form part of conditions recommended on major developments. Formal recording system set up in conjunction with	See details on table k of this report
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	NRMM used on site must meet the emissions standards stated in the GLA's Control of Dust and Emissions during Demolition and Construction SPG 2014 (or subsequent updated guidance)	Development Management Emerging Local Plan policy D.EG4 requires major developments to: 'comply with the non-road mobile machinery low emission zone Requirements'	
22.	Ensuring Combined Heat and Power (CHP) and biomass air quality policies are met at all developments proposing to utilise CHP, including the NOx emission limits for heating plant as stated in the GLA's Sustainable Design and Construction SPG (or subsequent updated guidance).	Comments provided on major planning applications as required by GLA SPG on Sustainable Design and Construction	See details on table k of this report
23.	Ensuring new developments have suitable energy efficiency measures installed to reduce the demand for onsite heat generation from boilers & CHP's.	Emerging Local Plan policy D.ES7 sets standards for a 'zero carbon borough' Our Local Plan requires energy use to be minimised as a priority in the design of the building and made energy efficient as possible. Policy is monitored through the Local Plan. Any shortfall in carbon reduction targets are met through and offset payment to the local authority	Ongoing activity
24	Ensuring Air Quality Neutral policies are complied with at all developments and exceeded where possible. Ensure all larger developments (as defined by the GLA) will be air quality neutral	Comments provided on major planning applications as required by GLA SPG on Sustainable Design and Construction. Emerging Local Plan policy D.ES2 requires 'air quality neutral'	See details on table k of this report
25.	Reduce the use of private cars by residents by encouraging car free developments and limiting number of parking spaces in new developments.	Emerging Local Plan policy D.TR3 sets out a permit-free policy for new developments, encourages priority for cycle parking over car parking, and sets parking standards that minimise the amount of car parking spaces allowed in most parts of the borough. At most, a 3+ bedroom house in an area of PTAL 1-2	

		would be allowed 0.5 parking spaces – all other developments would be allowed fewer spaces than this.	
26.	Ensure the layout of new developments considers air quality impacts, for example considering the locations of buildings with different proposed uses and locating the most sensitive use units in the least polluted areas	Emerging Local Plan policy D.ES2 requires new developments providing open space or child play space in new developments to demonstrate that the positioning of this space has been considered to reduce exposure to air pollution. Policy S.DH1 requires new developments to use design to reduce harmful impacts from, among other things, air pollution. Policy D.CF3 requires the design of new educational facilities to take account of air quality considerations.	
27.	Ensuring adequate, appropriate, and well located green space and infrastructure, including for walking and cycling, is included in new developments with the Green Grid Strategy promoted and adhered to in all major planning applications and master planning to provide low emissions routes for walking and cycling.	Emerging Local Plan policy D.OWS3 requires new strategic developments to contribute to the delivery of publicly accessible open space which is in accordance with the Green Grid Strategy; and for all new development within 200m of the green grid network to contribute to expanding and enhancing it. Policy S.TR1 requires new development to prioritise the needs of pedestrians and cyclists ahead of motor vehicles.	
28.	Encourage new developments to install alternative mass waste collection systems, such as ENVAC, to reduce collection vehicle emissions.	Our supplementary planning guidance for waste and recycling storage is being updated in 2019 to include for increased use of a range mass waste collection systems, which will help reduce collection vehicle emissions	Expected to be updated by Sep 2019
29.	Ensuring that the whole borough Smoke Control Zones is fully publicised and enforced.	Council lobbied DEFRA to incorporate improvements in the proposed new Environment Act to make smoke control legislation more effective.	
30.	Implement a Domestic boiler retrofit project using the GLA's RE:FIT energy	First phase of the project complete we are in the process of procuring phase 2 at a contract value of	

	efficiency retrofit programme.	£600k. Boiler installation phase will begin from April 2019. This project will run until 2021.	
31.	Implement a Schools Carbon Emissions Reduction Programme providing funding towards boiler replacement and insulation schemes in schools.	We have completed energy efficiency projects in 17 schools. Schools retrofit project - Energy efficiency improvements completed to 9 schools which includes boiler replacement, heating upgrades, insulation etc. The total fund for this project was £198k. Schools energy efficiency project - A project for schools which is a grant of up to £30k for energy efficiency works which 8 schools have successfully applied for and the works. Total fund for this project was £210k. We are in the process of allocating further funds to carry out works in more schools	
32.	Implement a Carbon Emissions Reduction Programme for council properties including boiler replacements and insulation projects.	£200k has been allocated for this project with a potential of another £400k over a 3 year period to be funded from the carbon offsetting fund (subject to council receiving the fund in the s106 account). For 2017/18 we achieved a 49% carbon emission reduction from a 2007 baseline and on target to achieve 60% carbon emission reduction by 2021.	
33.	Enderby Wharf – Ensure a thorough and robust evaluation of the Environmental statement, that methodologies used comply with current guidance and that the project will not lead to any significant adverse air quality impacts in the borough.	LBTH officers have worked with with R B Greenwich Environmental health and Planning teams to minimise pollution from this development. Application for cruise terminal now withdrawn by developers.	No further Action
34.	Ensure applications for new developments in neighbouring boroughs that have the potential to have impacts in Tower Hamlets are	Relevant applications in neighbouring boroughs (& LLDC planning area) reviewed and appropriate comments made	

