

**London Borough of Camden Air Quality Annual
Status Report for 2017**
Date of publication: 31/05/18



This report provides a detailed overview of air quality in Camden during 2017. It has been produced to meet the requirements of the London Local Air Quality Management statutory process¹.

Contact details

Ana Ventura
Senior Sustainability Officer (Air Quality)
ana.ventura@camden.gov.uk
0207 974 3901

London Borough of Camden
Sustainability
5th Floor
5 Pancras Square
N1C 4AG

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

CONTENTS

Abbreviations.....	3
1. Air Quality Monitoring.....	5
1.1 Locations	5
1.2 Comparison of Monitoring Results with AQOs	7
2. Action to Improve Air Quality.....	15
2.1 Air Quality Action Plan Progress.....	15
3. Planning Update and Other New Sources of Emissions.....	40
3.1 New or significantly changed industrial or other sources	41
Appendix A Details of Monitoring Site QA/QC.....	42
A.1 Automatic Monitoring Sites.....	42
A.2 Diffusion Tube Quality Assurance / Quality Control.....	42
A.3 Adjustments to the Ratified Monitoring Data	42
Appendix B Full Monthly Diffusion Tube Results for 2017	44

Tables

Table A. Summary of National Air Quality Standards and Objectives	4
Table B. Details of Automatic Monitoring Sites for 2017	5
Table C. Details of Non-Automatic Monitoring Sites for 2017.....	6
Table D. Annual Mean NO ₂ Ratified and Bias-adjusted Monitoring Results ($\mu\text{g m}^{-3}$).....	7
Table E. NO ₂ Automatic Monitor Results: Comparison with 1-hour Mean Objective.....	10
Table G. PM ₁₀ Automatic Monitor Results: Comparison with 24-Hour Mean Objective.....	12
Table H. Annual Mean PM _{2.5} Automatic Monitoring Results ($\mu\text{g m}^{-3}$) (<i>if available, if not this section can be deleted</i>).....	13
Table I. SO ₂ Automatic Monitor Results: Comparison with Objectives (<i>if available, if not this section can be deleted</i>).....	14
Table J. Delivery of Air Quality Action Plan Measures	15
Table K. Planning requirements met by planning applications in <i>Borough Name</i> in 2017.....	40
Table L. Short-Term to Long-Term Monitoring Data Adjustment	43
Table M. NO ₂ Diffusion Tube Results	44

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 ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

Table A. Summary of National Air Quality Standards and Objectives

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

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

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2017

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)	Pollutants monitored	Monitoring technique
London Bloomsbury	530123	182014	Urban Background	Y	40	27	NO ₂ , PM ₁₀ , PM _{2.5} , SO ₂ , O ₃	FDMS, API NO _x , TEOM
Swiss Cottage	526629	184391	Kerbside	Y	7	1.5	NO ₂ , PM ₁₀ , PM _{2.5}	FDMS, AC31 NO _x
Euston Road	529878	182648	Roadside	Y	1	0.5	NO ₂ , PM ₁₀ , PM _{2.5}	API NO _x , FDMS
Shaftesbury Avenue	530060	181290	Roadside	Y	1	1	NO ₂ , PM ₁₀	TEOM, API NO _x

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)	Pollutants monitored	Tube co-located with an automatic monitor? (Y/N)
CA4	Euston Road	530110	182795	Roadside	Y	1	5	NO ₂	N
CA6	Wakefield Gardens	530430	182430	Urban Background	Y	18	30	NO ₂	N
CA7	Frognaal Way	526213	185519	Urban Background	Y	6	30	NO ₂	N
CA10	Tavistock Garden	529880	182334	Urban Background	Y	35	25	NO ₂	N
CA11	Tottenham Court Road	529568	181728	Kerbside	Y	4	<1	NO ₂	N
CA15	Swiss Cottage	526633	184392	Kerbside	Y	7	<1	NO ₂	Y
CA16	Kentish Town Road	529013	185102	Roadside	Y	1	1	NO ₂	N
CA17	47 Fitzjohn's Road	526547	185125	Roadside	Y	5	5	NO ₂	N
CA20	Brill Place	529914	183147	Roadside	Y	9	<5	NO ₂	N
CA21	Bloomsbury Street	529962	181620	Roadside	Y	Y (4m)	<1	NO ₂	N
CA23	Camden Road	529173	184129	Roadside	Y	Y (5m)	<1	NO ₂	N
CA24	Chetwynd Road	528722	185950	Roadside	Y	Y (2m)	1	NO ₂	N
CA25	Emmanuel	525325	185255	Roadside	Y	Y (3m)	1	NO ₂	N

