

# **LB Camden Air Quality Annual Status Report for 2016**

## **Date of submission: 4<sup>th</sup> May 2017**



This report provides a detailed overview of air quality in the London Borough of Camden during 2016. 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
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

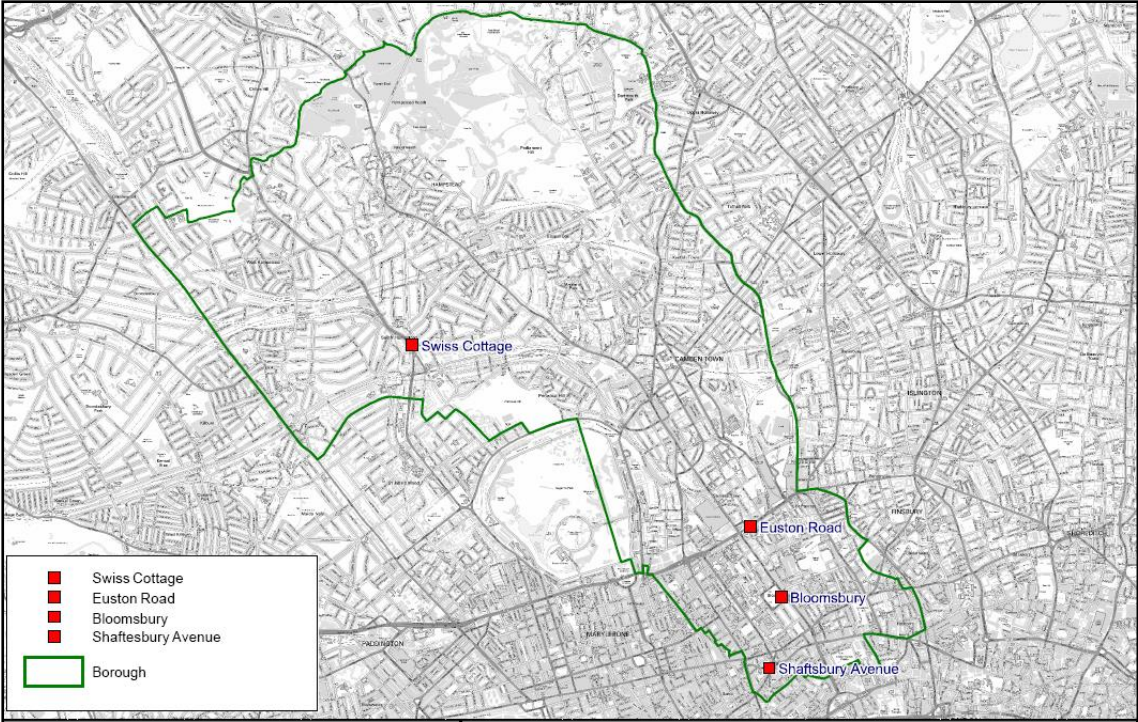
<b>Pollutant</b>	<b>Objective (UK)</b>	<b>Averaging Period</b>	<b>Date<sup>1</sup></b>
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020
Sulphur Dioxide (SO <sub>2</sub> )	266 µg m <sup>-3</sup> not to be exceeded more than 35 times a year	15 minute 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**

### ***1.1 Locations***

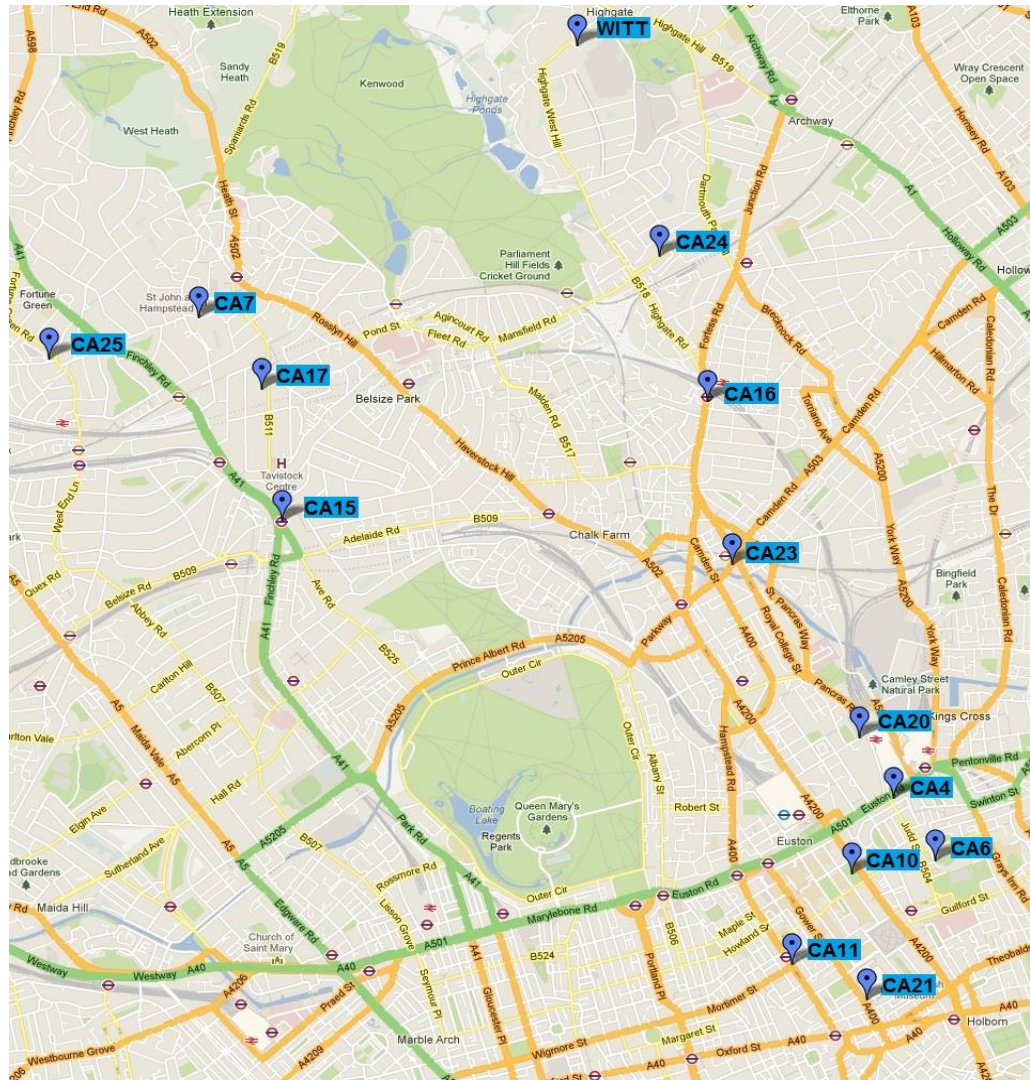
**Table B. Details of Automatic Monitoring Sites for 2016**



Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
LB: London Bloomsbury	Urban background	X 530120	Y 182034	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , CO, O <sub>3</sub>	Y	FDMS, API Nox, TEOM	Y (40m)	27m	Y
CD1: Swiss Cottage	Kerbside	X 526633	Y 184392	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> ,	Y	FDMS, AC31 Nox	Y (7m)	1.5m	Y
CD3: Shaftesbury Avenue	Roadside	X 530060	Y 181290	NO <sub>2</sub> , PM <sub>10</sub> ,	Y	TEOM, API Nox	Y (1m)	<1m	Y
CD9: Euston Road	Roadside	X 529878	Y 182648	NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>	Y	API Nox, FDMS	Y (1m)	0.5m	Y

