



## Resources and Public Realm Scrutiny Committee – Supplementary Agenda

**Thursday 14 March 2019 at 6.00 pm**

Boardrooms 3-5 - Brent Civic Centre, Engineers Way,  
Wembley, HA9 0FJ

### Membership:

#### Members

Councillors:

Kelcher (Chair)

Kansagra (Vice-Chair)

S Butt

Gbajumo

Gill

Kabir

Mashari

Nerva

#### Substitute Members

Councillors:

Aden, Ethapemi, Hassan, Johnson, Kennelly, Long and  
Stephens

Councillors:

**For further information contact:** Bryony Gibbs, Governance Officer  
020 8937 1355; [bryony.gibbs@brent.gov.uk](mailto:bryony.gibbs@brent.gov.uk)

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**The press and public are welcome to attend this meeting**

### **Notes for Members - Declarations of Interest:**

If a Member is aware they have a Disclosable Pecuniary Interest\* in an item of business, they must declare its existence and nature at the start of the meeting or when it becomes apparent and must leave the room without participating in discussion of the item.

If a Member is aware they have a Personal Interest\*\* in an item of business, they must declare its existence and nature at the start of the meeting or when it becomes apparent.

If the Personal Interest is also significant enough to affect your judgement of a public interest and either it affects a financial position or relates to a regulatory matter then after disclosing the interest to the meeting the Member must leave the room without participating in discussion of the item, except that they may first make representations, answer questions or give evidence relating to the matter, provided that the public are allowed to attend the meeting for those purposes.

### **\*Disclosable Pecuniary Interests:**

- (a) **Employment, etc.** - Any employment, office, trade, profession or vocation carried on for profit gain.
- (b) **Sponsorship** - Any payment or other financial benefit in respect of expenses in carrying out duties as a member, or of election; including from a trade union.
- (c) **Contracts** - Any current contract for goods, services or works, between the Councillors or their partner (or a body in which one has a beneficial interest) and the council.
- (d) **Land** - Any beneficial interest in land which is within the council's area.
- (e) **Licences** - Any licence to occupy land in the council's area for a month or longer.
- (f) **Corporate tenancies** - Any tenancy between the council and a body in which the Councillor or their partner have a beneficial interest.
- (g) **Securities** - Any beneficial interest in securities of a body which has a place of business or land in the council's area, if the total nominal value of the securities exceeds £25,000 or one hundredth of the total issued share capital of that body or of any one class of its issued share capital.

### **\*\*Personal Interests:**

The business relates to or affects:

(a) Anybody of which you are a member or in a position of general control or management, and:

- To which you are appointed by the council;
- which exercises functions of a public nature;
- which is directed is to charitable purposes;
- whose principal purposes include the influence of public opinion or policy (including a political party or trade union).

(b) The interests a of a person from whom you have received gifts or hospitality of at least £50 as a member in the municipal year;

or

A decision in relation to that business might reasonably be regarded as affecting the well-being or financial position of:

- You yourself;
- a member of your family or your friend or any person with whom you have a close association or any person or body who is the subject of a registrable personal interest.

# Supplementary Agenda


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This report informs the committee how the Council is progressing with local air quality action plan measures.



- Please remember to set your mobile phone to silent during the meeting.
- The meeting room is accessible by lift and seats will be provided for members of the public.

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 <b>Brent</b>	<b>Resources and Public Realm Scrutiny Committee</b> 14 March 2019
	<b>Report from the Strategic Director of Regeneration and Environment</b>
<b>Update on Air Quality Action Plan Progress 2017-2018</b>	

<b>Wards Affected:</b>	ALL
<b>Key or Non-Key Decision:</b> (only applicable for Cabinet, Cabinet Sub Committee and officer decisions)	N/A
<b>Open or Part/Fully Exempt:</b> (If exempt, please highlight relevant paragraph of Part 1, Schedule 12A of 1972 Local Government Act)	Open
<b>No. of Appendices:</b>	1 – Brent Annual Status Report 2017
<b>Background Papers:</b>	None
<b>Contact Officer(s):</b> (Name, Title, Contact Details)	Jennifer Barrett Nuisance Control Team Manager 020 8937 5284 <a href="mailto:Jennifer.barrett@brent.gov.uk">Jennifer.barrett@brent.gov.uk</a>  Karina Wane Head of Community Protection 020 8937 5067 <a href="mailto:Karina.Wane@brent.gov.uk">Karina.Wane@brent.gov.uk</a>

## 1.0 Purpose of the Report

- 1.1. This report informs the committee how the Council is progressing with local air quality action plan measures as outlined in our Air Quality Action Plan 2017-2022.

## 2.0 Recommendation

- 2.1 That the Committee note the progress with the council's plans for the delivery of our strategic air quality objectives to date.

### **3.0 Air Quality Action in Summary**

- 3.1 In our Air Quality Action Plan 2017 – 2022, the council set out a 5-year plan to cut local pollutant emissions from key sources such as local transport, construction activities, energy generation and specific types of polluting industry.
- 3.2 The Plan outlines twenty broad measures the council will undertake to reduce levels of two key air pollutants, nitrogen dioxide and particulate matter, known to be harmful to health.
- 3.3 In compliance with the London Local Air Quality Management (LLAQM) regime the council must annually provide a broad summary of action plan progress to the Mayor of London. The current Annual Status Report (ASR) for 2017 is provided in Appendix 1.
- 3.4 Since the approval of our Air quality Action Plan in November 2017 the council has pledged to work with Brent residents and businesses to assist us to deliver local improvements. Our focus in the last year has been to engage directly with the public via community events to discuss local pollution and target specifically idling engines around schools as this was identified by local residents as a specific concern.
- 3.5 We stated also stated that we would focus on replacement of our dirtiest vehicles with cleaner alternatives where possible. In the last 12 months we have made significant progress in improving our infrastructure for electric charging vehicles, consulted with residents about the best locations for electric vehicle charging points, increased our provision of public-use cycles and provided additional cycle training for residents, workers and school children.
- 3.6 The council sought to tackle air quality around schools as an urgent priority and we built on work started in August 2017, and in collaboration with the Mayor of London, to identify schools where further interventions are warranted. Examples of some actions taken to deliver on our air quality objectives are provided in brief.