	reviewed for air quality impacts and that no development will lead to any significant adverse air quality impacts in the borough.		
35.	Lead by example by ensuring the councils new Civic Centre is a best practice example of a sustainable and low emissions development in regards to air pollution and CO2 with both air quality neutral and carbon zero policies being met.	Corporate Property and Capital Delivery team are leading on the planning application; the relevant teams will be consulted to ensure sustainability/air quality targets are met. Building due to be occupied 2021.	The strategy for the project will achieve: - Circa 3,500sqm of open space provision/public realm - Provide over 300 staff and visitor cycle parking to the site -Achieve BREEAM excellent rating -Provide renewable energy measures such as air source heat pumps and PV within design -Includes waste recycling facilities -Includes rainwater/greywater recycling facilities -Provision of brown roof -Achieving 84.3% over the baseline for the whole development in carbon reduction, meeting the LBTH policy target
36.	Improve the energy efficiency of John Onslow House as part of the upcoming refurbishment with the aim of becoming carbon zero and any new boilers to be ultra-low NOx.	New Remeha Quinta Pro and Vaillant Ecotec boilers installed	Works complete. No further action
37.	Ensure developments that will increase river traffic, in the operational phase of development, are thoroughly assessed for potential air quality impacts and will not have a significant negative impact on air quality.	Planning applications which have an impact on air pollution on the River will be reviewed. None noted to date	

38.	Ensure the Tideway Tunnel infrastructure project is sustainably delivered with the Construction Code of Practice adhered to and effective	LBTH attend forum meetings and the CCP is in place and is being monitored. No reported air quality issues	
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	emissions mitigation in place during construction & operational phases.		
39.	Silvertown Tunnel – Ensure a thorough and robust evaluation of the Environmental statement, that methodologies used comply with current guidance and that the project, during both the construction and operational phases, will not lead to any significant adverse air quality impacts in the borough and that adequate mitigation is provided for any potential impacts. Ensure traffic modelling on which the air quality statements are robust.	Development Consent Order granted May 2018. Contact has been made with TfL to ensure robust monitoring scheme is in place to assess background levels on borough roads prior to opening	Contact is being sought with TfL to ensure adequate pre construction air quality monitoring is being carried out. No monitoring undertaken to date.
40.	Ensure that all future major infrastructure projects are adequately reviewed and assessed through the planning process to ensure impacts on air quality are minimised.	No new infrastructure projects other than these specifically assessed in the action plan received	
41.	Ensure that Procurement policies to include a requirement for suppliers with large fleets to have attained, silver as a minimum or gold as a preference, Fleet Operator Recognition Scheme (FORS) accreditation or equivalent.	Procurement are considering a requirement that contracts involving 10 or more vehicles operating in LBTH should include a requirement that the contractor (and any sub contractors) be required to obtain FORS Silver for that contract.	
42.	Investigate updating Procurement policies to ensure sustainable logistical measures are implemented (and include requirements for preferentially scoring bidders based on their sustainability criteria).	Procurement have hired external contractors to review all procurement actions to improve sustainability. The outcome of the sustainability study will be incorporated into procurement policies from 2020.	

43.	Investigate re-organisation of freight to support consolidation (or micro-consolidation) of deliveries, by setting up or participating in new logistics facilities, and/or requiring that council suppliers participate in these.	Procurement has set up a system to consolidate purchase orders and has a minimum order fee	
44.	Investigate implementing a local Eco Stars Fleet Recognition Scheme for Tower Hamlets.	Initial estimate to join EcoStars for a two year participation is in the region of £40,000. There is no identified funding for this scheme.	Funding option to be identified and confirmed
45.	Join a recognised appropriate driver award scheme, e.g. Fleet Operator Recognition Scheme (FORS) or Van Excellence & achieve certification.	The Fleet section has had discussions with neighbouring boroughs and believes that the Van Excellence option is the higher standing accreditation, and will work towards achieving this.	Expected implementation date April 2020
46.	Increasing the number of, electric, hybrid, and cleaner vehicles in the boroughs' fleet.	The Fleet section has piloted a number of electric vehicles. Additional electric vehicles will be integrated into the Fleet as the vehicle re-charging infrastructure develops.	Ongoing expansion of charging points and use of electric vehicles in 2019/20
47.	Accelerate uptake of new Euro VI vehicles in borough fleet, ending the purchase of diesel vehicles where feasible.	The Fleet section has started a large procurement exercise for waste services vehicles. All these vehicles are required to have Euro VI engines. In addition a vehicle renewal programme is underway, based around Contract Hire for the existing Fleet vehicles. Again these vehicles will all have Euro VI engines.	Major fleet procurement exercise completed by April 2020, with vehicle renewal using Euro VI engines via contract hire from Sep 2019
48.	Real-time Telematics monitoring of fleet driver behaviour and subsequent driver training.	The larger waste vehicles are being purchased with real time telematics. Improved driving assessment is being integrated into the Fleet operation through work with the Institute of Advanced Motorists / Freight Transport Association.	Expected completion date April 2020
49.	Utilise round optimisation for council fleet to reduce vehicle miles.	The use of round optimisation will be applied when the waste service becomes an in house operation in April 2020.	From September 2019 onwards
50.	Procure a cargo bike for regular	Parks Dept already have 2 cargo bikes in use in	No further action