**Table C. Details of Non-Automatic Monitoring Sites for 2016**





Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
CA4	Euston Road	Roadside	X 530110	Y 182795	NO <sub>2</sub>	Y	N	Y (1m)	5m	Y
CA6	Wakefield Gardens	Urban background	X 530430	Y 182430	NO <sub>2</sub>	Y	N	Y (18m)	30m	Y
CA7	Frognaal Way	Urban background	X 526213	Y 185519	NO <sub>2</sub>	Y	N	Y (6m)	30m	Y
CA10	Tavistock Gardens	Urban background	X 529880	Y 182334	NO <sub>2</sub>	Y	N	Y (35m)	25m	Y
CA11	Tottenham Court Road	Kerbside	X 529568	Y 181728	NO <sub>2</sub>	Y	N	Y (4m)	<1m	Y
CA15	Swiss Cottage	Kerbside	X 526633	Y 184392	NO <sub>2</sub>	Y	Y	Y (7m)	<1m	Y
CA16	Kentish Town Road	Roadside	X 529013	Y 185102	NO <sub>2</sub>	Y	N	Y (1m)	1m	Y
CA17	47 Fitzjohn's Road	Roadside	X 526547	Y 185125	NO <sub>2</sub>	Y	N	Y (5m)	5m	Y
CA20	Brill Place	Roadside	X 529914	Y 183147	NO <sub>2</sub>	Y	N	Y (9m)	<5m	Y
CA21	Bloomsbury Street	Roadside	X 529962	Y 181620	NO <sub>2</sub>	Y	N	Y (4m)	<1m	Y
CA23	Camden Road	Roadside	X 529173	Y 184129	NO <sub>2</sub>	Y	N	Y (5m)	<1m	Y

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
CA24	Chetwynd Road	Roadside	X 528722	Y 185950	NO <sub>2</sub>	Y	N	Y (2m)	1m	Y
CA25	Emmanuel Primary	Roadside	X 525325	Y 185255	NO <sub>2</sub>	Y	N	Y (3m)	1m	Y
WITT	Wittanhurst Lane	Roadside	X 528213	Y 187203	NO <sub>2</sub>	Y	N	Y (3m)	1.5m	Y

## 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	Nitrogen Dioxide (NO <sub>2</sub> ) Annual Mean Concentration µg/m <sup>3</sup>						
	2010* c	2011* c	2012* c	2013* c	2014 c	2015	2016
LB: London Bloomsbury	55	50	55	44	45	48	42
CD1: Swiss Cottage	82	71	70	63	66	61	66

CD3: Shaftesbury Avenue	89	76	71	74	69*	83	84
CD9: Euston Road	-	122*	106	106	98	90	88

Site ID	Location	Annual mean concentration (adjusted for bias) $\mu\text{g}/\text{m}^3$						
		2010* (Bias Adjustment Factor = XX)	2011* (Bias Adjustment Factor = 0.95)	2012* (Bias Adjustment Factor = 0.95)	2013* (Bias Adjustment Factor = 1.00)	2014 (Bias Adjustment Factor = 0.97)	2015 (Bias Adjustment Factor = 0.98)	2016 (Bias Adjustment Factor = 0.96)
CA4	Euston Road	82	93.12	82.05	107.75	89.74	86.76	82.71
CA6	Wakefield Gardens	34	45.61	39.29	40.32	36.44	35.80	31.31
CA7	Frognaal Way	29	31.46	28.89	31.95	28.55	27.78	27.91
CA10	Tavistock Gardens	52	47.56	40.12	49.37	46.50	44.57	39.68
CA11	Tottenham Court Road	92	91.67	83.30	88.09	86.75	85.61	83.57
CA15	Swiss Cottage	71	73.17	72.66	83.08	74.34	69.28	73.86
CA16	Kentish Town Road	74	57.19	58.97	65.32	57.83	63.55	58.72
CA17	47 Fitzjohn's Road	73	58.39	61.20	65.24	60.30	55.80	56.38
CA20	Brill Place	54	50.79	50.00	49.37	52.34	48.94	47.53
CA21	Bloomsbury Street	41	76.73	71.66	76.08	80.82	71.43	72.20
CA23	Camden Road	84	72.21	67.40	77.85	72.21	63.33	61.74

Site ID	Location	Annual mean concentration (adjusted for bias) $\mu\text{g}/\text{m}^3$						
		2010* (Bias Adjustment Factor = XX)	2011* (Bias Adjustment Factor = 0.95)	2012* (Bias Adjustment Factor = 0.95)	2013* (Bias Adjustment Factor = 1.00)	2014 (Bias Adjustment Factor = 0.97)	2015 (Bias Adjustment Factor = 0.98)	2016 (Bias Adjustment Factor = 0.96)
CA24	Chetwynd Road	<b>68</b>	<b>44.12</b>	<b>43.67</b>	<b>47.75</b>	<b>44.76</b>	<b>46.52</b>	<b>41.96</b>
CA25	Emmanuel Primary	-	<b>41.5</b>	<b>45.94</b>	<b>57.91</b>	<b>48.36</b>	<b>47.70</b>	<b>52.18</b>
WITT	Wittanhurst Lane	-	-	-	<b>53.10</b>	<b>48.26</b>	<b>45.03</b>	<b>43.11</b>

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

NO<sub>2</sub> annual means in excess of 60  $\mu\text{g}/\text{m}^3$ , 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	Site Type	Within AQMA?	Number of Exceedences of Hourly Mean (200 µg/m <sup>3</sup> )						
			2010* <sup>c</sup>	2011* <sup>c</sup>	2012* <sup>c</sup>	2013* <sup>c</sup>	2014 <sup>c</sup>	2015	2016
LB	Urban background	Y	1	0	1	0	0	0	0
CD1	Kerbside	Y	<b>128</b>	<b>79</b>	<b>43</b>	<b>28</b>	13	11	<b>37</b>
CD3	Roadside	Y	21	15	12	6	1 (140.4) <sup>c</sup>	Data capture issues	Data capture issues
CD9	Roadside	Y	-	<b>726</b>	<b>295</b>	<b>296</b>	<b>170</b>	<b>54</b>	<b>39</b>

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	PM10 Annual Mean Concentration µg/m <sup>3</sup>						
	2010* <sup>c</sup>	2011* <sup>c</sup>	2012* <sup>c</sup>	2013* <sup>c</sup>	2014 <sup>c</sup>	2015	2016
LB: London Bloomsbury	18	22	19	18	20	22	20
CD1: Swiss Cottage	26	27	23	21	22	20	21

CD3: Shaftesbury Avenue	29	32	29	29	25	22	18
CD9: Euston Road	-	-	-	-	29	18	24

Notes: Exceedance of the PM<sub>10</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%

*Option to include some narrative on the 7 year trend here*

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

Site ID	PM10 Number of Exceedences of 24-Hour Mean (50 mg/m3)						
	2010* <sup>c</sup>	2011* <sup>c</sup>	2012* <sup>c</sup>	2013* <sup>c</sup>	2014 <sup>c</sup>	2015	2016
LB: London Bloomsbury	2	17	10	4	11	6	9
CD1: Swiss Cottage	26	31	21	8	12	8	7
CD3: Shaftesbury Avenue	29	27	18	17	16	4	TBC
CD9: Euston Road	-	-	-	-	5	5	10

Notes: Exceedance of the PM<sub>10</sub> short term AQO of 50 µg m<sup>-3</sup> over the permitted 35 days per year or where the 90.4th percentile exceeds 50 µg m<sup>-3</sup> are shown in **bold**.

Where the period of valid data is less than 90% of a full year, the 90.4th percentile is shown in brackets after the number of exceedences.

