London Borough of Camden Air Quality Annual Status Report for 2019
Date of publication: July 2020

This report provides a detailed overview of air quality in the London Borough of Camden during 2019. It has been produced to meet the requirements of the London Local Air Quality Management statutory process[1].

CONTACT DETAILS

Tom Parkes, Senior Air Quality Officer: Tom.Parkes@camden.gov.uk
Sustainability, Air Quality & Energy
Regeneration and Planning
London Borough of Camden

[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19)). https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs

CONTENTS

Abbreviations ..... **Error! Bookmark not defined.**

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 34

3.1 New or significantly changed industrial or other sources 36

Appendix A Details of Monitoring Site QA/QC 37

A.1 Automatic Monitoring Sites 37

A.2 Diffusion Tube Quality Assurance / Quality Control 37

A.3 Adjustments to the Ratified Monitoring Data 38

Appendix B Full Monthly Diffusion Tube Results for 2019 39

Tables

Table A. Summary of National Air Quality Standards and Objectives 4

Table B. Details of Automatic Monitoring Sites for 2019 5

Table C. Details of Non-Automatic Monitoring Sites for 2019 5

Table D. Annual Mean NO_2 Ratified and Bias-adjusted Monitoring Results ($\mu g\ m^{-3}$) 8

Table E. NO_2 Automatic Monitor Results: Comparison with 1-hour Mean Objective 11

Table G. PM_{10} Automatic Monitor Results: Comparison with 24-Hour Mean Objective 12

Table H. Annual Mean $PM_{2.5}$ Automatic Monitoring Results ($\mu g\ m^{-3}$) *(if available, if not this section can be deleted)* 13

Table I. SO_2 Automatic Monitor Results: Comparison with Objectives *(if available, if not this section can be deleted)* 14

Table J. Delivery of Air Quality Action Plan Measures 15

Table K. Planning requirements met by planning applications in *Borough Name* in 2019 34

Table L. Short-Term to Long-Term Monitoring Data Adjustment 38

Table M. NO_2 Diffusion Tube Results 39

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	Date[1]
Nitrogen dioxide - NO_2	200 μg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
	40 μg m^{-3}	Annual mean	31 Dec 2005
Particles - PM_{10}	50 μg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 μg m^{-3}	Annual mean	31 Dec 2004
Particles - $PM_{2.5}$	25 μg m^{-3}	Annual mean	2020
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020
Sulphur Dioxide (SO_2)	266 μg m^{-3} not to be exceeded more than 35 times a year	15 minute mean	31 Dec 2005
	350 μg m^{-3} not to be exceeded more than 24 times a year	1 hour mean	31 Dec 2004
	125 μg m^{-3} mot 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

Camden has committed to achieving the World Health Organization air quality guideline values for PM_{10} and $PM_{2.5}$ by 2030. The objective for PM_{10} is 20μg/m^3 and for $PM_{2.5}$ is 10μg/m^3, both as an annual mean concentrations.

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2019

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
B0	London Bloomsbury	530123	182014	Urban Background	Y	40	27	4	NO_2, PM_{10}, $PM_{2.5}$, SO_2, O_3	TEOM-FDMS, API NOx
CD1	Swiss Cottage	526629	184391	Kerbside	Y	7	1.5	3	NO_2, PM_{10}, $PM_{2.5}$	TEOM-FDMS, AC31 NOx
CD9	Euston Road	529878	182648	Roadside	Y	1	0.5	2.5	NO_2, PM_{10}, $PM_{2.5}$	TEOM-FDMS, API NOx
KGX	Coopers Lane	529831	183250	Urban Background / Industrial*	Y	8	55	2.5	PM_{10}	TEOM-FDMS

*****KGX Coopers Lane was previously classified as an industrial site due to its proximity to major construction at King's Cross and St. Pancras, and although the site has retained this classification it is now more representative of an urban background site.

Table C. Details of Non-Automatic Monitoring Sites for 2019

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Tube co-located with an automatic monitor? (Y/N)
CA4A (new)	Euston Road	530093	182792	Kerbside	Y	1	0.5	2.2	NO_2	N
CA27	Euston Road LAQN colocation	529907	182670	Roadside	Y	1	0.5	2	NO_2	Y
CA6	St. George's Gardens (prev. 'Wakefield Gardens')	530430	182430	Urban Background	Y	18	30	1.8	NO_2	N
CA28	St. George's Gardens East	530512	182511	Urban Background	Y	10	29	1.5	NO_2	N
CA7	Frognal Way	526213	185519	Urban Background	Y	6	30	3	NO_2	N
CA10	Tavistock Gardens	529880	182334	Urban Background	Y	35	25	2.5	NO_2	N
CA11	Tottenham Court Road*	529568	181728	Kerbside	Y	4	<1	3.5	NO_2	N
CA15	Swiss Cottage	526633	184392	Kerbside	Y	7	<1	2.5	NO_2	Y
CA16	Kentish Town Road	529013	185102	Roadside	Y	1	1	2.5	NO_2	N
CA17	47 Fitzjohn's Road	526547	185125	Roadside	Y	5	5	2	NO_2	N
CA20A (new)	Brill Place	529904	183138	Roadside	Y	12	0.5	2.5	NO_2	N
CA21	Bloomsbury Street	529962	181620	Kerbside	Y	4	<1	2.2	NO_2	N
CA23	Camden Road	529173	184129	Kerbside	Y	5	<1	2.2	NO_2	N
CA24	Chetwynd Road	528722	185950	Roadside	Y	2	1	2.5	NO_2	N
CA25A (new)	Emmanuel Primary School	525362	185255	Roadside	Y	3	2	2	NO_2	N
CA26 (prev. 'WITT')	Witanhurst Lane	528213	187203	Roadside	Y	3	1.5	2.2	NO_2	N
CA29	Endsleigh Gardens	529689	182470	Roadside	Y	6	0.5	2	NO_2	N
CA30	Dartmouth Park Hill	529118	185913	Roadside	Y	10	0.5	2.5	NO_2	N
CA31	Acland Burghley School (Burghley Road)	529099	185881	Roadside	Y	1	7	2.2	NO_2	N

CA32	Oakford Road	529060	185848	Roadside	Y	8	1	2.5	NO_2	N
CTLEN1	Haverstock School (Haverstock Hill)	528081	184490	Roadside	Y	4	0.5	2.2	NO_2	N
CTLEN2	Harmood Street	528558	184331	Roadside	Y	7	1	2.2	NO_2	N
CTLEN3	Hartland Road	528619	184315	Roadside	Y	3	1	2.2	NO_2	N
CTLEN4	Hawley Primary School (Hawley Road)	528881	184287	Roadside	Y	1	6	2.2	NO_2	N
CTLEN5	Kentish Town Road	528935	184053	Roadside	Y	5	0.5	2.2	NO_2	N
CTLEN6	Hawley Crescent	528898	184094	Roadside	Y	4	0.5	2.2	NO_2	N
CTLEN7	Jamestown Road	528704	184011	Roadside	Y	5	0.5	2.2	NO_2	N
CTLEN8	Camden High Street (Bridge)	528722	184127	Roadside	Y	6	2	2.5	NO_2	N
CTLEN9	Camden High Street (Camden News)	528845	183970	Roadside	Y	5	2	2.2	NO_2	N
CTLEN10	Camden High Street (American Candy)	528884	183901	Roadside	Y	6	1	2.2	NO_2	N
CTLEN11	Britannia Junction	528915	183870	Kerbside	Y	15	0.5	2.5	NO_2	N
CTLEN12	Cavendish School (Arlington Road)	528770	183887	Roadside	Y	3	2	2.5	NO_2	N
CTLEN13	Holy Trinity & St. Silas School (Hartland Road)	528715	184456	Roadside	Y	3	1.5	2.5	NO_2	N

*The diffusion tube on Tottenham Court Road (CA11) had to be moved in November 2019 due to major streetworks necessitating the removal of the lighting column to which the tube had previously been attached. The new tube location is five metres to the north, and is the same distance from the kerb, and is fixed at a marginally lower height.