### **4.0 Air Quality Project Updates**

#### **4.1 School Air Quality Audits**

- 4.1.1 Brent Council participated in a pan-London audit of 50 schools in collaboration with representatives from each school, Transport for London and the London Mayor which began in July 2017. We determined the status of local air quality and sources of pollution at 2 Brent schools and this work was completed in December 2017. Detailed audit reports were published in January 2018. Each school was provided with a bespoke list of recommended actions and recently provided with £10,000 funding from the Mayor to start work to deliver their improvement programme. The council has assisted each school to determine their highest priority action and match-funded each project with an additional £10,000.

4.1.2 In the next 12 months John Keble Primary in Harlesden will be enhancing their existing green barrier and Ark Franklin School in Kensal Rise propose to improve ventilation in their worst affected classrooms in spring 2019.

## **4.2 Air Quality Champions**

4.2.1 Brent Council started our programme to recruit local volunteers to act as air quality champions in December 2017. Eight air quality champions were recruited and trained facilitated by Vehicle Idling Action to assist the council to raise awareness about local idling issues to the wider community. Our air quality champions have subsequently assisted with the delivery of our local idling action campaigns, Car Free Day and Clean Air Day events.

4.2.2 In addition, the council has recognised the contributions made by local residents forming the CAfB group and the Harlesden Environment Action Residents Team (HEART) who have also served to champion local air quality issues and assisted the council in the planning and delivery of community events.

4.2.3 In the next 12 months the council will continue recruit additional volunteers from the local community for future events including National Clean Air Day June 2019 and London Car Free Day in September 2019.

## **4.3 London Idling Action Campaign**

4.3.1 The council signed up to the GLA's Idling Action Group consisting of 17 boroughs in April 2017. This enabled us to deliver anti-idling projects at relatively low cost and, by sharing campaign materials and the delivery of training to local volunteers, we were able to maximise our use of existing resources.

4.3.2 The council organised four community events with a launch of the programme in Wembley in June 2018, Wembley Central and Cricklewood in September 2018 and Harlesden in January 2019. Each campaign was used to target local drivers and provide on-the-spot advice about the law and their contribution to poor air quality. We trained officers to be able to issue fixed penalty notices for enforcement against drivers who do not comply with requests to stop. We have not issued any notices to date.

4.3.3 Additional idling action events are also planned for 27<sup>th</sup> February 2019 in Kilburn (in collaboration with the London Borough of Camden) and 3<sup>rd</sup> April 2019 in Neasden Town Centre.

4.3.4 The Idling Action Group will be expanded and delivered as a pan-London programme for the next financial year, with many more boroughs signing up to the programme. Brent Council has committed to sign up for 2019 -2020.

4.3.5 The London Mayor has requested that all boroughs demonstrate that they are undertaking robust enforcement action to tackle local idling. Further work will be required this year to identify and enforce against persistent offenders.

#### **4.4 National Clean Air Day Celebration**

4.4.1 Brent celebrated National Clean Air Day on the 21<sup>st</sup> June 2018 with an event to promote the council's anti-idling work and communicate the Council's plans to tackle pollution.

4.4.2 The event was held in Wembley in collaboration with Global Action Plan, Idling Action London, Brent Friends of the Earth and Clean Air for Brent (CAfB), a local community group. MP Smarter Travel, Dr Bike and Source London also participated and were on hand to field specific queries about cleaner transport, local cycling initiatives and options for electric vehicle charging. Council officers and volunteers targeted drivers on local streets to engage with drivers as well as with parents at four Wembley primary schools. Feedback from those who attended including local residents and children, Councillors, Members of Parliament and London Assembly members was very positive.

4.4.3 The council will plan similar events for Clean Air Day in June 2019.

#### **4.5 Breathe Clean Project**

4.5.1 The Breathe Clean Project builds on our previous work in schools which included school audits, tailored assemblies to answer queries about local air quality and our ongoing schools idling programme. Once completed the council will be able to better estimate exposure of children to poor air around Brent schools. The installation of anti-idling signs at school entrances, encouraging drivers to switch off their engines has been incorporated into this and we expect 400 signs to be deployed by the end of the project.

4.5.2 We will use data derived from short term monitoring undertaken as part of the project to obtain a more accurate assessment of local pollution in and around our schools. The results of this project will enable the council to establish which of our schools are most at risk and identify further actions which could be employed to reduce this. We expect to have all results by late spring 2019.

#### **4.6 Construction Emissions**

4.6.1 Non-Road Mobile Machinery (NRMM) has the potential to significantly contribute to local pollution. Most large construction sites are required to register NRMM they use so that the council can verify they are using the least polluting equipment available. The council began work to inspect this equipment in October 2018. In recognition of the importance of this work, and the need to ensure consistency in approach across London the GLA has endorsed Merton Council to govern the programme, supplying funds from the Mayors Air Quality Fund to deliver the programme. All London boroughs are expected to join this pan-London group and membership will cost £4,000, significantly less expensive than trying to implement our own programme.

4.6.2 The council will join the NRMM Action Group once arrangements for this have been confirmed.

## **5.0 Financial Implications**

- 5.1 The Air Quality Action plan objectives are anticipated to be delivered within existing budgets. However, subject to complying with the LLAQM criteria and attainment of Cleaner Air Borough status, the council can also apply for funding for air quality projects from the Mayors Air Quality Fund, which will be subject to availability.
- 5.2 Any requests for additional funding, or savings arising out of its implementation, will be managed through the normal budgeting process.

## **6.0 Legal Implications**

- 6.1 The Mayor governs an accreditation scheme to reward local authorities able to demonstrate the impacts of their work. Local authorities can apply for Cleaner Air Borough status which is awarded to those who can demonstrate how they are improving air quality and exceeding upon rather than simply meeting targets. The scheme is currently under review by the Mayor. Officers aim to attain this, once the criteria for the scheme has been published.
- 6.2 The Air Quality Action Plan outlines the council's strategy for reducing local emissions of nitrogen dioxide and particulate matter. This legal duty is a requirement under the Environment Act 1995 and all local authorities must publish and regularly review their action plan once an air quality management area has been declared.
- 6.3 Progress reports detailing how we are delivering on our objectives will be published in accordance with the timetable set out by the Mayor. The LLAQM is currently under review and may necessitate a further review of the Air Quality Action Plan in 2019 – 2020. The council cannot anticipate at this stage the potential implications of this action for Brent or the additional legal requirements that might be imposed following the publication of the new guidelines. In 2016, the Greater London Authority provided technical guidance, known as "London Local Air Quality Management Technical Guidance" which has been prepared to support London boroughs in carrying out their duties under the Environment Act 1995 and connected regulations.
- 6.3 Air quality in the capital is devolved to the Mayor of London, who has a supervisory role, with powers to intervene and direct local authorities in Greater London under Part IV of the Environment Act 1995. In support of these devolved powers, the Mayor has established a London-specific LAQM system (LLAQM) for the effective and coordinated discharge of their respective responsibilities under Part IV of the Act.