	delivery of literature to councillors.	Victoria Park. Councillors now provided with tablets to facilitate delivery of literature.	
51.	Project 2020: use the procurement process to ensure all waste & Recycling collection vehicles in the new contract are as low emission as possible by prioritising tenders with the highest proportion of low emission vehicles.	With the decision to bring waste services back “In – House” the Fleet section has started a large procurement exercise for waste services vehicles. All these vehicles are required to have Euro VI engines. In addition a vehicle renewal programme is underway, based around Contract Hire for the existing Fleet vehicles. Again these vehicles will all have Euro VI engines. This has been done with the RCVs. All other fleet to be leased so that proper provision can be made w.r.t. ULEZ and other environmental considerations when eventually purchased.	No further action
52.	Project 2020: utilise round optimisation to reduce vehicle mileage for waste collections.	The use of round optimisation will be applied when the waste service becomes an in house operation in April 2020. Internalisation of the waste and cleaning contract will make this an easier objective.	No further action
53.	Reduce ‘Grey Fleet’ impacts by reviewing staff parking permits to reduce number or allocate shared team permits rather than individual.	Under review	
54.	Investigate installing Green Infrastructure, such as green walls, green screens or living roofs at schools/residential developments in polluted areas. Linking in with the Green Grid and Open Spaces Strategy.	LBTH Mayor’s air quality fund (1 st round) provided money for green screens in two schools and an experimental moss pollution absorbing scheme Public Health and Highways / Transport intend to work together to deliver recommendations of the green grid through the emerging liveable streets programme Public Health have initiated local development planning policy, with the intention to implement Health Impact Assessments on physical infrastructure	

		development to promote health and wellbeing through influencing the wider determinants of health, including built and natural environment. Public Health developing 'can-do' grants projects to promote local walking initiatives Public Health developing a 'Healthy Streets School Survey' to understand children and young people's experience and expectations of the environment around their school to enable building environments that are conducive to positive health outcomes.	
55.	Low Emission Neighbourhoods (LENs) – implement the City Fringe LEN in partnership with Hackney and Islington.	Strong engagement with businesses in the City Fringe helping people prepare for ULEV streets and ULEZ with advice about switching to zero emission deliveries	Bid for continuation of scheme made to GLA Air Quality Fund for 2019
56.	Engagement with businesses – Continuation of the ZEN Project engaging businesses with advice and grants to enable them to reduce their air quality impact.	ZEN project engaging with business in the city fringe area as part of a tri borough (Hackney, Tower Hamlets and Islington) consortium. Project funded by grants from the London Mayor's Air Quality Fund (MAQF) and match fund contributions from each Council. A total of 28 grants have been awarded to local businesses in Tower Hamlets towards helping the businesses to change to cleaner mode of transport. The ZEN project has been hailed as a good practice by DEFRA.	413 businesses 218 residents 2061 Twitter followers - NB @zencityfringe not #cleanerairisourbusiness 361 Instagram 314 LinkedIn 11 delivery riders switched from moped to e-bike and produced toolkit for fleets making the switch. Bid for continuation of scheme made to GLA Air Quality Fund for 2019
57.	Discouraging unnecessary idling by taxis, coaches and other vehicles. Anti – Idling engagement project focusing on air pollution hotspots and high risk locations such as hospitals and schools.	Publicity events held at Brick Lane and Watney Market. Enforcements visits made in response to complaints at Pennington St and Roman Rd	Bid to join continuation of GLA pan London anti idling scheme in 2019
58.	Enforce anti-idling regulations by	Anti idling powers under Road Traffic Act adopted	

	becoming a designated authority to issue Fixed Penalty Notices to idling drivers.	2018. Enforcement delegated to Civil Enforcement Officers (parking) and Tower Hamlets Enforcement Officers	
59.	Increasing the proportion of electric, hydrogen and ultra-low emission vehicles in Car Clubs.	There are currently 130 sole car club bays in Tower Hamlets at 81 separate locations which are offered for the round trip model. The Council also offers the point to point car club model with DriveNow, ZipCar and Ubeeqo and we are in discussions with a further company. All of these car club companies use ultra-low emission vehicles and there are some that use electric vehicles as part of their fleets.	
60.	Review parking permit fee banding to encourage lower emission vehicle choice or add an additional diesel surcharge to existing permit fees.	New fees with differential charge for parking permits introduced	
61.	Installation of residential electric charge points.	42 vehicle charging points installed 2018/19 Further 100 to be delivered 2019/20	Public consultation on location for further charging points See https://www.pclconsult.co.uk/towerhamletsev/
62.	Installation of rapid chargers to help enable the take up of electric taxis, cabs and commercial vehicles (in partnership with TfL and/or OLEV)	3 installed by TfL in LBTH 2018/19 with 6 more sites including a hub site in detailed review for implementation 2019/20.	
63.	Investigate reprioritisation of road space to smooth traffic flow, reduce congestion, improve bus journey times, cycling and pedestrian experience, and reduce emissions caused by congested traffic	Liveable streets programme being rolled out to half the borough to implement these objectives. 10 new cycle lockers installed April 2019. Salmon Street School Street scheme – road closure	
64.	Continue to provide/ ensure provisions of infrastructure to support walking and cycling including on street	Liveable streets programme being rolled out to half the borough to implement these objectives. 144 secure cycle parking spaces delivered, including	