	Primary								
WITT	Wittanhurst Lane	528213	187203	Roadside	Y	Y (3m)	1.5	NO ₂	N

1.2 Comparison of Monitoring Results with AQOs

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

Table D. Annual Mean NO₂ Ratified and Bias-adjusted Monitoring Results (µg m⁻³)

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µg m ⁻³)						
				2011 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
LB: London Bloomsbury	Automatic	98	98	50	55	44	45*	48	42	38
CD1: Swiss Cottage	Automatic	91	91	<u>71</u>	<u>70</u>	<u>63</u>	<u>66</u>	<u>61</u>	<u>66</u>	53
CD3: Shaftesbury Avenue	Automatic	-	-	<u>76</u>	<u>71</u>	<u>74</u>	<u>69*</u>	-	-	-
CD9: Euston Road	Automatic	99	99	<u>122*</u>	<u>106</u>	<u>106</u>	<u>98</u>	<u>90</u>	<u>88</u>	<u>83</u>

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 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
CA4 Euston Road	Diffusion	-	58	<u>93.12</u>	<u>82.05</u>	<u>107.75</u>	<u>89.74</u>	<u>86.76</u>	<u>82.71</u>	<u>92.45</u>
CA6 Wakefield Gardens	Diffusion	-	-	45.61	39.29	40.32	36.44	35.80	31.31	-
CA7 Frogna1 Way	Diffusion	-	58	31.46	28.89	31.95	28.55	27.78	27.91	32.26
CA10 Tavistock Gardens	Diffusion	-	-	47.56	40.12	49.37	46.50	44.57	39.68	-
CA11 Tottenham Court Road	Diffusion	-	-	<u>91.67</u>	<u>83.30</u>	<u>88.09</u>	<u>86.75</u>	<u>85.61</u>	<u>83.57</u>	-
CA15 Swiss Cottage	Diffusion	-	-	<u>73.17</u>	<u>72.66</u>	<u>83.08</u>	<u>74.34</u>	<u>69.28</u>	<u>73.86</u>	-
CA16 Kentish Town Road	Diffusion	-	58	57.19	58.97	<u>65.32</u>	57.83	<u>63.55</u>	58.72	<u>74.92</u>
CA17 47 Fitzjohn's Road	Diffusion	-	-	58.39	<u>61.20</u>	<u>65.24</u>	<u>60.30</u>	55.80	56.38	-

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 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
CA20 Brill Place	Diffusion	-	58	50.79	50.00	49.37	52.34	48.94	47.53	<u>57.30</u>
CA21 Bloomsbury Street	Diffusion	-	50	<u>76.73</u>	<u>71.66</u>	<u>76.08</u>	<u>80.82</u>	<u>71.43</u>	<u>72.20</u>	<u>80.67</u>
CA23 Camden Road	Diffusion	-	58	<u>72.21</u>	<u>67.40</u>	<u>77.85</u>	<u>72.21</u>	<u>63.33</u>	<u>61.74</u>	<u>75.42</u>
CA24 Chetwynd Rd	Diffusion	-	58	44.12	43.67	47.75	44.76	46.52	41.96	55.02
CA25 Emmanuel Primary	Diffusion	-	58	41.5	45.94	57.91	48.36	47.70	52.18	55.16
WITT Wittanhurst Lane	Diffusion	-	58	-	-	53.10	48.26	45.03	43.11	48.88

Notes: Exceedance of the NO₂ annual mean AQO of 40 $\mu\text{g m}^{-3}$ are shown in **bold**.