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_2 Ratified and Bias-adjusted Monitoring Results (μg m^{-3})

Site ID	Site type	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean Concentration (μg m^{-3})						
				2013[c]	2014[c]	2015[c]	2016[c]	2017[c]	2018[c]	2019[c]
LB: London Bloomsbury	Automatic	-	97.7%	**44**	**45***	**48**	**42**	38	36	32
CD1: Swiss Cottage	Automatic	-	98.9%	**63**	**66**	**61**	**66**	**53**	**54**	**43**
CD9: Euston Road	Automatic	-	78.3%	**106**	**98**	**90**	**88**	**83**	**82**[c]	**70**
CA4 Euston Road	Diffusion tube	-	-	**107.75**	**89.74**	**86.76**	**82.71**	**84.95**[c]	**69.19**	-
CA4A Euston Road (new)	Diffusion tube	-	91.7%	-	-	-	-	-	-	**69.06**
CA27 Euston Road LAQN colocation	Diffusion tube	-	100%	-	-	-	-	-	-	**63.81**
CA6 St. George's Gardens	Diffusion tube	-	75%	**40.32**	36.44	35.80	31.31	34.83[c]	26.67	24.65
CA28 St. George's Gardens East	Diffusion tube	-	100%	-	-	-	-	-	-	27.67
CA7 Frognal Way	Diffusion tube	-	100%	31.95	28.55	27.78	27.91	29.64[c]	22.12	22.82
CA10 Tavistock Gardens	Diffusion tube	-	100%	**49.37**	**46.50**	**44.57**	39.68	**46.18**[c]	35.35	33.13
CA11 Tottenham Court Road	Diffusion tube	-	83.3%	**88.09**	**86.75**	**85.61**	**83.57**	**74.04**[c]	**65.75**	**61.22**
CA15 Swiss Cottage	Diffusion tube	-	75%	**83.08**	**74.34**	**69.28**	**73.86**	-	**62.30**[c]	**49.74**
CA16 Kentish Town Road	Diffusion tube	-	100%	**65.32**	**57.83**	**63.55**	**58.72**	**68.84**[c]	**54.66**	**45.03**

Site ID	Site type	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean Concentration (µg m^{-3})						
				2013[c]	2014[c]	2015[c]	2016[c]	2017[c]	2018[c]	2019[c]
CA17 47 Fitzjohn's Avenue	Diffusion tube	-	91.7%	**65.24**	**60.30**	**55.80**	**56.38**	**66.27**[c]	**48.13**	**42.53**
CA20 Brill Place	Diffusion tube	-	-	**49.37**	**52.34**	**48.94**	**47.53**	**52.65**[c]	**41.15**	-
CA20A Brill Place (new)	Diffusion tube	-	91.7%	**-**	**-**	**-**	**-**	**-**	**-**	**43.13**
CA21 Bloomsbury Street	Diffusion tube	-	91.7%	**76.08**	**80.82**	**71.43**	**72.20**	**71.18**[c]	**59.43**	**48.48**
CA23 Camden Road	Diffusion tube	-	100%	**77.85**	**72.21**	**63.33**	**61.74**	**69.30**[c]	**55.57**	**52.49**
CA24 Chetwynd Road	Diffusion tube	-	100%	**47.75**	**44.76**	**46.52**	**41.96**	**50.55**[c]	38.68	35.24
CA25 Emmanuel Primary School	Diffusion tube	-	-	**57.91**	**48.36**	**47.70**	**52.18**	**50.68**[c]	39.75	-
CA25A Emmanuel Primary School (new)	Diffusion tube	-	91.7%	**-**	**-**	**-**	**-**	**-**	-	37.88
CA26 Witanhurst Lane	Diffusion tube	-	100%	**53.10**	**48.26**	**45.03**	**43.11**	**44.91**[c]	37.37	32.51
CA29 Endsleigh Gardens	Diffusion tube	-	91.7%	-	-	-	-	-	-	**48.34**
CA30 Dartmouth Park Hill	Diffusion tube	-	100%	-	-	-	-	-	**42.55**	37.04
CA31 Acland Burghley School (Burghley Road)	Diffusion tube	-	91.7%	-	-	-	-	-	27.11	27.42
CA32 Oakford Road	Diffusion tube	-	91.7%	-	-	-	-	-	30.51	29.23
CTLEN1 Haverstock School (Haverstock Hill)	Diffusion tube	-	100%	-	-	-	-	-	-	32.31
CTLEN2 Harmood Street	Diffusion tube	-	100%	-	-	-	-	-	-	31.02

Site ID	Site type	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean Concentration (µg m^{-3})						
				2013[c]	2014[c]	2015[c]	2016[c]	2017[c]	2018[c]	2019[c]
CTLEN3 Hartland Road	Diffusion tube	-	83.3%	-	-	-	-	-	-	31.09
CTLEN4 Hawley Primary School (Hawley Road)	Diffusion tube	-	91.7%	-	-	-	-	-	-	**41.97**
CTLEN5 Kentish Town Road	Diffusion tube	-	91.7%	-	-	-	-	-	-	**44.00**
CTLEN6 Hawley Crescent	Diffusion tube	-	100%	-	-	-	-	-	-	38.02
CTLEN7 Jamestown Road	Diffusion tube	-	100%	-	-	-	-	-	-	37.84
CTLEN8 Camden High Street (Bridge)	Diffusion tube	-	100%	-	-	-	-	-	-	**40.53**
CTLEN9 Camden High Street (Camden News)	Diffusion tube	-	100%	-	-	-	-	-	-	37.93
CTLEN10 Camden High Street (American Candy)	Diffusion tube	-	100%	-	-	-	-	-	-	**46.58**
CTLEN11 Britannia Junction	Diffusion tube	-	100%	-	-	-	-	-	-	**52.69**
CTLEN12 Cavendish School (Arlington Road)	Diffusion tube	-	100%	-	-	-	-	-	-	33.21
CTLEN13 Holy Trinity & St. Silas School (Hartland Road)	Diffusion tube	-	91.7%	-	-	-	-	-	-	27.46

Notes: Exceedance of the NO_2 annual mean AQO of 40 µg m^{-3} are shown in **bold**.

NO_2 annual means in excess of 60 µg m^{-3}, indicating a potential exceedance of the NO_2 hourly mean AQS objective are shown in **bold and underlined**.

[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 E. NO_2 Automatic Monitor Results: Comparison with 1-hour Mean Objective

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Number of Hourly Means > 200 µg m^{-3}						
			2013[c]	2014 [c]	2015[c]	2016 [c]	2017 [c]	2018 [c]	2019 [c]
BL0	-	97.7%	0	0	0	0	0	0	0
CD1	-	98.9%	**42**	14	11	**37**	1	2	1
CD9	-	78.3%	**404**	**221**	**54**	**39**	**25**	18	7

Notes: Exceedance of the NO_2 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%

The NO_2 data presented in Table D and Table E illustrates the recent trend of declining NO_2 concentrations which has continued into 2019. It is apparent that roadside and kerbside NO_2 levels are decreasing most rapidly, whereas urban background locations are showing a less significant reduction. Several diffusion tube monitoring locations with historically high NO_2 annual means have measured levels approaching the annual mean National Air Quality Standard in 2019.

In 2019 only one exceedance of the 200µg/m^3 hourly mean National Air Quality Objective for NO_2 was recorded at Swiss Cottage (CD1), and seven at Euston Road (CD9). This represents a 97.6% reduction in the number of exceedances of this objective at Swiss Cottage, and a 98.3% reduction at Euston Road, both compared to 2013.

Table F. Annual Mean PM_{10} Automatic Monitoring Results (µg m^{-3})

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean Concentration (µg m^{-3})						
			2013[c]	2014[c]	2015[c]	2016[c]	2017[c]	2018[c]	2019[c]
BL0	-	91.6%	18	20	22	20	19	17	18
CD1	-	96.1%	21	22	20	21	20	21	19
CD9	-	99.5%	-	29	18	24	20	21	22
KGX	-	92.6%	-	-	-	-	-	15	15

Notes: Exceedance of the PM_{10} 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%

Table G. PM_{10} Automatic Monitor Results: Comparison with 24-Hour Mean Objective

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Number of Daily Means > 50 µg m^{-3}						
			2013[c]	2014[c]	2015[c]	2016[c]	2017[c]	2018[c]	2019[c]
BL0	-	91.6%	4	11	6	9	6	1	9
CD1	-	96.1%	8	12	8	7	8	4	8
CD9	-	99.5%	-	5	5	10	3	2	8
KGX	-	92.6%	-	-	-	-	-	1	5

Notes: Exceedance of the PM_{10} 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%

The decline in annual mean PM_{10} concentrations as measured at Camden's automatic monitoring sites has plateaued since 2015, and two monitoring sites (Bloomsbury UB and Euston Road RS) measured increased concentrations in 2019 compared to the previous year. From the limited monitoring available it is not clear whether this is driven primarily by localised factors or by widespread conditions, however it has become increasingly obvious that particulate pollution in London and the South East is affected considerably by long-distance transportation. This places further emphasis on actions focusing on influencing and shaping national air quality policy, if Camden (and London) is to achieve the WHO air quality guidelines by 2030.