	residential secure parking lockers, cycle routes, cycle permeability schemes, traffic management area reviews.	12 on-street bike hangars. 50 open cycle parking spaces (bike stand provision) catering for shops and local amenities	
65.	Reduce traffic in the borough through the development of a new Local Implementation Plan in line with the Mayors Transport Strategy.	Completed and approved by TfL.	
66.	Continue to encourage staff sustainable travel by providing Dr Bike services and staff subscriptions to the TFL cycle hire scheme for site visits. Annual update of the Staff Travel Plan to ensure it remains relevant and proactive.	Ongoing	
67.	Push for Tower Hamlets to be included in the ULEZ through partaking in the TFL Consultation process.	ULEZ to include all of LBTH when it is extended to North Circular in 2021	No further action
68.	Ensure responses to all government and regional consultations focus on reducing or eliminating emissions of Local air pollutants and CO2.	Air quality comments provided for draft Local Plan; draft London Plan; Isle of Dogs Neighbourhood Plan; Isle of Dogs and South Poplar Opportunity Area Planning Framework; DEFRA Air Quality Strategy & Solid Fuel Burning	
69.	Lobby and work with TfL to reduce emissions from buses in the borough. e.g. through green bus corridors. Work with other statutory Services to reduce emissions – LFB, NHS etc.	Lobby continues to bring forward sooner TfL committed to 100% buses by 2037. A11 is a designated green bus corridor.	
70.	Lobby and work with TfL to reduce emissions from TfL controlled roads e.g. through reprioritisation of road space.	Under review	

71.	Lobby the GLA to strengthen their Air Quality Neutral Policy and lower the CHP emission limits in current guidance.	New Draft Environment Strategy and Draft London Plan seeks to have largest developments required to be air quality positive. Further guidance awaited from the GLA following adoption of the new London Plan	
72.	Delivery of the Tower Hamlets Mayor's Air Quality fund over 2018/19 and 2019/20	<p>First tranche of funding was released in June. 18 applications received. 8 approved:</p> <ol style="list-style-type: none"> 1. Tower Hamlets Community Housing for purchase of electric vans and installation of electric charging points 2. Swan Housing Association- get cycling project to encourage 36 residents of Swan Housing in a bicycle building project to encourage residents to shift to cycling 3. Umbrellium Ltd/Marner Primary school to encourage participants to travel to school in a sustainable manner 4. Poplar Harca- The project proposes to install internal and external green walls at their new head office, purchase electric bicycles to facilitate staff movements at work and to replace existing combustion engine landscaping tools with electric equivalents 5. St Luke's Primary School- install a green screen 6. Oglia Primary School green screen & diffusion tubes 7. Mile End pollution monitoring by residents' assn 8. Poplar Detox moss wall 	Phase 2 money to be released in 2019
73.	The Mayor of Tower Hamlets to hold a meeting with The Royal Borough of Greenwich and Greater London Authority to discuss reducing the environmental impact of the proposed Enderby Wharf cruise terminal.	Meeting held. Liaison between officers of LBTH & RBG to control pollution. Shore side power not feasible. Application for cruise terminal withdrawn by developers	No further Action

	Lobby for shore-side power to be provided for the ships.		
74.	Work with the Canal & Rivers Trust, the GLA and other Boroughs with canals to devise a plan to best tackle issues with emissions from canal boats. Enforcement action to be taken where necessary.	Liaison meetings held with Canals & Rivers Trust.	
75.	Support the Port London Authority in the development and implementation of their Air Quality Strategy for the River Thames.	Presentation by PLA to Council's Air Quality Partnership Board on their new strategy. Working with PLA to locate air quality monitors to assess the impact of existing Greenwich cruise liner terminal Monitors deployed by PLA in 2019	No further action
76.	Support the GLA in Lobbying national Government to provide new powers and improved coordination for river and maritime vessels, including having a single regulatory authority for the Thames and London tributaries and introduce minimum emissions standards	Liaison with PLA Representative specifically on the production of guidance for developers and boroughs in 2018, as well as proposals for funds improving emissions from the marine sources within the borough. Attendance to the future workshops on the progress for the strategy. Maritime emissions addressed in latest DEFRA consultation	No further action

3. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in Tower Hamlets in 2018

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts <i>Number not in brackets – Applications reviewed in 2018</i> <i>Number in brackets – Decision notices in 2018</i>	48 (21)
Number of planning applications required to monitor for construction dust	45
Number of CHPs/Biomass boilers refused on air quality grounds	0
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	0
Number of developments required to install Ultra-Low NO _x boilers	0
Number of developments where an AQ Neutral building and/or transport assessments undertaken	47
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	0
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: Central Activity Zone and Canary Wharf Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIB of the Directive and/or exemptions to the policy. <i>Number not in brackets – Applications reviewed in 2018</i> <i>Number in brackets – Decision notices in 2018</i>	6 (7)
NRMM: Greater London (excluding Central Activity Zone and Canary Wharf) Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIA of the Directive and/or exemptions to the policy. <i>Number not in brackets – Applications reviewed in 2018</i> <i>Number in brackets – Decision notices in 2018</i>	1 (1)

All major planning applications are referred to the Pollution Team for comment. Each is individually reviewed to ensure that the GLA SPGs on Sustainable Design and Construction as well as the Control of Dust and Emissions from Demolition and Construction Sites. Where there are compliance issues, Pollution Officers recommend either further information be obtained from the applicant or relevant conditions recommended. It is at the discretion of the Development Control Team/Planning Committee as to what action is taken on recommendations made by the Pollution Team.