## **7.0 Equality Implications**

- 7.1 None.

## **Background Papers**

Appendix 1 – Brent Annual Status Report

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Report Sign Off

**AMAR DAVE**

**Strategic Director of Regeneration and Environmental Services**

# **London Borough of Brent Air Quality Annual Status Report for 2017**

**Date of publication: May 2018**



This report provides a detailed overview of air quality in Brent during 2017. It has been produced to meet the requirements of the London Local Air Quality Management statutory process<sup>1</sup>.

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

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## **Abbreviations**

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
PM <sub>10</sub>	Particulate matter less than 10 micron in diameter
PM <sub>2.5</sub>	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TEOM	Tapered Element Oscillating Microbalance
TfL	Transport for London

**Table A. Summary of National Air Quality Standards and Objectives**

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

Note: <sup>1</sup> by which to be achieved by and maintained thereafter

## 1. Air Quality Monitoring

The London Borough of Brent operated four automatic monitoring stations all of which are within the Council's air quality management area.

- John Keble Primary School site (BT6) – roadside (R), measures NO<sub>2</sub> and PM<sub>10</sub> (by Tapered Element Oscillating Microbalances (TEOM))
- Ark Franklin Academy site (BT8) roadside (R), measures NO<sub>2</sub> and by TEOM measures both PM<sub>10</sub> and PM<sub>2.5</sub> –
- Drury Way/ Ikea site (BT4)<sup>2</sup>- roadside (R), measures NO<sub>2</sub> and PM<sub>10</sub> (by TEOM)
- Neasden Lane site (BT5) - industrial (I), measures NO<sub>2</sub> and PM<sub>10</sub> (by TEOM)

The London Borough of Brent also undertook monitoring of annual mean NO<sub>2</sub> concentrations using passive diffusion tubes at 27 sites located throughout the Borough. This included one location monitored in triplicate (site 52 A, B and C) and one background location (Tube ID 33A).

### 1.1 *Locations*

**Table B. Details of Automatic Monitoring Sites for 2017**

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
BT4	Ikea	520886	185169	Roadside	Y	38	2	2.5	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , O <sub>3</sub>	Chemiluminescent; FDMS
BT5	Neasden Lane	521511	185204	Industrial	Y	35	4	2.5	NO <sub>2</sub> , PM <sub>10</sub>	Chemiluminescent, TEOM, VCM method
BT6	John Keeble Primary School	521619	183554	Roadside	Y	10	2	2.5	NO <sub>2</sub> , PM <sub>10</sub>	Chemiluminescent, TEOM, VCM method
BT8	Ark Franklin Primary School	523716	183030	Roadside	Y	10	2	2.5	NO <sub>2</sub> , PM <sub>10</sub>	Chemiluminescent, TEOM, VCM method

<sup>2 2</sup> The Ikea site (BT4) is a King's College Supersite and in addition to the pollutants listed above it also measures carbon dioxide (CO<sub>2</sub>) and ozone (O<sub>3</sub>).

**Table C. Details of Non-Automatic Monitoring Sites for 2017**

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Tube co-located with an automatic monitor? (Y/N)
1	Junction of Kenton Rd / Upton Gardens	516929	188560	Roadside	Y	15	1	2.0	NO <sub>2</sub>	N
2	Harrow Rd, Sudbury Court Drive	515793	186042	Roadside	Y	10	0.5	2.5	NO <sub>2</sub>	N
4	Junction of Shaftesbury Avenue / Woodcock Hill	518254	187771	Roadside	N	6	1	2.5	NO <sub>2</sub>	N
7	Bridgewater Rd / Ealing Road	517921	183716	Roadside	Y	17	2	2	NO <sub>2</sub>	N
9	Junction of East Lane / Wembley Hill Road	518499	186168	Roadside	Y	20	1	2	NO <sub>2</sub>	N
17	Old Church Lane junction with Neasden Lane	520480	186537	Roadside	Y	4	0.5	2.5	NO <sub>2</sub>	N
21	Central Middlesex Hospital, Central Way	520078	182857	Roadside	Y	4	2.0	2.5	NO <sub>2</sub>	N
22	Junction of Kingsbury Road / Edgware Road	521447	188730	Roadside	Y	5	0.5	2.5	NO <sub>2</sub>	N
23	Junction North Circular Rd / Chartley Avenue	521213	186125	Roadside	Y	10	1.0	2.0	NO <sub>2</sub>	N
26	Dudden Hill Lane junction with High Road	522191	184821	Roadside	Y	19	1.0	2.0	NO <sub>2</sub>	N
29	Junction Dollis Hill Lane / Cricklewood	523191	186571	Roadside	Y	12	0.5	2.0	NO <sub>2</sub>	N
30	Chichele Road near Melrose Ave	523663	185353	Roadside	Y	9.8	0.5	2.0	NO <sub>2</sub>	N
33a	Fryent Park Car Park area	519572	187691	Background	Y	500	N/A	2.5	NO <sub>2</sub>	N

41	R/O 246 Neasden Lane	521455	185920	Roadside	Y	3	2.0	2.5	NO <sub>2</sub>	N
48	Kilburn Park Rd near junction with Shirland Road	525196	182517	Roadside	Y	2	0.5	2.5	NO <sub>2</sub>	N
52 a,b,c	IKEA, Hut, North Circular Road	520874	185173	Roadside	Y	40	2.5	2.0	NO <sub>2</sub>	Y
53	Junction Ealing Road / High Road	518020	185043	Roadside	Y	15	1.0	2.5	NO <sub>2</sub>	N
54	Ealing Road / Riverside Gardens	518221	183206	Roadside	Y	4	2.0	2.5	NO <sub>2</sub>	N
BRT 42	Police Station, Craven Park	521155	184002	Roadside	Y	3	2.0	2.5	NO <sub>2</sub>	N
BRT 43	Pitfield Way	520242	184541	Roadside	Y	20	2.0	2.0	NO <sub>2</sub>	N
BRT 53	High Road Wembley	518303	185181	Roadside	Y	0	1.0	2.5	NO <sub>2</sub>	N
BRT 55	High Street, Harlesden	521743	183361	Roadside	Y	3	1.0	2.5	NO <sub>2</sub>	N
BRT 56	Chamberlayne Road	523635	183153	Roadside	Y	15	1.0	2.5	NO <sub>2</sub>	N
BRT 57	Kilburn Bridge	525461	183558	Roadside	Y	8	1.0	2.5	NO <sub>2</sub>	N
BRT 58	51 High Road, Willesden	523031	184655	Roadside	Y	2	1.0	2.5	NO <sub>2</sub>	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, the details of which are described in Appendix A.