<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%

Option to include some narrative on the 7 year trend here

**Table H. Annual Mean PM<sub>2.5</sub> Automatic Monitoring Results ( $\mu\text{g m}^{-3}$ ) (if available, if not this section can be deleted)**

**Table I. SO<sub>2</sub> Automatic Monitor Results for 2015: Comparison with Objectives (if available, if not this section can be deleted)**

Site ID	Site Type	Within AQMA?	Number of Exceedences (percentile in bracket $\mu\text{g/m}^3$ ) <sup>c</sup>		
			15-minute Objective (266 $\mu\text{g/m}^3$ )	1-hour Objective (350 $\mu\text{g/m}^3$ )	24-hour Objective (125 $\mu\text{g/m}^3$ )
LB	Urban Background	Y	0	0	0

Exceedences of the SO<sub>2</sub> AQOs are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed / year)

<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" as in Box 3.2 of TG(09) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>), if valid data capture is less than 75%

## **2. Action to Improve Air Quality**

**Table J. Commitment to Cleaner Air Borough Criteria**

Theme	Criteria	Achieved (Y/N)	Evidence
			<p><i>You will be assessed on your progress with addressing air pollution at the local level since the previous year.</i></p> <p><i>Please provide at least one example for each measure.</i></p>



				<p><b>Examples must be specific, with details i.e. they must include the specific location and the date of the intervention/s.</b></p> <p><b>Example projects must have been delivered in 2016 (or early 2017).</b></p>
<b>1. Political leadership</b>	<b>1.a</b>	Pledged to become a Cleaner Air for London Borough (at cabinet level) by taking significant action to improve local air quality and signing up to specific delivery targets.	Y	<i>No evidence required</i>
	<b>1.b</b>	Provided an up-to-date Air Quality Action Plan (AQAP), fully incorporated into LIP funding and core strategies.	Y	<p><i>Camden's AQAP 2016-18 is available to download at: <a href="http://www.camden.gov.uk/AQ">www.camden.gov.uk/AQ</a></i></p> <p><i>Air Quality is incorporated into core strategies including Camden's Local Plan and Joint Strategic Needs Assessment, and is a material consideration in Camden's internal LIP strategy</i></p>
<b>2. Taking action</b>	<b>2.a</b>	Taken decisive action to address air pollution, especially where human exposure and vulnerability (e.g. schools, older people, hospitals etc) is highest.	Y	<p><i>Camden is a partner of the Idling Action project will has delivered six events around Camden schools focusing on air quality awareness and anti-idling messaging.</i></p> <p><i>Camden has supported air quality monitoring at 97 school sites across the borough in 2017.</i></p> <p><i>Camden has implemented projects such as Play Streets and Healthy Schools Streets (at St Joseph's primary school) to reduce road traffic and improve air quality near schools.</i></p>
	<b>2.b</b>	Developed plans for business engagement (including optimising deliveries and supply chain), retrofitting public buildings using the RE:FIT framework, integrating no engine idling awareness raising into the work of civil enforcement officers, (etc etc).	Y	<p><i>Camden is a partner of Cleaner Air Better Business which seeks to reduce business impacts on air pollution</i></p> <p><i>Camden operates the London Borough Consolidation Centre to optimise deliveries to council buildings and private sector partners</i></p> <p><i>Air quality is part of the messaging used by Camden's environmental business network the Camden Climate Change Alliance</i></p>

	<b>2.c</b>	Integrated transport and air quality, such as: improving traffic flows on borough roads to reduce stop/start conditions, improving the public realm for walking and cycling, and introducing traffic reduction measures.	Y	<p>Camden has implemented projects such as Play Streets and Healthy Schools Streets (at St Joseph's primary school) to reduce road traffic and improve air quality near schools.</p> <p>Through projects such as the Torrington Place trials Camden has continued to increase the viability of the public realm for walking and cycling. This has included before and after air quality monitoring. More details: <a href="https://www.camden.gov.uk/ccm/content/transport-and-streets/transport-strategies/torrington-place-to-tavistock-place-experimental-traffic-changes.en?page=4">https://www.camden.gov.uk/ccm/content/transport-and-streets/transport-strategies/torrington-place-to-tavistock-place-experimental-traffic-changes.en?page=4</a></p>
	<b>2.d</b>	Made additional resources available to improve local air quality, including by pooling its collective resources (s106 funding, LIPs, parking revenue, etc).	Y	<p>Additional funding for air quality work has been received by:</p> <p>S106 funding (specifically for greening infrastructure projects)</p> <p>LIP funding (specifically for transport related interventions)</p> <p>External funding has been secured through the Mayor's Air Quality Fund and through Defra's Clean Air Fund.</p>
<b>3. Leading by example</b>	<b>3.a</b>	Invested sufficient resources to complement and drive action from others.	Y	Camden has 1 full time AQ officer, with additional resources within the council's Sustainability function equal to 0.8FTE. Camden's core operating budget for air quality remains small (at around ~£15,000 but is greatly supplemented by external funding sources.
	<b>3.b</b>	Maintained an appropriate monitoring network so that air quality impacts within the borough can be properly understood	Y	Camden maintains a network of automatic and diffusion tube monitors, and has supplemented this in 2016 through the use of seven AQmesh mobile monitoring units.
	<b>3.c</b>	Reduced emissions from council operations, including from buildings, vehicles and all activities.	Y	The air quality elements of the total council operations are not known, however Camden continues to reduce energy usage across our whole estate. By March 2016 Camden had achieved a 26% reduction in carbon emissions from our estate and operations from the 2009/10 baseline.

	<b>3.d</b>	Adopted a procurement code which reduces emissions from its own and its suppliers activities, including from buildings and vehicles operated by and on their behalf (e.g. rubbish trucks).	Y	<p>Camden has updated two procurement policies in 2016 in this area: our Green Fleet policy and our Green Fleet Contractors policy. Both these documents include targets for the uptake of low emission vehicles and the use of a fuel hierarchy to encourage a move away from diesel vehicles.</p> <p>In 2016 Camden stopped procuring any diesel vehicles for our fleet.</p> <p>Camden's new Waste Services contract includes 18 Compressed Natural Gas vehicles and 45% of all vehicles will be powered by low emission fuels.</p>
<b>4. Using the planning system</b>	<b>4.a</b>	Fully implemented the Mayor's policies relating to air quality neutral, combined heat and power and biomass.	Y	All approved planning applications for major developments meet the Mayor's requirements relating to AQ neutral and CHPs.
	<b>4.b</b>	Collected s106 from new developments to ensure air quality neutral development, <i>where possible</i> .	N	Camden has not collected any s106 monies for ensuring air quality neutral developments.
	<b>4.c</b>	Provided additional enforcement of construction and demolition guidance, with regular checks on medium and high risk building sites.	Y	Resource constraints mean that Camden does not commit to undertaking regular on site visits for medium and high risk sites. However throughout the construction process a combination of resident feedback, liaisons with developers, and monitoring of real time dust levels do result in Environmental Health officers making site visits where necessary.
<b>5. Integrating air quality into the public health system</b>	<b>5</b>	Included air quality in the borough's Health and Wellbeing Strategy and/or the Joint Strategic Needs Assessment.	Y	<p>Air Quality is a chapter in Camden's Joint Strategic Needs Assessment. The JSNA is in the process of being updated and air quality will continue to be a distinct area of focus.</p> <p>Camden's AQ Action Plan contains actions to update the Director of Public Health and relevant cabinet members of air quality.</p>
<b>6. Informing the public</b>	<b>6.a</b>	Raised awareness about air quality locally.	Y	<p>Camden continues to promote airTEXT through its website and publications.</p> <p>In 2016 there were six articles in Camden's resident magazine on air quality.</p> <p>Camden hosted an Air Quality Conference in October 2016 which saw over 100 attendees learn</p>

*more about Camden's action on air quality and provide ideas for where the council could do more.*

## 2.1 Air Quality Action Plan Progress

Table K provides a brief summary of Camden's progress against the Air Quality Action Plan, showing progress made this year.