All four PM_{10} monitoring sites in Camden recorded an increase in the number of 24-hour mean PM_{10} concentrations exceeding the 50µg/m^3 objective, compared to the previous year, although all four were well within the 35-event tolerance for this objective.

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 2019 % [b]	Annual Mean Concentration (µg m^{-3})						
			2013[c]	2014 [c]	2015[c]	2016 [c]	2017[c]	2018[c]	2019 [c]
BL0	-	97.5%	-	-	11	12	13	10	11
CD1	-	97.5%	-	-	12	15	16	11	11
CD9	-	99.7%	-	-	17	17	14	15	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%

Although $PM_{2.5}$ monitoring data is only available from 2015 onwards in Camden, it is apparent that the trend for this pollutant is unsurprisingly similar to the trend in PM_{10} annual means. The lack of a distinct and continual reduction in annual mean $PM_{2.5}$ concentrations highlights the influence of emissions sources which are harder to tackle, including agricultural and industrial emissions arising in the UK and transported from sources in Continental Europe, as well as the increasing prevalence of domestic wood-burning, which Defra estimates to contribute approximately 38% of total annual $PM_{2.5}$ emissions.

The EU objective for $PM_{2.5}$ has not been breached at any Camden monitoring site since measurements began in 2015, however the WHO guideline has consistently been exceeded at all sites.

Table I. SO_2 Automatic Monitor Results: Comparison with Objectives

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [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}
BL0	-	78.9%	0 (99.9th percentile = 8.86 µg/m^3)	0 (99.7th percentile = 6.63 µg/m^3)	0 (99.2nd percentile = 3.72 µg/m^3)

Exceedances of the SO_2 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%

The highest 15-minute mean SO_2 concentration measured in 2019 at the BL0 AURN monitoring site was 12.7 µg/m^3, comfortably below the National Air Quality Objectives for 15-minute, one-hour, and 24-hour means.

2. Action to Improve Air Quality

2.1 Air Quality Action Plan Progress

Camden's new Clean Air Action Plan was launched in April 2019. This update covers the early stages of our work and progress on the many new actions contained within the Action Plan, which was developed through a collaborative approach involving stakeholders from various groups and sectors.

Table J provides a brief summary of our progress against the Clean Air Action Plan, showing progress made during 2019. Note that 'Completed / ongoing' in the 'Progress' column typically implies that a particular process-related action has been implemented, and that the action is now focused on continued delivery and, where appropriated, refinement of the action such that it delivers even greater impact in improving air quality.

Table J. Delivery of Air Quality Action Plan Measures

Action	Measure	Progress	Further information
1. Secure additional funding from developers through S106 agreements to manage and enforce construction impacts	Secure additional funding for air quality projects through S106 to assist with improving air quality in Camden for the protection of current and future residents' (and workers') health	Ongoing	Review of CMP fees and resourcing began in November 2019, with a possible realignment of sourcing and use of S106 funds to better resource work to improve air quality
2. Ensure all major development sites have a demolition management plan (DMP) and/or a construction management plan (CMP) approved by the air quality officer	Senior Air Quality Officer to review CMPs received for forthcoming development sites to ensure appropriate dust mitigation and monitoring has been proposed	Completed / ongoing	The Senior Air Quality Officer reviews CMPs received by Camden's Planning Obligations team
3. Ensure all medium and high-risk sites have real-time particulate monitoring on site and that the information from this monitoring is easily accessible to the public	Contractors/developers to use and refer to on-site dust monitoring to ensure that mitigation is effective. Data to be shared publicly to ensure transparency and public oversight over site AQ management	Ongoing	Not standardised that data is publicly available at this stage but intention would be to push for this once a CMP-funded Air Quality Enforcement Officer can be appointed as there would be greater preventative monitoring and community liaison capacity
4. Ensure that policies and assurances agreed with HS2 in relation to air quality	Ensure that monitoring and reporting regimes agreed with HS2 are correctly adhered to, as well as those associated with green space and	Completed / ongoing: long-term continual action	HS2 reports on NRMM and vehicle compliance, provides access to real-time construction dust monitoring data, and produces monthly air

	and green space are complied with during the course of the project	that any air quality problems caused by HS2 are minimised and mitigated as far as possible		quality reports for Camden. Any poor performance is raised in monthly Camden-HS2 environmental catch-up meetings and more serious transgressions are addressed at multi-authority HS2 Environmental Health Subgroup meetings, which occur every two months
5.	Produce a construction code of practice for small developments to be used as an informative	Work with Senior Sustainability Officers (Planning) and Planning Officers to produce a CoCP for small developments to ensure better communication and ultimately management of air quality issues outside of CMP and S106 controls	Ongoing	Draft CoCP produced in 2019 and pending publication with accompanying guidance from other teams at Camden (Transport Strategy, Environmental Health, etc.)
6.	Create clean air zones (areas of exclusion for construction vehicles) around schools/ hospitals	Create clear air zones around schools and hospitals to help protect those most susceptible to health issues resulting from poor air quality	Ongoing	
7.	Improve communications with local communities about the pollution impact of large construction projects, how impacts will be minimised, and how residents can report concerns	Utilise council platforms to engage with local communities about pollution impacts of construction	Ongoing	Some development sites have been required to make construction dust monitoring data publicly available either online or on site hoardings, though it is an ongoing process to ensure this practice is widespread
8.	Support the development of community-led Neighbourhood Construction Site Watch groups to assist in monitoring construction sites in line with air quality CMP requirements.	Connect with local the community to help facilitate a community-led watch group around construction sites	Ongoing	
9.	Develop and implement a power generator hierarchy for construction sites with the aim of reducing the number of diesel generators	Reduce pollution from diesel generator use on construction sites, focusing on higher engine standards, and alternative fuels and technologies	Ongoing	Related to this, we are working with the events and film industry in Camden to improve standards of generators being used and reduce the number in use
10.	Require cumulative impact assessments for developments in order to identify the impact on local air quality and	CIA to highlight the need for extra dust mitigation, inter-site coordination, and community liaison in cumulative impact areas	Completed / ongoing	CIA background work completed in 2019 and requirement due to be applied to relevant sites thereafter

	identify methods to reduce impact on local communities			
11.	Control construction lorry delivery times through S106 agreements and/or planning condition to reduce impact on local communities and air quality.	Work with Transport Planners to put in place actions to control construction lorry delivery times through S106 agreements	Completed / ongoing	Transport Planners are involved in the CMP and S106 process and therefore HGV movements servicing development sites are managed as far as possible
12.	Reduce the impact of Council-led infrastructure projects by requiring air quality controls for all Community Investment Programme development	Work with CIP Project Managers and ensure that Camden's CIP team understands air quality issues, and consequently passes on all necessary requirements to contractors	Ongoing	
13.	Enforcement of Non Road Mobile Machinery (NRMM) air quality policies	Ensure that NRMM air quality policies are adhered to	Completed / ongoing	Camden is a participant in the LB Merton led NRMM compliance ('Cleaner Construction for London') project, and specialist auditors undertake visits to major sites in Camden
14.	Monitor air quality for Council transport infrastructure projects to inform the scheme design, evaluate project impact, and enhance future schemes	Air quality monitoring to be undertaken for Camden transport and public realm projects to develop rationale for intervention and to determine the air quality impact of different types of schemes in different settings	Complete / ongoing	Diffusion tube air quality monitoring undertaken for 13 distinct transport and public realm projects in Camden in 2019, in accordance with LLAQM best practice
15.	To support construction industry-led initiatives that demonstrate best practice and drive improvement across the sector	Highlight and promote current and new best practice to drive continual improvement in air quality management in the construction industry	Complete / ongoing	Camden has provided some initial support for British Safety Council in the development of the Canairy air quality app for construction workers. Kier, HS2 and Network Rail are all represented on Camden's Clean Air Partnership, and this is an opportunity to promote and highlight newly-emerging best practice in the construction industry
16.	Ensure all major domestic and non-domestic developments achieve zero-carbon status through exemplar energy efficiency standards and renewable energy installations	Work with Senior Sustainability Officers (Planning) to ensure all major developments accomplish zero carbon status	Ongoing	