**Table D. Annual Mean NO<sub>2</sub> Ratified and Bias-adjusted Monitoring Results (µg m<sup>-3</sup>)**

Site ID	Site type	Valid data capture for monitoring period % a	Valid data capture 2017 % b	Annual Mean Concentration ((µg m <sup>-3</sup> ))						
				2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>d</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BT1	Automatic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BT4	Automatic	87%	87%	<u>74.9</u>	<u>76.1</u>	N/A	<u>79.7</u>	<b>41.0</b>	<u>76</u>	<u>72</u>
BT5	Automatic	97%	97%	<b>41.2</b>	<b>44.0</b>	38.9	N/A	38.8	<b>44</b>	<b>45</b>
BT6	Automatic	99%	99%	<b>44.8</b>	<b>41.1</b>	37.5	N/A	N/A	<b>45</b>	<b>45</b>
BT8	Automatic	14%	14%	N/A	N/A	N/A	N/A	N/A	N/A	54
1	Diffusion tube	82%	82%	38.7	37.9	<b>41.0</b>	<b>41.9</b>	<b>40.1</b>	<b>41.13</b>	36.23
2	Diffusion tube	82%	82%	<b>42.1</b>	<b>42.2</b>	<b>46.9</b>	<b>46.1</b>	<b>41.7</b>	<b>51.00</b>	<b>41.76</b>
4	Diffusion tube	82%	82%	<b>40.4</b>	<b>41.8</b>	<b>45.3</b>	<b>47.9</b>	<b>40.3</b>	<b>51.08</b>	<b>42.74</b>
7	Diffusion tube	100%	100%	<b>56.7</b>	<b>59.7</b>	<u>71.2</u>	<u>69.4</u>	<u>62.3</u>	<u>71.65</u>	<b>62.79</b>
9	Diffusion tube	82%	82%	<b>44.3</b>	<b>46.6</b>	<b>50.5</b>	<b>53.9</b>	<b>47.3</b>	<b>57.11</b>	<b>49.86</b>
17	Diffusion tube	91%	91%	<b>54.1</b>	<b>52.8</b>	<b>55.5</b>	<b>59.6</b>	<b>55.4</b>	<u>62.49</u>	<b>55.67</b>

Site ID	Site type	Valid data capture for monitoring period % a	Valid data capture 2017 % b	Annual Mean Concentration (( $\mu\text{g m}^{-3}$ ))						
				2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>d</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
21A	Diffusion tube	100%	100%	43.1	47.1	49.5	55.1	48.7	55.13	46.90
22	Diffusion tube	73%	73%	51.6	54.1	57.9	<u>64.7</u>	56.7	<u>65.05</u>	58.14
23	Diffusion tube	82%	82%	<u>82.1</u>	<u>92.8</u>	<u>104.5</u>	<u>108.7</u>	<u>93.2</u>	<u>115.39</u>	93.88
26	Diffusion tube	91%	91%	58.1	<u>60.4</u>	<u>65.4</u>	<u>68.9</u>	<u>63.9</u>	<u>73.69</u>	61.93
29	Diffusion tube	64%	64%	<u>63.5</u>	<u>75.8</u>	<u>79.0</u>	<u>82.7</u>	<u>74.1</u>	<u>85.97</u>	55.58
30	Diffusion tube	73%	73%	59.1	<u>64.6</u>	<u>62.5</u>	58.6	52.6	<u>62.63</u>	51.29
33A	Diffusion tube	73%	73%	22.2	24.7	26.3	26.1	22.9	29.14	22.21
41	Diffusion tube	82%	82%	57.8	<u>61.6</u>	57.6	<u>65.7</u>	<u>60.7</u>	<u>74.41</u>	<u>60.05</u>
48	Diffusion tube	82%	82%	<u>69.3</u>	<u>76.6</u>	<u>70.5</u>	<u>63.1</u>	56.5	<u>71.57</u>	<u>59.95</u>
52	Diffusion tube	100%	100%	<u>87.7</u>	<u>102.8</u>	<u>104.1</u>	<u>103.4</u>	<u>87.9</u>	<u>102.10</u>	<u>86.59</u>
53	Diffusion tube	100%	100%	<u>66.9</u>	<u>66.9</u>	<u>64.4</u>	<u>70.0</u>	<u>66.6</u>	<u>83.85</u>	68.34
54	Diffusion tube	91%	91%	41.9	49.7	47.0	50.3	47.1	52.49	46.00
BRT 42	Diffusion tube	100%	100%	43.6	45.1	48.5	47.7	41.8	49.77	42.38
BRT 43	Diffusion tube	100%	100%	58.1	<u>64.2</u>	<u>66.9</u>	<u>72.7</u>	<u>80.3</u>	<u>80.65</u>	73.71
BRT 53	Diffusion tube	100%	100%	48.1	<u>64.8</u>	<u>75.0</u>	<u>77.1</u>	<u>75.7</u>	<u>80.77</u>	64.95
BRT 55	Diffusion tube	100%	100%	<u>70.6</u>	<u>76.2</u>	<u>70.4</u>	<u>76.2</u>	<u>73.5</u>	<u>91.83</u>	76.69

Site ID	Site type	Valid data capture for monitoring period % a	Valid data capture 2017 % b	Annual Mean Concentration (( $\mu\text{g m}^{-3}$ ))						
				2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>d</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BRT 56	Diffusion tube	82%	82%	<b><u>66.5</u></b>	<b><u>75.2</u></b>	<b><u>70.1</u></b>	<b><u>67.7</u></b>	56.8	<b><u>69.43</u></b>	<b>58.29</b>
BRT 57	Diffusion tube	73%	73%	<b><u>81.6</u></b>	<b><u>100.8</u></b>	<b><u>88.0</u></b>	<b><u>86.2</u></b>	<b><u>85.3</u></b>	<b><u>84.21</u></b>	<b>64.43</b>
BRT 58	Diffusion tube	100%	100%	<b><u>60.3</u></b>	<b><u>68.2</u></b>	<b><u>65.4</u></b>	<b><u>65.6</u></b>	58.1	<b><u>65.73</u></b>	<b>52.75</b>

Notes: Exceedance of the NO<sub>2</sub> annual mean AQO of 40  $\mu\text{g m}^{-3}$  are shown in **bold**.