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

Action	Detail	Progress
1. The publication on Camden's website of an accessible annual report of Camden's air quality data	Accessible reports produced annually to inform how Camden's air quality relates to EU limit values and WHO thresholds, with additional information on trends and changes over time.	<ul style="list-style-type: none"> <li>Completed on an annual basis (most recent available is ASR completed in 2016)</li> <li>Executive summary of actions on Camden's Action Plan will be published on Camden's website in summer 2017.</li> </ul>
2. Data from Camden's automatic monitors will be made available to the public through the London Air Quality Network website	All air quality data to be made freely available and downloadable through the LAQN website	<ul style="list-style-type: none"> <li>Completed / ongoing</li> </ul>
3. Data from mobile automatic monitors will be made available to the public through Camden's open data platforms	Data from Camden's 5 Pancras Square monitor to be freely available in real time from Camden's open data platforms	<ul style="list-style-type: none"> <li>Camden currently provides publically available data on seven monitoring units through its opendata website / platform.</li> </ul>
4. To continue to monitor air quality levels on a temporary basis for road based projects and schemes	Use of portable monitors to add air quality levels to the suite of assessment tools used to evaluate the success of transport projects and interventions	<ul style="list-style-type: none"> <li>Completed / ongoing: see progress for point 3 above.</li> </ul>
5. To review annually the monitoring requirements of Camden and update monitoring and/or reporting where necessary	A review of current monitoring to be carried out annually, with a review of potential funding for additional monitoring if deemed necessary.	<ul style="list-style-type: none"> <li>Completed / ongoing</li> </ul>

Action	Detail	Progress
	Update this Action Plan as necessary if additional information on sources of pollution is made available (for example the London Atmospheric Emissions Inventory).	
6. To update Camden's air quality web pages to make them more informative and accessible, and to include details of community projects and other forms of collaborative working where appropriate	Camden's AQ web pages to be updated to provide better and clearer information on air quality. This includes linking to relevant projects and also to external websites which host Camden's up to date monitoring information (LondonAir and Camden open data sites).	<ul style="list-style-type: none"> <li>• Brand new website pages at <a href="http://www.camden.gov.uk/AQ">www.camden.gov.uk/AQ</a></li> <li>• Brand new data page on Camden's opendata website: <a href="https://opendata.camden.gov.uk/stories/s/Camden-Air-Quality-Monitoring/bmrm-k7pv">https://opendata.camden.gov.uk/stories/s/Camden-Air-Quality-Monitoring/bmrm-k7pv</a></li> </ul>
7. Camden will promote the adoption of fuel saving measures to residents through the Green Camden helpline, Well and Warm service, and other projects.	Key indicators include the number of residents receiving advice and the number of home energy visits. Use of external funding to provide private sector residents with opportunities to fund energy saving installations. Look at ways to improve the dissemination of information about energy efficiency to residents.	<ul style="list-style-type: none"> <li>• 1,567 Well and Warm advice visits were delivered, exceeding the target of 600 per year.</li> <li>• 78 energy efficiency grants were awarded to low income private sector households and landlords through our Housing Renewal Assistance Policy (HRAP) totalling £257,000. A further 32 landlords who own property in Camden have been trained under the landlord accreditation scheme bringing the total to 756.</li> <li>• The Green Camden Helpline provided advice to 2,670 residents. During 2015-16 (the first year of recorded data) 239 callers were provided with advice on the £140 Warm Home Discount and of these, the Helpline made 64 direct referrals to the scheme, leading to a combined fuel bill saving of £8,960.</li> </ul>
8. Camden will promote the adoption of fuel saving measures to businesses through the Camden Climate Change Alliance.	Energy saving advice is given to all Alliance members, with the number of members being a key indicator of success. Number of businesses becoming air quality champions. Ensure that best practice guidance documents for building owners and tenants are disseminated to businesses.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• The Alliance now has 251 active members</li> </ul>

Action	Detail	Progress
9. Continue to undertake energy efficiency improvement work in the Council's own buildings.	Progress with improvement programmes in council owned corporate properties and domestic units, including work to improve insulation and upgrade boilers to reduce overall fuel consumption and emissions.	<ul style="list-style-type: none"> <li>Camden has achieved a 26% reduction in carbon emissions from our estate and operations from the 2009/10 baseline</li> </ul>

Action	Detail	Progress
10. Ensure that all Part B Installations in the borough maintain the highest standards of air pollution emission control.	Ensure that all Part B Installations meet compliance standards, and where issues are found take action accordingly.	<ul style="list-style-type: none"> <li>Completed / ongoing</li> </ul>
11. Work with businesses to evaluate options for reducing dependence on 'black start' emergency diesel generators.	Work with businesses to trial alternatives to diesel standby generators and produce guidance for use by businesses across the borough.	<ul style="list-style-type: none"> <li>Trial being undertaken in Lincoln's Inn fields looking at replacing standby diesel generators with standalone battery powered electric units.</li> </ul>
12. Continue to work with developers and King's College London to explore best in class dust mitigation measures on Camden's construction sites	Using MAQF2 funding from the GLA, continue to work with developers on sites to implement and evaluate various best in class measures to minimise dust and emissions caused by construction sites. This work will be undertaken in partnership with King's College London.	<ul style="list-style-type: none"> <li>Completed / ongoing</li> <li>Funding has been received for a second round of this project through the Mayor's Air Quality Fund</li> </ul>
13. Ensure Camden's Smoke Control Zone is fully promoted and enforced.	The whole of Camden is a Smoke Control Zone, which means controls are in place on the types of fuels that can be burned in commercial and domestic buildings. Ensure that relevant information is provided to existing building owners and developers to promote compliance.	<ul style="list-style-type: none"> <li>Completed / ongoing</li> <li>Relevant information is available on Camden's website</li> </ul>
14. Minimise emissions from the construction and operation of new developments by requiring developers to adhere to current and any superseding best practice guidance and supplementary planning guidance.	Current policies developers must adhere to include the GLA's 2014 'Control of Dust and Emissions during Construction and Demolition' SPG, and the GLA's 2014 'Sustainable Design and Construction' SPG, which requires new developments to be 'air quality neutral'. By following these policies Camden will ensure that developments that would result in a decrease in air quality levels (nitrogen dioxide or particulate matters) will be resisted.	<ul style="list-style-type: none"> <li>Completed / ongoing</li> <li>Camden's new Local Plan (due for adoption in summer 2017) has been updated to further strengthen links between planning and air quality</li> <li>New pro forma Construction Management Plan adopted</li> </ul>

Action	Detail	Progress
15. Continue to use planning conditions and obligations to require developers to adopt measures which will reduce transport emissions during operational phase of developments.	Examples of measures includes but is not restricted to requesting travel and business plans, installing electric vehicle recharging infrastructure, and allocating car club bays.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden's new Local Plan (due for adoption in summer 2017) has been updated to further strengthen links between planning and air quality</li> <li>• New pro forma Construction Management Plan adopted</li> <li>• Staggered introduction of requirements for new developments to have regard for freight consolidation options in Camden.</li> </ul>
16. Require developers to undertake an air quality assessment (AQA) in circumstances where a new development could have a negative impact on air quality where the development is adjacent to sensitive receptors such as schools, nurseries, hospitals and doctors' surgeries, or where the development will introduce new receptors into an area of existing poor air quality.	Update planning policies where necessary to ensure that developers designate these sites with the correct risk level, and undertake mitigation and monitoring measures accordingly in subsequent Construction and/or Demolition Management Plans.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden's new Local Plan (due for adoption in summer 2017) has been updated to further strengthen links between planning and air quality</li> <li>• New pro forma Construction Management Plan adopted</li> <li>• All major developments required to undertake AQAs</li> </ul>
17. Ensuring the enforcement of CHP and biomass air quality policies, and review the potential impacts of other types of heat and electricity generation.	Ensuring that developers select plant that meets the standards for emissions from combined heat and power and biomass plants set out in the GLA's 2014 'Sustainable Design and Construction' SPG and use ultra-low NOX boilers in new developments.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden's new Local Plan (due for adoption in summer 2017) has been updated to further strengthen links between planning and air quality</li> <li>• New pro forma Construction Management Plan adopted</li> </ul>
18. Ensuring the enforcement of Non Road Mobile Machinery (NRMM) air quality policies for new developments.	Ensure that developers are compliant with new NRMM policy introduced in 2015. Utilise guidance and training provided by the GLA to support enforcement officers.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden has included this new policy in our new pro forma Construction Management Plan</li> </ul>
19. Review and update Camden's air quality policies and guidance to developers where appropriate, and feed into updates of Camden's wider planning policies.	Conduct an assessment of policies and guidance to developers, including the CMP pro forma and air quality checklist, to ensure these documents represent best practice.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden's new Local Plan (due for adoption in late 2016) has been updated to further strengthen links between planning and air quality</li> </ul>