3.1 *New or significantly changed industrial or other sources*

No new sources identified

Appendix A Details of Monitoring Site QA/QC

A.1 Automatic Monitoring Sites

Calibrations at Tower Hamlets Roadside, Millwall Park and Victoria Park are undertaken by Ricardo Energy and Environment. Millwall Park and Victoria Park are both urban background sites, so they calibrated every 4 weeks. Tower Hamlets Roadside is calibrated every 2 weeks.

Millwall Park and Victoria Park are audited by Ricardo Energy and Environment every 6 months, in June and December.

Note: the Blackwall site is operated by Transport for London, not LBTH

PM₁₀ Monitoring Adjustment

Millwall Park – 1020 Heated BAM, correction applied

Victoria Park – TEOM, VCM correction applied

Both VCM and BAM correction is applied automatically when data is downloaded from Air Quality England web site.

A.1 Diffusion Tube Quality Assurance / Quality Control

- Lab supplying and analysing the tubes:
SOCOTEC Unit 12, Moorbrook, Southmead Industrial Park Didcot OX11 7HP
- *Preparation method used*
The tubes were prepared by spiking acetone:triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection
- *Confirmation that the lab follows the procedures set out in the Practical Guidance*
The samples have been analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015 Issue 1. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes For Ambient NO₂ Monitoring: Practical Guidance.'

- *Results of laboratory precision results:*
This analysis of diffusion tube samples to determine the amount of nitrogen dioxide present on the tube is within the scope of our UKAS schedule. Any further calculations and assessments requiring exposure details and conditions fall outside the scope of our accreditation. In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a **Satisfactory** laboratory
- *Bias adjustment factor*
A bias adjustment factor of 0.77 was used. This was derived from DEFRA spreadsheet version number 03/18 for LBTH's contractor's lab.

Factor from Local Co-location Studies (if available)

Local co-location bias adjustment was not used

A.1 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Table L. Short-Term to Long-Term Monitoring Data Adjustment

Start	End	Victoria	Millwall	Tube 10	B1/10
07-Jan	04-Feb	24.2			
05-Feb	04-Mar	26.4		58.7	26.4
05-Mar	01-Apr	42.4			
02-Apr	29-Apr	30.6		59.3	30.6
20-Apr	27-May	31.5			31.5
28-May	01-Jul	14.0			
02-Jul	29-Jul	18.8		64.1	18.8
30-Jul	26-Aug	17.6		52.0	
27-Aug	30-Sep	23.5		59.1	23.5
01-Oct	28-Oct	25.1		61.5	25.1
29-Oct	02-Dec	30.3		73.8	
03-Dec	06-Jan	32.7		56.4	32.7
		26.4		60.6	26.9
Ratio is Am/Pm		0.98			

annualisation = Ratio*Pm 59.4

Start	End	Victoria	Tube 46	B1/46
07-Jan	04-Feb	24.2		
05-Feb	04-Mar	26.4	54.5	26.4
05-Mar	01-Apr	42.4	140.2	42.4
02-Apr	29-Apr	30.6	80.2	30.6
20-Apr	27-May	31.5	43.7	31.5

28-May	01-Jul	14.0		
02-Jul	29-Jul	18.8	28.8	18.8
30-Jul	26-Aug	17.6		
27-Aug	30-Sep	23.5	46.9	23.5
01-Oct	28-Oct	25.1	50.4	25.1
29-Oct	02-Dec	30.3		
03-Dec	06-Jan	32.7	56.1	32.7
		26.4	62.6	

