London Borough of Brent Air Quality Annual Status Report for 2020

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This report provides a detailed overview of air quality in LB Brent during 2020. 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
AQO	Air Quality Objective
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 Standards and Objectives

Pollutant	Standard / Objective (UK)	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
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})	40 µg m^{-3}	Annual mean	31 Dec 2004
Particles ($PM_{2.5}$)	25 µg m^{-3}	Annual mean	2020
Particles ($PM_{2.5}$)	Target of 15% reduction in concentration at urban background locations	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
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

Notes:

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

1. Air Quality Monitoring

The London Borough of Brent operates three automatic monitoring stations at roadside (R) sites (BT4, BT6 and BT8) and one at an industrial (I) site (BT5). The IKEA site (BT4)[2] measures NO_2, PM_{10} (by TEOM, Tapered Element Oscillating Microbalances) and $PM_{2.5}$ (by TEOM); the Neasden Lane site (BT5) measures NO_2 and PM_{10} (by TEOM); the John Keeble Primary School site (BT6) measures NO_2 and PM_{10} (by TEOM); and Ark Franklin Primary Academy site (BT8) measures NO_2, PM_{10} and $PM_{2.5}$ (both by TEOM); All monitoring sites are within the Council's AQMA. The LB of Brent monitors annual mean NO_2 concentrations using passive diffusion tubes at 45 sites throughout the Borough. In 2020, diffusion tubes were setup to include 43 roadside locations and 2 background locations (site ID 33A and 71).

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2020

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA? If so, which AQMA?	Distance to Relevant Exposure (m)	Distance to Kerb of Nearest Road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
BT4	IKEA	520866	185169	Roadside	Y	38	2	2.5	NO_2, PM_{10}, $PM_{2.5}$, O_3	Chemiluminescent; TEOM
BT5	Neasden Lane	521511	185204	Industrial	Y	35	4	2.5	NO_2, PM_{10}	Chemiluminescent, TEOM
BT6	John Keeble Primary School	521619	183554	Roadside	Y	10	2	2.5	NO_2, PM_{10}	Chemiluminescent, TEOM
BT8	Ark Franklin Primary Academy	523716	183030	Roadside	Y	10	2	2.5	NO_2, PM_{10}, $PM_{2.5}$	Chemiluminescent, TEOM

Table C. Details of Non-Automatic Monitoring Sites for 2020

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA? If so, which AQMA?	Distance to Relevant Exposure (m)	Distance to Kerb of Nearest Road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Tube co-located with an automatic monitor. (Y/N)
1	Junc. Kenton Rd/Upton Gds	516929	188560	Roadside	Y	15	2	1.5	NO_2	N
2	Harrow Rd/Sudbury Court Drive	515793	186042	Roadside	Y	10	1	1.5	NO_2	N
4	Junc. Shaftsbury Ave/Woodcock Hill	518240	187747	Roadside	N	6	1	1.5	NO_2	N
7	Junc. Bridgewater Rd/Ealing Rd	517942	183721	Roadside	Y	17	2	1.5	NO_2	N
9	Junc. East Lane/Wembley Hill Rd	518499	186168	Roadside	Y	20	2	1.5	NO_2	N
17	Junc. Old Church Lane/Neasden Lane	520480	186537	Roadside	Y	4	1	1.5	NO_2	N
21a	Central Way, Park Royal	520077	182853	Roadside	Y	4	1	1.5	NO_2	N
22	Junc. Kingsbury Rd/Edgware Rd	521447	188730	Roadside	Y	5	1	1.5	NO_2	N
23	Junc. North Circular Rd/Chartley Ave	521213	186125	Roadside	Y	10	2	1.5	NO_2	N
26	Junc. Dudden Hill Lane/High Rd	522191	184821	Roadside	Y	19	1	1.5	NO_2	N
29	Junc. Dollis Hill Lane/Cricklewood B/W	523191	186571	Roadside	Y	12	1	1.5	NO_2	N
30	Chichele Rd near Melrose Ave	523663	185353	Roadside	Y	10	1	1.5	NO_2	N
33a	Fryent Country Park	519572	187691	UrbanBG	Y	50	1	1.5	NO_2	N
41	R/O 246 Neasden Lane	521455	185920	Roadside	Y	3	4	1.5	NO_2	N
48	Kilburn Park Rd Junc. Shirland Rd	525196	182517	Roadside	Y	2	1	1.5	NO_2	N
52	IKEA hut North Circular Rd	520874	185173	Roadside	Y	40	1	1.5	NO_2	Y
53	Junc. Ealing Rd/High Road	518026	185028	Roadside	Y	15	1	1.5	NO_2	N
54	Junc. Ealing Rd/Riverside Gds	518236	183207	Roadside	Y	4	1	1.5	NO_2	N
60	Junc. Bridge Rd/Forty Ave	519475	186557	Roadside	Y	35	1	2	NO_2	N
61	Forty Lane F/O Old Brent Town hall	519762	186600	Roadside	Y	40	1	2	NO_2	N
62	Junc. Kings Drive/Forty Lane	519667	186604	Roadside	Y	40	1	2.5	NO_2	N
63	King's Drive opp no 37	519703	187007	Roadside	N	7	1	2.5	NO_2	N
64	The Paddocks opp no 9	519824	186715	Roadside	Y	20	1	2.1	NO_2	N
65	Junc. Aybone Rd/ 517 NCR	521313	186529	Roadside	Y	7	1	2.2	NO_2	N
66	Junc. Heather Rd/Tanfield Ave	521912	186514	Roadside	Y	20	1	2.1	NO_2	N
67	Dawport Road f/o 24	521651	186611	Roadside	Y	5	1	2.1	NO_2	N
68	Junc. Randall Ave/next to 730 NCR	521448	186626	Roadside	Y	5	1	2.5	NO_2	N

69	F/O 65 Wrentham Ave	523782	183527	Roadside	Y	8	1	2.1	NO_2	N
70	Junc. Peploe Rd / f/o 72 Chevening Rd	523828	183338	Roadside	Y	5	1	2.1	NO_2	N
71	Queens Park rec area on CCTV post	524179	183232	UrbanBG	Y	25	45	2.1	NO_2	N
72	f/o 139 Harvist Road	524142	183120	Roadside	Y	5	1	2.1	NO_2	N
73	Jct Harvist Rd/Salisbury Rd opp Police St	524607	183267	Roadside	Y	3	1	2.1	NO_2	N
74	Jct Salisbury Rd/Chevening Rd	524283	183882	Roadside	Y	5	3	2.1	NO_2	N
75	Jct Woodcock Hill	517499	187778	Roadside	Y	15	3	2.1	NO_2	N
76	Lindsay Dr Jct Branksome Way	518430	188406	Roadside	N	5	1	2.1	NO_2	N
77	Beverly Dr Jct Sandhurst Rd	519100	189827	Roadside	N	11	1	2.1	NO_2	N
78	Jct Harrow Rd/Watford Rd	516721	185478	Roadside	Y	12	2	2.1	NO_2	N
79	Ark Franklin AQ station	523721	183008	Roadside	Y	10	2	1.5	NO_2	Y
BRT42	Police St, Craven Park	521131	183995	Roadside	Y	3	3	1.5	NO_2	N
BRT43	Pitfield Way	520242	184541	Roadside	Y	20	2	1.5	NO_2	N
BRT53	High Rd Wembley	518303	185181	Roadside	Y	4	0.5	1.5	NO_2	N
BRT55	High Street Harlesden	521743	183361	Roadside	Y	3	0.5	1.5	NO_2	N
BRT56	Chamberlayne Road	523635	183153	Roadside	Y	15	0.5	1.5	NO_2	N
BRT57	Kilburn Bridge	525419	183612	Roadside	Y	8	0.5	1.5	NO_2	N
BRT58	51 High Road, Willesden	523031	184655	Roadside	Y	2	0.5	1.5	NO_2	N

1.2 Comparison of Monitoring Results with AQOs

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

Table D. Annual Mean NO_2 Ratified, Bias-adjusted, and Distance Corrected (where applicable) Monitoring Results

Site ID	Site type	Valid data capture for monitoring period %[(a)]	Valid data capture 2020 %[(b)]	2014	2015	2016	2017	2018	2019	2020
BT4	Automatic	91	91	**79.7**	**41.0**	**76**	**72**	**71**	**63**	**49**
BT5	Automatic	99	99	N/A	**38.8**	**44**	**45**	**38**	*38*	29
BT6	Automatic	99	99	N/A	N/A	**45**	**45**	**39**	*37*	29
BT8	Automatic	99	99	N/A	N/A	N/A	**54**	**46**	**41**	29
1	Diffusion Tube	100	100	**41.9**	**40.1**	**41.1**	36.2	LD	30.3	28.4
2	Diffusion Tube	100	100	**46.1**	**41.7**	**51.0**	**41.8**	LD	30.9	27.4
4	Diffusion Tube	100	100	**47.9**	**40.3**	**51.1**	**42.7**	LD	30.8	28.9
7	Diffusion Tube	100	85	**69.4**	**62.3**	**71.6**	**62.8**	LD	*39.5*	29.3
9	Diffusion Tube	100	85	**53.9**	**47.3**	**57.1**	**49.9**	LD	32.8	35.1
17	Diffusion Tube	100	100	**59.6**	**55.4**	**67.5**	**55.7**	LD	**42.7**	31.7
21a	Diffusion Tube	100	92	**55.1**	**48.7**	**55.1**	**46.9**	LD	*37.2*	30.6

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2020 %[b]	2014	2015	2016	2017	2018	2019	2020
22	Diffusion Tube	100	100	**64.7**	**56.7**	**65.1**	**58.1**	LD	*38.1*	31.1
23	Diffusion Tube	100	100	**108.7**	**93.2**	**115.4**	**93.9**	LD	**59.7**	**44.7**
26	Diffusion Tube	100	85	**68.9**	**63.9**	**73.7**	**61.9**	LD	30.4	25.8
29	Diffusion Tube	100	75	**82.7**	**74.1**	**86.0**	**55.6**	LD	35.3	26.6
30	Diffusion Tube	100	100	**58.6**	**52.6**	**62.6**	**51.3**	LD	31.2	26.2
33a	Diffusion Tube	100	75	26.1	22.9	29.1	22.2	LD	24.3	26.0
41	Diffusion Tube	100	100	**65.7**	**60.7**	**74.4**	**60.1**	LD	*39.3*	*39.5*
48	Diffusion Tube	100	100	**63.1**	**56.5**	**71.6**	**59.9**	LD	**40.6**	30.1
52	Diffusion Tube	100	92	**103.4**	**87.9**	**102.1**	**86.6**	LD	*37.7*	30.3
53	Diffusion Tube	100	85	**70.0**	**66.6**	**83.85**	**68.3**	LD	**44.8**	34.5
54	Diffusion Tube	100	85	**50.3**	**47.1**	**52.5**	**46.0**	LD	*37.6*	27.1
60	Diffusion Tube	100	85	N/A	N/A	N/A	N/A	LD	30.1	33.1
61	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	33.7	28.9
62	Diffusion Tube	100	85	N/A	N/A	N/A	N/A	LD	27.5	26.6
63	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	26.0	19.0
64	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	33.5	23.0

Site ID	Site type	Valid data capture for monitoring period %[(a)]	Valid data capture 2020 %[(b)]	2014	2015	2016	2017	2018	2019	2020
65	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	35.9	33.7
66	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	34.6	25.3
67	Diffusion Tube	100	92	N/A	N/A	N/A	N/A	LD	33.4	24.1
68	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	37.6	32.4
69	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	34.5	21.6
70	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	33.0	21.5
71	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	30.2	20.1
72	Diffusion Tube	100	92	N/A	N/A	N/A	N/A	LD	35.6	24.9
73	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	34.6	26.0
74	Diffusion Tube	100	92	N/A	N/A	N/A	N/A	LD	31.4	22.4
75	Diffusion Tube	100	92	N/A	N/A	N/A	N/A	LD	31.4	19.5
76	Diffusion Tube	100	85	N/A	N/A	N/A	N/A	LD	25.9	21.8
77	Diffusion Tube	100	85	N/A	N/A	N/A	N/A	LD	31.2	23.0
78	Diffusion Tube	100	100	N/A	N/A	N/A	N/A	LD	33.6	30.7
79	Diffusion Tube	100	85	N/A	N/A	N/A	N/A	LD	34.2	28.6
BRT42	Diffusion Tube	100	100	**47.7**	**41.8**	**49.8**	**42.4**	LD	*37.7*	26.8

Site ID	Site type	Valid data capture for monitoring period %[(a)]	Valid data capture 2020 %[(b)]	2014	2015	2016	2017	2018	2019	2020
BRT43	Diffusion Tube	100	100	**72.7**	**80.3**	**80.7**	**73.7**	LD	**42.6**	35.2
BRT53	Diffusion Tube	100	100	**77.1**	**75.7**	**80.8**	**64.9**	LD	**49.8**	**54.1**
BRT55	Diffusion Tube	100	100	**76.2**	**73.5**	**91.8**	**76.7**	LD	**67.1**	35.2
BRT56	Diffusion Tube	100	85	**67.7**	**56.8**	**69.4**	**58.3**	LD	**41.3**	30.0
BRT57	Diffusion tube	100	100	**86.2**	**85.3**	**84.2**	**64.4**	LD	**41.7**	33.8
BRT58	Diffusion Tube	100	100	**65.6**	**58.1**	**65.7**	**52.7**	LD	**41.7**	35.5

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 33%.