Action	Detail	Progress
	<p>Feed into future updates of Camden's wider planning policies and procedures, including the Camden Planning Guidance, Guide for Contractors Working in Camden, and Camden Environmental Minimum Requirements.</p> <p>Ensure that major developments undertake Health Impact Assessments at the application stage.</p>	<ul style="list-style-type: none"> <li>• New pro forma Construction Management Plan adopted</li> </ul>

Action	Detail	Progress
20. Map air quality levels and local health prevalence and inequalities data with other indicators to support planning processes.	Mapping air quality levels with existing and proposed energy generations (including CHP units) and decentralised energy networks, existing green infrastructure, electric vehicle charging infrastructure, and other indicators to better inform the planning process. Include local prevalence data on health issues affecting residents at postcode level.	<ul style="list-style-type: none"> <li>• Little progress to date due to other priorities – working with public health on available datasets</li> </ul>
21. Ensure that policies and assurances are in place to minimise the impact of High Speed 2 on Camden before the construction phase of the scheme begins.	Work in partnership with HS2 and with other stakeholders (including other authorities, GLA, TfL, and various residents groups) to ensure that potential impacts of HS2 are minimised. This will build on assurances from HS2 on a number of air quality issues, including air quality monitoring, compliance reporting, use of low emission vehicles, bespoke NRMM regulations, and plans to minimise air quality impacts during the operational phase of HS2.	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Camden has negotiated assurances related to a number of air quality issues, including: <ul style="list-style-type: none"> <li>○ Emissions standards for construction vehicles</li> <li>○ Emissions standards for Non Road Mobile Machinery</li> <li>○ Standards for the management of dust and emissions from construction sites</li> <li>○ Baseline data monitoring of the impact of HS2 on highways and roads</li> <li>○ Data sharing with Camden</li> <li>○ Support in quantifying the impact of HS2</li> </ul> </li> <li>• Now Royal Assent has been granted for HS2, Camden's role has moved to one of liaison with HS2 and its lead contractors on ensuring assurances are met and any issues identified and dealt with satisfactorily.</li> </ul>
22. Ensure that High Speed 2 is compliant with all agreed policies and assurances upon commencement of construction phase of the scheme.	Ensure that monitoring and reporting regimes agreed with HS2 are correctly adhered to, and that any air quality problems caused by HS2 are minimised and mitigated as far as possible.	<ul style="list-style-type: none"> <li>• See point 21. above</li> </ul>

Action	Detail	Progress
23. Continue to undertake measures to increase walking and cycling in Camden.	<p>The Camden Transport Strategy maintains our commitment to sustainable transport and includes key objectives to:</p> <ul style="list-style-type: none"> <li>• reduce motor traffic levels and vehicle emissions to improve air quality, mitigate climate change and contribute to making Camden a 'low carbon and low waste borough'</li> <li>• encourage healthy and sustainable travel choices by prioritising walking, cycling and public transport in Camden.</li> </ul> <p>Camden will ensure these key objectives continue to be met. Work to leverage funding with LB Islington to implement a project aimed at encouraging increased cycling among residents through a cycle loan scheme.</p>	<ul style="list-style-type: none"> <li>• Completed / ongoing</li> <li>• Projects undertaken since the adoption of this Plan include: <ul style="list-style-type: none"> <li>○ 8 Play Streets in the borough</li> <li>○ Healthy School Streets project in Holborn which focused on road closures during the school rush hour period (and a 66% reduction in traffic levels)</li> <li>○ Torrington Place trial saw major work to improve the public realm and increase the viability and ease of walking and cycling in the area</li> </ul> </li> </ul>
24. Support the uptake of low emission and alternatively fuelled vehicles in the borough.	<p>In addition to Action 22, this Action covers a variety of activity, including working with the network provider to improve the coverage and reliability of Camden's existing electric vehicle charging network, providing information and guidance to residents on vehicle options, and monitoring the uptake and usage of low emission vehicles in Camden.</p>	<ul style="list-style-type: none"> <li>• Camden has installed a permanent CNG supply at our York Way depot, replacing the previous system that required gas to be transported in by road. <ul style="list-style-type: none"> <li>○ Camden's new waste service contract includes a number of CNG powered vehicles</li> </ul> </li> <li>• Camden is part of the Go Ultra Low cities London bid and is seeking to use funding to install lamp column charging points across the borough</li> </ul>
25. Explore options to fund rapid charging electric vehicle infrastructure.	<p>Work with public sector (for example the DECC Office for Low Emission Vehicles) and private sector (for example private hire vehicle fleet operators, private energy suppliers) to fund and install rapid charging electric vehicle infrastructure.</p>	<ul style="list-style-type: none"> <li>• Camden is working with TfL to install rapid charging units at strategic locations in Camden; expected completion in 2017 if sites are deemed suitable.</li> </ul>
26. Encourage modal shift away from diesel vehicles through parking permit charges.	<p>Increase the additional charges currently appended to business and resident parking permits if the vehicle being registered is a diesel. The annual adjustment of parking fees and charges to be based on the annual adjustment of the TfL Zone1 &amp; 2 travelcard, and is subject to periodic review.</p>	<ul style="list-style-type: none"> <li>• Complete: Camden has introduced a new diesel surcharge on its residents parking permits beginning in March 2016</li> <li>• Camden is exploring the potential to introduce new differential charges for pay and display parking bays depending on vehicle type</li> </ul>

Action	Detail	Progress
27. Engage with TfL and taxi and private hire vehicle operators to encourage and implement measures to reduce their emissions where practical.	This includes liaising with major business users of taxis (including major train station operators), and also providing support for the introduction of new zero emission capable taxis in London from 2017. Continued engagement with TfL to encourage TfL to undertake anti-idling enforcement of taxis.	<ul style="list-style-type: none"> <li>• Liaisons with TfL continue, in particular with regard to idling taxis on ranks near train stations.</li> <li>• Continuing to work with TfL on potential rapid charging infrastructure for zero emission capable taxis <ul style="list-style-type: none"> <li>○ This includes working with TfL and HS2 / DfT on potential charging structure at new Euston station</li> </ul> </li> </ul>
28. Continue to enforce anti-idling policies at idling hotspots and review areas where enforcement is undertaken.	Review current arrangements of both enforcement officers and signage to minimise idling at designated hotspots. This includes exploring the use of Fixed Penalty Notices. Liaise with businesses and developers to reduce where possible idling, and directly contact businesses who regularly have drivers idling. Work with other boroughs on 'Cleaner Air Action Days' throughout the year, where concerted efforts are made to reduce idling through volunteers and publicity materials.	<ul style="list-style-type: none"> <li>• Camden is a partner on the Idling Action project funded by MAQF and led by City of London</li> </ul>
29. Explore emissions based charging for paid-for-parking bays to encourage modal shift or the use of less polluting vehicles.	This would involve introducing a variable charging scheme with the drivers of the highest polluting vehicles paying more to park.	<ul style="list-style-type: none"> <li>• See progress for Action 26.</li> </ul>
30. Review housing estate Parking permits and enforcement, identify and implement improvements to increase efficiency and effectiveness in influencing car ownership and usage.	Complete a full audit of housing estate parking, develop options for change, in consultation with stakeholders and residents, and implement any agreed proposals.	<ul style="list-style-type: none"> <li>• Ongoing: project plan to be delivered in Summer 2017</li> </ul>
31. Increase the proportion of low emission vehicles in Camden's fleet, and reduce overall fuel usage.	In addition to Action 26, work to improve the proportion of low emission vehicles in Camden's fleet by adhering to the council's fleet fuel hierarchy for procurement of vehicles, and ensuring hired vehicles are to the lowest emission standards	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• Camden has stopped procuring any diesel vehicles for its own fleet</li> <li>• Additional measures to reduce overall fuel usage of Camden's fleet to include: <ul style="list-style-type: none"> <li>• Work on telematics and other 'smart' solutions to reduce vehicle miles.</li> <li>• Driver training on fuel efficiency</li> </ul> </li> </ul>