NO₂ annual means in excess of 60 $\mu\text{g m}^{-3}$, indicating a potential exceedance of the NO₂ hourly mean AQS objective are shown in bold and underlined.

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

*Where data capture rate is less than 90%

Shaftesbury Avenue monitoring station ceased collecting NO₂ data in 2015 due to a technical fault.

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

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Number of Hourly Means > 200 µg m ⁻³						
			2011 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
BLO Bloomsbury	98	98	0	1	0	0	0	0	0
CD1 Swiss Cottage	91	91	77	43	42	14	11	37	1
CD3 Shaftesbury Avenue	0	0	15	12	10	2	-	-	-
CD9 Euston Road	99	99	726	294	404	221	54	39	25

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

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

Shaftesbury Avenue monitoring station ceased collecting NO₂ data in 2015 due to a technical fault.

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

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µg m ⁻³)						
			2011 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
BLO Bloomsbury	95	95	22	19	18	20	22	20	19
CD1 Swiss Cottage	89	89	27	23	21	22	20	21	20
CD3 Shaftesbury Avenue	-	-	32	29	29	25	22	18	-
CD9 Euston Road	89	89	-	-	-	29	18	24	20

Notes: Exceedance of the PM₁₀ annual mean AQO of 40 µg m⁻³ are shown in **bold**.

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

Shaftesbury Avenue monitoring station ceased collecting PM10 data in 2016 due to a technical fault.

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

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Number of Daily Means > 50 µg m ⁻³						
			2011 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
BLO Bloomsbury	95	95	17	10	4	11	6	9	6
CD1 Swiss Cottage	89	89	31	21	8	12	8	7	8
CD3 Shaftesbury Avenue	-	-	27	18	17	16	4	-	-
CD9 Euston Road	89	89	-	-	-	5	5	10	3

Notes: Exceedance of the PM₁₀ short term AQO of 50 µg m⁻³ over the permitted 35 days per year or where the 90.4th percentile exceeds 50 µg m⁻³ are shown in **bold**. Where the period of valid data is less than 85% of a full year, the 90.4th percentile is shown in brackets after the number of exceedances.

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

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

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µg m ⁻³)						
			2011 ^c	2012 ^c	2013 ^c	2014 ^c	2015 ^c	2016 ^c	2017 ^c
BLO Bloomsbury	94	94	-	-	-	-	11	12	13
CD1 Swiss Cottage	97	97	-	-	-	-	12	15	16
CD9 Euston Road	89	89	-	-	-	-	17	17	14

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

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

Table I. SO₂ Automatic Monitor Results: Comparison with Objectives

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Number of: ^c		
			15-minute means > 266 µg m ⁻³	1-hour mean > 350 µg m ⁻³	24-hour mean > 125 µg m ⁻³
BLO Bloomsbury	85	85	0	0	0

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

^a data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

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

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

2. Action to Improve Air Quality

2.1 Air Quality Action Plan Progress

Table J provides a brief summary of LB Camden'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 (*where applicable*).

Table J. Delivery of Air Quality Action Plan Measures

Action	Detail	Progress	Further information
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.	Completed / ongoing	All statutory annual reports are listed on our website .
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	Completed / ongoing	Raw monitoring data is available via the London Air Quality Network site and also on the Opendata site. Both are updated regularly.
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	Completed / ongoing Data published on the Opendata site.	
4. To continue to monitor air quality	Use of portable monitors to add air quality levels to	Completed / ongoing	All medium to large transport projects use monitoring equipment prior to works, during works and once projects are completed.