Results have been distance corrected where applicable.

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

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

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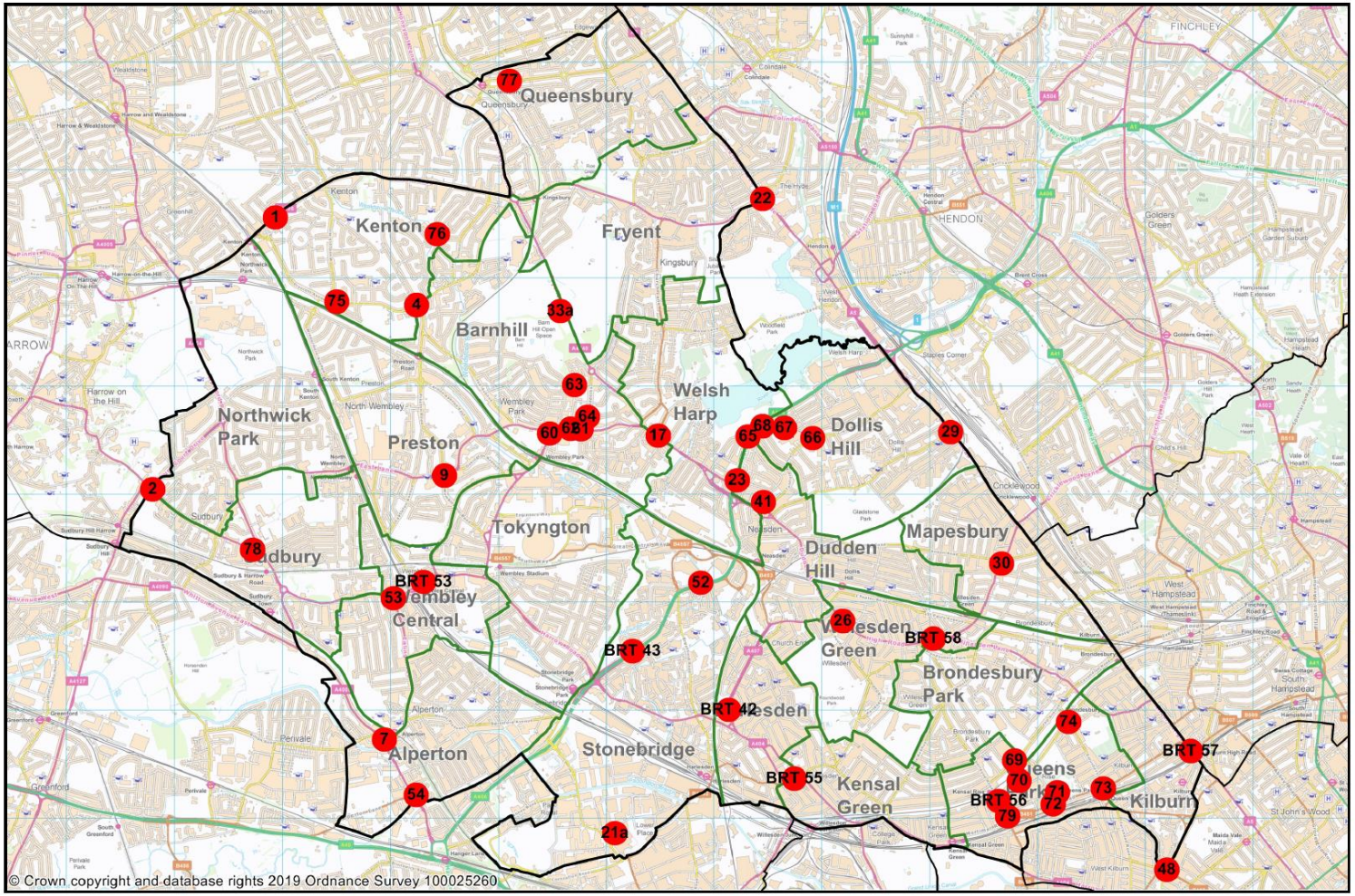
Brent NO2 Diffusion Tube Locations 2019



16 May 2019 1:47000 0 500 1000 metres Brent

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

Site ID	Valid data capture for monitoring period %([a])	Valid data capture 2020 %([b])	2014	2015	2016	2017	2018	2019	2020
BT4	91	91	10	**0**	**33**	**33**	1	9	0
BT5	99	99	-N/A	0	**25**	17	1	2	0
BT6	99	99	N/A	N/A	0	0	0	0	0
BT8	99	99	N/A	N/A	N/A	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. Annual Mean PM_{10} Automatic Monitoring Results (µg m^{-3})

Site ID	Valid data capture for monitoring period %([a])	Valid data capture 2020 %([b])	2014	2015	2016	2017	2018	2019	2020
BT4	91	91	29	29	33	33	32	30	26
BT5	98	98	24	31	31	30	28	26	21
BT6	97	97	21	17	20	20	20	19	19
BT8	89	89	N/A	N/A	N/A	19	19	18	17

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 33%.

(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%).

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

Site ID	Valid data capture for monitoring period %[(a)]	Valid data capture 2020 %[(b)]	2014	2015	2016	2017	2018	2019	2020
BT4	91	91	26	23	**45**	**41**	**37**	29	20
BT5	98	98	5	15	**37**	29	22	11	3
BT6	97	97	1	1	9	20	1	4	4
BT8	89	89	N/A	N/A-	N/A	0	1	**1**	1

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%).

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 2020 %[b]	2014	2015	2016	2017	2018	2019	2020
BT4	23	23	22.9	20.4	23.7	21.4	20	20.7	13
BT8 [c]	97	97	N/A	N/A	N/A	14.7	14.6	18.9	13.7

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

Exceedances of the $PM_{2.5}$ annual mean AQO of 25 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 33%.

(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) Not reference equivalent

2. Impact of COVID-19 upon LAQM

The COVID-19 has had a significant impact on the Council's resources.

However, after securing funding, the focus has been on delivering our active travel, electric vehicle charging point (EVCPs) and cycle storage programmes, as outlined in Table J.

The council secured funding from the TfL Streetspace scheme for the implementation of a series of Low Traffic Neighbourhoods and School Streets with thirty participating schools. This has been a significant opportunity to work with the local community to encourage active travel and a green recovery from the pandemic.

Impact of the COVID-19 "Lockdown" on air pollution in Brent

The weekday diurnal profiles of NO_2 at Brent's four automatic monitoring site (figures 1 to 4) and of PM10 and PM2.5 at BT4 (figure 5 and 6 respectively) illustrate the impact that the pandemic has had on air pollution concentrations in Brent. As would be expected, the largest decrease in NO_2 at the sites corresponds with traditional commuter times (8 am and 7pm), reflecting decreased traffic as a result of travel restrictions.

These changes cannot be completely attributed to the lockdown as they have not been corrected for meteorological conditions or for the impact of policies that were implemented in that time. However, the data does serve to illustrate the impact on concentrations during this unprecedented time.

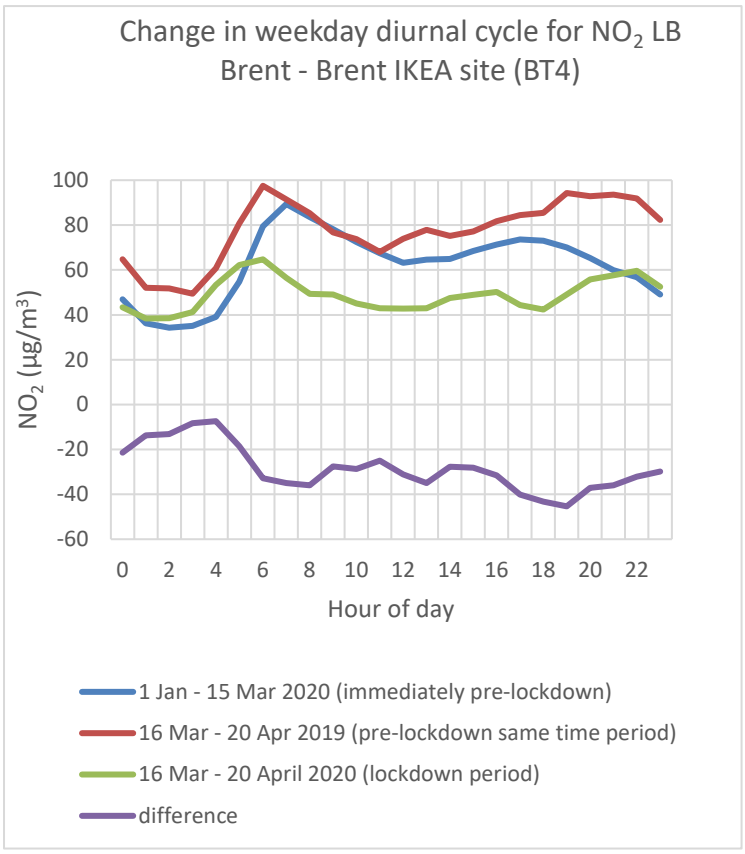

Figure 1 (above). Change in weekday diurnal cycle for NO2 LB Brent - Brent IKEA site (BT4)

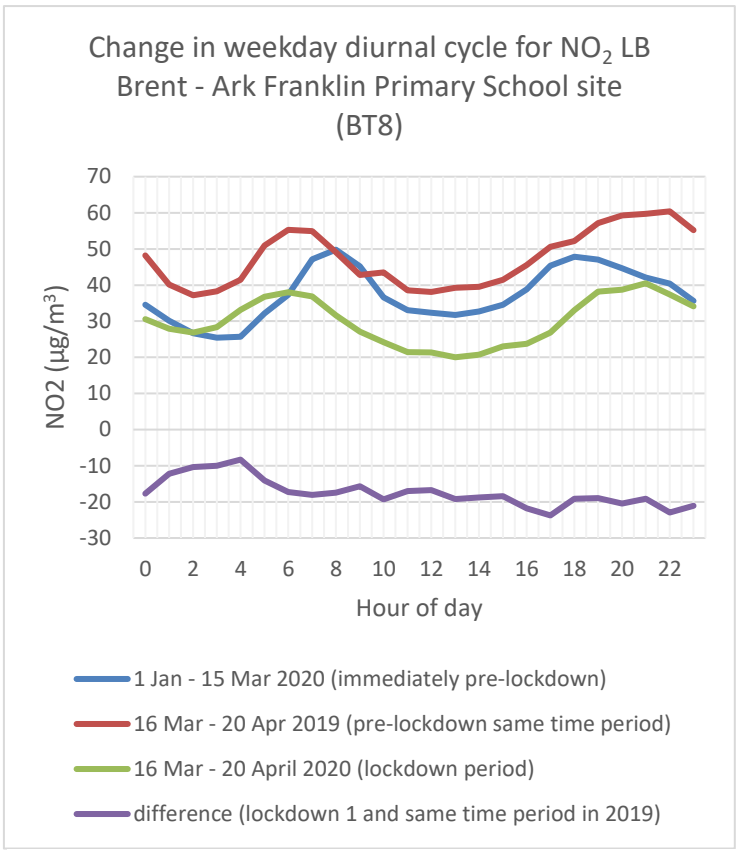

Figure 2. (above) Change in weekday diurnal cycle for NO2 LB Brent – Ark Franklin Primary School site (BT8)