Action	Detail	Progress
		<ul style="list-style-type: none"> <li>Implementing vehicle retrofits to reduce emissions from existing fleet.</li> </ul>
32. Ensure that Camden's major vehicle procurement exercises deliver fuel savings and emissions reductions	<p>Camden Repairs are due to replace 145 vehicles in a major procurement exercise in 2017. In addition, a further 40 vehicles used by Camden's Special Educational Needs and Adult Social Care teams are due to be replaced.</p> <p>Camden will ensure that these procurement exercises, in line with the council's green fleet policy, will result in the introduction of alternatively fuelled vehicles that will significantly reduce emissions from Camden's fleet.</p>	<ul style="list-style-type: none"> <li>Ongoing</li> <li>In late 2016 Camden updated our Green Fleet and Green Contractors Fleet procurement guidelines to tighten requirements for low emission vehicles and move away from diesel in all fleets associated with council work</li> <li>Camden's new Waste Services contract includes a number of requirements for low emission vehicles. This consists of 18 Compressed Natural Gas vehicles and 45% of all vehicles will be powered by low emission fuels.</li> </ul>
33. Install a permanent supply of Compressed Natural Gas at Camden's York Way depot for use by the council fleet and external operators.	<p>Replace the trailer based supply of CNG with a permanent station which will reduce outages and reduce the cost of supply. The station will continue to be open to use by other CNG users (commercial and private), in order to continue to promote alternatively fuelled low emission vehicles.</p>	<ul style="list-style-type: none"> <li>Complete</li> </ul>
34. Ensure that fleet operators and contractors working with Camden minimise their emissions where possible.	<p>Ensure that Camden's Contractor Green Vehicle Fleet Standard is implemented where necessary in all council contracts and tenders. Work with contractors where appropriate to help them fulfil obligations and work towards lower emission fleets for use in Camden contracts and beyond.</p>	<ul style="list-style-type: none"> <li>Complete – guidelines have been updated to help further reduce emissions from contractors. See comments for Action 32.</li> </ul>
35. Maintain 'Gold' Fleet Operator' accreditation for Camden's fleet.	<p>Ensure that Camden maintains the highest level of accreditation. A requirement of FORS accreditation is that fleet operators manage, measure and report fuel consumption and at silver/ gold levels, work to actively reduce emissions. As well as environmental performance, FORS also focuses on safety and efficiency of fleet operations.</p>	<ul style="list-style-type: none"> <li>Ongoing / complete</li> </ul>

Action	Detail	Progress
36. Ensure ongoing uptake of FORS bronze among Camden' via Procurement and Planning controls	<p>Work related road risk (WRRR) procurement terms require contractors operating vehicles to achieve FORS bronze (along with other safety equipment).</p> <p>It is a planning requirement that fleet operators working on construction sites are required to adhere to the 'CLOCS standard for managing work related road risk'. FORS bronze is the minimum requirement of CLOCS, but the wider standard is aligned to FORS silver.</p>	<ul style="list-style-type: none"> <li>• Ongoing / complete</li> <li>• Procurement guidelines to be further updated to help further reduce emissions from contractors. See comments for action 32.</li> </ul>
37. Continue to develop the London Boroughs Consolidation Centre (LBCC) to further reduce the number of deliveries servicing council and business premises in Camden.	<p>Build on the success of the LBCC project to increase its impact on local air quality. This includes increasing the number of suppliers who use the LBCC to service Camden's buildings, while also bringing on board new businesses and premises to the scheme, potentially including the Camden Clinical Commissioning Group (CCG).</p> <p>This action includes undertaking a deliveries trial as part of the West End Project.</p>	<ul style="list-style-type: none"> <li>• This project received funding to be continued through the next three years through the Mayor's Air Quality Fund</li> </ul>
38. Work in partnership with schools by providing advice to encourage the adoption of travel plans and other policies to reduce transport emissions.	<p>Work with schools, both through the planning process for new developments and through ongoing partnerships, to encourage the uptake of policies to reduce transport emissions and improve the health and wellbeing of staff and pupils.</p> <p>This will include encouraging schools to join the TfL STARS accredited travel planning programme by providing information on the benefits to schools and supporting its implementation.</p>	<ul style="list-style-type: none"> <li>• Ongoing / complete</li> <li>• Camden continues to have a goal of all its schools having Travel Plans.</li> <li>• New pages on the Camden internal schools web portal encourage greater action by schools.</li> <li>• Alert system for schools to be set up to give warning of high pollution events.</li> </ul>
39. Work in partnership with businesses by providing advice to encourage the adoption of travel plans, consolidated delivery plans, and other policies to reduce transport emissions.	<p>Continue to provide leadership and share best practice by promoting benefits of freight consolidation to businesses.</p> <p>Work with the Cross River Partnership to continue delivering travel advice and interventions to businesses working with Camden's Business Improvement Districts through the Cleaner Air Better Business Project.</p>	<ul style="list-style-type: none"> <li>• Support this year has been given to the Fitzrovia Partnership BID in this area</li> <li>• Camden has received funding along with Westminster from Defra to deliver work on consolidation and deliveries for SMEs.</li> </ul>

Action	Detail	Progress
40. Engage with railway companies to tackle both indoor air quality issues in train stations located in Camden, and work to mitigate the impacts of emissions from diesel trains.	Work with major station and train operators to look at ways to improve indoor air quality at Camden's main stations. Engage with train operators to work towards lower emission train engines, and to explore options for mitigating unavoidable emissions from diesel trains.	<ul style="list-style-type: none"> <li>No progress to date</li> </ul>
41. Explore potential for a Camden specific or central London wide 'car free day'.	Work with other central London boroughs to investigate the possibility of a central London wide car free day, building on the successes of previous car free day projects	<ul style="list-style-type: none"> <li>Considered unfeasible due to the resources required and lack of long term impact.</li> </ul>
42. Continue to disseminate up to date information about air quality and investigate new methods of informing the public about air pollution levels.	In line with the Actions in Section 1, work to ensure that Camden residents, schools and businesses are kept up to date with information on air quality and current air pollution levels. Investigate the potential for new methods of disseminating air quality information, either through better utilising existing communication channels or through new means of contacting the public.	<ul style="list-style-type: none"> <li>Camden continues to promote airTEXT for example new web pages on Camden's internal schools web portal encourage sign ups by schools to the service</li> <li>Publication of new data webpages specifically on air quality to ensure all of Camden's air quality data is publically available and accessible.</li> </ul>
43. Promote the availability of air pollution forecasting services such as airText.	Encourage sign ups to the airText service through Camden's website and social media channels. Also ensure that promotion of airText is included where appropriate in messaging of other air quality awareness raising projects.	<ul style="list-style-type: none"> <li>Camden continues to promote airTEXT; for example new web pages on Camden's internal schools web portal encourage sign ups by schools to the service</li> <li>Mail outs from GP surgeries to vulnerable residents are planned for June 2017.</li> </ul>
44. Work with public health and council resilience teams to ensure that vulnerable populations are better aware of high pollution days and short term actions they can take to reduce their exposure	Specific targeting of services such as airText to vulnerable residents. Working with CCG and doctors' surgeries to further improve dissemination of information about high pollution days.	<ul style="list-style-type: none"> <li>Ongoing work</li> <li>Mail outs from GP surgeries to vulnerable residents are planned for June 2017.</li> </ul>
45. Continue to seek funding for air quality projects.	Continue to work with partners and funding bodies to identify and apply for funding to implement air quality projects.	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>