levels on a temporary basis for road based projects and schemes	the suite of assessment tools used to evaluate the success of transport projects and interventions		This monitoring is to compliment other monitoring measures (traffic, pedestrian, and cycle counts) and does not specifically link measured pollution concentrations to the impact of the projects.
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. Update this Action Plan as necessary if additional information on sources of pollution is made available (for example the London Atmospheric Emissions Inventory).	Completed / ongoing	
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 undated 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).	Completed / ongoing	
7. Camden will promote the adoption of fuel saving measures to residents through the Green Camden helpline,	Key indicators include the number of residents receiving advice and the number of home energy visits. Use of external funding to provide private sector	Ongoing	<ul style="list-style-type: none"> • 750 cross-tenure Well and Warm visits • 16 private sector energy efficiency grants totalling £59.2k • 1621 residents contacted Green Camden Helpline for advice 534 referred to Warm Home Discount (collective saving of £74,760)

Well and Warm service, and other projects.	residents with opportunities to fund energy saving installations. Look at ways to improve the dissemination of information about energy efficiency to residents.		
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.	Completed / ongoing	The Alliance currently has 260 active members
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.	Ongoing	Within our own estate and operations we have exceeded our 2017 target for Carbon emissions reduction achieving a 29.6% reduction against our 2009/10 baseline.
10. Ensure that all Part B Installations in the borough	Ensure that all Part B Installations meet compliance standards,	Completed / ongoing	No enforcement action taken in the past financial year with any permitted processes in Camden.

maintain the highest standards of air pollution emission control.	and where issues are found take action accordingly.		
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.	Ongoing	
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.	Ongoing	Final update on this will be available after March 2019 when MAQF2 project concludes. Currently working with JCB to trial an all-electric digger on our West End Project . The project will also be trialling a hydrogen generator.
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.	Completed / ongoing	<ul style="list-style-type: none"> • 0 notices issued • 3 written notifications provided <p>Our website has been updated with relevant information</p> <p>A specific smoke control flyer was created and delivered to resident associations and GP surgeries.</p>
14. Minimise emissions from the	Current policies developers must adhere	Ongoing	

<p>construction and operation of new developments by requiring developers to adhere to current and any superseding best practice guidance and supplementary planning guidance.</p>	<p>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.</p>		
<p>15. Continue to use planning conditions and obligations to require developers to adopt measures which will reduce transport emissions during operational phase of developments.</p>	<p>Examples of measures includes but is not restricted to requesting travel and business plans, installing electric vehicle recharging infrastructure, and allocating car club bays.</p>	<p>Completed / ongoing</p>	
<p>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</p>	<p>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</p>	<p>Completed / ongoing</p>	<p>Refer to table K below.</p>

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.			
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.	Completed / ongoing	Refer to table K below
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.	Ongoing	Refer to table K below
19. Review and update Camden's air quality policies and guidance to developers where appropriate, and feed into updates of Camden's wider	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.	Completed / ongoing	

planning policies.			
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.	Ongoing	Little progress to date due to other priorities.
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.	<p>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.</p> <p>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</p>	Ongoing	<p>Regular bi-weekly meetings occur with Council officers and HS2 teams to discuss progress of project and ensure compliance with assurance.</p> <p>Camden has negotiated assurances related to a number of air quality issues, including:</p> <ul style="list-style-type: none"> • Emissions standards for construction vehicles • Emissions standards for Non Road Mobile Machinery • Standards for the management of dust and emissions from construction sites • Baseline data monitoring of the impact of HS2 on highways and roads • Data sharing with Camden • Support in quantifying the impact of HS2

	impacts during the operational phase of HS2.		
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.	Ongoing	Exceedance alerts are sent to the Council along with summary of the source and action taken.
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"> • 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' • encourage healthy and sustainable travel choices by prioritising walking, cycling and public transport in Camden. <p>Camden will ensure these</p>	Ongoing	<p>The proportion of households in the Borough who do not own a car increased from 56% (2001) to 61% (2011), and currently stands at 65% (2015/16). This compares favourably to inner London (59%), and London as a whole (43%).</p> <p>The percentage of trips made by residents in the Borough by walking and cycling increased by 2% and 1% respectively between 2008/09 and 2015/16.</p> <p>Walking mode share in Camden is now at 41% of all trips (3 year figures to 2015/16). By comparison the average across inner London as a whole is 37%, the London-wide average is 32%, and nationally the figures are 22% of all trips by walking.</p> <p>Cycling mode share in Camden is at 4% of all trips (three year figures to 2015/16) which is above the London-wide average (3%). Cycle mode share in Camden is currently double the national average (2%).</p> <p>Cycle flows at count points across the Borough (screenline data) increased by 46% between 2006 and 2016.</p>