NO<sub>2</sub> annual means in excess of 60  $\mu\text{g m}^{-3}$ , indicating a potential exceedance of the NO<sub>2</sub> hourly mean AQS objective are shown in bold and underlined.

<sup>a</sup> data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> 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%)

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

Table E. NO<sub>2</sub> Automatic Monitor Results: Comparison with 1-hour Mean Objective

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Number of Hourly Means > 200 µg m <sup>-3</sup>						
			2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BT4	86%	86%	10	<b>32</b>	N/A	10	0	<b>33</b>	<b>33</b>
BT5	97%	97%	2	0	0	N/A	0	<b>25</b>	17
BT6	99%	99%	0	0	0	N/A	N/A	0	0
BT8	14%	14%	N/A	N/A	N/A	N/A	N/A	N/A	0

Notes: Exceedance of the NO<sub>2</sub> short term AQO of 200 µg m<sup>-3</sup> over the permitted 18 days per year are shown in **bold**.

<sup>a</sup> data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> 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%)

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

Table F. Annual Mean PM<sub>10</sub> Automatic Monitoring Results (µg m<sup>-3</sup>)

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Annual Mean Concentration (µg m <sup>-3</sup> )						
			2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BT4	92%	92%	34.5	32.9	34.1	28.6	29.2	33	33
BT5	99%	99%	34.3	32.5	26.5	24.1	31.3	31	30
BT6	98%	98%	25.5	24.4	25.3	21.2	16.9	20	20

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Annual Mean Concentration ( $\mu\text{g m}^{-3}$ )						
			2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BT8	11%	11%	N/A	N/A	N/A	N/A	N/A	N/A	19

Notes: Exceedance of the PM<sub>10</sub> annual mean AQO of 40  $\mu\text{g m}^{-3}$  are shown in **bold**.

<sup>a</sup> data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> 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%)

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

**Table G. PM<sub>10</sub> Automatic Monitor Results: Comparison with 24-Hour Mean Objective**

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Number of Daily Means > 50 $\mu\text{g m}^{-3}$						
			2011 <sup>c</sup>	2012 <sup>c</sup>	2013 <sup>c</sup>	2014 <sup>c</sup>	2015 <sup>c</sup>	2016 <sup>c</sup>	2017 <sup>c</sup>
BT4	97%	97%	<b>46</b>	35	<b>38</b>	26	23	<b>45</b>	<b>41</b>
BT5	99%	99%	<b>62</b>	<b>57</b>	17	5	15	<b>37</b>	29
BT6	98%	98%	15	11	10	1	1	9	20
BT8	11%	11%	N/A	N/A	N/A	N/A	N/A	N/A	0

Notes: Exceedance of the PM<sub>10</sub> short term AQO of 50  $\mu\text{g m}^{-3}$  over the permitted 35 days per year or where the 90.4th percentile exceeds 50  $\mu\text{g m}^{-3}$  are shown in **bold**.

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

<sup>a</sup> data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> 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%)

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

## 2. Action to Improve Air Quality

### 2.1 Air Quality Action Plan Progress

Table J provides a brief summary of the London Borough of Brent's progress against the Air Quality Action Plan, showing progress made this year. New projects which commenced in 2017 are shown at the bottom of the table.

**Table J. Delivery of Air Quality Action Plan Measures**

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
Cleaner Transport – increase provision of sustainable transport and accelerate uptake of new low emission vehicles in borough fleet	Increase modal share for Walking and Cycling	<p>Our Long Term Transport Strategy 2015 – 2035 outlines our objectives for the provision of sustainable transport and includes a commitment reduce air pollution in the borough. 2 core objectives are to increase the uptake of sustainable and active modes of transport such as cycling and walking and reduce exposure to pollution generated by the Brent transport network. Walking accounts for 29% of trips and cycling 1% in Brent. In recognition of the need to increase modal shift from passenger vehicle use to active and sustainable travel modes of transport such as cycling and walking and separate strategies have been created</p> <p>We published our Walking Strategy this year. Brent Council offers free cycle training to all residents (adult and children) as well as staff in Brent businesses and have provided cycle training to over 1200 Brent residents.</p>	<p>The Long Term Transport Strategy can be viewed via <a href="https://www.brent.gov.uk/media/16403671/transport-strategy-2016.pdf">https://www.brent.gov.uk/media/16403671/transport-strategy-2016.pdf</a></p> <p>Cycling Strategy can be viewed via: <a href="https://www.brent.gov.uk/media/16407708/cycle-strategy-updated-april-2017.pdf">https://www.brent.gov.uk/media/16407708/cycle-strategy-updated-april-2017.pdf</a></p> <p>Walking Strategy can be viewed via <a href="https://www.brent.gov.uk/media/16407830/brent-walking-strategy-2017-2022.pdf">https://www.brent.gov.uk/media/16407830/brent-walking-strategy-2017-2022.pdf</a></p>

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	<p>Targeted reduction of vehicle diesel use in Brent</p> <p>Increasing access to low emission or alternative fuels, speeding up the introduction of the cleanest vehicles to our fleet by upgrade or replacement.</p>	<p>Our charges for resident parking permits reward environmentally responsible behaviour and are designed to encourage residents to consider the contribution their vehicle makes to climate change and local air quality. In 2017/18 the council consulted residents on plans for changes to our parking fees and charges, aiming to further promote the modal shift from passenger vehicle use to active and sustainable travel. Plans included the implementation of increased fees for Essential User permits and residential parking permits for household's second and third vehicles and the introduction of a £50 levy on resident parking permits for diesel vehicles. We expect plans to be implemented from 1st October 2018 with further increases proposed annually to 2020.</p> <p>The Mayor announced plans in January 2017 for 10 more Low Emission Bus Zones, deploying the greenest buses in air quality hotspots. One of these zones is set to be Edgware Road (Kilburn to Maida Vale), from Cricklewood Broadway via Kilburn High Road to Shoot-Up Hill. Currently there is one bus route (98) in Borough using electric buses. The A5 corridor (eastern boundary of Borough) was declared a low emission bus zone in 2018 and the introduction of Euro VI buses on 5 routes serving this corridor will result.</p>	<p>Our parking permit charges are based on emissions and more info regarding them can be found at <a href="https://www.brent.gov.uk/service-s-for-residents/parking/parking-permits/parking-charges/">https://www.brent.gov.uk/service-s-for-residents/parking/parking-permits/parking-charges/</a></p> <p>We will start work late 2018 to review current provision of vehicles in the council fleet which meets highest standards and/ or use alternative fuels.</p> <p>Low Emission Bus Zone on the A5 – see for more information and a map showing which routes this benefits <a href="https://www.brent.gov.uk/your-community/brent-going-green/cleaner-and-greener-bus-routes/">https://www.brent.gov.uk/your-community/brent-going-green/cleaner-and-greener-bus-routes/</a></p>