Action	Detail	Progress
46. Disseminate the results and best practice from current and completed projects to further improve awareness of air quality.	Ensure that final project reports, case studies, toolkits, and any other final project outputs are disseminated to interested parties in Camden and beyond. This Action also includes endeavouring to learn from other final outputs from relevant projects undertaken by other local authorities and organisations.	<ul style="list-style-type: none"> <li>• Ongoing: reports from projects such as Cleaner Air for Great Ormond Street Hospital have been disseminated to Camden's hospitals</li> </ul>
47. Provide support for 'citizen science' projects being undertaken in the borough.	Provide support and guidance where appropriate to 'citizen science' projects planned by businesses or resident groups. This could include air quality monitoring in local areas to inform the Neighbourhood Planning, or supporting businesses wishing to engage in personal exposure experiments.	<ul style="list-style-type: none"> <li>• Camden has announced a new citizen science monitoring fund to allow residents to undertake their own diffusion tube monitoring across the borough. £1000 is available for the 2017/18 fund.</li> <li>• Camden has match funded a citizen science monitoring project in early 2017 to monitor AQ levels at 97 school sites across the borough.</li> </ul>
48. Increase awareness of air pollution in and encourage modal shift away from cars in schools through educational projects and lessons within the national curriculum.	Work in partnership with an educational provider and other London boroughs to implement a project in Camden's primary schools to increase pupil, teacher and parent awareness of air quality, what actions can be taken on high pollution days to reduce exposure, and to encourage modal shift away from getting to and from schools by car.	<ul style="list-style-type: none"> <li>• New action for 2016</li> </ul>
49. Strengthen the links between air quality and public health by briefing Director of Public Health on air quality issues and actively requiring their sign-off of statutory reporting.	Help encourage greater visibility of air quality within local authority public health teams, and ensure that public health teams support and advocate the air quality work programme. The sign off of statutory reporting will help strengthen the links between air quality and public health through DPHs taking formal responsibility for delivery of air quality improvements.	<ul style="list-style-type: none"> <li>• New action for 2016</li> </ul>
50. Director of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up to date information on air quality impacts on the population	Camden already has air quality as a key theme of its JSNA. Ensuring up to date evidence based information in JSNAs strengthens the links and joint working between air quality and public health.	<ul style="list-style-type: none"> <li>• Complete</li> </ul>
51. Work with Public Health to strengthen engagement with Camden's Clinical	To build on the successes of Camden AirAware project, which delivered training sessions to public health staff on air quality, by	<ul style="list-style-type: none"> <li>• New action for 2016</li> </ul>



Action	Detail	Progress
Commissioning Group and Camden's GP surgeries.	working with public health to establish a closer relationship with Camden's GP surgeries. This Action intends for a project to be implemented that will involve close working with Camden's CCG and GPs to increase awareness of air quality among health professionals and patients visiting GP surgeries.	
52. Work with Business Improvement Districts and other business organisations on joint projects and interventions to increase awareness of air quality.	To continue to provide support to Camden's Climate Change Alliance members and the BIDs in the borough to improve air quality awareness. Work with existing Air Quality Business Champions to help them further increase awareness and reduce emissions, and look to work with new businesses.	<ul style="list-style-type: none"> <li>• Ongoing / complete</li> <li>• In particular Camden has worked with the Fitzrovia BID on air quality in 2015</li> <li>• Camden is a funding partner of the Cleaner Air Better Business project, run by the Cross River Partnership and funded through the Mayor's Air Quality Fund</li> </ul>
53. Investigate potential for green infrastructure projects to improve awareness of air quality and help absorb emissions.	Build on existing green infrastructure audits and greening strategies to quantify the air quality benefits of interventions and ensure that any projects are widely publicised to raise general awareness of air quality.	<ul style="list-style-type: none"> <li>• New study has been completed looking at green infrastructure opportunities in Somers Town. This will be rolled out to other parts of the borough in 2017; infrastructure projects will be delivered in Somers Town in summer 2017</li> </ul>
54. Submit an application for a Low Emission Neighbourhood from the Mayor's Air Quality Fund, that could have a transformative impact on air quality in Somers Town.	Camden has submitted a full application for a LEN from the Mayor's Air Quality Fund that sets out a vision for a LEN in Somers Town. Should the application be successful, this Action includes implementing a LEN from the projected project start date in April 2017.  To use the feasibility study undertaken as part of the LEN application as a guide to implementing innovative air quality projects throughout the borough, ensuring that irrespective of the success of Camden's LEN bid, the benefits outlined in the application are maximised as far as possible.	<ul style="list-style-type: none"> <li>• Complete: Camden did not receive funding for this project</li> </ul>
55. Work with partners to look at innovative ways of highlighting successes of air quality work	Explore options for better ways of highlighting work on air quality, which will also raise public awareness of the issue. This may include drop-in events for residents, videos or other audiovisual projects, and ties in the actions in Section 1 relating to sharing monitoring information and updating Camden's AQ web pages.	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• A best practice case study pack was produced as part of Camden's National Air Quality Award winning project 'Cleaner Air for Great Ormond St Hospital'</li> </ul>

Action	Detail	Progress
56. Hold an air quality conference in 2016 to help raise awareness of air quality and to help forge new relationships with partners interested in air quality work.	Camden has held two joint conferences with LB Islington to help promote air quality awareness and highlight best practice success stories. Camden will host another conference in 2016 to help increase awareness of air quality across the borough and also bring interested partners and stakeholders together to work collaboratively on this issue.	<ul style="list-style-type: none"> <li>• Complete: Camden delivered a major air quality conference in November 2016 which had over 100 attendees. Attendees learnt about what Camden, GLA and national government are doing on air quality and also provided over 85 recommendations to Camden on what they felt were priorities for AQ work moving forward.</li> </ul>
57. Continue to support measures introduced by the Mayor of London and national government to improve air quality.	This includes working in joint projects, attending meetings, responding to consultations, and taking an active role in air quality management in London.	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>
58. Continue to partner with other local authorities to lobby TfL and the GLA on reducing air pollution from taxis and buses.	Continue to work to improve the environmental performance of large sources of emissions that are outside of the direct control of the council.	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>
59. Support the GLA and TfL on the introduction of the Ultra Low Emission Zone (ULEZ), but continue to press for the scheme to be improved to further reduce air pollution.	While supporting the principle of the ULEZ, Camden has repeatedly argued for that the scheme could be geographically wider, stricter, and brought in sooner than the GLA have proposed. While Camden will work to implement the proposed ULEZ, it will do so while continuing to work for the scheme to be improved to benefit the health of Camden's population as far as possible.	<ul style="list-style-type: none"> <li>• Ongoing: Camden will be responding to the current TfL consultation on an early introduction of the ULEZ and will continue to advocate a wider ULEZ.</li> </ul>
60. Lobby national government to provide further financial and strategic support for local authorities to improve air quality, and lobby for further action on national policies on diesel vehicles such as changes to road tax and a national diesel scrappage scheme.	This work could be undertaken in conjunction with other London boroughs, the GLA, or with local partners and major stakeholders. Progress towards this action could be made through direct lobbying, through meetings and other forums, or through official responses to consultations.	<ul style="list-style-type: none"> <li>• Ongoing: Camden wrote to Defra ministers in January 2017 requesting more action from national Government on air quality.</li> </ul>
61. Continue to partner with other major stakeholders and partners to lobby TfL and the GLA on improving air quality on Euston Road and other parts of the TfL Road Network.	Camden's concerns over air quality around the Euston Road are shared with a number of major business partners located around the area and health organisations based in the borough. Camden will continue to work with partners to lobby and hopefully partner with the GLA and TfL to reduce air pollution caused by the TfL road network.	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• Current discussions with TfL and HS2 / DfT on the development of Euston Station will impact on air quality on the Euston Rd</li> <li>• Camden is continuing to work with TfL and LB Islington on new proposals for the King's Cross gyratory.</li> </ul>

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

**Table L. Planning requirements met by planning applications in Camden in 2016**

**NB:** This table is currently incomplete due to lack of information / resource in Camden’s planning team to provide details. Once information has been received Camden’s ASR will be updated and resubmitted. [note added May 2017]

Condition	Number <i>Please complete all fields in this column with the total numbers</i>
Number of planning applications reviewed for air quality impacts	
Number of planning applications required to monitor for construction dust	
Number of CHPs/Biomass boilers refused on air quality grounds	
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	
Number of AQ Neutral building and/or transport assessments undertaken	
Number of AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	
Number of planning applications with S106 agreements including other requirements to improve air quality	
Number of planning applications with CIL payments that include a contribution to improve air quality	
<b>NRMM: 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 IIIB of the Directive and/or exemptions to the policy.	<i>e.g.            12 conditions included            6 registered and compliant            2 unregistered/uncompliant and being chased.</i>
<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.	<i>e.g.            12 conditions included            6 registered and compliant            2 unregistered/uncompliant and being chased.</i>

*If possible (this is not mandatory, but would be very much appreciated) please briefly describe the processes you have in place to ensure that all relevant planning applications are reviewed and any air quality conditions, including NRMM conditions, are enforced.*

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

*Please list any new sources here. Or state "No new sources identified" if relevant*

No new sources identified.