17. Ensure major regeneration planning policy framework documents are developed to specify low emission zones with zero on-site combustion	This has been incorporated into major regeneration specification	Completed / ongoing	Camden's Senior Air Quality Officer, Senior Sustainability Officers (Planning) and Sustainability Projects Manager work closely with Camden's Planning department to ensure the highest possible standards for air pollution and carbon abatement are achieved through major regeneration frameworks
18. Promoting and delivering energy-efficiency retrofitting projects in workplaces and homes using the GLA RE:NEW and RE:FIT programmes and the Camden Climate Fund	Camden Climate Fund and other energy-efficiency funding streams to be promoted through the MAQF Camden Town LEN project and other air quality and carbon reduction programmes	Completed / ongoing	The RE:NEW and RE:FIT programmes are now closed, however Camden's Sustainability service continues to promote and deliver energy-efficiency advice and projects through the Camden Climate Fund and other channels, including through the Camden Climate Change Alliance sustainability network
19. Enforce CHP and biomass air quality planning policies for new developments	This is currently taking place. We are working on how to best proceed with monitoring and reporting	Completed / ongoing	CHP and biomass planning policies for new developments are already enforced, though there is room for improvement in data collection and reporting on the impact that this has on improving local air quality
20. Enforcing Air Quality Neutral and Air Quality Positive planning policies for new developments	Ensure effective joined-up working between Sustainability and Planning to enforce air quality neutral and positive planning policy in Camden	Completed / ongoing	AQ neutral and AQ positive planning policies implemented through planning process, but there is room for improvement in data collection and reporting
21. Ensuring adequate, appropriate, and well located green space and infrastructure is included in new developments	New development to require inclusion of well-designed green space which has a positive impact on amenity and perception of environment without causing any evident detriment to air quality (e.g. avoiding impaired dispersion of pollutants)	Completed / ongoing	Camden's Green Space team is a consultee on all major planning applications. New development within the borough must meet the correct standards for open space provision and nature conservation. The planning process ensures that new development contributes positively to the surrounding environment, as well providing additional green infrastructure and new habitat to increase biodiversity. This approach is supported by local and regional planning policy

22.	Maintain and increase the amount of green infrastructure in Camden including the number of trees	Work with the green spaces team to increase the number of green infrastructure in Camden	Completed / ongoing	Camden's Tree Policy for Council Owned Trees (December 2015) is to 'replace and where possible, increase the Council's tree stock'. This includes careful consideration of tree maturity, species diversification and selection in accordance with Camden's Biodiversity Action Plan. The Green Space team aims to plant at least 400 trees per year and continuously works to secure additional external funding for tree planting
23.	Ensure that smoke control area regulations are communicated and enforced with the support of residents' associations	Produce clear and consist information for communities and local groups to ensure that smoke control regulations are well-highlighted throughout the borough	Completed / ongoing	Flyers sent out to residents in November 2019 to advise on the Clean Air Act 1993 and smoke control area regulations. Information also available on Camden's website
24.	Continue to control emissions from permitted process via inspections and enforcement	Regulation of Part B processes to ensure effective enforcement	Completed / ongoing	Permitting and enforcement is ongoing and managed by Camden's Environmental Health team
25.	Increase the amount of electric vehicle charging infrastructure in Camden	Work with Camden Transport Strategy to increase the number of electrical vehicle charging points throughout the borough, in accordance with the new EVCP Action Plan	Completed / ongoing	24 Source London EVCPs installed from December 2018, 89 lamp column EVCPs installed in March 2019 (and further 85 planned for FY 2019/2020), and 2 rapid EVCPs installed in 2019
26.	Undertake feasibility, consultation and implementation of on-street rapid charge points at taxi ranks, in partnership with TfL	Work with transport and TfL to undertake feasibility and implement electrical vehicle charging points throughout the borough	Completed / ongoing	2 rapid EVCPs installed in 2019 and others in being considered for feasibility ahead of consultation in early-2020
27.	To use all relevant forms of parking restrictions and charges to help reduce total overall traffic levels and help improve air quality	Work with the Parking Operations and Transport Strategy services to ensure all relevant forms of parking restrictions and charges are enforce to help lower traffic within Camden	Completed / ongoing	Parking charges under review, including diesel surcharge which has already been introduced and is under review based upon current evidence on the deleterious impact of diesel vehicle exhaust emissions on health
28.	Undertake a feasibility study into a workplace parking levy (WPL) in Camden and implement if feasible	Feasibility and eventual introduction of a WPL to reduce commuting and workplace-related parking	Ongoing	

29.	Keep cycle routes open (if safety is not an issue) when road closures are planned	Work with Transport Strategy to undertake feasibility studies for when roads close to ensure cyclist can safely continue to use cycle routes	Completed / ongoing	This is generally done in most circumstances
30.	Trial replacement of parking spaces near junctions with cycle storage or other green measures that don't impair pedestrian or driver visibility, to improve junction visibility and safety	Work with Transport Strategy to pilot replacing parking spaces with cycling storage and green infrastructure, ensuring that health and safety is met	Ongoing	
31.	Continue to provide additional bicycle parking in the borough including Business Improvement Districts	Continue to work with local BIDS to install additional bicycle parking	Ongoing	
32.	To offer travel plans to businesses and Camden Climate Change Alliance members	Create a travel plan template that can be modified to suit businesses that need a tailored travel plan for their business	Ongoing	Working with the Camden Climate Change Alliance (CCCA) on travel plan templates for businesses to minimise car usage
33.	Continue to discourage unnecessary idling through anti-idling campaigns and enforcement activity	Utilise the MAQF London Idling Action Project to address idling within Camden, whilst introducing local enforcement	Completed / ongoing	Camden is a co-lead borough on the London Idling Action Project and two officers have been recruited by the Council to deliver this programme in Camden, the City of London, and 29 other boroughs. Borough-wide TMO introduced in Camden in October 2019 with PCN regime
34.	Work with the LTDA to establish a jointly executed anti-idling campaign targeted at taxi drivers	Work collaboratively to ensure that key air quality messages are disseminated to drivers to raise awareness of the health impacts of exposure to air pollution, and the importance of avoiding engine idling	Completed / ongoing	Camden and the LTDA engaged with idling drivers ranking at King's Cross station for Clean Air Day in June 2019, to raise awareness of health impacts of air pollution
35.	To improve walking and cycling infrastructure through projects such as the proposed Prince of Wales Road and Camden Road cycle routes	Facilitate sustainable and active travel throughout the borough	Completed / ongoing	Various walking, cycling and public realm improvement schemes instigated in Camden during 2019, including the first phase of the West End Project which provides safer two-way cycling on Tottenham Court Road