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	<p>Encourage Car Clubs to use low emission and alternative fuel vehicles in their fleet</p> <p>Cleaning Council Fleet</p> <p>Support the installation of on-street electric vehicle charge points throughout Brent</p>	<p>The Long Term Transport Strategy includes a commitment to create a Car Club Management Plan. The council will work with car club operators to identify options for increasing the take-up of car club vehicles and provision of the least polluting vehicles for use. We also identify opportunities for the provision of car clubs in new development schemes, in considering areas for controlled parking provision and in response to requests from residents.</p> <p>The council seeks to reduce emissions from our own fleet wherever practicable. This includes the provision and use of electric and hybrid vehicles, the upgrade of all Brent Transport vehicles to Euro 6 and regular review of vehicle provision to identify opportunities for further reduction of vehicles in our fleet. The Council also utilises ZipCar vehicles as part of our fleet, maximising opportunities for the efficient use of vehicles locally whilst reducing our contribution to local congestion and pollution. We continue to review locations to determine where demand is greatest and will factor this into future actions to be defined in the Car Club Management Plan and the emerging Procurement Policy.</p> <p>Approximately 2,166 electric vehicles are registered to addresses in Brent. Last year the council consulted residents to identify suitable locations for additional on-street electric vehicle charging points. The council is currently installing 30 active, freestanding charge points and associated parking infrastructure as part of the Source London network (with works undertaken by BluePointLondon Ltd).</p>	

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	<p>Support the take-up of electric taxis and commercial vehicles.</p> <p>Implements a Strategy for Transport Planning that supports air quality objectives</p>	<p>The council has begun work to identify suitable locations for the installation of London Rapid Chargers for use by residents with no access to off-street charging points, Taxi drivers and other private hire operators in the borough. Work is ongoing and we are on target to provide at least 50 additional charge points by March 2019.</p> <p>In exercise of our strategic objectives the council regular reviews and updates our Local Transport Plan (as our Local Implementation Plan). A core aim is to reduce the environmental impacts of transport via provision of improved infrastructure for cycling and walking, maintenance, repair and improvements to highways infrastructure to eliminate pinch points and otherwise improve traffic flows.</p>	<p>The council will undertake an annual review of chargers installed from 2020 onwards.</p>
Cleaner Transport – Tackle unnecessary idling by taxis, coaches and other vehicles	Raising local awareness of idling action	<p>In September 2017 the council launched our programme to tackle idling near schools which included the installation of 40 ‘no-idling’ signs in selected locations, the provision of workshops in 8 schools to raise awareness and a toolkit to facilitate similar actions in other schools. This was supplemented by the installation of signage in a further 60 hotspots across the borough.</p> <p>The council has recruited Community Air Quality Champions to assist in raising local awareness about idling action and will assist in the implementation of idling vehicle campaigns at taxi ranks, bus stands and schools and other key locations. Two on-street campaigns have been held to date with a further campaign planned for winter 2018.</p>	

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	<p>Regulation of engine idling</p> <p>Reducing the number of complaints about local idling</p>	<p>The council has reviewed our enforcement procedures so that we can take action to issue fixed penalty notices to the worst offenders when other actions fail and has joined a consortium for idling action with other London Boroughs to share best practice and maximise resources for further projects. In 2017/18 we provided training to enforcement officers to facilitate this process.</p> <p>Complaints logged with the council regarding engine idling are relatively low compared to others– the council received 20 complaints in 2017/18. No formal enforcement action was taken in respect of these complaints. The council uses this and other information to identify idling hotspots which can be targeted for local awareness raising and action.</p>	
Public Health and Community Engagement	Raising awareness in the community	<p>The council publishes information about air quality on our website.</p> <p>We have maintained our membership of the London Air Quality Network annually throughout this time to ensure ready access to current air quality information is available to the public.</p> <p>The Council annually reviews its Air Quality Management Areas using a range of data sources. We make this information available via our web pages and provide additional information upon request. In addition, we regularly attend residents meetings to advise and update about local air quality action.</p> <p>The council promotes air quality action via initiatives such as Walk on Wednesdays and Play Streets for schools throughout the year. In addition, we plan local campaigns to raise awareness about local</p>	

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	Engage with Local Business to reduce local air pollution	<p>air quality on National action days such as Clean Air Day and Car Free Day.</p> <p>The main mechanism for engaging with local businesses is via uptake and implementation of workplace travel plans. We have started work to produce general guidance for local businesses to include opportunities for engaging local businesses in local air quality action.</p> <p>The council undertaken a trial study to explore options for retiming some HGV movements in Wembley town Centre. We were able to determine that, by undertaking deliveries outside of peak hours, we could achieve local air quality and wider environmental benefits. We intend to build on this early work and will consider trial delivery redistribution or optimisation for small businesses in other areas as the next phase of this work. We will also explore the feasibility of a scheme to consider off-peak home deliveries or using local collection as part of this work.</p>	
	Ensure schools join the school travel planning programme	All Brent schools have travel plans and we are currently working with those with existing travel plans to achieve higher levels of compliance, attain STARS accreditation or maintain existing gold accreditation in the same scheme. In Brent 50 schools and 20 nurseries have an active travel plan promoting sustainable and safe ways of travelling. 40% of schools with existing travel plans have attained a higher level of compliance.	