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

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

*Describe briefly the frequency of routine calibrations and periodic site audits and who carries these out (LA or contractor) (if applicable). Are there any issues to be highlighted?*

#### **PM<sub>10</sub> Monitoring Adjustment**

*Please describe any adjustments made to Particulate Matter monitoring data e.g. correction factors applied to BAM data or use of VCM to correct TEOM data.*

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

*Details of QA/QC for diffusion tubes should include:–*

- *Lab supplying and analysing the tubes*
- *Preparation method used*
- *Confirmation that the lab follows the procedures set out in the Practical Guidance*
- *Results of laboratory precision (tube precision and WASP results:  
<http://laqm.defra.gov.uk/diffusion-tubes/precision.html> for precision  
<http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html> for WASP results)*
- *Bias adjustment factor from the database available on the LAQM Support Website at:  
<http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>. Please ensure you confirm the version of the database used (this can be found in the upper right hand part of the spreadsheet).*
- *Whether the Local Authority has compared the diffusion tubes with the reference method in a co-location study (details of this can be included as a sub-section or appendix)*
- *The bias adjustment factor being applied to the annual means from the diffusion tubes*
- *Where this came from – i.e. local co-location*

*Information on QA/QC for diffusion tubes can be found on the LAQM website at <http://laqm.defra.gov.uk/diffusion-tubes/diffusion-tubes.html>*

*Give the bias adjustment factors for the previous years included in the body of the report – but do not give the full calculation for the previous years.*

#### **Factor from Local Co-location Studies (if available)**

*Provide annual means and bias for each site – including type of site location.*

*Local authorities are encouraged to share co-location information with other authorities. The questionnaire for adding your own co-location study to the database is at <http://laqm.defra.gov.uk/bias-adjustment-factors/co-location-data.html>.*

*Please complete and return the co-location questionnaire to ensure your monitoring data is considered for inclusion in the database of bias adjustment factors provided by the LAQM Helpdesk. This should be done as soon as possible to ensure the database is updated in advance of report submission.*

### Discussion of Choice of Factor to Use

*If both local and national Bias Adjustment Factors are available please state which has been used and the reasons for the choice, also describing the impact of this choice (e.g. whether the factor used is conservative).*

### **A.3 Adjustments to the Ratified Monitoring Data**

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

*Where data capture is less than 75% of a full calendar year (less than 9 months), the mean should be “annualised” – i.e. adjusted using the methodology outlined in LLAQM.TG(16) before being compared to annual mean objectives.*

*Include a table stating long-term sites chosen for calculation and state dates for Period Mean, as shown in Table A.1*

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

Site	Site Type	Annual Mean ( $\mu\text{g}/\text{m}^3$ )	Period Mean ( $\mu\text{g}/\text{m}^3$ )	Ratio
<b>Average</b>				

#### Distance Adjustment

*If an exceedance is measured at a monitoring site which is not representative of public exposure, use the procedure specified in LLAQM.TG(16) to estimate the concentration at the nearest receptor and describe the process followed here.*

**Appendix B Full Monthly Diffusion Tube Results for 2016**

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

Figures adjusted for Bias = 0.96															Average
ID	Site ID	Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	CA4	Euston Road	58.9 2	61.8 7	74.6 2	77.5 5	82.3 5	94.2 1	87.5 2	80.8 4	155.3 6	68.2 3	78.7 7	72.2 9	82.71
2	CA6	St George's Gardens	29.1 2	30.5 8	34.6 9	27.4 7	28.6 3	26.9 2	28.2 6	29.6 1	32.74	30.4 4	37.2 4	40.0 4	31.31
3	CA16	Kentish Town Road	53.1 2	51.4 5	68.8 8	60.9 7	43.8 8	46.6 2	52.9 7	59.3 2	70.87	55.2 1	73.8 5	67.5 0	58.72
4	CA7	Frognaal Way	28.0 7	27.1 9	27.5 6	22.4 9	24.1 8	19.3 5	21.3 2	23.2 9	37.99	24.1 1	39.8 5	39.4 9	27.91
5	CA17	47 Fitzjohn's Ave	63.4 4	66.6 2	61.1 7	46.7 2	47.2 8	59.6 7	55.2 8	50.8 9					56.38
6	CA15	Swiss Cottage 1, Finchley Rd	64.7 5	63.4 2	73.0 2	58.4 3	54.1 4	94.4 0	77.9 6	61.5 2	139.3 5	57.2 0	74.0 9	71.1 7	74.12
7	CA15	Swiss Cottage 2, Finchley Rd	67.7 5	68.3 2	75.1 5	58.0 7	62.2 5	89.2 3	74.6 9	60.1 4	127.7 0	62.9 8	70.8 2	69.3 5	73.87
8	CA15	Swiss Cottage 3, Finchley Rd	66.9 8	65.6 0	71.6 2	62.0 6	60.2 5	90.6 4	77.9 9	65.3 5	121.7 2	62.8 8	72.0 8	65.8 0	73.58
9	CA20	Brill Place	43.5 4	39.3 3	49.1 1	43.9 4		44.4 1	46.1 4	47.8 5	65.01	41.0 9	45.5 2	56.9 2	47.53
10	CA10	Tavistock Gardens	42.9 1	38.7 7		37.4 2	39.7 5	40.8 7	38.8 2	36.7 9	36.75	33.5 2		51.2 3	39.68
11	CA11	Tottenham Court Road	79.2 2	84.6 8	80.0 6	91.4 8	89.0 2	82.8 2	89.5 7	96.3 2	86.01	72.0 2	76.2 9	75.3 8	83.57
12	CA25	Emmanuel Primary School	50.9 6	51.3 9	52.5 6	44.5 2	38.9 0	55.1 2	48.2 7	41.4 1	76.35	52.0 1	58.1 3	56.5 1	52.18
13	TEMP	Wittanhurst Lane	34.9 3	35.2 3	46.0 1	40.6 4	30.7 3	45.6 0	43.9 8	42.3 6	46.26	45.8 8	53.2 2	52.4 5	43.11
14	CA23	Camden Road	40.3 0	45.0 9	67.0 9	67.1 7	60.3 7	70.5 1	70.6 2	70.7 3	56.86	57.4 0	70.8 2	63.9 8	61.74

<b>1</b>			<b>58.5</b>	<b>64.1</b>	<b>80.4</b>	<b>64.9</b>	<b>75.1</b>	<b>85.5</b>	<b>76.6</b>	<b>67.6</b>	<b>75.48</b>	<b>73.0</b>	<b>77.5</b>	<b>67.3</b>	
<b>5</b>	<b>CA21</b>	Bloomsbury Sreet	6	4	3	1	6	4	0	6		0	1	4	<b>72.20</b>
<b>1</b>			<b>41.5</b>	<b>41.9</b>	<b>43.6</b>	<b>41.0</b>	<b>36.8</b>	<b>38.1</b>	<b>38.0</b>	<b>37.9</b>	<b>39.38</b>	<b>40.2</b>	<b>55.1</b>	<b>49.6</b>	
<b>6</b>	<b>CA24</b>	Chetwynd Road	4	6	8	2	5	6	4	1		8	2	0	<b>41.96</b>

Exceedance of the NO<sub>2</sub> annual mean AQO of 40 µg<sup>m</sup>-<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%