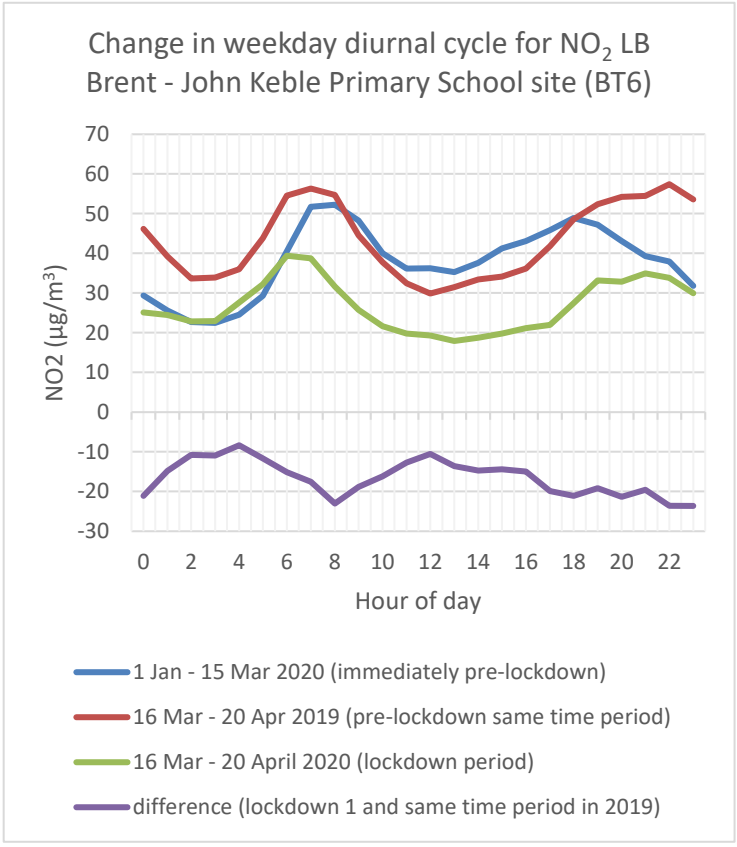

Figure 3. Change in weekday diurnal cycle for NO2 LB Brent – John Keble Primary School (BT6)

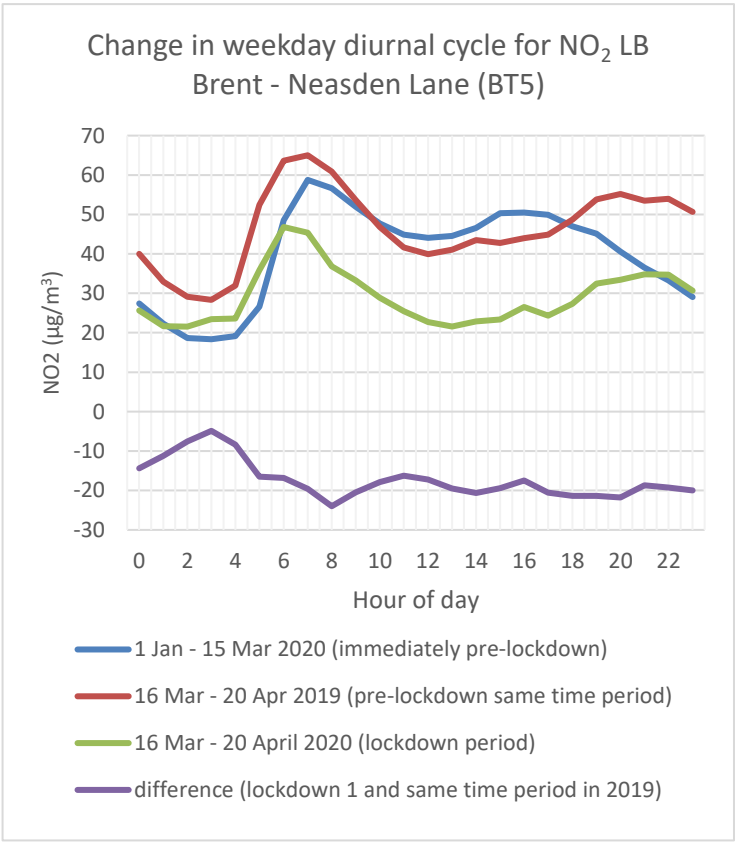

Figure 4. Change in weekday diurnal cycle for NO2 LB Brent – Neasden Lane site (BT5)

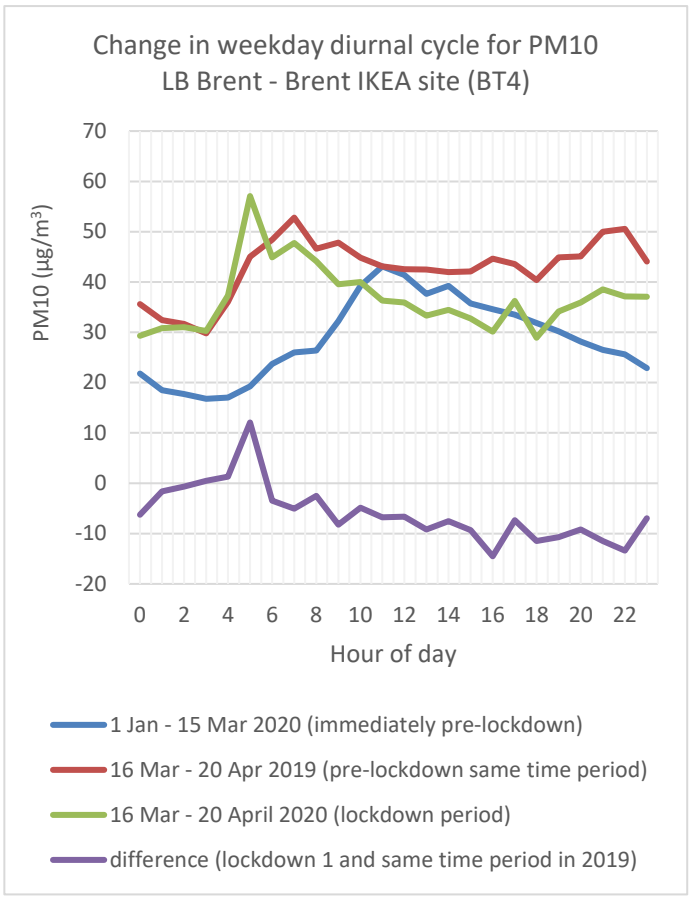

Figure 5.Change in weekday diurnal cycle for PM10 LB Brent Brent IKEA site (BT4)

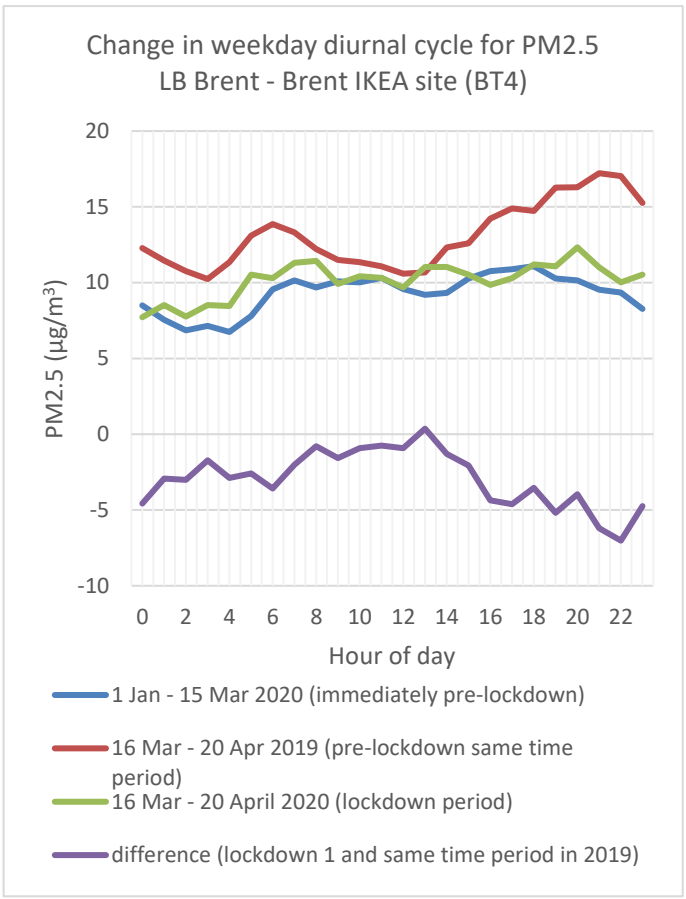

Figure 6..Change in weekday diurnal cycle for PM10 LB Brent Brent IKEA site (BT4)

3. Action to Improve Air Quality

3.1 Air Quality Action Plan Progress

Table J provides a brief summary of Brent's progress against the Air Quality Action Plan, showing progress made this year. New projects, which commenced in 2020, are also included.

Table J. Delivery of Air Quality Action Plan Measures

Action ID	Theme	Action	2020 update

1.1	Monitoring and other core statutory duties	Maintaining and where possible expanding monitoring networks, and fulfilling other statutory duties.	**Automatic monitoring**
			• Four automatic monitoring stations (three are roadside and one is industrial).
			  ○ Of these, all four measure NO_2 and PM_{10}, two measure $PM_{2.5}$ and one measures O_3.
			  ○ All automatic stations were calibrated fortnightly and audited every six months during 2020
			  ○ All automatic stations were serviced twice a year and any breakdown responded within 48 hrs to maintain high data capture rate. BT4 had one service in 2020, as it was new equipment.
			• The Brent IKEA automatic monitoring station (BT4) underwent a significant upgrade during 2020 to modernise and replace aging, unreliable equipment. This site is situated next to the North Circular Road and will be important to capture the impact of the ULEZ. The upgrade provided a renewed power supply, a solid base for a new enclosure to house the equipment, analysing equipment, which captures data to the current standards, and a new communications device meaning we can continue to retain good, reliable data capture and future proofing the site for years to come.
			Diffusion tube monitoring

Action ID	Theme	Action	2020 update

	Monitoring and other core statutory duties	Maintaining and where possible expanding monitoring networks, and fulfilling other statutory duties (continued)	• Brent expanded its diffusion tube network from twenty-seven to forty-five in 2018/2019.
			
			• These existing sites have been retained and maintained throughout 2020 and will be for 2021
			  ○ All diffusion tubes are analysed in UKAS accredited labs and data is bias corrected using national studies.
			