	<p>key objectives continue to be met.</p> <p>Work to leverage funding with LB Islington to implement a project aimed at encouraging increased cycling among residents through a cycle loan scheme.</p>		
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>	Ongoing	<p>LB 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.</p> <p>This system is currently being used by our fleet and may be open to the public including neighbouring boroughs in the near future.</p>
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</p>	Ongoing	<p>Currently looking to install at least 1 rapid charger at our York Way Depot.</p> <p>Neighbourhoods of the Future school project received funding to install 5, 22KW 'fast' charge points in schools located in our Fitzjohn area.</p>

	suppliers) to fund and install rapid charging electric vehicle infrastructure.		
26. Encourage modal shift away from diesel vehicles through parking permit charges.	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 & 2 travelcard, and is subject to periodic review.	Completed / ongoing	Since the introduction of a diesel surcharge, there has been a decline in the uptake of residential diesel permits and market trader diesel permits of 7% and 25% respectively.
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.	Ongoing	

<p>28. Continue to enforce anti-idling policies at idling hotspots and review areas where enforcement is undertaken.</p>	<p>Review current arrangements of both enforcement officers and signage to minimise idling at designated hotspots. This includes exploring the use of Fixed Penalty Notices.</p> <p>Liaise with businesses and developers to reduce where possible idling, and directly contact businesses who regularly have drivers idling.</p> <p>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.</p>	<p>Ongoing</p>	<p>Camden is a partner on the Idling Action project funded by MAQF and led by City of London.</p> <p>Camden is currently trialling a 12 month pilot aimed at enforcing on idling drivers who refuse to turn their engines off.</p>
<p>29. Explore emissions based charging for paid-for-parking bays to encourage modal shift or the use of less polluting vehicles.</p>	<p>This would involve introducing a variable charging scheme with the drivers of the highest polluting vehicles paying more to park.</p>	<p>Completed</p>	
<p>30. Review housing estate Parking permits and enforcement,</p>	<p>Complete a full audit of housing estate parking, develop options for</p>	<p>Completed</p>	

identify and implement improvements to increase efficiency and effectiveness in influencing car ownership and usage.	change, in consultation with stakeholders and residents, and implement any agreed proposals.		
31. 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	Ongoing	Refer to: https://camden.gov.uk/ccm/cms-service/stream/asset/?asset_id=3563818& for information on how LB Camden is working towards becoming a diesel free council.
32. Ensure that Camden's major vehicle procurement exercises deliver fuel savings and emissions reductions	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. Camden will ensure that these procurement exercises, in line with the council's green fleet policy, will result in the	Ongoing	

	introduction of alternatively fuelled vehicles that will significantly reduce emissions from Camden's fleet.		
33. Install a permanent supply of Compressed Natural Gas at Camden's York Way depot for use by the council fleet and external operators.	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.	Completed	
34. Ensure that fleet operators and contractors working with Camden minimise their emissions where possible.	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.	Completed	

<p>35. Maintain 'Gold' Fleet Operator' accreditation for Camden's fleet.</p>	<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>	<p>Completed / ongoing</p>	<p>Currently listed accredited as Champions on the FORS website.</p>
<p>36. Ensure ongoing uptake of FORS bronze among Camden' via Procurement and Planning controls</p>	<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</p>	<p>Ongoing</p>	<p>S106 agreements require CLOCS standards</p>

	standard is aligned to FORS silver.		
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>	Ongoing	Project part of the MAQF2. Final report will be produced in Spring/Summer 2019.
38. Work in partnership with schools by providing advice to encourage the adoption of travel plans and other policies to reduce transport emissions.	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	Ongoing	<p>LB Camden is committed to ensuring that all our schools have a school travel plan in place.</p> <p>Currently, have 22 schools with STARS accreditation.</p>