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
Exposure Reduction	<p>School Audit programme</p> <p>Identify and develop Low Emission Neighbourhoods where feasible</p> <p>Reduce emissions to air from industrial installations</p>	<p>The Mayor of London launched their School Air Quality Audit Programme in January 2017. 2 Brent primary Schools, Ark Franklin Primary Academy &amp; John Keble C of E Primary School, participated and audits were completed in December 2017. The council has provided match-funding to implement action plans devised from each bespoke audit. The council has started works to identify and prioritise schools subject to the greatest exposure to pollution based on the principles outlined in the Mayors audit programme. This will include the provision of packs to schools to conduct their own audits and the provision of additional support and guidance to devise local action plans.</p> <p>The council has begun work to explore options for the provision of measures which will contribute to local low emission neighbourhoods or areas. Initially will target action in four areas – Neasden Town Centre, Church End, Wembley and Tokyngton and the Kilburn Regeneration Area.</p> <p>The council regulates some polluting processes via the Environmental Permitting Regime to ensure businesses with the greatest polluting potential comply with the law. The council ensures that local emissions from the polluting of these installations are appropriately controlled. Each is inspected in accordance with an agreed regime and the council expects to complete all by the end of the year. In addition, the council has investigated 12 complaints made in respect of emissions from</p>	

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
		industrial installations in 2017/18. No enforcement action was taken in respect of these installations.	
	Targeted upgrade of green infrastructure	<p>The council aims to double current planting numbers and has committed to planting around 18000 street trees. We aspire to plant more where we can continually identify opportunities for the enhancement of green infrastructure at appropriate locations, especially in areas where exposure to poor air quality is high and provision of green space is low. In 2017/18, the council identified an area for enhanced provision of street trees in Neasden Town Centre. 30 trees will be planted by spring 2018.</p> <p>In addition, the council is committed to encouraging local residents to contribute to identification of new areas, maintenance of green space and, with this aim, endorses community-led programmes such as Adopt-a-Tree so that residents can take ownership of green spaces in their local areas.</p>	
	Promote air pollution forecasting and route planner tools	<p>The council is currently a member of the Airtex consortium. We continue to promote the use of the AirText messaging service via our website and community events such as air quality action days. We also continue to promote similar route planning applications such as Walkit to allow the community to make informed travel choices on high pollution days.</p> <p>The council ensures air quality impacts are communicated when promoting initiatives such as Walk and Stride and during public consultation of key documents such as the Cycling strategy and Long Term Transport Strategy.</p>	



Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
	<p>Enforce Combined Heat and Power and biomass air quality policies</p> <p>Promote energy efficiency retrofitting projects in workplaces and homes</p>	<p>The council requires all new major developments use low and ultra-low emission as standard practice, via the planning regime. The council reviews all applications to ensure that all energy generating equipment such as boilers achieve the highest emission standards.</p> <p>The council proactively promotes initiatives to cut energy use, signpost commercial and residential building owners to assist them to replace old boilers and encourage them to adopt other measures to get the most out of energy they use. An example of this is Brent current partnership with the Mayor of London on an innovative new scheme offering high-quality solar photovoltaic (PV) panels to help deliver the Mayor's vision of a zero-carbon city.</p>	
	<p>Promote and enforce Smoke Control Zones</p> <p>Reduce emissions from the burning of waste and from waste facilities</p>	<p>Brent is entirely a smoke control zone and the council control the types of fuels that should be used in commercial and domestic buildings by enforcement of the Clean Air Act. The council issues guidance to assist businesses and residents to make informed choices about the least polluting fuels and equipment they can use.</p> <p>The council actively discourages the domestic burning of waste and provides alternatives such as green waste collection service. Burning of waste on commercial premises and at waste facilities is prohibited. The council dealt with 412 complaints regarding</p>	<p>The council is currently creating a register of local plant so that we can map and monitor local increases in energy-generating plant, provide guidance regarding future installations and</p>

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
		<p>nuisance from the burning of waste and issued 28 abatement notices in 2017/ 18.</p> <p>The council received 8 complaints in relation to waste sites within the borough. The council effectively managed this via liaison with the regulatory authority, the Environment Agency, where appropriate. No formal enforcement action was required.</p>	implement further controls where needed.
	Improve energy efficiency in council buildings	<p>Our Civic Centre is officially recognised as the greenest public building in the UK, through its <a href="#">BREEAM Outstanding</a> accreditation.</p> <p>The council is currently reviewing energy use in Brent-owned buildings and associated operations to determine options for reducing emissions. We are currently signposting commercial and residential building owners to initiatives such as the GLA-led RE:NEW and RE:FIT programmes and intend to include this in our guidance to schools to be issued later this year.</p> <p>Work is currently underway to install a Neighbourhood Heating System as part of the South Kilburn Regeneration Programme. The aim of this is to deliver on our localised sustainability strategy, to ensure that new and future developments achieve a 40% carbon reduction and potentially zero carbon in the long term.</p> <p>The council is currently replacing nearly 21,000 street lights across the borough with new, energy efficient LED (Light Emitting Diode) lights. The programme of works is expected to be completed by</p>	Information about the sustainable elements of the Centre can be found in the <a href="#">building case study</a> which formed part of the BREEAM assessment.

Measure	Action	Progress (-Emissions/Concentration data - Benefits - Negative impacts / Complaints)	Further information
		November 2018. A reduction in energy cost of approximately £850,000 per year as well as carbon emissions.	
	Update our procurement policies	The council's procurement policy is scheduled for review this year. Environmental performance of suppliers in all new contracts and this is a key selection criterion in our tendering process. We are also committed to reviewing existing contracts to ensure that opportunities for improvements are identified and will set out our environmental standards in our updated policies.	
	Investigate options for less polluting deliveries	In October 2017 the council completed the second phase of a project which explored the potential for reducing vehicle emissions by re-timing commercial deliveries and co-ordinating actions from a number of commercial operators, maximising potential reductions in local congestion.	

### 3. Planning Update and Other New Sources of Emissions

**Table K. Planning requirements met by planning applications in London Borough of Brent in 2017**

<b>Condition</b>	<b>Number</b>
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	30
Number of planning applications required to monitor for construction dust	<u>12</u>
Number of CHPs/Biomass boilers refused on air quality grounds	<u>0</u>
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	<u>4</u>
Number of developments required to install Ultra-Low NO <sub>x</sub> boilers	<u>20</u>
Number of developments where an AQ Neutral building and/or transport assessments undertaken	<u>9</u>
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	<u>0</u>
Number of planning applications with S106 agreements including other requirements to improve air quality	<u>0</u>
Number of planning applications with CIL payments that include a contribution to improve air quality	<u>0</u>
<b>NRMM: Greater London (excluding Central Activity Zone and Canary Wharf)</b> 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 <a href="http://www.nrmm.london">www.nrmm.london</a> and that all NRMM used on-site is compliant with Stage IIIA of the Directive and/or exemptions to the policy.	20 conditions included (significantly more considered in relation to Construction Method Statement conditions). We have yet to verify the number of developments registered and will undertake site audits to verify compliance once this has been confirmed.