annualisation = Ratio*Pm 61.4

Appendix B Full Monthly Diffusion Tube Results for 2018

Table M. NO₂ Diffusion Tube Results with distance adjustment

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO ₂ Jan	Annual Mean NO ₂ Feb	Annual Mean NO ₂ March	Annual Mean NO ₂ Apr	Annual Mean NO ₂ May	Annual Mean NO ₂ June	Annual Mean NO ₂ Jul	Annual Mean NO ₂ Aug	Annual Mean NO ₂ Sept	Annual Mean NO ₂ Oct	Annual Mean NO ₂ Nov	Annual Mean NO ₂ Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
1	92	44.1	48.3	50.2	44.0	30.9	Missing	43.8	39.0	43.5	51.7	48.4	52.6	45.1	34.30	31
2	100	49.8	54.1	49.0	49.7	44.2	31.0	46.0	44.1	49.1	53.8	57.0	58.8	48.9	37.15	33
3	92	Missing	51.3	54.0	50.0	46.0	31.5	47.4	43.3	48.5	49.9	38.4	55.5	46.9	35.64	33
4	92	66.2	77.0	65.1	70.4	80.6	77.9	Missing	57.7	57.9	70.1	76.9	69.1	69.9	53.12	41
5	92	75.4	77.8	Missing	78.2	88.5	75.0	87.2	81.8	86.9	87.7	73.5	73.2	80.5	61.16	50
6	83	63.6	58.4	No record	65.2	Missing	48.8	71.2	63.9	74.0	71.9	70.2	65.6	65.3	49.61	40
7	75	59.6	Missing	39.3	33.8	33.9	21.7	33.1	30.4	37.6	Missing	41.3	Missing	36.7	27.93	28
8	100	47.3	42.5	48.4	40.0	35.4	26.9	37.5	33.5	39.3	48.2	47.4	41.6	40.7	30.91	29
9	83	Missing	50.6	49.7	40.2	42.2	31.1	40.6	39.5	Missing	48.4	40.9	55.2	43.8	33.32	30
10	67	Missing	58.7	Missing	59.3	Missing	Missing	64.1	52.0	59.1	61.5	73.8	56.4	60.6	46.07	37
11	100	54.3	47.0	52.6	48.8	43.2	30.8	42.3	37.6	45.5	50.7	52.2	53.0	46.5	35.34	31
12	100	54.9	53.9	56.0	46.9	37.9	36.9	43.4	38.2	44.8	48.5	49.2	43.0	46.1	35.06	32
13	92	Missing	48.1	53.0	43.7	52.5	43.3	55.9	45.1	50.3	54.0	57.1	52.1	50.5	38.35	34
14	100	57.9	53.9	56.4	47.6	47.0	35.7	46.2	42.8	50.8	47.3	54.5	58.9	49.9	37.94	31

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO2 Jan	Annual Mean NO2 Feb	Annual Mean NO2 March	Annual Mean NO2 Apr	Annual Mean NO2 May	Annual Mean NO2 June	Annual Mean NO2 Jul	Annual Mean NO2 Aug	Annual Mean NO2 Sept	Annual Mean NO2 Oct	Annual Mean NO2 Nov	Annual Mean NO2 Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
15	83	Missing	65.0	68.9	50.8	Missing	40.7	62.3	51.9	56.8	66.7	61.0	64.6	58.9	44.74	38
16	100	60.6	57.7	62.7	60.7	56.7	43.2	53.5	45.0	44.1	49.9	57.6	58.5	54.2	41.18	36
17	100	47.7	42.0	49.3	39.1	38.5	25.6	36.2	33.9	39.5	44.4	24.5	44.8	38.8	29.48	28
18	100	61.0	54.6	58.8	48.4	47.4	41.9	51.8	49.1	53.1	62.3	57.8	52.0	53.2	40.42	36
19	100	65.9	58.7	60.7	57.9	48.0	39.7	61.4	52.0	57.9	62.4	67.6	66.7	58.2	44.26	35
20	100	78.0	65.0	71.6	68.2	66.0	55.7	77.5	63.0	68.3	66.5	73.3	73.0	68.8	52.32	49
21	83	Missing	Missing	45.3	47.2	204.8	58.2	136.3	37.4	43.6	47.9	50.0	58.9	73.0	55.45	44
22	100	45.2	50.9	47.6	41.0	39.8	34.5	40.7	33.7	39.8	48.9	47.2	42.8	42.7	32.43	30
23	100	62.3	54.7	60.5	52.7	51.1	43.4	65.7	53.9	63.3	54.9	57.9	59.0	56.6	43.03	38
24	92	Missing	73.2	85.3	66.0	243.8	21.6	80.1	64.8	70.3	77.7	66.6	73.3	83.9	63.75	49
25	100	66.4	55.3	49.5	46.6	47.6	36.3	51.7	50.6	57.2	58.3	57.0	61.1	53.1	40.38	32
26	100	66.4	59.9	57.1	48.1	52.3	43.7	62.4	56.4	67.2	58.0	55.4	63.3	57.5	43.71	38
27	92	Missing	54.1	58.6	48.7	37.7	44.8	44.8	40.1	38.7	48.9	55.7	52.0	47.6	36.21	31
28	100	53.4	48.7	50.6	44.4	48.9	34.6	47.4	44.1	51.2	53.2	52.0	60.9	49.1	37.33	32
29	100	58.4	55.2	66.5	50.4	56.0	42.1	58.4	48.3	55.5	60.5	69.0	51.2	56.0	42.53	34
30	100	55.1	61.1	71.3	80.3	60.9	59.9	57.3	47.6	48.7	58.4	69.6	51.2	60.1	45.69	36
31	100	93.4	68.0	84.1	57.1	90.5	70.9	101.7	84.1	92.8	77.3	83.8	88.2	82.7	62.82	44
32	100	71.0	63.9	49.2	62.2	67.0	58.2	71.7	59.3	66.7	66.3	64.2	60.3	63.3	48.13	40