	<p>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>		
<p>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>	<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>	<p>Completed - Ongoing</p>	<p>Projects delivered include:</p> <ul style="list-style-type: none"> • Wellbeing walks delivered by CRP, Camden Town Unlimited and Urban Partners • The Fitzrovia Partnership's FitzPark parklet • Click. Collect. Clean Air.' personal deliveries campaign with Hatton Garden BID <p>Refer to CRP Clean Air Better Business site for more information.</p> <p>Camden's Climate Change Alliance also works with members to reduce their environmental impact, including air quality.</p>
<p>40. Engage with railway companies to tackle both indoor air quality issues in train</p>	<p>Work with major station and train operators to look at ways to improve indoor air quality at Camden's</p>	<p>Ongoing</p>	<p>Communication with HS1 and Network Rail regarding air quality commenced in April 2018.</p>

stations located in Camden, and work to mitigate the impacts of emissions from diesel trains.	<p>main stations.</p> <p>Engage with train operators to work towards lower emission train engines, and to explore options for mitigating unavoidable emissions from diesel trains.</p>		
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	Completed	Considered unfeasible due to the resources required and lack of long term impact.
42. Continue to disseminate up to date information about air quality and investigate new methods of informing the public about air pollution levels.	<p>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.</p> <p>Investigate the potential for new methods of disseminating air quality information, either through better utilising existing communication channels or through new means of</p>	Completed - Ongoing	<p>In Jan 2018, LB Camden released a new air quality campaign called Clean Air For Camden with posters, promo video and pledges designed for schools, businesses and residents.</p> <p>https://consultations.wearecamden.org/communications-strategy-improvement/clean-air-for-camden-pledge/</p> <p>https://www.youtube.com/watch?v=Uxclxn29KOc&feature=youtu.be</p> <p>https://www.camden.gov.uk/ccm/navigation/environment/green-camden/air-quality/</p>

	contacting the public.		
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.	Completed - ongoing	
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	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.	Ongoing	
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.	Ongoing	Current projects include: <ul style="list-style-type: none"> • London Low Emission Construction Partnership • Neighbourhoods of the Future School project • Anti-Idling engagement project • Go Ultra Low Cities
46. Disseminate the results and best practice from current and	Ensure that final project reports, case studies, toolkits, and any other	Ongoing	Main platform continues to be Camden's website and magazine.

<p>completed projects to further improve awareness of air quality.</p>	<p>final project outputs are disseminated to interested parties in Camden and beyond.</p> <p>This Action also includes endeavouring to learn from other final outputs from relevant projects undertaken by other local authorities and organisations</p>		
<p>47. Provide support for 'citizen science' projects being undertaken in the borough.</p>	<p>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.</p>	<p>Ongoing</p>	<p>First round of the community monitoring project completed; second round to commence later in 2018.</p> <p>CIL community monitoring / air quality projects also being supported.</p>
<p>48. Increase awareness of air pollution in and encourage modal shift away from cars in schools through educational</p>	<p>Work in partnership with an educational provider and other London boroughs to implement a project in Camden's primary schools to increase pupil, teacher</p>	<p>Ongoing</p>	<p>Along with our school travel plan and STARS program, LB Camden is also engaging with schools providing air quality toolkits and also directly engaging with the children directly. King's Cross Academy is currently providing artwork for our anti idling street signs.</p>