			• In 2020 a further 76 tubes were deployed for monitoring of School Streets (36 tubes outside schools) and Low Traffic Neighbourhood schemes (39 tubes)
			
			Sharing data
			• Results of the monitoring stations are collated in the Annual Status Report which is made available on Brent's Air Quality section of the website:
			https://www.brent.gov.uk/services-for-residents/environment/air-quality/air-quality-reports/
			• LB Brent holds membership of the London Air Quality Network, which means our automatic monitoring site data, is included in periodic LAQN reporting mechanisms.
			
			https://www.londonair.org.uk/london/asp/publicbulletin.asp?region=0&bulletin=hourly&site=&lat=51.5585&lon=-0.267803&Species=All&laEdge=&VenueCode=&zoom=11&WhoBulletin=N
			
			Air Quality Sensor trials
			• Brent are proactively seeking ways to further extend the monitoring network:
			  ○ Low-cost sensor trials scheduled for summer 2021 with several small sensors being co-located at Brent automatic monitoring stations for comparison.
			
			  ○ AirNode sensor deployed in 2020 to measure impact of pedestrianisation scheme at Oaklands Rd , Cricklewood https://www.cricklewood.net/oaklands-road-construction-update/
			
			  ○ Took part in GLA's School Streets monitoring using small AQ sensors.

Action ID	Theme	Action	2020 update
			https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/school-streets-air-quality-study
2.1	Emissions from developments and buildings	Ensuring emissions from construction are minimised.	**Construction dust** • Dust management plans required for all major construction sites. • Planning conditions required by Environment monitoring team where dust pollution likely. • Brent responds to all dust/particulate pollution complaints • Enforcement under nuisance control legislations or planning enforcement. • Member of the London Low Emission Construction Partnership (LLECP) http://www.clec.uk/about/about-project/llecp-partners
2.2	Emissions from developments and buildings	Ensuring enforcement of non-road mobile machinery (NRMM) air quality policies	**NRMM enforcement** • Brent is a member of the MAQF pan-London NRMM project 22 audits were conducted between Jan 2020 – March 2021 • The audited sites achieved 100% compliance, with four sites being self-compliant and six sites becoming compliant after the recommendations had been put into place.
2.3	Emissions from developments and buildings	Reducing emissions from CHP Reducing emissions from CHP (continued)	**CHP emissions** • Any development proposal with planned CHPs are reviewed by the environmental monitoring team to confirm low emission status. • Sustainability checklist used to encourage uptake of greener energy sources. https://www.brent.gov.uk/media/154774/Sustainability%20Checklist%20v4%20Oct2011.xlsx
2.4	Emissions from developments and buildings	Enforce Air Quality Neutral policy	• Planning cases are assessed for air quality issues with Local Plan policies addressing a range of construction and development emissions.

Action ID	Theme	Action	2020 update
	Emissions from developments and buildings	Enforce Air Quality Neutral policy	• Brent currently requires major developments (10+ dwellings or 1000sq.m. +) within Growth Areas and Air Quality Focus Areas to be Air Quality Neutral (assessed with Air Quality Impact Assessments). When adopted in 2021 the new Brent Local Plan will require an Air Quality Positive approach. • All major developments are reviewed at the pre-application stage as well as during. Mitigation or modifications of plans are required where poor air quality or high exposure levels are highlighted. https://www.brent.gov.uk/services-for-residents/planning-and-building-control/before-you-make-a-planning-application/planning-pre-application-advice-service/ https://www.brent.gov.uk/services-for-residents/planning-and-building-control/planning-policy/shaping-brent-s-future-together/ https://www.brent.gov.uk/services-for-residents/planning-and-building-control/planning-policy/current-planning-policy-consultations/

2.5	Emissions from developments and buildings	Ensuring adequate, appropriate, and well-located green space and infrastructure is included in new and existing developments	Brent Council's draft Local Plan has been subject to examination hearing sessions and it is likely that the Inspectors' report will be received Summer 2021 with the Council adopting the Plan in Autumn 2021.
			
			Green space in new developments
			
			• Draft Local Plan 2021 includes policies to promote tree planting and secure new open space.
			  ○ 40% of each residential development site needs to be capable of providing bio-diverse environments (Urban Greening Factor 0.4)
			  ○ This is an extension of the London Plan, which only stipulates the Urban Greening Factor for larger developments.
			  ○ Minimum open space requirements, e.g. number of Local Parks set out for new Growth Areas

Action ID	Theme	Action	2020 update
2.6	Emissions from developments and buildings	Declaring Smoke Control Zones and ensuring they are fully promoted and enforced	• The whole of Brent Borough is a smoke control zone • Any complaints or reports related to violation of this is actioned by the Regulatory Service team under Clean Air Act • In 2020, 0 complaints logged. • Standard practice is that during any complaint/ investigatory visits, environmental health officers advise and direct operators/residents/retailers. • The council issues guidance to assist businesses and residents to make informed choices about the least polluting fuels and equipment they can use. Brent Council have joined the GLA Wood burning working group to collaborate on efforts to ensure the revised regulations are well communicated. • Guidance can be found at this URL under the "Smoke control area header: https://www.brent.gov.uk/services-for-residents/environment/air-quality/air-quality-management-area/
2.7	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds	In July 2019, Brent Council declared a Climate and Ecological Emergency and in April 2021 Brent's Cabinet approved their Climate and Ecological Emergency Strategy which committed to: • Aim for carbon neutrality by 2030. • Achieve zero carbon in Council buildings by 2030. https://www.brent.gov.uk/council-news/july-2019/climate-emergency-declared-by-brent/ https://www.brent.gov.uk/your-community/climate-emergency/our-response-to-the-climate-emergency/ One of the five key themes within this strategy is Homes, Buildings and the Built Environment. This holds a long-term objective of: 'By 2030, as many homes and buildings in the borough as possible will be more energy efficient, be powered by renewable sources and be resilient to future adverse weather events caused by climate change – and we will do all in our gift to achieve an average rating of Energy Performance Certificate B in directly owned council stock".

Action ID	Theme	Action	2020 update
	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds. (continued)	**In the first year of delivery (2021-2022), Brent are committed to:** • Develop a plan for the council to achieve net zero carbon emissions from the council's own estate and operations by 2030 • Deliver the first year of the tower block works programme, which will include retrofitting work to improve the energy efficiency of properties within at least three council tower blocks – beginning work to our target of an average of EPC B in our housing stock by 2030. • Commission a detailed assessment of our own housing to identify the energy efficiency measures required and the potential costs for housing types, with consideration across all housing tenures. • Undertake a number of retrofit pilots to improve the energy efficiency of a number of specific void properties in the council's own stock. • We will launch the Brent Climate Offset Fund to incentivise domestic and non-domestic energy efficiency and renewable energy measures **Projects:** **1. Launch of Carbon Offset Fund** • Brent has recruited a planning group of between 30-60 residents to take part in a planning group to set the criteria for launch of applications for the borough's Carbon Offset Fund. • This is the council's first participatory budgeting process with a view to be rolled out to other grant schemes if it is successful. • The applications for carbon reduction projects will be judged at a community decision day in summer/autumn 2021.

Action ID	Theme	Action	2020 update
	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds. (continued)	**2. <u>Solar Together (RE:NEW scheme)</u>** • Brent participates in the Mayor of London's Solar Together project, helping residents install solar panels. • In phases 1-3 Brent received a total of 1962 registration and 95 registrations • Phase 3 was due for completion in 2020 but was disrupted due to COVID – this is being continued over 2021. Across phases 1-3, there will have been 95 installations with a resultant CO_2 saving of 62.7 tonnes. • Over 2021, phase 4 is being delivered. To date, 44 installations are planned and 50+ are expected in this phase (with 740 registrations to date). https://www.brent.gov.uk/solartogether **3. <u>EcoFurb</u>** • Brent participates in EcoFurb, encouraging residents to refurbish homes to a high standard of energy efficiency. **4. <u>Warmer Homes Advice Service</u>** • Brent participates in this scheme, which provides up to 125 Green Doctor visits in Brent. The home visit service was disrupted due to Covid but a telephone service was set up. • Brent are part of a West London Consortia of Boroughs (led by Ealing) who have been awarded funding under the Green Homes Grant - Local Authority Delivery to support refurbishment of homes to improve their energy rating. Over 2021, the focus will be on delivering this scheme. • The scheme is open to landlords or homeowners of E, F or G rated homes in Brent, Ealing, Hammersmith & Fulham, Harrow, Hounslow, Lambeth and Kensington and Chelsea. To be eligible, the total household income must be less than £30k/year (including benefits). The scheme is a quality assured fully managed service providing a whole house plan rather than just single measures. Each property will have an energy survey and measures proposed as part of the scheme.

Action ID	Theme	Action	2020 update
	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds. (continued)	https://www.brent.gov.uk/your-community/brent-going-green/in-your-home/home-insulation/ **5. South Kilburn - neighbourhood heating** • A district energy network is being developed in South Kilburn to reduce total emissions. The aim is to be able to provide heating to over 1000 homes in south Kilburn from a low emission source. • Over 2019/2020, a low carbon hear source was identified and officers are now exploring commercial viability. https://www.brent.gov.uk/your-community/regeneration/south-kilburn-regeneration/the-development-process/neighbourhood-heating-system/ **Energy emissions and new developments:** • Brent follows the London plan • All major residential developments have a zero carbon target with a minimum requirement of 35% over building regulations. • From January 2019, major developments were required to assess their strategy against SAP10 emission standards (electricity emissions are lower than building regulations requirements). • Most major developments have zero local emission systems such as air source heat pumps. • Building regulations regulate emissions from plant, for both new build and where existing supplies are updated. These are low or even zero emission at source. **Council Building policy**

Action ID	Theme	Action	2020 update
	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds. (continued)	As part of Brent's Sustainable Procurement Policy, from 2021 the council have committed to prioritise non-combustion based heating systems wherever possible when building new homes. **Energy Efficiency Works in Brent Corporate Buildings** • Energy audit surveys have been completed on 16 of Brent's largest retained corporate buildings with the highest energy consumption, giving detailed recommendations at each site for energy efficiency measures upgrades works, each with forecasts of energy savings and costs for installation and implementation. • Brent's building stock offers significant potential for improvement in energy efficiency. A major project in 2021-22 will improve the energy efficiency of the selected Brent Council buildings, creating energy and cost savings to the council. • The project will be funded using £3.2m of grant funding won through the Public Sector Decarbonisation Scheme (PSDS), via the Government department BEIS (Department for Business, Energy & Industrial Strategy), and administered by Salix Finance, a non-departmental public body. • The RE:FIT procurement scheme will be used for the majority of buildings to deliver projects with verifiable energy savings. • The project proposal includes a range of hard measures such as insulation of walls, floors, roofs and pipes, improved glazing, and a small number of heat pumps, and other measures such as intelligent controls and improved sub-metering. • Forecast annual savings from all the measures in the application total £174k per annum. This figure is subject to improved accuracy of forecast in an Investment Grade Proposal.