#### **3.1 New or significantly changed industrial or other sources**

No new industrial or other sources have been identified in 2017

## **Appendix A Details of Monitoring Site QA/QC**

### **A.1 Automatic Monitoring Sites**

QA/QC for Brent's automatic monitoring stations is provided by ERG King's College London. These stations are calibrated fortnightly by local site operator LSO, with audits every 6 months. Calibrations are carried out by the Local Authority, EnviroTechnology and ERG King's College London. Audits are carried out by the National Physics Laboratory and are UKAS accredited.

### **A.2 Diffusion Tube Quality Assurance / Quality Control**

All diffusion tubes are collected and set up by the local site operator (LSO) and analysed by Gradko International Ltd Laboratories (UKAS Accredited Methods) using the preparation method 20% Triethanolamine (TEA) in De-ionised Water absorbent. Blanks are subtracted for each exposure period prior to averaging to obtain the NO<sub>2</sub> annual average data. Annual averages have been bias adjusted using the bias adjustment factor for 2017 from the national database available on the LAQM website at <http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html> .

For the 2017 data a bias adjustment factor of 0.89 was used which is derived from 34 studies nationwide.

### **Short-term to Long-term Data Adjustment**

A final measurement data set was produced by King's College following retrospective ratification of the measurements using procedures which exceed the requirements given by LLAQM.TG(16). During ratification, information from regular calibrations, 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 dataset can be found at [www.londonair.org.uk](http://www.londonair.org.uk).

**Appendix B Full Monthly Diffusion Tube Results for 2017**

**Table M. NO<sub>2</sub> Diffusion Tube Results**

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Annual Mean NO <sub>2</sub>												Annual mean – raw data <sup>c</sup>	Annual mean – bias adjusted <sup>c</sup>
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	82%	82%	65.8	41.7	42.6	38.6	36.3	35.1	33.4	35.6	-	-	37.3	-	40.7	36.2
2	82%	82%	70.5	43.3	47.7	48.0	46.8	42.7	45.0	44.3	-	-	34.1	-	46.9	41.8
4	82%	82%	80.7	46.9	57.3	43.7	51.0	40.7	40.1	38.4	-	-	33.4	-	48.0	42.7
7	100%	100%	101.1	62.6	60.4	73.8	77.3	74.1	70.2	65.2	75.7	62.3	53.5	-	70.6	62.8
9	82%	82%	83.2	52.4	53.6	59.4	54.1	56.8	49.5	52.5	-	-	43.0	-	56.0	49.9
17	91%	91%	85.9	58.4	50.5	61.9	56.1	65.8	67.6	60.9	61.1	57.2	-	-	62.5	55.7
21A	100%	100%	87.3	51.2	48.2	51.9	49.6	44.4	46.3	46.3	54.9	59.9	39.8	-	52.7	46.9
22	73%	73%	95.6	54.9	63.0	77.2	62.7	68.6	-	63.8	-	-	36.8	-	65.3	58.1
23	82%	82%	141.5	74.8	76.2	117.4	100.5	106.5	98.4	-	117.0	117.2	-	-	105.5	93.9
26	91%	91%	105.1	45.5	60.7	76.0	69.4	72.6	68.1	65.6	70.0	62.8	-	-	69.6	61.9
29	64%	64%	116.9	73.5	41.5	70.1	54.3	-	36.6	-	-	-	44.3	-	62.4	55.6
30	73%	73%	82.1	-	44.8	64.3	52.8	54.8	-	-	66.3	62.4	33.6	-	57.6	51.3
33A	73%	73%	45.5	28.7	25.4	17.9	23.1	17.5	-	20.6	-	-	21.0	-	25.0	22.2
41	82%	82%	75.6	74.6	52.3	66.1	66.3	65.4	76.8	-	68.2	62.6	66.9	-	67.5	60.0
48	82%	82%	91.4	54.0	-	67.7	61.8	-	63.5	67.0	71.1	62.5	-	-	67.4	60.0
52 A	100%	100%	106.8	80.5	85.5	93.4	102.3	98.7	91.7	99.8	93.4	90.6	80.9	-	93.0	82.8
52 B	100%	100%	124.2	91.5	91.9	99.3	141.0	101.8	91.1	89.7	98.0	90.6	104.6	-	102.2	90.9
52 C	100%	100%	129.7	82.6	81.4	103.4	107.9	108.2	96.5	99.5	100.2	90.1	64.2	-	96.7	86.1
53	100%	100%	107.3	49.8	61.0	70.1	85.8	89.2	85.9	74.7	86.3	90.6	43.8	-	76.8	68.3
54	91%	91%	70.3	54.2	43.2	54.9	46.0	52.1	-	53.1	57.1	45.3	40.8	-	51.7	46.0
BRT 42	100%	100%	80.6	49.1	44.2	41.4	54.0	43.8	43.1	40.8	48.8	41.9	36.1	-	47.6	42.4
BRT 43	100%	100%	127.4	69.6	80.0	69.0	79.4	82.1	84.3	71.4	90.2	85.2	72.6	-	82.8	73.7
BRT 53	100%	100%	97.7	73.0	66.5	67.3	83.1	85.6	76.9	74.1	80.4	62.3	36.0	-	73.0	64.9
BRT 55	100%	100%	126.0	77.1	67.0	103.9	94.0	99.0	83.5	86.5	75.8	62.5	72.6	-	86.2	76.7
BRT 56	82%	82%	96.5	62.9	54.7	66.6	66.2	71.4	-	-	59.6	46.0	65.5	-	65.5	58.3

Site ID	Valid data capture for monitoring period % <sup>a</sup>	Valid data capture 2017 % <sup>b</sup>	Annual Mean NO <sub>2</sub>												Annual mean – raw data <sup>c</sup>	Annual mean – bias adjusted <sup>c</sup>
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
BRT 57	73%	73%	94.7	67.6	59.2	69.4	73.2	73.2	-	-	79.5	62.6	-	-	72.4	64.4
BRT 58	100%	100%	85.7	54.0	53.2	57.2	60.6	64.6	58.3	57.6	62.6	56.9	41.1	-	59.3	52.7

Exceedance of the NO<sub>2</sub> annual mean AQO of 40 µg m<sup>-3</sup> are shown in **bold**.

<sup>a</sup> Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

<sup>b</sup> 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%)

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