<p>projects and lessons within the national curriculum.</p>	<p>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.</p>		
<p>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.</p>	<p>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.</p>	<p>Ongoing</p>	
<p>50. Director of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up to</p>	<p>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</p>	<p>Completed</p>	

date information on air quality impacts on the population	quality and public health.		
51. Work with Public Health to strengthen engagement with Camden's Clinical Commissioning Group and Camden's GP surgeries.	<p>To build on the successes of Camden AirAware project, which delivered training sessions to public health staff on air quality, by working with public health to establish a closer relationship with Camden's GP surgeries.</p> <p>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.</p>	Ongoing	
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	Ongoing	Measure linked to measure 39 of this Plan

	emissions, and look to work with new businesses.		
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.	Ongoing	
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.	<p>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.</p> <p>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</p>	Completed	Camden were unsuccessful in obtaining funding.

	success of Camden's LEN bid, the benefits outlined in the application are maximised as far as possible.		
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.	Ongoing	Currently conducted via: <ul style="list-style-type: none"> • Cluster group meetings • Clean Air for Camden campaign • Camden's air quality website • Camden's magazine • Resident group meetings • Camden Climate Change Alliance • Clean Air Better Business project with Cross River Partnership • Annual statutory reports • LB Camden also have a dedicated webpage to highlight what we are doing to improve air quality.
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	Completed	

	work collaboratively on this issue.		
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.	Completed / Ongoing	
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.	Ongoing	
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	Completed - ongoing	Camden's formal response to the consultation supports the principle of expanding the ULEZ, however we believe that it should extend beyond the proposed North and South Circular boundary to align with the existing LEZ, and encompass the whole of Greater London.

	possible.		
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.	<p>This work could be undertaken in conjunction with other London boroughs, the GLA, or with local partners and major stakeholders.</p> <p>Progress towards this action could be made through direct lobbying, through meetings and other forums, or through official responses to consultations.</p>	Ongoing	
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.	<p>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.</p>	Ongoing	

3. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in LB Camden in 2017

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	54 (inclusive of discharging conditions and S106 agreements, pre-apps, prior approvals, reserved matters, appeals, construction management plans)
Number of planning applications required to monitor for construction dust	28
Number of CHPs/Biomass boilers refused on air quality grounds	0
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	4
Number of developments required to install Ultra-Low NO _x boilers	28
Number of developments where an AQ Neutral building and/or transport assessments undertaken	2
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	0
Number of planning applications with S106 agreements including other requirements to improve air quality	28
Number of planning applications with CIL payments that include a contribution to improve air quality	0
<p>NRMM: Central Activity Zone and Canary Wharf Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIB of the Directive and/or exemptions to the policy.</p>	<p>Between 1/04/17-31/03/18:</p> <ul style="list-style-type: none"> • 28 S106 requirements related to NRMM (figure is for all of Camden and not specific to zones) • 57 in total are registered • 55 are listed as active • 19 don't have start / end dates • 2 listed as inactive • Currently unknown which sites are compliant.
<p>NRMM: Greater London (excluding Central Activity Zone and Canary Wharf) Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIA of the Directive and/or exemptions to the policy.</p>	<p>Between 1/04/17-31/03/18:</p> <ul style="list-style-type: none"> • 28 S106 requirements related to NRMM (figure is for all of Camden and not specific to zones) • 57 in total are registered • 55 are listed as active • 19 don't have start / end

	dates <ul style="list-style-type: none">• 2 listed as inactive• Currently unknown which sites are compliant.
--	---

3.1 New or significantly changed industrial or other sources

No new sources identified.

Appendix A Details of Monitoring Site QA/QC

A.1 Automatic Monitoring Sites

Routine calibrations are carried out on a fortnightly basis by operators from King's College London ERG. These operators are trained to AURN standards.

Swiss Cottage and Bloomsbury are part of the AURN, as such, both are audited to the AURN standard. AURN sites are audited by providers selected by either Bureau Veritas (Bloomsbury) or Kings College London ERG (Swiss Cottage) who manage these sites for the AURN.

Non AURN sites are audited by the National Physical Laboratory (NPL) who are UKAS accredited. NPL is also UKAS accredited for the recertification of onsite cylinders.

All sites are audited every 6 months.

All sites comply with the validation procedures which conform to the requirements of the AURN and exceed the requirements of LAQM TG(16). The data ratification procedures also exceed the requirements of TG(16).