Action ID	Theme	Action	2020 update
			• The works should be complete by September 2021 where possible, with the final date for completion of the works by March 2022
2.8	Emissions from developments and buildings	Master planning and redevelopment areas aligned with Air Quality Positive and Healthy Streets approaches	**Masterplanning** • Growth areas and most major site allocations require a masterplanning approach. This will promote high quality environments that provide good mix of uses and quality public realm to reduce the need to travel and support more sustainable forms of travel. • Over 2019, Brent's draft Local Plan 2020 was developed and put to public consultation. Over 2020, the draft Local Plan has been subject to examination hearing sessions and it is likely that the Inspectors' report will be received summer 2021 with the Council adopting the Plan in autumn 2021. • Brent's Local Plan 2021 conforms to the new London Plan. Planning guidance published in relation to the new London Plan will be complied with and incorporated into Brent's planning assessment procedures, for example the upcoming Air Quality Positive guidance. • Brent's local plan stipulates: ○ All major developments within Growth Areas and Air Quality Focus Areas to be air quality positive. This is an extension of the new London Plan. ○ All applicants complete an air quality impact assessment. Any requirements imposed require discharge of the conditions on completion. ○ All residential developments to achieve Urban Greening Factor of 0.4 ○ Healthy streets approach embedded. ○ Supporting car free development where possible ○ Major commercial development (1000 square metres or more) attaining BREEAM Excellent https://www.brent.gov.uk/services-for-residents/planning-and-building-control/planning-policy/shaping-brent-s-future-together/ https://www.brent.gov.uk/services-for-residents/planning-and-building-control/planning-policy/current-planning-policy-consultations/

Action ID	Theme	Action	2020 update
3.1	Public health and awareness raising	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans.	**Key Projects relating to Public Health:** **<u>Information sharing</u>** • In February 2021, a Health and Wellbeing virtual fair was held which featured a webinar on the topic of air pollution, sharing how residents can get more information and what they can do to help reduce their exposure. https://www.brentwellbeingfair.tv/ • Brent's Air Quality and Public Health team are collaborating to develop a plan for sharing air quality alerts to Brent's most vulnerable residents, including nurseries, supported living and GPs. **Air Quality Action Plan review and update** • Over the course of 2021/2022, the council will be reviewing and updating its Air Quality Action Plan. The Public Health team will feed into this process to ensure alignment with strategies.
3.2	Public health and awareness raising	Engagement with businesses	1) **Brent Environmental Network** • This is a network of local residents, businesses, community groups and schools. • Businesses can sign up to receive a monthly newsletter with ideas and practical tips for reducing environmental impact. Receive links to support and resources e.g. grants and funding opportunities • 22 number of businesses currently signed up https://www.brent.gov.uk/your-community/climate-emergency/community/brent-environmental-network/ **2) COVID-19 Green Recovery**

Action ID	Theme	Action	2020 update
	Public health and awareness raising	Engagement with businesses (continued)	• Webinar series “Go green to survive and thrive” delivered to 73 businesses • Recruitment of a Senior Sustainability Officer (Business and the Green Economy) • Website updated to include advice for businesses on travel, energy and waste: https://www.brent.gov.uk/your-community/climate-emergency/business/ • Toolkits for businesses that will focus on sustainability and having a green recovery are currently being written • The creation of a local ‘green business directory’ is currently being planned **3) Clean Air Day** • Promoted “Cleaner workplaces for healthier employees” talk advertised in Brent Business News with reach of 10,000 subscribers. **4) Small Business Saturday Awards 2020** • Brent held this award in 2020 which includes an award category for “Most Green Business” https://www.brent.gov.uk/council-news/november-2020/small-business-saturday-award-winners-announced/ **5) Cargo bike business engagement** • Brent has arranged for business engagement activities to take place over 2021. Following a successful bid by Brent and the Cross River Partnership (CRP), the borough will be involved in a 15-month project to improve air quality in the Willesden Green area, by helping businesses recover from COVID-19 in a sustainable way. • In addition, a pilot cargo-bike engagement scheme is being run in Harlesden town centre in spring 2021. Several businesses are being offered a subsidy to trial cargo bikes in their operations.

Action ID	Theme	Action	2020 update
	Public health and awareness raising	Engagement with businesses (continued)	**6) Other engagement** • As part of the Climate and Ecological Emergency Strategy 2021-22 delivery plan - we will promote Brent's green business base and encourage the 'greening' of Brent businesses, by promoting business advice, incentives that are available and enable local supply chain opportunities, via the Brent for Business Meet the Buyer events, local business associations, and the e-newsletter (with over 7,000 subscribers). • We are looking at developing a Green Toolkit for the different business sectors in the borough. • We are looking at developing a Green Directory for low carbon circular economy businesses in Brent. • We will support and take part in West London Alliance's COP26 Roadshow that will be put on for businesses in Brent in summer to inspire further action on businesses becoming greener ahead of the Conference of Parties meeting in November 2021.

3.3	Public health and awareness raising	Supporting a direct alerts service such as Airtext, and promotion and dissemination of high pollution alert services	Raising awareness of air pollution for the residents of Brent is a priority. The main channels for raising awareness are:
			
			1) AirTEXT
			• Brent has renewed AirTEXT subscription for 2020-2021
			  ○ In 2019/20, there were 10 new subscribers
			  ○ Brent has a total of 173 members
			  ○ Brent has been part of the AirTEXT consortium since it started.
			https://www.brent.gov.uk/services-for-residents/environment/air-quality/airtext/
			
			• **Breathe Clean project across Schools**
			
			• An extension of the Mayor of London's school air quality audit.
			• A citizen science and educational programme was commissioned and delivered at the majority of primary schools within the Borough of Brent over 2019. This project was completed and the results published here: https://www.brent.gov.uk/media/16418469/breathe-clean-full-programme-report-updated-with-no2-limit-caveat-final-1.pdf

Action ID	Theme	Action	2020 update

	Public health and awareness raising	Supporting a direct alerts service such as Airtext, and promotion and dissemination of high pollution alert services (continued)	• **Clean Air Day 2020**
			
			• Social media take over - sharing Air Quality information and advice through the day across Instagram, Twitter, Facebook:
			  ○ Video on health impacts
			  ○ AirTEXT
			  ○ Indoor air quality tips
			  ○ Clean air routes map finder
			  ○ Air pollution calculator
			• Sharing “Cleaner workplaces for healthier employees” resources in Brent business newsletter, with reach of 10,000 subscribers
			
			• **Car Free Day**
			
			• Supported TfL’s “Remagine” communications campaign to engage with local residents, schools and businesses to reimagine trips, taking the opportunity to walk and cycle where possible and linking to health benefits.
			
			https://www.brent.gov.uk/council-news/september-2020/take-the-car-free-pledge-as-you-return-to-work-with-myfreecartrip/
			
			• **Brent Council Air Quality website**
			
			• Residents can access relevant reports and data.
			https://www.brent.gov.uk/services-for-residents/environment/air-quality/
			
			• **Sharing automatic monitoring site data with King’s College London’s London Air Quality Network**

Action ID	Theme	Action	2020 update
			• Ensuring this is available to residents on the Council website. https://www.brent.gov.uk/services-for-residents/environment/air-quality/air-quality-monitoring-data/ **7) Sharing GLA Air Pollution alerts with residents** • Brent retweets GLA air pollution alerts • Alerts are also shared with all early years settings. (voluntary and independent (PVI) settings (approx. 115) and all childminders (approx. 150)) • Work is ongoing over 2021 to raise further awareness with schools, nurseries and to share alerts with supported living providers as well as GPs.

3.4	Public health and awareness raising	Encourage schools to join the TfL STARS accredited travel planning programme	• Due to the pandemic, engaging with Schools on the STARs programme was paused over the course of 2020. This was restarted in May 2021 with an interim accreditation that gold schools can apply for if theirs expires this year and they are unable to provide evidence to for a full 3-year application.
			
			• Over 2021, engagement focussed on implementation of 30 School Streets and supporting schools with COVID-19 responses e.g. providing engineering support with widening pavements, signage, promoting active travel rather than increasing car usage.
			
			STARs Accreditation (up until April 2021)
			
			• As of April 2021, of the 106 Brent non-independent schools, 36 have STARS accreditation (34%).
			• This includes:
			  ○ Two nurseries (15% of nurseries in Brent)
			  ○ Twenty-eight primary (47% of primary in Brent)
			  ○ Four secondary (29% of secondary in Brent)
			  ○ Two SEN (40 % of SEN in Brent)
			• Of the 124 schools in Brent (including independent), 37 have STARS accreditation (30%)

Action ID	Theme	Action	2020 update

	Public health and awareness raising	Encourage schools to join the TfL STARS accredited travel planning programme (continued)	• Of the schools with STARs accreditation:
			  ○ 70% have been awarded Gold
			  ○ 11% silver
			  ○ 19% Bronze
			
			Supporting STARs –Brent's programme
			
			• Brent reaches out to all schools in the Borough to put in place travel plans
			• Schools are encouraged to achieve higher levels of compliance, attain STARS accreditation or maintain existing gold accreditation.
			• Brent encourages schools to engage with this at least once in the academic year – workshops and assemblies are offered.
			  ○ The School Travel Plan covers:
			  ○ Road safety
			  ○ Air quality
			  ○ Anti-idling
			  ○ Sustainable travel,
			  ○ Modal shift.
			
			• Brent has proactively added in environmental aspects to School Travel Plans
			• Youth Travel Ambassadors and Junior Road Safety Ambassadors are encouraged so schools can continue the programme throughout the year.
			• Healthy Streets officers (TFL funded) help give assistance for the hard to engage schools.
			
			https://www.brent.gov.uk/services-for-residents/transport-and-streets/road-safety-and-transport-policy/school-travel-plans/
			
			School Climate Champions Network

Action ID	Theme	Action	2020 update
			As part of the first year delivery plan for the council's Climate and Ecological Emergency Strategy we have committed to engaging with school-led approaches on the climate emergency agenda, supporting the establishment of a professional network of climate emergency leaders/champions within schools to share best practice. The first meeting of this network met in April 2021 and included an agenda section on school signing up the STARS travel-planning programme, and encouraged schools to think about encouraging other schools to join the programme.
3.5	Public health and awareness raising	Air quality in and around schools	Significant work has been undertaken over the course of the past year to improve air quality outside schools. There has been continuous engagement to encourage active travel as schools return to school. This includes: **<u>Supporting schools with active travel</u>** • To enable school communities to feel confident walking to and from school, all schools were reviewed to see if they needed support with social distancing measures. • Provision of walking route maps ad contact through the Head Teacher's bulletin • 8 schools received temporary footway widening to enable social distancing outside the school gates • 52 schools received social distancing markings. • All schools were sent covid-19 social distancing banners **<u>Breathe Clean project across Schools</u>** • Breathe Clean is Brent Council's air quality education and monitoring programme, which served to: o Measure nitrogen dioxide (NO2) pollution concentrations; o Educate children about air quality; and o Engage with schools about what they can do to limit their exposure to air pollution and minimise their air pollution impact. • This was completed in 2020, with final air quality assemblies being delivered virtually to complete the programme.

Action ID	Theme	Action	2020 update
	Public health and awareness raising	Air quality in and around schools (continued)	• 80 schools across Brent (equates to 80% of Brent schools) participated in air quality assemblies and air quality monitoring, with positive feedback from school staff and students; • 78 schools had their air pollution monitored outdoors and inside school buildings, with a total of 572 air quality monitoring diffusion tubes installed and analysed between late 2018 and early 2020; • 157 'No Idling' signs installed across 93 schools and anti-idling engagement with drivers outside the school gates • The results of the programme can be found here: https://www.brent.gov.uk/media/16418469/breathe-clean-full-programme-report-updated-with-no2-limit-caveat-final-1.pdf • The aim is to continue the programme subject to funding. **School Streets** • The School Streets programme has expanded rapidly in Brent over 2020 through the TfL Streetspace Scheme. School Streets are schemes that prohibit vehicles, (except emergency, service and residents vehicles); from entering streets near schools during morning and afternoon peak hours. • They help make the route safer for pupils, promote walking and cycling, and cut the number of polluting cars contributing to local air pollution. It also helps the school community with social distancing • In 2020, Brent made two 'school streets' permanent, which were previously being piloted. They are enforced using CCTV cameras with Automated Number Plate Recognition (ANPR) technology. • Thirty additional schools are also now participating in pilot School Streets schemes. These are being consulted on until 30th July 2021 after which a decision will be made whether to make them permanent or not. • A report from GLA finds that School Streets can result in up to 23% reduction in NO2.