36.	To offer a parking permit scrappage scheme where a free two-year membership to a car club is provided	Encourage reduced car ownership and usage by incentivising car club membership as an alternative	Completed / ongoing	This has already been introduced: https://www.camden.gov.uk/car-clubs
37.	Ensure the Clean Air Action Plan and Camden Transport Strategy have overlapping and supporting policies in relation to air quality	Work with the Transport Strategy service to ensure that joint aims are overlapping within both plans	Completed	The CAAP and CTS were developed in tangent and the Sustainability team and the Transport Strategy service continue to have the same or mutually supportive objectives
38.	Install collapsible bicycle posts around the Hatton Garden Business Improvement District	Work with Hatton garden BID to help facilitate instillation of collapsible bicycle posts	Ongoing	
39.	Consolidate patient transport to reduce the number of vehicles on the road (subject to health and safety of patients)	Discuss with hospitals in the borough as part of the Clean Air Hospital Framework	Ongoing	Meetings have taken place with GOSH in relation to this. The Hospital is planning to implement this along with other measures
40.	Assess the feasibility of creating an air quality app that allows users to report air quality issues to the Council	Work with Camden's Environmental Services team to create an air quality feature on the existing environmental reporting app	Ongoing	
41.	Deliver a Neighbourhoods of the Future project in the Fitzjohn's area in partnership with independent schools to encourage more sustainable forms of transport	NotF to include schemes to encourage and facilitate a reduction in car travel to and from schools in the project area	Ongoing	Work on this project has commenced, including feasibility on a health school streets zone within the project area
42.	Produce and promote a School Air Quality Audit toolkit to schools in Camden	Develop a toolkit for schools that can be carried out by both council staff and school staff to help maximise uptake	Ongoing	
43.	Work with Public Health to develop a school super zones pilot that tackles health and air quality in the Kilburn area	Ensure that collaborative working is employed with PH to develop a school super zone pilot in Kilburn	Ongoing	
44.	Continue to encourage schools to join the TfL STARS accredited travel planning programme by providing information on the benefits to schools and supporting	Work with the Transport Strategy service to promote TfL STARTS to schools within the borough	Completed / ongoing	STARS is widely promoted by Camden's Transport Strategy service, as well as through the Mayor's schools and nurseries air quality audits programme, which involved three Camden schools and one nursery

	the implementation of such a programme			
45.	Continue to promote the uptake of Play Streets to local residents	Work with Transport Strategy to create guidance of street closures for local communities	Completed / ongoing	6 temporary Play Streets in Camden for London Car Free Day in September 2019, in addition to 3 other major road closures. The Transport Strategy services continues to promote and facilitate introduction of permanent Play Streets where appropriate
46.	Work with universities to investigate the potential for a new university-led community air quality monitoring project	Promote citizen science lessons to local schools to help maximise uptake	Ongoing	Citizen science lessons with UCL have been discussed but not launched yet in Camden
47.	Increase the number of Healthy School Streets in key pollution areas	Work with Transport Strategy to undertake feasibility and implementation of Healthy School Streets	Completed / ongoing	Four HSS schemes implemented by the end of 2019
48.	Develop bespoke clean air routes for schools in Camden highlighting clean routes to and from school as well as to relevant places such as libraries, community centres and parks	Ensure that clear clean air routes are accessible to school communities via the Council website as well as working with transport to create bespoke routes for schools in 'hot spot' areas	Ongoing	
49.	To continue to work in partnership with London authorities, the GLA, TfL, London Councils and Defra on air quality projects	Ensure Camden continues to maintain its working partnership on air quality issues with London authorities, the GLA, TfL, London council's and Defra	Completed / ongoing	This year we have worked with the GLA at the London Health board conference addressing the health impacts of air quality. Camden is also working closely with the GLA and TfL around the London Idling Action Project, through which we are working to support all participating boroughs to implement idling enforcement regimes
50.	Continue to work with schools on air quality engagement, awareness and behaviour change	Ensure that school engagement is conducted through the Sustainers, Camden Climate Change Alliance, school air quality audits and the London Idling action project	Completed / ongoing	Engagement in 2019 focused on London Idling Action Project, the Sustainers and the Camden Climate Change Alliance, with further projects planned for 2020

51.	Support the NW3 Green School Run project which aims to reduce pollution from the independent school run	Green School Runs has a number of avenues to explore in terms of lessening air pollution through active travel, and these will be promoted through Council channels	Ongoing	GSR initiatives on sustainable and active travels supported through the Neighbourhoods of the Future project. GSR also represented at Camden Clean Air Partnership update meetings, so that projects can be shared with other partners (which includes schools, and community representatives)
52.	Determine whether local byelaws could be introduced to address pollution sources currently controlled by not fit for purpose legislation	Where legislation cannot be influenced of amended to afford sufficient regulatory control or enforcement, byelaws will be investigated as an alternative	Ongoing	A scoping meeting has been arranged with Camden's Legal Services team to discuss byelaws for domestic solid fuel burning, engine idling and the use of diesel generators for events/public spaces
53.	Implement a borough-wide traffic management order (TMO) to enable more robust enforcement of vehicle idling and higher fines	Strengthen the current ETO idling enforcement regime to enable Civil Enforcement Officers to issue penalties for stationary idling offences anywhere in Camden	Completed	TMO created and advertised in October 2019, to be introduced at the beginning of 2020
54.	Apply to Mayor's Air Quality Fund (MAQF) and Defra funding to deliver air quality projects	Secure external funding to deliver air quality programmes in Camden	Completed	We have applied to the GLA's Good Growth Fund and Defra Clean Air Fund, with success on the first stage of the GGF. Our proposed project seeks to reduce pollution from canal boats in Camden and other London boroughs
55.	Produce guidance for canal boat users on the impact of wood and coal burning on local air quality and disseminate with the support of the Canal & River Trust	Convey messaging around air quality and public health, opportunities for reducing emissions and exposure, and smoke control regulations relevant to boaters	Ongoing	Guidance has yet to be published, however we are actively engaged with the Canal & River Trust on the application to the GLA's Good Growth Fund
56.	Continue to install green infrastructure in Euston Town Business Improvement District (BID) area	Work with Euston town BID to facilitate green infrastructure being installed	Ongoing	
57.	Create an air quality art installation at the Camden Peoples' Theatre to absorb pollution and help raise awareness of pollution	Euston Town BID plans to install a pollution-sequestering art installation on the façade of the Camden People's Theatre, which will raise awareness of air pollution	Ongoing	

58.	Create a green walkway on North Gower Street and a cleaner air walk from Euston station to Regent's Park along Drummond Street and Longford Street	Collaborate with Euston BIDS to create a green walk way on North Grower Street and clean walk routes throughout Euston	Ongoing	
59.	Support Great Ormond Street Hospital to produce and promote a Clean Air Hospital Framework for use by other NHS and public Health based organisations	The CAHF will be developed collaboratively by Global Action Plan and GOSH and will address various aspects of organisational sustainability and action to reduce air pollution, including emissions from transport, procurement, building operations, and by engaging with patients and staff will raise awareness of air pollution and public health	Completed / ongoing	Great Ormond Street Hospital has successfully started implementing actions from the CAHF with support from Global Action Plan
60.	Continue to work with the Camden Clean Air Partnership to ensure actions are delivered and further initiatives are developed	Various actions in the CAAP are the responsibility of other CCAP members, and continued collaborate working is crucial to ensure overall successful delivery of the Action Plan	Completed / ongoing	Meetings are scheduled with the Camden Clean Air Partnership to occur every 6 months, to ensure that actions are delivered as well as incorporating new initiatives. The most recent meeting was in July 2019 and the next is arranged for early-2020
61.	To create a sustainability steering group (The Sustainers) for year 8 and 9 school children in Camden to support air quality improvements in and around schools	Sustainability steering for schools to cover various sustainability issues, including air quality, with opportunities for funding from CCCA members to cover small school-based innovative projects	Completed / ongoing	The Sustainers has been set up and is active as a project in promoting sustainability issues including air quality to schools in Camden
62.	Promote Camden's freight consolidation centre to other boroughs, business improvement districts and private companies	Camden Council consolidates all janitorial and stationary supplies with zero-tailpipe emission last-mile delivery, utilising an electric van and e-cargo bike	Completed / ongoing	We have been working with Cross River Partnership through CRP's Defra-funded Clean Air Villages II project to promote use of the freight consolidation centre to businesses in the Hatton Garden and Euston Town BID areas in Camden
63.	Assist local businesses and BIDs to consolidate services such as deliveries and waste collections	Promote the Council's consolidation centre for use by businesses and BIDs within Camden	Ongoing	