PM₁₀ Monitoring Adjustment

Dynamic correction of PM₁₀ TEOM measurements is conducted via the approved Volatile Correction Model (VCM) method, developed by King's: the only EU reference equivalent method for this instrument.

A.2 Diffusion Tube Quality Assurance / Quality Control

- Lab supplying and analysing the tubes: Gradko International.
- Preparation method used: 50% TEA /Acetone
- Confirmation that the lab follows the procedures set out in the Practical Guidance: Yes
- Results of laboratory precision results: Gradko is rated as Good for precision according to Defra's [precision summary results](#).
- Gradko has consistently achieved 100% for the [AIR-PT](#) (formerly WASP) results.
- Bias adjustment factor: **0.97** obtained from the LAQM Support Website at: <https://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html> Spreadsheet Version Number 03/18
- Although tubes have been co-located at our Swiss Cottage site, a co-location study was not conducted. Reason: data capture less than 50%

Factor from Local Co-location Studies (if available)

N/A

Discussion of Choice of Factor to Use

The nationally derived bias adjustment factor was chosen as:

- Our Swiss Cottage co-located tubes only achieved 25% data capture
- The LLAQM TG16 guidance prefers the usage of the nationally derived factor as it includes many locally derived factors based on collocation data sent to NPL, as such, the national factor is likely to be more reliable.
- Based on box 4.10 of the LLAQM TG16, the nationally derived factor is preferable

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Table L. 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
Camden Bloomsbury	Urban Background	37.8	34.4	1.099
City of London - Sir John Cass School	Urban Background	38.1	36.6	1.041
Southwark - Elephant and Castle <i>(chosen as closer sites did not achieve 90% data capture)</i>	Urban Background	34.2	29.7	1.152
Average				1.097

Distance Adjustment

N/A

Appendix B Full Monthly Diffusion Tube Results for 2017

Table M. NO₂ Diffusion Tube Results

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean NO ₂												Annual mean – raw data	Annualised	Annual mean – bias adjusted ^c
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec			
Euston Road	58		95.46	82.99	101.09	62.43	91.14	98.98	76.11						86.89	95.31	<u>92.45</u>
Wakefield Gardens	33				37.80	27.72		31.43	31.32								
Kentish Town Road	58		85.39	61.00	67.76	54.05	82.49	77.95	64.24						70.41	77.24	<u>74.92</u>
Frognaal Way	58		48.04	35.31	40.57	19.86	24.37	23.34	20.72						30.32	33.26	32.26
47 Fitzjohn's Ave	42		85.37			49.53	70.76	68.81	53.05								
Swiss Cottage, Finchley Rd	25		100.56			55.24	81.69										
Swiss Cottage, Finchley Rd	17					61.38	81.52										
Swiss Cottage, Finchley Rd	25		105.65			61.55	81.60										

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean NO ₂														
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data	Annualised	Annual mean – bias adjusted ^c
Brill Place	58		72.45	53.42	57.17	37.43	58.49	47.50	50.47						53.85	59.07	57.30
Tavistock Gdns	33		68.75		50.72		46.39	30.62									
Tottenham Court Road	33		101.75	77.73	85.21	78.40											
Emmanuel Primary School	58		75.67	48.63	58.13	39.39	52.89	46.62	41.50						51.84	56.86	55.16
Wittanhurst Lane	58		68.65	44.64	43.91	32.74	44.54	46.27	40.78						45.93	50.39	48.88
Camden Rd	58		88.98	67.67	79.81	43.67	76.35	75.07	64.63						70.88	77.76	<u>75.42</u>
Bloomsbury St	50		91.74	59.39	72.85	66.81	84.95	79.11							75.81	83.16	<u>80.67</u>
Chetwynd Rd	58		69.92	40.02	56.03	37.28	44.91	49.12	64.63						51.70	56.72	55.02

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

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

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

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

Any data with less than 6 months data has been discounted from Table D in this ASR. This data and should not be used in air quality assessments.