Action ID	Theme	Action	2020 update
	Public health and awareness raising	Air quality in and around schools (continued)	https://www.brent.gov.uk/services-for-residents/transport-and-streets/making-travel-safer-and-healthier/school-streets/ https://www.brent.gov.uk/council-news/august-2020/traffic-free-streets-coming-to-30-schools-in-time-for-september/ **Green Infrastructure in playgrounds** • The council are embarking on a trial project to assess the impact of installing green infrastructure on air pollution exposure at schools in the borough. • Hedera helix Woerner ivy screens will be installed in the playground of three schools in 2021. Two playgrounds border a busy road and one borders a construction site. The council wish to monitor the impact of the green screens on levels of NO2 and particulate matter in the playground to assess whether a wider rollout of the infrastructure would have benefits for school-aged children. As well as assessing air pollution exposure, the project also aims to consider wider co-benefits of the infrastructure. **Schools Climate Champions Network** • As part of the Council's Climate and Ecological Emergency Strategy, the council established a specific Schools Climate Champions Network within the overarching Brent Environmental Network. The creation of a dedicated schools network is aimed to bring together the relevant environmental leads from within all of Brent's schools as champions for the environment. It will provide a mechanism for staff collaboration on best practice, knowledge sharing and as a platform for ideas and discussion on how schools and the council can work together most effectively to achieve our aims for carbon neutrality and a greener, cleaner and more sustainable future for all. **No Idling campaign** • Brent is part of the pan-London anti-idling campaign. • Due to the pandemic, idling events were paused over 2020. Three events took place in early 2020. • "No Idling" signs were installed outside all nurseries in Brent where possible, following all schools in 2019.

Action ID	Theme	Action	2020 update
4.1	Delivery servicing and freight	Update of procurement policies to reduce pollution from logistics and servicing	• In March 2021, the council published a new Sustainable Procurement Policy in March 2021. • This ensures sustainability commitments are considered consistently as part of the procurement process, according to the following themes: - Ecology - Energy - Food - Transport - Waste and Resources - Water conservation • All quotes and tenders above £25,000 that involve deliveries/vehicles will be advised to include the relevant criteria detailed in the Brent sustainability assessment measures spreadsheet. As part of the tender evaluation process, contractors that adopt low emission vehicles such as electric, hybrid, LPG will be scored more favourably. In order to enable this, contractors must provide a list of all vehicles to be used in the first year of the contract https://lbdigitalservices.sharepoint.com/sites/intranet/resources/procurement/Pages/Site%20pages/sustainability.aspx • Additionally, a Fleet Standard is currently being developed. **Example procurement activities with aim of reducing emissions:** • New Office Supplies contract with Staples awarded May 20 has reduced deliveries to the Civic Centre (from 5 day per week to 2 days per week). • New car club tender to commence in June 2021. Current fleet is a mixture of petrol and hybrid. New fleet will be 100% electric and hybrid. Currently, there are 22 vehicle (5 are hybrids and 17 petrol).
4.2	Delivery servicing and freight	Reducing emissions from deliveries to local	**1) E-cargo bike pilot** • Harlesden pilot planned for several organisation for Spring/Sumer 2021

Action ID	Theme	Action	2020 update
		businesses and residents	• Brent providing subsidy to enable organisations trial cargo bikes at no cost. **2) Willesden Green Clean Air Village project** in partnership with Cross River Partnership – business engagement programme focussing on reducing emissions from deliveries over the 15 months...
5.1	Borough Fleet	Reducing emissions from council fleets	In response to the climate and ecological emergency, Brent have committed to develop a plan to achieve net zero carbon for the Council's own estate and operations by 2030. The Council is actively exploring opportunities for reducing emissions from its activities: • Through the development of a new Sustainable Procurement Policy, we will aspire to review and replace our current fleet with low emission models over the next ten years. • Additionally, the Council is developing a Staff Travel Plan to support Council staff in reducing car usage and adopting active modes of travel wherever possible, capitalising on the opportunity to build back greener following the COVID-19 pandemic. • Anti-Idling guidance has been published for Brent staff, members, and suppliers and contractors to encourage those travelling around the borough to switch off their engine wherever possible. This has been disseminated to Council staff and suppliers, with workshops offered on the topic. • In 2021//2022 the council aims to purchase a cargo bike to trial for use in its own operations as well as to loan to businesses where possible. • The council will this year look to start a tender process for the re-procurement of its zipcar fleet – with the intention at this stage for vehicles to be replaced by low-emission vehicles wherever possible.

Action ID	Theme	Action	2020 update
6.1	Localised solutions	Expanding and improving green Infrastructure (GI)	**Green Infrastructure in council policies** Improving green infrastructure, as well as following a Healthy Streets approach, is central to Brent's 2019-2040 Inclusive Growth Strategy and 2019-2041 Local Implementation Plan. In addition, the Brent Long Term Transport Strategy is being reviewed over 2021. A core aim of the Draft Long Term Transport Strategy is making our streets safer, greener and more inclusive. Expanding the provision of 'green' infrastructure, including the greater use of 'parklets', street trees, green walls and Sustainable Drainage Systems (SuDS) as a means of reducing environmental impact and mitigating climate change, is a key priority. It is anticipated that the revised plan will be completed by early 2022. Nature and Green Space is included as a theme in Brent's Climate Emergency strategy, with the following actions planned for 2021: • Develop a Green Infrastructure Vision for Brent for 2030. • Expansion of Brent's tree planting programme in the borough, targeting planting at areas of deprivation, poor air quality and canopy cover. Greening, including new street trees and rain gardens, will continue to be embedded in major public realm and transportation schemes over the course of 2021. This will help establish a greener and more pleasant environment to encourage active travel. **Specific Projects:** **Kensal Corridor:** ○ The first phase of public realm improvement at Kensal Rise Overground Station and the adjacent section of Kensal Rise is due to commence in the summer of 2021 with completion early in 2022. This will provide new wider pavements, cycle parking and amenities with a new green roof cycle shelter near the station, pedestrian

Action ID	Theme	Action	2020 update
	Localised solutions	Expanding and improving green Infrastructure (GI) (continued)	crossings, trees and greening including rain gardens. Further phases of the Kensal Corridor scheme will be programmed when funding becomes available. Information about the scheme is available on our website; https://www.brent.gov.uk/kensalcorridor **South Kilburn Regeneration** • Large-scale urban regeneration project ongoing over a fifteen year programme that is approximately half way through delivering over 2,400 new high quality homes, new and improved open spaces and public realm, retail, education and health facilities. • Next phase includes regeneration of Carlton Vale Boulevard aim to create a vibrant Boulevard with improved transport links, lighting, street furniture and artwork https://www.brent.gov.uk/your-community/regeneration/south-kilburn-regeneration/the-development-process/carlton-vale-boulevard/ o This green spine will focus on improving the health and well-being of residents and will deliver improvements to air quality, sustainable drainage solutions and increased biodiversity. It is anticipated that public consultation on the scheme will finish in summer 2021 and construction could start on site in spring 2022 with completion by spring 2023. Opportunities for planting and greening include planting ~150 additional trees (include a variety of species), new rain gardens, significant improvements to the urban realm and ongoing air quality monitoring. Other proposals: • A new larger high quality urban park and improved public realm • Improved environmental standards and a site-wide energy solution https://www.brent.gov.uk/your-community/regeneration/south-kilburn-regeneration/what-is-happening-in-south-kilburn/

Action ID	Theme	Action	2020 update
	Localised solutions	Expanding and improving green Infrastructure (GI) (continued)	https://www.brent.gov.uk/your-community/regeneration/south-kilburn-regeneration/the-development-process/ **Kilburn High Road Liveable Neighbourhoods Proposal** • Brent and Camden councils have been working together to develop a public realm improvement scheme that will help to transform the high road. The main objectives of the Kilburn High Road improvement scheme are to reduce the dominance of traffic on the high road, help create a place that people want to visit and spend time in, and support businesses. Emphasis is also placed on improving pedestrian safety and encouraging greater pedestrian and cycle activity. • The implementation of the Kilburn High Road scheme is to be undertaken in several phases. Construction of the first phase of the scheme is expected to begin in early June and to last for approximately 8 weeks. The first phase is focused on the section of the High Road between West End Lane and Greville Place. Consultation on the wider scheme (Phases 2 and 3) is programmed for autumn 2021 with construction planned for the period January 2022 to June 2022 • Phase 1 includes the introduction of 6 new street trees into the town centre (between West End Lane and Coventry Close) The introduction of wider pavements provides the necessary space for the planting of new trees in the town centre. https://www.brent.gov.uk/your-community/regeneration/kilburn-high-road/ **Oaklands Road Liveable Streets** • Oaklands Road Liveable Street project was completed in November 2020 - a section of Oaklands Road by Cricklewood Broadway is now closed off to vehicles. A living wall was installed outside the new residential development on the street as part of the project, funded by Rainbow Properties.

Action ID	Theme	Action	2020 update
	Localised solutions	Expanding and improving green Infrastructure (GI) (continued)	• The project was funded by Brent's Neighbourhood Community Infrastructure Levy Fund, and was devised to address problems associated with the congested environment, air pollution and lack of public space in Cricklewood town centre https://consultation.brent.gov.uk/highways-and-infrastructure/oaklands-road-liveable-street-scheme/ https://www.udensoncaldbeck.co.uk/2020/09/21/update-oaklands-road-playable-street/ **Tree planting across the Borough** • Over 2019/2020 Brent planted 457 trees • Over 2021, 407 trees are planned for planting so far (363 have been planted so far) with a total annual target of 520. • An i-tree survey was commissioned and completed in 2020 for Brent Council. This aimed to assess value of Brent's tree network in terms of ecosystem services. The key findings are: o The street trees managed by Brent Borough Council remove over 4 tonnes of air-borne pollutants each year and store over 9,600 tonnes of carbon. o These street trees divert over 8,200 cubic meters of storm water runoff away from the local sewer systems each year. This is worth an estimated £4,535 each year in avoided stormwater treatment costs. https://www.forestresearch.gov.uk/research/i-tree-eco/ **Green Screens pilot @ Brent Schools** • In summer 2021, green screens are planned for installation in the playground of a Brent school to assess the impact of the ivy barriers on air pollution exposure for school-aged children. **Improvements to Welsh Harp Education Centre**

Action ID	Theme	Action	2020 update
	Localised solutions	Expanding and improving green Infrastructure (GI) (continued)	• The council has secured funding for the creation of a Biodiversity Centre at Welsh Harp, improving the existing building on the ground there. This funding will be used a contributor to the running of the centre in the first stages of the project. The aim is to use the funding to fund staff to enable us to utilise the existing buildings to continue to provide education opportunities through existing agreements with schools. There is a longer-term aspect to this project that requires growth as a commercial centre, which is considered in the next phase. **Other projects** • Development of a rain garden in Silver Jubilee Park
7.1	Cleaner transport	Ensuring that Transport and Air Quality policies and projects are integrated	**Draft Brent COVID-19 Transport Recovery Plan** • During the course of 2020, in response to changing priorities as a result of COVID-19, a Draft Brent COVID-19 Transport Recovery Plan was developed and consulted on. Healthy Streets and prioritising space for pedestrians and cyclists featured as key priorities. The aim was to support social distancing in the public realm but also to encourage a green recovery to avoid a car-led recovery and consequently increasing NOx and carbon emissions. The Plan is to be reviewed following consultation and will be re-branded as an Active Travel Implementation Plan. This work is expected to be completed by the end of 2021. https://www.brent.gov.uk/your-community/coronavirus/changes-to-council-services/transport-and-streets/ **Brent Long Term Transport Strategy** • In addition, the Brent Long Term Transport Strategy is being reviewed to ensure it reflects current priorities. An internal steering group has been established to inform its development. • The Healthy Streets approach is a key priority and links in with air pollution objectives. A core aim of the draft is to reduce traffic and facilitate healthy, sustainable travel in order to reduce pollution and improve peoples' health and wellbeing.