64.	Create an online signposting hub on Camden's website that highlights funding opportunities for air quality positive technology (electric vehicles, EV charging, cargo bikes, etc.)	Promote all funding sources available for businesses, BIDs, community groups and residents which may help to achieve emissions reductions	Ongoing	Some resources already signposted but we have not yet collated a single page highlighting all opportunities
65.	Signpost Council suppliers and external businesses to the DfT Clean Van Commitment scheme, the Logistics Emissions Reduction Scheme (LERS) and the freight portal	Work with the Camden Climate Change Alliance to inform businesses of what current grants are available to them	Ongoing	
66.	Trial using cargo bikes in our own freight consolidation project	Reduce last-mile delivery emissions by trialling cargo bikes as an option for freight consolidation	Completed / ongoing	An electrically-assisted cargo bike is being used for last mile delivery from Camden's freight consolidation centre
67.	Reduce emissions from Council fleet, targeting a low and zero tailpipe emission fleet by 2022	Camden operates over 300 vehicles for the delivery of a range of services, and has objectives to move to a zero-tailpipe emission fleet by 2022	Ongoing	Camden Fleet services to trial use of PHEV vans with geofencing to ensure EV mode is used in urban areas. Ongoing programme of fleet renewal to reduce emissions
68.	Open Camden's compressed natural gas facility at York Way to third party businesses	Camden's biomethane CNG refuelling facility at York Way represents an option for low-carbon vehicle fuel, which is preferable to diesel in terms of local air pollution	Completed	The CNG facility has been opened up to businesses and other external organisations
69.	Ensure air quality is included in all procurement processes and favours suppliers with low or beneficial impacts on air quality	Ensure that air quality is fed through procurement processes	Ongoing	
70.	Promote the use of low-/zero-tailpipe emission delivery services through the Camden Climate Change Alliance	Work with the Camden Climate Change Alliance to promote behaviour change around driving	Ongoing	
71.	Create a low/zero emission servicing, delivery and freight action group with other London authorities to ensure a joined-up approach to limit impact on servicing, delivery and freight providers	Coordinate through the Central London AQ Cluster Group and others to instigate a new approach to tackle emissions from servicing, delivery and freight	Ongoing	

72.	Provide Smarter Driver (Ecodriving) Training for drivers of vehicles in the Council fleet, i.e. through training in fuel-efficient driving and providing regular re-training for staff	Driver training is being delivered through the London idling action programme	Ongoing	The London Idling Action Project will be able to provide training for Camden fleet drivers, however this hadn't been rolled out by the end of 2019
73.	Investigate creating a waste consolidation programme for businesses in the Hatton Garden and Fitzrovia BID areas	Work with BIDs to reduce emissions from waste collections where businesses in close proximity are currently using different service providers	Ongoing	Meetings with Hatton Garden and Fitzrovia BIDs have been set up and initial planning has started
74.	UCL to deliver a logistics plan for the Bloomsbury campus, consolidating deliveries and reducing vehicle emissions and congestion	Help to facilitate the implementation of a logistics plan at UCL Bloomsbury campus to help reduce emissions	Ongoing	Work ongoing but not completed yet
75.	UPS to complete power supply upgrade and installation of Smart Grid technology at the Kentish Town UPS depot to support the electrification of UPS's central London fleet of 170 vehicles	Reduce emissions from UPS's London fleet by installing EVCPs and ancillary technologies at the Kentish Town depot	Completed / ongoing	Smart Grid technology has been installed at the depot, which will allow for a fully-EV fleet. The next phase is to procure the vehicles (subject to market availability)
76.	John Lewis Partnership to fit Microlise routing and scheduling software to optimise routing and load consolidation and reduce the number of vehicles entering the capital	Work with John Lewis partnership to help facilitate	Ongoing	Currently being rolled out and most of the Waitrose primary and home delivery fleets have the software fitted, with John Lewis vehicles still under consideration
77.	Waitrose to use lorries which are run entirely on bio methane gas generated from food waste	Work with John Lewis partnership to help facilitate	Ongoing	The Waitrose distribution centre at Bracknell has sign off for a gas station to be installed, which will add circa 60 CNG tractor units onto the fleet which delivers to some stores in London. The total gas fleet will be c.130 vehicles as some are operated at other locations
78.	John Lewis Partnership to work towards converting all standard heavy trucks to gas upon renewal	Work with John Lewis partnership to help facilitate	Ongoing	Planned but subject to manufacturer availability

79.	Ensure Directors of Public Health are fully briefed on the scale of the air quality problem in Camden; what is being done, and what further action is needed	Ensure that reoccurring scheduled meetings are held between the air quality team and public health to ensure a cohesive approach	Ongoing	The Camden Sustainability team now works more closely with Public Health, although there is more to be done to ensure a fully joined-up approach on air quality and public health issues
80.	Directors of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up-to-date information on the health impacts of air quality impacts on the population	Ensure that all future JSNA have up to date information on the health impacts of poor air quality and are overseen by the Director of Public Health	Completed / ongoing	Current 2019 JSNA is up-to-date and relevant, and has been signed off by Public Health and Camden's head of Sustainability, Air Quality and Energy
81.	Require the Public Health teams to support engagement with local stakeholders (businesses, schools, community groups and healthcare providers)	Public Health colleagues to support with ensuring the air quality and public health messages are conveyed throughout various social and economic communities, and in other sectors	Completed / ongoing	We have a strong point of contact in Public Health who continues to support and help facilitate our working with local stakeholders
82.	Work with Public Health to strengthen engagement with Camden's Clinical Commissioning Group and Camden's GP surgeries	Ensure that clinicians in Camden are fully aware of the associations between exposure to air pollution and adverse health outcomes, and can highlight to patients opportunities for reducing exposure to air pollution in Camden	Completed / ongoing	We have a strong point of contact in Public Health who continues to support and help facilitate our PH/air quality agenda and has strengthened engagement between the air quality team and local GPs. The Senior Air Quality Officer attends NCL STP, Paediatric Asthma Network and Healthy London Partnership meetings to strengthen engagement with clinicians
83.	Ensure that the Leader of the Council, Cabinet Members for Health and Transport and the Head of Transport Strategy have been fully briefed on the Public Health duties and the fact that all Directors are responsible for delivering them, as well as on air quality opportunities and risks related to transport in the borough	Secure a deep organisational awareness of the importance of air quality and the deleterious health effects of exposure to air pollution, such that senior management and councillors are aware of the need to improve air quality throughout the borough	Ongoing	

84.	Strengthen co-ordination with Public Health by ensuring that at least one Consultant- grade public health specialist within the borough has air quality responsibilities outlined in their job profile	Secure alignment of Public Health and air quality work to ensure all opportunities for engagement with medical and practitioners is realised	Ongoing	We have a strong point of contact in Public Health who continues to support and help facilitate our PH/air quality agenda
85.	Require the Director of Public Health to sign off Statutory Annual Status Reports and all new Clean Air Action Plans	Ensure that the Director of Public Health is aware of statutory obligations to measure and improve air quality, as well as progress on this agenda	Completed / ongoing	Public Health has agreed sign off the ASR and all new Clean Air Action Plans
86.	To work with Public Health and council resilience teams to ensure that vulnerable people are aware of high pollution days and the action they can take to reduce their exposure	Disseminate pollution alerts through council social media and other channels, and ensure other council teams (for example, Housing, HS2 Community Liaison, etc.) are able to signpost service users to relevant resources	Ongoing	
87.	Deliver community-led air quality monitoring projects annually	Establish a community led air quality monitoring project	Completed / ongoing	Throughout 2019 a community air quality monitoring project was undertaken in Swiss Cottage and Belsize Park, involving approximately 30 volunteers who changed triplicate diffusion tubes at 10 locations chosen to represent local relevant exposure. This was funded through CIL, and the data collected through the project is all of a good quality and high degree of precision
88.	Promote and support airText pollution alerts system	Increase the subscription to the airText pollution alerts in Camden, to ensure that vulnerable people are aware of forecast pollution events whilst raising general awareness of the importance of air quality as a health determinant	Completed / ongoing	Camden continues to promote the use of airText. From 1 April to 30 November 2019 2,164 email and 3,108 SMS alerts were sent to users airText subscribers in Camden. By 30 November 2019 there were 547 airText subscribers in Camden
89.	Promote cleaner walking routes and signposting to free air quality route mapping apps and websites	This action will be linked with action 98 to signpost clean air routes in Camden	Ongoing	