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO2 Jan	Annual Mean NO2 Feb	Annual Mean NO2 March	Annual Mean NO2 Apr	Annual Mean NO2 May	Annual Mean NO2 June	Annual Mean NO2 Jul	Annual Mean NO2 Aug	Annual Mean NO2 Sept	Annual Mean NO2 Oct	Annual Mean NO2 Nov	Annual Mean NO2 Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
33	92	93.3	40.7	41.4	31.9	105.2	Missing	33.4	30.5	38.6	44.5	51.1	52.6	51.2	38.91	35
34	92	Missing	49.3	63.2	36.9	52.5	42.5	50.5	41.1	49.2	50.6	53.5	51.1	49.1	37.34	33
35	83	Missing	Missing	129.7	134.4	91.5	118.0	115.8	102.3	104.2	118.0	106.0	108.3	112.8	85.74	56
35	100	49.2	52.3	55.0	47.2	43.6	40.3	40.9	34.1	43.0	48.5	50.8	51.4	46.4	35.23	28
37	100	49.7	51.3	53.6	45.1	45.3	37.9	42.2	38.3	38.0	44.0	45.3	47.3	44.8	34.07	28
39	100	50.1	46.9	27.3	48.8	49.8	41.2	45.6	42.6	49.7	50.4	53.5	60.2	47.2	35.85	32
39	100	59.8	56.4	64.7	53.4	58.7	58.7	51.1	42.6	50.4	54.1	49.9	57.2	54.8	41.61	40
40	83	Missing	47.7	54.9	46.5	Missing	34.5	46.8	40.3	49.8	53.0	49.3	54.3	47.7	36.26	31
41	100	55.7	54.7	55.5	35.1	52.9	52.1	51.0	41.1	55.4	47.2	50.1	48.7	50.0	37.97	37
42	100	33.3	33.3	33.6	27.9	23.7	19.4	22.3	22.4	27.0	30.7	36.4	39.3	29.1	22.12	-
43	100	33.6	33.6	33.2	28.2	24.2	19.8	23.4	23.1	28.7	26.7	32.6	37.4	28.7	21.82	-
44	100	48.5	58.3	56.6	53.1	48.4	38.5	43.3	Missing	52.5	54.7	1.1	51.7	46.1	35.01	32
45	100	62.3	61.2	39.3	55.3	49.6	41.2	52.5	280.4	51.6	60.2	62.5	63.2	73.3	55.69	47
46	62	Missing	54.6	140.2	80.2	43.7	Missing	28.8	Missing	46.9	50.4	Missing	56.1	62.6	47.59	39
47	100	63.0	67.2	70.9	58.3	73.8	51.8	67.8	60.3	53.9	63.8	65.4	68.4	63.7	48.42	35
48	100	49.8	43.2	56.3	47.3	46.2	38.8	50.3	48.8	50.8	51.8	54.1	55.1	49.4	37.53	29
49	100	53.5	51.9	50.8	44.6	35.6	30.0	37.6	35.3	39.7	43.6	44.4	48.0	42.9	32.62	30
50	100	110.5	57.9	52.6	47.8	49.6	43.8	48.1	45.8	50.9	51.8	51.7	52.5	55.3	41.99	40

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO2 Jan	Annual Mean NO2 Feb	Annual Mean NO2 March	Annual Mean NO2 Apr	Annual Mean NO2 May	Annual Mean NO2 June	Annual Mean NO2 Jul	Annual Mean NO2 Aug	Annual Mean NO2 Sept	Annual Mean NO2 Oct	Annual Mean NO2 Nov	Annual Mean NO2 Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
51	100	47.6	47.5	54.5	43.3	40.7	35.9	40.2	34.4	43.0	49.0	38.7	48.2	43.6	33.12	34
52	92	Missing	57.6	57.9	57.5	49.7	39.7	53.9	47.3	49.1	54.6	58.0	56.4	52.9	40.19	36
53	100	64.5	51.8	54.8	50.0	46.8	36.1	60.4	55.4	54.7	62.2	64.2	65.4	55.5	42.20	36
54	92	Missing	60.9	62.8	55.0	134.1	74.9	88.0	75.5	79.8	77.7	91.1	74.0	79.4	60.37	46
55	100	39.8	33.4	28.4	30.2	27.7	21.1	24.9	25.0	30.9	30.4	33.4	36.6	30.2	22.91	-
56	100	58.7	49.0	53.4	46.0	43.5	34.6	51.1	46.4	46.9	47.9	51.6	52.8	48.5	36.85	29
57	92	Missing	41.3	44.5	38.0	31.4	24.4	29.5	29.5	32.0	37.8	45.8	44.3	36.2	27.53	27
58	100	46.3	45.3	44.5	34.4	31.0	25.2	35.6	30.8	38.4	37.9	41.9	49.3	38.4	29.17	28
59	92	53.5	54.0	Missing	47.9	50.4	43.0	44.8	40.0	43.7	48.8	55.0	51.7	48.4	36.81	33
60	92	59.8	50.7	55.4	Missing	51.2	41.0	48.5	46.3	51.6	55.3	61.0	48.2	51.7	39.31	31
61	92	Missing	48.3	52.4	50.4	26.2	32.9	40.1	43.7	49.9	46.2	56.4	53.2	45.4	34.52	31
62	83	36.0	42.9	35.4	Missing	Missing	27.2	34.5	36.1	37.7	43.3	40.9	48.5	38.3	29.07	28
63	92	42.5	34.2	Missing	31.6	24.1	21.1	24.3	24.8	23.2	31.2	33.9	34.3	29.6	22.47	-
64	100	41.1	55.7	57.5	48.2	48.2	40.3	50.2	45.1	46.1	54.6	53.1	53.3	49.5	37.58	32
65	100	35.5	39.8	44.7	36.6	35.1	31.0	34.2	30.7	34.6	39.8	42.3	41.3	37.1	28.22	33
66	92	43.6	38.2	38.6	28.4	25.9	19.3	Missing	26.9	33.4	30.9	39.8	42.5	33.4	25.39	-
67	100	41.9	47.4	46.8	35.0	35.2	28.3	36.1	33.6	35.8	41.0	46.8	49.1	39.8	30.21	28
68	100	41.8	47.7	47.4	39.9	41.5	34.4	36.3	32.2	36.6	45.0	46.7	47.8	41.4	31.50	30