Action ID	Theme	Action	2020 update
	Cleaner transport	Ensuring that Transport and Air Quality policies and projects are integrated (continued)	• It is anticipated that the revised plan will be completed by early 2022. • The current Long Term Local Transport Plan 2015 – 2035, as well as the Local Implementation Plan, explicitly highlights a commitment to improving air quality. • Two key objectives are: o Increase the uptake of sustainable and active modes of transport such as cycling and walking o Reduce exposure to pollution generated by the Brent transport network. • A core aim is to reduce the environmental impacts of transport via: o Provision of improved infrastructure for cycling and walking, o Maintenance, repair and improvements to highways infrastructure to eliminate pinch points o Introduce 20 mph zones o Improve traffic flows. Brent's Inclusive Growth Strategy 2019 -2040 also prioritises sustainable travel and modal shift **Brent Electric Vehicle Charge Point Programme** The Council has been working to provide additional charging infrastructure for electric vehicles at locations across the borough through a number of different schemes: • **Source London Network** An additional seven Source London charge points were recently installed at three locations in the borough – to add to the 60 already in operation across Brent.

Action ID	Theme	Action	2020 update
	Cleaner transport	Ensuring that Transport and Air Quality policies and projects are integrated (continued)	• **Lamp Column Chargers** The Council is progressing with the rollout of a network of charge points attached to lamp columns at various locations across the borough. To date, there are 85-lamp column charge points in operation across Brent, with a further 180 planned for installation by Summer 2021. • **STEP Charge Point Trial Project** The Council is part of a consortium that has recently received funding from the Office for Low-Emission Vehicles to trial new on-street charging technology in the borough. The Subsurface Technology for Electric Pathways (STEP) project involves the trial of up to 100 Trojan Energy charge points on streets in the Harlesden and Kensal Green areas. The project aims to solve the issue of charging for electric vehicle owners who park their car on street and do not have access to a home charge point. Installation of the on-street charging equipment was completed in April 2021 and the trial is due to go fully live in Summer 2021. **Air Quality Action Plan review** • Over the course of 2021/2022, the council will be reviewing and updating its Air Quality Action Plan. The Transportation Planning team will feed into this process to ensure alignment with strategies.
7.2	Cleaner transport	Discouraging unnecessary idling by taxis and other vehicles	• The council is part of the pan-London idling action group and has supported the #Engines Off campaign in 2021. https://www.brent.gov.uk/council-news/february-2021/engine-off-every-stop-brent-joins-campaign-to-tackle-invisible-threat/ https://www.brent.gov.uk/services-for-residents/environment/air-quality/no-idling-campaign/

Action ID	Theme	Action	2020 update
	Cleaner transport	Discouraging unnecessary idling by taxis and other vehicles	https://twitter.com/Brent_Council/status/1366425610516652035 **Enforcement** • Brent enforces idling with FPNs under The Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002. • In 2021, the council reviewed its enforcement approach and committed to holding 12 idling enforcement events per year with the addition of including idling enforcement as part of everyday enforcement activity for a trial of 6 months. Idling enforcement officers attended a refresher workshop and will re-start enforcement from summer 2021. **Brent's own operations** • Anti-Idling guidance has been published for Brent staff, members, and suppliers and contractors to encourage those travelling around the borough to switch off their engine wherever possible. This has been disseminated to Council staff and suppliers, with workshops offered on the topic. • Additionally, idling guidance and #enginesoff information, including advertisement of a free workshop, was circulated to all suppliers and contractors on procurement database – 99 in total. **"No idling" signs** • In 2020, 73 "no idling" signs were installed across health centres, rail station car bays and religious venues. Installation outside schools was completed in 2019 (157 signs). • In 2021, 147 "no-idling" signs were installed outside of nurseries, playgroups, and other idling hotspots.
7.3	Cleaner transport	Regular temporary car free days	Brent supported Car Free Day 2020 with an online communications campaigns to share the impact of car usage across the borough. • https://www.brent.gov.uk/council-news/september-2020/take-the-car-free-pledge-as-you-return-to-work-with-myfreecartrip/ • https://twitter.com/Brent_Council/status/1314083165749817344

Action ID	Theme	Action	2020 update
			• https://www.bestbrent.co.uk/Article/79154 School Streets programme expanded to over thirty schools over 2020/2021
7.4	Cleaner transport	Using parking policy to reduce pollution emissions	• Brent Council's resident parking permits are carbon emissions based. The key policies are: ○ Vehicle emissions are graded as low, medium or high. The cost of the parking permit then depends on how the vehicle is graded. ○ There is a £100 diesel surcharge for resident and annual visitor on street parking permits for 2021. This was implemented with from 2019 with annual increases planned: ▪ 2019 – surcharge was £50 ▪ April 2020 – surcharge increased to £75 ▪ April 2021 – surcharge increased to £100 ○ Increased fees for residential parking permits for household's second and third vehicles https://www.brent.gov.uk/services-for-residents/parking/parking-permits/parking-charges/ • The aim is to reward environmentally responsible behaviour. • Fees are designed to promote the modal shift from passenger vehicle use to active and sustainable travel. • Additionally, Parking officers are working to support the School Streets programme with ad hoc enforcement over 2020 as well as planning for the implementation of ANPR cameras for a number of schemes in 2021, consultation results pending.

Action ID	Theme	Action	2020 update
7.5	Cleaner transport	Installation of Ultra-low Emission Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric vehicle charging point and hydrogen refuelling stations)	The Council has an extensive programme of installing electric vehicle charging points across the borough. Work has also commenced on the development of an Electric Vehicle Charge Point (EVCP) Delivery Plan that will set out the Council's approach to accelerating delivery of EVCP infrastructure in the borough in line with objectives of the Council's emerging Climate Change Strategy and Air Quality priorities. The Plan will identify the types of infrastructure required (and locations for these), establish mechanisms for funding/delivery and set out the range of processes for implementation. **EVCPS** To date across the borough we have: • 5 Rapid Charging Points • 61 Source London Charging Points, with 34 being installed in 2020 • 85 Lamp Column Charging points • Implementing a further 250 Lamp Column Chargers, 100 kerbside Chargers over the next 6 months to be installed next 2-3 months. • Subject to funding, another 180 lamp column chargers will be installed next 6-9 months
7.6	Cleaner transport	Provision of infrastructure to support walking and cycling	Supporting walking and cycling through public realm improvements and provision of infrastructure is a central tenet across the council's transport policies. The council has embedded the Healthy Streets Approach across all key policies. **Examples of public realm improvement projects:** • Kensal Corridor regeneration – new cycle lanes included in plans. https://www.brent.gov.uk/your-community/regeneration/kensal-corridor/ • South Kilburn Regeneration • Kilburn High Road • Oaklands Road Liveable Streets – pedestrianised a section of road by Cricklewood Broadway, (an air quality focus area) completed in Nov 2020

Action ID	Theme	Action	2020 update
	Cleaner transport	Provision of infrastructure to support walking and cycling (continued)	**Walking and cycling initiatives and infrastructure:** Over 2020, the Council has implemented an ambitious programme of Active Travel initiatives in response to the COVID-19 pandemic. The council was successful in bidding for TfL Streetspace funding, after LIP funding was paused, and through this has continued to raise awareness of the effects of car travel on air quality and encouraged behavioural change towards sustainable travel. This has been achieved through the implementation of: **1) School Streets** • The School Streets programme has expanded rapidly through successful bids for funding from the TfL Streetspace Scheme. The two 'school streets' which were being piloted have now been made permanent. They are enforced using CCTV cameras with Automated Number Plate Recognition (ANPR) technology. • These schemes prohibit vehicles, (except emergency, service and residents vehicles); from entering streets near schools during morning and afternoon peak hours. • Thirty additional schools are participating in pilot School Streets schemes. Extensive engagement has been carried out with the schools encouraging pupils and parents to switch to active travel for getting to school. These are being consulted on until 30th July 2021 after which a decision will be made whether to make them permanent or not. • Funding is being identified for further ANPR cameras that will assist with making a number of schemes permanent. • Brent took part in the GLA monitoring project that found that School Streets could result in up to 23% reduction in NO2. • Additional air quality monitoring has been implemented outside all participating schools to review NO2 concentrations. https://www.brent.gov.uk/services-for-residents/transport-and-streets/making-travel-safer-and-healthier/school-streets/ **2) Supporting schools with active travel**

Action ID	Theme	Action	2020 update
	Cleaner transport	Provision of infrastructure to support walking and cycling (continued)	• To enable school communities to feel confident walking to and from school, all schools were reviewed to see if they needed support with social distancing measures. • Sharing resources such as walking routes and advertising in Head Teacher's bulletins • 8 schools received temporary footway widening to enable social distancing outside the school gates • 52 schools received social distancing markings. • All schools were sent covid-19 social distancing banners **3) Brent Healthy Neighbourhoods** • 5 new healthy (Low Traffic) Neighbourhood schemes implemented with plans for a further 5 new schemes in 2021 following public engagement • The council are working with Living Streets to support the public engagement and work with local communities to develop schemes that provide local benefits and are supported. • ANPR CCTV Cameras will be installed in some locations to improve accessibility by the emergency services. • Traffic counts are being carried out to give an indication of modal shift as a result of the scheme. Air quality monitoring has also been implemented. https://www.brent.gov.uk/services-for-residents/transport-and-streets/brent-healthy-neighbourhoods/ **4) Pop up cycle lane on Harrow Road** • In September 2020, the council implemented a new temporary segregated cycling lane between Wembley Triangle and the A406 North Circular Road (approx. 1.5km). We are currently working with TfL on developing a permanent strategic cycle lane on this route.

Action ID	Theme	Action	2020 update
	Cleaner transport	Provision of infrastructure to support walking and cycling (continued)	https://www.brent.gov.uk/services-for-residents/transport-and-streets/making-travel-safer-and-healthier/improving-cycling/ **5) Wembley to Willesden Healthy Streets Corridor (Cycle Future Route 23)** • The council are working together with Transport for London (TfL) to develop Healthy Streets improvements between Wembley and Willesden Junction. These changes would make it easier and safer to walk, cycle, and use public transport in the area. Making the area safer, greener and reducing car travel. Early public engagement was undertaken in early 2020 but further design development was paused due to the pandemic and a focus on temporary walking and cycling improvement schemes delivered through the London Streetspace Plan. Dependent on funding, it is anticipated that design development work will restart in 2021/22 with a review of the results from the early public engagement and development of designs for public consultation. • Opportunities for planting and additional green infrastructure include areas around bus stops, build outs, and changes to junctions. Examples could include using planting and rain gardens to separate cycle traffic and motor traffic and exploring opportunities for tree planting on build outs and near junctions. **5) Pavement widening** • Pavements in 19 locations in some of our busiest streets in town centres have been temporarily widened to help residents stay safe and enable them to safely social distance to prevent the spread of COVID-19 and to encourage walking. https://www.brent.gov.uk/services-for-residents/transport-and-streets/making-travel-safer-and-healthier/ **7) Cycle parking:** • Brent currently has 55 bike hangars, of which 30 were installed in 2020. • An additional 50 cycle hangars will be installed over the next 2 years 60 2021/22 to 2022/23

Action ID	Theme	Action	2020 update
	Cleaner transport	Provision of infrastructure to support walking and cycling (continued)	**8) Other cycling initiatives:** • In 2020, following an extensive consultation, a byelaw was changed to allow cycling in parks across Brent which is a permanent arrangement. • A Try Before You Bike scheme was set up for bikes, e-bikes and cargo bikes https://www.brent.gov.uk/services-for-residents/transport-and-streets/cycling/try-a-bike-for-a-month/ **Future schemes** • The 2021/22 Local Implementation Plan Annual Spending Submission will also focus on Active Travel measures. • To assist with developing future schemes in relation to promoting a shift away from car usage, the Council also set up an interactive online community engagement tool, which is being used to crowdsource resident ideas for making active travel in Brent an easy and safe option. The site achieved [correct as of 06/05/2021]: ○ 3629 visitors (An individual person who visited a Commonplace website. If a person used multiple devices, they may be counted as several visitors) ○ 3961 contributions (The total number of comments and agreements by respondents to express their opinions) ○ 777 respondents (A person who contributed to a Commonplace website by either adding a comment or an agreement) https://brentactivetravel.commonplace.is/

4. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in Brent in 2020

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	150
Number of planning applications required to monitor for construction dust	200
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	50
Number of developments required to install Ultra-Low NO_x boilers	30
Number of developments where an AQ Neutral building and/or transport assessments undertaken	130
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	50
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 with the GLA through the relevant NRMM website and that all NRMM used on-site is compliant with Stage IIIB of the Directive and/or exemptions to the policy.	N/A
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.	77 included

Process for ensuring planning applications are reviewed:

An Environmental Health Officer reviews planning applications to ensure that local air quality management is considered. Each application is reviewed to establish the potential air quality impact of the development as well as considering the impact on any new sensitive receptors brought to the area because of the development. Air

quality assessments are requested for applications dependent on the size, location or type of development. The department follows the GLA guidance for developments that require an air quality neutral assessment. NRMM conditions are considered appropriate for major developments within the area.