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO2 Jan	Annual Mean NO2 Feb	Annual Mean NO2 March	Annual Mean NO2 Apr	Annual Mean NO2 May	Annual Mean NO2 June	Annual Mean NO2 Jul	Annual Mean NO2 Aug	Annual Mean NO2 Sept	Annual Mean NO2 Oct	Annual Mean NO2 Nov	Annual Mean NO2 Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
69	100	53.4	47.4	60.0	42.9	40.6	31.1	43.1	39.5	42.3	45.8	47.8	50.2	45.3	34.46	28
70	92	Missing	41.3	42.9	37.9	31.3	24.5	28.8	24.2	34.4	40.0	45.8	46.2	36.1	27.45	27
71	75	Missing	69.0	67.2	63.6	Missing	Missing	75.4	63.1	80.5	78.4	69.5	72.3	71.0	53.96	44
72	92	46.5	50.5	63.5	48.5	56.5	40.1	46.6	Missing	48.7	54.1	44.4	58.2	50.7	38.53	34
73	100	36.8	57.2	55.2	32.4	35.7	28.2	38.4	38.9	43.5	48.8	42.6	45.5	41.9	31.87	29
74	83	Missing	78.7	47.6	79.8	Missing	76.8	101.4	84.1	99.7	81.8	94.3	96.8	84.1	63.92	44
75	100	50.0	31.8	100.3	40.4	33.2	29.5	34.2	32.6	41.1	43.3	49.8	49.6	44.7	33.93	30
76	100	62.7	60.3	74.3	57.0	48.5	58.0	56.7	55.0	54.5	56.9	61.1	63.4	59.0	44.87	33
77	100	50.8	56.9	53.8	50.1	37.7	32.5	39.8	38.3	45.8	50.2	55.4	51.6	46.9	35.65	33
78	100	61.0	65.9	54.0	56.3	58.3	50.7	55.4	50.4	48.9	58.9	58.2	59.7	56.5	42.92	34
79	100	42.4	49.9	47.0	45.1	42.1	34.9	35.0	33.7	36.0	43.4	48.4	46.6	42.0	31.95	30
80	100	48.4	61.6	51.7	53.7	54.6	50.5	43.4	41.7	40.9	53.4	49.8	55.7	50.5	38.34	34
81	92	83.9	54.2	Missing	45.1	46.6	40.0	40.3	39.1	45.7	48.5	58.3	55.3	50.6	38.48	33
82	100	68.8	65.7	67.6	59.2	70.1	56.7	54.1	50.5	51.9	59.1	59.2	55.0	59.8	45.47	36
83	100	73.8	81.9	85.7	87.8	100.4	91.3	88.4	69.9	69.6	82.6	84.6	73.5	82.5	62.67	33
84	92	76.5	60.6	68.0	56.1	41.5	36.0	60.6	52.3	66.3	48.2	69.2	Missing	57.8	43.89	38
85	100	65.1	57.3	72.8	64.2	51.5	50.4	54.9	45.1	55.1	61.2	67.4	61.9	58.9	44.77	38
86	100	41.5	49.0	37.4	41.0	37.5	28.8	34.5	33.9	39.2	42.4	38.5	44.1	39.0	29.63	29

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2018 % ^b	Annual Mean NO2 Jan	Annual Mean NO2 Feb	Annual Mean NO2 March	Annual Mean NO2 Apr	Annual Mean NO2 May	Annual Mean NO2 June	Annual Mean NO2 Jul	Annual Mean NO2 Aug	Annual Mean NO2 Sept	Annual Mean NO2 Oct	Annual Mean NO2 Nov	Annual Mean NO2 Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^c
87	92	Missing	63.0	59.8	62.9	63.4	69.0	64.4	61.5	66.8	77.9	61.9	61.0	64.7	49.17	33
88	92	Missing	43.3	44.3	35.2	34.4	28.5	29.1	30.1	34.6	39.0	41.2	40.3	36.4	27.64	27
89	83	43.6	42.3	45.3	33.7	27.8	25.6	29.3	27.2	31.5	Missing	Missing	41.0	34.7	26.39	-
90	100	39.7	35.3	42.0	36.6	28.1	26.4	25.4	24.6	29.0	28.5	37.6	34.2	32.3	24.54	-

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

^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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

Note blank entries in ‘concentration at nearest receptor’ means no nearby receptor

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

^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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%