4.1 New or significantly changed industrial or other sources

No new sources identified.

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

QA/QC for Brent's automatic monitoring stations is provided by ERG Imperial College London. These stations are calibrated fortnightly by their local site operator (LSO), with annual audits carried out by the National Physics Laboratory.

A.2 Diffusion Tubes

All diffusion tubes are prepared and provided by Gradko International Limited. The tubes are set up and collected by the local site operator 'We Care4 Air' and analysis undertaken by Gradko using UKAS Accredited Methods. Tubes are prepared using the preparation method 20% Tri-ethanolamine (TEA) in de-ionised water.

Annual averages have been bias adjusted using the bias adjustment factor for 2020 from the national database available on the LAQM website at http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html.

For the 2020, data a bias adjustment factor of 0.81 was used which was derived from 18 studies nationwide for similar preparation and analysis.

Currently Brent does not compare diffusion tubes with the reference method in a co-location study.

Table L. Bias Adjustment Factor

Year	Local or National	If Local, Version of National Spreadsheet	Adjustment Factor
2019	National	03/20	0.91
	Gradko 20% TEA in water (2029, 27 studies)		
2020	National	03/21	0.81
	Gradko 20% TEA in water (2020, 18 studies)		

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

A final measurement data set was produced by ERG Imperial following retrospective ratification of the measurements using procedures which comply with the requirements of LLAQM.TG (19). During ratification, information from regular calibration, audits and daily manual validation were used to establish an operational and calibration history of the instruments. The pollution measurements were then corrected to establish traceability to National Meteorological Standards. Details of the monitoring site and the final data set can be found at www.londonair.org.uk.

Where capture is less than 75% and greater than 33% of a full calendar year (less than 9 months), the mean would be 'annualised' – i.e. adjusted using the methodology outlined in LLAQM.TG (19) before being compared to annual mean objectives.

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

Site ID	Annualisation Factor Site 1 Name	Annualisation Factor Site 2 Name	Annualisation Factor Site 3 Name	Annualisation Factor Site 4 Name	Average Annualisation Factor	Raw Data Annual Mean (µg m^{-3})	Annualised Annual Mean (µg m^{-3})	Comments
A1 (Example)								
A2 (Example)								

Table N. 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
DT7	2	19	37.2	22.2	29.3	
DT17	1	5	36.0	22.7	31.7	
DT 22	1	6	36.6	21.4	31.1	
DT 23	2	12	58.4	25.8	**44.7**	Predicted concentration at Receptor is above AQS objective
DT 41	3	7	43.1	26.8	39.5	Predicted Concentration at receptor within 10% of the AQS objective
DT 52	1	41	46.6	24.9	30.3	Warning your receptor is more than 20m further from the kerb than your monitor – treat result with caution
DT 53	1	16	49.9	22.4	34.5	
DT 61	1	41	49.6	21.9	28.9	Warning, your receptor is more than 20m further from the kerb than your monitor – treat result with caution
DTBRT 43	2	22	46.5	26.4	35.2	Warning, your receptor is more than 20m further from the kerb than your monitor – treat result with caution
DTBRT 53	0.5	4.5	74.3	22.4	**54.1**	Predicted concentration at Receptor is above AQS objective
DTBRT 55	0.5	3.5	40.6	24.8	35.2	
DTBRT 56	0.5	15.5	40.7	23.0	30.0	

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
DTBRT 58	0.5	2.5	40.5	22.9	35.5	

Appendix B Full Monthly Diffusion Tube Results for 2020

Table O. NO_2 Diffusion Tube Results

Site ID	Valid data capture for monitoring period %[(a)]	Valid data capture 2020 %[(b)]	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean raw data	Annual mean – bias adjusted (0.81)	Dist. Correct at Receptor
DT1	100	100	49.4	**43.2**	33.6	18.4	20.8	39.6	26.9	33.1	33.9	38.9	43.8	38.7	35.0	28.4	
DT2	100	100	45.4	37.5	30.5	22.4	24.2	39.0	25.9	30.1	26.5	33.4	44.0	36.6	33.8	27.4	
DT4	100	100	44.1	34.2	34.7	28.1	29.6	39.7	21.4	33.0	37.5	38.2	48.8	39.1	35.7	28.9	
DT7	100	84	47.5	43.5	42.1	31.8	33.6	38.4	-	-	43.7	50.8	68.4	59.2	45.9	37.2	29.3
DT9	100	84	58.2	52.4	42.8	30.2	31.8	45.1	34.1	-	43.6	42.8	52.1	-	43.3	35.1	
DT17	100	100	59.5	52.7	41.9	28.4	35.6	46.1	36.6	39.0	48.0	42.4	56.5	46.1	44.4	36.0	31.7
DT21a	100	92	56.3	39.9	40.1	24.5	27.4	41.0	27.9	34.5	36.6	-	48.5	39.3	37.8	30.6	
DT22	100	100	56.5	38.0	38.3	34.0	41.7	49.1	41.5	44.7	51.3	43.3	53.8	49.4	45.1	36.6	31.1
DT23	100	100	97.3	79.5	64.2	44.0	53.9	84.6	57.5	71.4	78.8	76.2	87.8	70.7	72.2	**58.4**	**44.7**
DT26	100	84	44.3	35.0	33.7	26.1	27.5	35.6	22.9		36.5	20.7		36.6	31.9	25.8	
DT29	100	75	43.3	31.1	32.8	24.0		29.6	19.7	25.0		40.5	49.1		32.8	26.6	
DT30	100	100	40.2	30.7	31.3	24.0	28.4	35.6	24.3	32.8	34.0	30.1	42.3	34.3	32.3	26.2	
DT33a	100	75	40.2	38.6		21.3	21.5	37.4	23.8	29.1		39.5		37.9	32.1	26.0	
DT41	100	100	69.7	55.0	50.1	39.6	44.3	34.1	46.7	57.2	65.7	57.8	67.8	50.8	53.2	**43.1**	*39.5*
DT48	100	100	47.5	39.1	34.4	24.4	28.1	37.2	34.4	35.3	39.7	39.1	44.4	41.8	37.1	30.1	
DT52	100	92	68.4	66.1		51.9	51.3	70.5	39.8	59.9	58.4	52.2	63.8	50.9	57.6	**46.6**	30.3
DT53	100	85	70.1	75.5	55.9	40.7	41.0	65.9	56.1	84.1			46.4	80.6	61.6	**49.9**	34.5
DT54	100	85	48.9	41.8	33.2	20.0	24.5	34.4	31.0	28.6	32.8			39.2	33.4	27.1	
DT60	100	85	51.2	47.3	45.4	33.6	33.8		33.2	29.8	43.7	44.7		46.4	40.9	33.1	
DT61	100	100	72.8	66.4	60.0	40.4	46.1	63.3	52.5	57.9	70.6	62.2	82.8	60.1	61.2	**49.6**	28.9
DT62	100	85	45.9	39.4	32.2	20.7	23.6	34.1	27.4	32.6	35.3	37.0			32.8	26.6	
DT63	100	100	31.6	27.5	24.8	15.5	13.1	18.4	21.4	18.5	22.2	23.8	35.7	28.8	23.4	19.0	
DT64	100	100	35.6	32.8	27.5	16.9	19.8	27.0	12.3	26.6	31.7	32.4	42.7	36.0	28.4	23.0	
DT65	100	100	56.5	46.2	39.3	32.9	31.0	47.6	27.1	38.2	38.7	44.3	52.6	45.2	41.6	33.7	

DT66	100	100	37.1	34.6	34.2	24.1	22.4	27.5	20.3	28.7	35.1	29.4	46.1	35.8	31.3	25.3	
DT67	100	92	40.1	33.6	29.9	20.2	16.9	23.7	20.1		36.4	31.1	41.4	34.1	29.8	24.1	
DT68	100	100	52.4	44.2	38.6	29.3	33.4	46.0	35.5	35.4	44.3	42.1	41.9	37.1	40.0	32.4	
DT69	100	100	44.1	33.3	29.3	17.7	18.3	27.7	21.6	23.2	30.2	31.1	22.3	24.7	26.7	21.6	
DT70	100	100	39.9	31.6	26.2	17.0	16.2	23.3	19.6	21.6	26.4	27.8	37.4	31.0	26.5	21.5	
DT71	100	100	32.8	30.8	26.4	15.0	14.0	22.4	16.3	20.4	25.7	27.0	36.4	31.4	24.9	20.1	
DT72	100	92	44.6	36.0	30.3	17.8		30.2	19.8	24.6	30.3	31.4	39.3	33.1	30.7	24.9	
DT73	100	100	42.3	34.0	29.7	21.6	24.1	33.3	22.8	31.6	33.7	33.2	42.7	36.2	32.1	26.0	
DT74	100	92	37.1	29.7	26.4	17.1		27.3	20.8	23.8	28.4	26.0	36.6	30.7	27.6	22.4	
DT75	100	92	35.7	24.4	26.1	18.3	15.5	24.6	16.6	22.4	26.5	26.0		29.0	24.1	19.5	
DT76	100	84	31.5	25.0			16.2	17.9	16.5	18.8	56.9	25.6	32.0	29.4	27.0	21.8	
DT77	100	84	44.4	32.2			18.6	24.4	19.2	12.4	26.9	30.2	41.2	34.2	28.4	23.0	
DT78	100	100	53.5	45.2	35.0	20.8	26.2	34.8	30.4	33.8	40.2	40.7	52.1	41.6	37.9	30.7	
DT79	100	84	49.3		34.2	25.8	32.1	39.5	29.5	32.2	38.4	35.1		36.8	35.3	28.6	
BRT42	100	100	37.0	30.8	35.2	27.6	25.5	33.8	23.1	35.4	32.6	31.3	46.2	38.5	33.1	26.8	
BRT43	100	100	59.6	60.6	56.8	41.1	45.8	54.4	44.0	64.4	59.1	57.6	84.8	60.3	57.4	**46.5**	35.2
BRT53	100	100	106.0	74.3	73.7	65.8	80.0	92.6	78.4	89.6	113.7	110.9	113.5	102.4	91.7	**74.3**	**54.1**
BRT55	100	100	72.1	56.6	49.1	36.7	45.5	59.6	44.0	41.5	52.8	44.8	51.2	47.7	50.1	**40.6**	35.2
BRT56	100	84	67.2	55.8	44.2	30.2	36.9	50.6			54.3	50.5	58.4	54.8	50.3	**40.7**	30.0
BRT57	100	100	45.7	47.2	41.6	30.2	35.5	38.7	35.8	40.1	44.0	43.5	53.2	45.2	41.7	33.8	
BRT58	100	100	70.8	53.6	48.0	37.9	40.4	56.3	38.3	50.5	51.4	51.3	70.3	31.3	50.0	**40.5**	35.5

Notes

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**.

All means will have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 33%.

(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%).