90.	Send out air pollution alerts via various council communication outlets (Facebook, Twitter, etc.)	Disseminate pollution alerts through council social media channels	Ongoing	
91.	To continue to deliver our Clean Air for Camden engagement programme	Maintain momentum and programme visibility through the continued delivery of air quality engagement under the Clean Air for Camden banner	Completed / ongoing	Through the actions within the Camden Clean Air Action Plan we are continuously engaging with the local community and continuing the delivery of the Clean Air for Camden programme. The CAFC logo and branding is used in various communications to ensure familiarity
92.	Deliver anti-idling engagement via community-led projects	Work with community volunteers to carry out targeted idling action engagement events and awareness-raising initiatives	Completed / ongoing	Several idling action events were held in 2019 at schools and health centres, all of which involved community volunteers. We have also continued to support Green School Runs which promotes anti-idling messages among various other sustainability initiatives. Camden is also a co-lead borough on the MAQF London Idling Action Project, which delivers anti-idling workshops and idling action events in collaboration with community volunteers
93.	Camden staff who are regularly out and about will be encouraged to engage with idling vehicles in the promotion of best practice in driving	Provide training for Camden staff who may encounter idling drivers, to raise awareness of engine idling and air pollution and provide key messages to persuade drivers to switch off their engines	Ongoing	
94.	Produce a toolkit on indoor air pollution and how to reduce personal exposure	Produce guidance for residents on sources of indoor air pollution (in the home) and how to avoid and mitigate poor indoor air quality	Ongoing	
95.	Produce a toolkit for businesses on how they can reduce pollution and pollution exposure	Produce guidance for businesses on reducing sources of indoor and outdoor air pollution, signposting funding opportunities for reducing emissions, and relevant regulations	Ongoing	

96. Promote and deliver air quality projects on National Clean Air Day and National Car Free Day	Build momentum for Clean Air for Camden air quality behaviour change campaign through promotion of NCAD and CFD	Completed / ongoing	Black cab engagement on NCAD in 2019, focusing on engine idling and driver exposure to pollution, with use of portable real-time AQ monitoring. Idling action event at Kentish Town Health Centre on NCAD. Promotion and facilitation of Play Streets and road closures for CFD 2019
97. Provide anti-idling banners for primary schools in Camden	Provide anti-idling banner workshops for schools and produce completed banners based upon pupils' designs	Ongoing	Anti-idling will be produced from a competition run buy London Idling Action Project
98. Improve signposting for cleaner air walking routes	Ensure less polluted streets and walking routes are visible for pedestrians, to encourage healthier travel and awareness of the associations between air quality and health	Ongoing	
99. Expand the air pollution monitoring network in Camden and provide the monitoring information in an easy-to access manner through Open Data and London Air	Achieve better air quality data coverage for the purpose of measuring compliance with legal objectives and WHO guidelines, and assessing changes in air quality in response to policy or projects	Completed / ongoing	Camden took ownership of a FDMS-TEOM PM_{10} monitoring site in Coopers Lane (urban background) and the 2019 data is publicly available (along with other automatic sites) on London Air. Diffusion tubes were used for NO_2 monitoring at 125 locations during 2019, compared to 92 in 2018. Statutory (long-term, non-project-specific) and Camden Town LEN diffusion tube data is available on the Camden Air Quality Monitoring Open Data webpage
100. Provide air quality information at healthcare facilities, libraries, pharmacies and other frequently used public buildings	Produce posters with key messages about exposure to air pollution and associated health impacts, both in relation to ambient and indoor air pollution	Ongoing	
101. Make accessible King's College modelling on WHO guidelines in Camden to explain the future trajectory of pollution	Ensure the Camden 2030 WHO modelling outcomes are available online on the Council's website, and related to the Clean Air Action Plan	Partially completed	The WHO guidelines study: Technical report is available to read on the air quality pages of the Council's website. However the interactive 2030 air pollution map is not publicly available at the request of the GLA as the modelling data

			underlying the study was superseded by the LAEI release in July 2019
102. Support the monitoring and delivery of the Children's Health in London & Luton (CHILL) project	Facilitate where possible research to better understand the impact of exposure to air pollution for health over the long-term	Ongoing	Camden supports this research project and the outcomes of the study will be shared and used to inform policy/guidance where appropriate and applicable
103. Promote the Euston BID's dedicated air quality page signposting to air quality information, projects, forums, clean walking routes, zero-emission delivery services, etc.	Ensure that Euston BID's air quality pages are promoted though the Camden Climate Change Alliance to businesses within the local area	Ongoing	
104. Euston Town BID to signpost its members to deliverBest which provides practical proven solutions that allow business deliveries to be more efficient and reduce impact on air quality	Ensure that businesses are signposted to deliverBest in Euston Town comms and on the BID's website, with additional supporting promotion on the Camden Climate Change Alliance website (and news bulletins)	Ongoing	
105. John Lewis Partnership to encourage use of electrically-powered fridge units by showcasing their demonstration truck for other organisations	Achieve emission reductions by cutting pollution from HGV ancillary refrigeration engines	Ongoing	JLP has purchased a number of new alternator driven electric fridges to replace older conventional arrangements; these will primarily deliver into London, and have the benefit of being driven from a Euro VI HGV engine
106. Lobby national Government to tighten smoke control regulations and ban the use of fireplaces and wood burners in areas well-served by cleaner heating sources	Push for greater regulatory control over the use of solid fuel-burning appliances in smoke control areas, for the purpose of reducing particulate emissions and the associated health burden imposed by $PM_{2.5}$	Ongoing	
107. Support national Government's proposal to phase out diesel trains by 2040 and lobby to implement this measure sooner	Diesel rail is estimated to contribute approximately 7% of NOx emissions in Camden and without clear plans to electrify rail freight the air quality impact of rail will not decline as rapidly as other emission sources	Ongoing	Lobbying positions being refined after engaging with Rail Safety and Standards Board
108. Lobby national Government to provide a robust vehicle scrappage scheme to	Push for financial support to incentivise uptake of ULEVs and zero-tailpipe-emission	Ongoing	

	accelerate the shift towards ultra-low emission vehicles and electric vehicles	vehicles by introducing a national scrappage scheme		
109.	Support the Mayor's ULEZ but keep lobbying for a London wide ULEZ	Lobby for ULEZ emission controls to apply across all of London to ensure clarity for motorists and fleet operators, and to avoid the displacement of polluting vehicles from Central and Inner London to Outer London boroughs	Ongoing	Camden supports the expansion of the ULEZ but encourages adoption of these emission controls across all of Greater London
110.	To work with other London authorities in lobbying large delivery companies such as Amazon to reduce their environmental impact	Collaborate with London authorities to push for voluntary improvements to delivery company vehicle fleets	Ongoing	
111.	Continue to support measures introduced by the Mayor of London and national Government to improve air quality	Work with existing and new legislation and policy positions to reduce emissions and protect health, whilst pushing for increased action at London-wide and national scale	Completed / ongoing	Camden continues to support strengthening air quality objectives and regulations to reduce emissions and protect health
112.	Lobby national Government to reduce the amount of biomass burning throughout the UK, and avoid coal-to biomass power plant conversions for decommissioned coal power stations	Conversion of coal power stations to use biomass fuels represents a continued risk to air quality objectives, so this repurposing should be avoided	Ongoing	
113.	To continue to work with GLA and other London authorities to take a stricter stance on construction and building emissions	Ensure linked up working across London authorities and the GLA is maintained to ensure planning policies at London-wide and local scale are tightened with respect to construction and in-use (operational) emissions, with clearer mechanisms for enforcement and greater uniformity in standards throughout London	Ongoing	Participation in the LB Merton-led MAQF-funded NRMM project entails dissemination of guidance on NRMM and active enforcement of NRMM conditions on major sites. Camden will push for greater control at local authority level for planning policy and planning enforcement
114.	Lobby national Government to put pressure on continental European countries to reduce the burning of coal, biomass and other fossil fuels	Particulate matter is a transboundary pollutant and it is imperative that collective international effort is applied to improve air quality and protect health throughout Europe	Ongoing	

115. To provide a way for citizens and local businesses to join in support of the lobbying actions within this plan	Work directly with the local community and stakeholders to develop lobbying actions, and ensure that the public has visibility of the CAAP and ongoing work within the air quality programme, with potential for participation wherever possible to maintain the 'shared endeavour' spirit of the Action Plan	Completed / ongoing	Many CAAP actions are focused upon public engagement, and several of these actions commenced during 2019 (for example, those focused on engine idling, community air quality monitoring, etc.). Additionally, Camden Air Action and Bloomsbury Air Action (key air quality campaigning groups in Camden) were invited to feed into the formulation of priority lobbying positions to be taken forward in 2020
116. To take forward additional lobbying actions determined by the WHO study to drive national progress towards WHO compliance	Ensure that existing lobbying actions work towards WHO compliance, and use WHO guideline study and other sources of air quality modelling and data to identify further priority lobbying positions to work towards the overarching WHO guideline objective	Ongoing	

3. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in Camden in 2019

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	46 major applications received and reviewed for AQ impacts in 2019
Number of planning applications required to monitor for construction dust	4 new sites required to monitor for construction dust in real-time, with requirements applied in Construction Management Plans approved in 2019. Other sites may have commenced dust monitoring in 2019 but this could be related to CMPs approved prior to 2019
Number of CHPs/Biomass boilers refused on air quality grounds	N/A
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	These conditions are applied as standard for all applications proposing to use CHP
Number of developments required to install Ultra-Low NO_x boilers	N/A
Number of developments where an AQ Neutral building and/or transport assessments undertaken	46 AQ Neutral building/transport assessments received for applications received and reviewed in 2019
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	7 of 46 AQ Neutral assessments received for major applications did not meet the benchmark and required further mitigation
Number of planning applications with S106 agreements including other requirements to improve air quality	Not current practice at Camden
Number of planning applications with CIL payments that include a contribution to improve air quality	Not current practice at Camden
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.	7 sites inside the CAZ newly registered on www.nrmm.london in 2019, bringing the running total in this area in Camden to 27. 4 sites inside the CAZ area were audited during 2019 through the NRMM compliance project (Cleaner Construction for London). All sites were compliant after being audited (1 was already compliant prior to being audited). Camden's CMP pro forma contains a requirement for sites to ensure NRMM is compliant and registered. 5 CMPs for sites within the CAZ were approved during 2019. Conditions relating to NRMM compliance are included in decision notices for many applications, however the total number of conditions for planning permissions granted in 2019 is not currently

	retrievable. Camden's Sustainability team is working with the Council's Planning service to ensure NRMM conditions are applied routinely, with up-to-date wording as provided by LB Merton's Cleaner Construction for London project coordinator
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.	4 sites outside the CAZ newly registered on www.nrmm.london in 2019, bringing the running total of registered non-CAZ sites in Camden to 28. 6 sites outside of the CAZ were audited during 2019 through the NRMM compliance project (Cleaner Construction for London). All sites were compliant after being audited (4 were already compliant prior to being audited) Camden's CMP pro forma contains a requirement for sites to ensure NRMM is compliant and registered. 13 CMPs for sites outside the CAZ were approved during 2019. Conditions relating to NRMM compliance are included in decision notices for many applications, however the total number of conditions for planning permissions granted in 2019 is not currently retrievable. Camden's Sustainability team is working with the Council's Planning service to ensure NRMM conditions are applied routinely, with up-to-date wording as provided by LB Merton's Cleaner Construction for London project coordinator

Camden's Senior Sustainability Officers (Planning) review planning applications from an air quality, energy/carbon, and SUDS perspective and work closely with the Senior Air Quality Officer and the Planning department to ensure that all relevant planning applications are reviewed and conditions are applied and enforced. It is nevertheless viewed that there is continual opportunity for process improvement, both in terms of tightening controls and data collection, so that Camden can ensure future development is more sustainable and is undertaken in a way that offers greater protections to air quality, public health, and amenity.

Through our participation in the MAQF-funded NRMM compliance project led by LB Merton, all major construction sites in Camden are eligible for NRMM compliance audits. The Senior Air Quality Officer coordinates with LB Merton's Project Coordinator to ensure an up-to-date list of major sites is provided.

Where sites in Camden are found to be non-compliant in terms of NRMM standards, real-time dust (PM_{10}) monitoring or reporting, or management of air quality impacts in general, the first step is to

engage directly with the site to convey the importance of compliance and improved performance. Failing this, the case will be passed to Camden's Planning Enforcement team (through liaison with a newly-formed Construction Management Forum comprising officers from various teams) for further action. This usually involves an enforcement case being opened and a formal warning being issued. Continued failure to meet conditions or comply with CMP or S106 requirements would lead to an injunction being sought, though this stage was not required for any site during 2019.

3.1 New or significantly changed industrial or other sources

No significant new or changed industrial (or other) sources of pollution have been identified, however it is worth noting that the LAEI 2016 dataset (published in July 2019) highlighted that commercial cooking is the single largest source of $PM_{2.5}$ in Camden (42% of annual emissions), and this necessitates a shift of focus in our efforts to tackle in-borough $PM_{2.5}$ emissions.

Appendix A Details of Monitoring Site QA/QC

A.1 Automatic Monitoring Sites

Routine calibrations are carried out on a fortnightly basis by operatives from King's College London Environmental Research Group; operatives are trained to AURN standards.

The Swiss Cottage and Bloomsbury sites are part of the AURN and, as such, both are audited to the AURN standard. AURN sites are audited by providers selected by either Bureau Veritas (Bloomsbury) or King's College London Environmental Research Group (Swiss Cottage) which manage these sites for the AURN.

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

All sites are audited every six months, and 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).

PM_{10} Monitoring Adjustment

PM_{10} and $PM_{2.5}$ is measured with TEOM-FDMS analysers at all sites in Camden at which these pollutants are monitored, and since these instruments are certified to MCERTS reference equivalent standard the VCM is not required.

A.2 Diffusion Tube Quality Assurance / Quality Control

Camden's diffusion tubes are supplied by Gradko International, and we use the 50% TEA in acetone preparation method.

Gradko follows the procedures set out in the Practical Guidance, and Gradko diffusion tubes using the 50% TEA/acetone preparation method were rated as having 'good' precision from colocation studies in 2019, according to the '*2017-2019 Summary of Precision Results for Nitrogen Dioxide Diffusion Tube Collocation Studies, by Laboratory*', published in April 2020 by Defra, which can be viewed here: https://laqm.defra.gov.uk/assets/Tube_Precision_version_03_20_Final_REDUCED_FINAL.pdf

Gradko has scored highly in laboratory performance assessments for the AIR NO2 Proficiency Testing Scheme (formerly WASP), and in the November 2019 summary from the LAQM Helpdesk (covering AIR PT rounds AR024-AR034) was found to have had 100% of results determined to be 'satisfactory' in all AIR PT rounds with the exception of AIR PT round AR030 (January-February 2019) for which 75% of results were determined to be satisfactory. The '*Summary of Laboratory Performance in AIR NO2 Proficiency Testing Scheme (January 2018 – November 2019*' report published by Defra can be viewed here:
https://laqm.defra.gov.uk/assets/laqmno2performancedatauptonovember2019v1.pdf

We have used the national bias adjustment factor for Gradko International diffusion tubes prepared with the 50% TEA/acetone method (0.87) to adjust our raw diffusion tube annual mean concentrations for bias. This factor was published in the '*National Diffusion Tube Bias Adjustment Factor Spreadsheet, Version 03/20*' in April 2020, which can be viewed here:

https://laqm.defra.gov.uk/assets/Database_Diffusion_Tube_Bias_Factors_v03_20_FINAL.xlsx

We have compared the diffusion tube data at our colocation sites to reference equivalent NO2 analysers, however due to data continuity issues we did not participate in the diffusion tube colocation study in 2019.

The only diffusion tube bias adjustment factor applied to the data presented in this report is the national bias adjustment factor for Gradko International diffusion tubes prepared with the 50% TEA/acetone method (from the Version 03/20 spreadsheet referenced above), which was 0.87.

Previous years' diffusion tube-measured annual mean NO_2 concentrations have been re-calculated where necessary with updated national bias adjustment factors as published by Defra (all for Gradko International diffusion tubes prepared with the 50% TEA/acetone method). Consequently the diffusion tube annual mean values for 2018 and preceding years which has been presented in this Annual Status Report supersedes the annual means presented in previous Annual Status Reports.

Factor from Local Co-location Studies (if available)

We did not participate in the colocation study in 2019 and have had continued data continuity issues with our Swiss Cottage triplicate colocation site. However, it is intended that we will participate in the colocation study in future years if sufficient data as available, and we may add further collocated diffusion tubes at existing or new automatic monitoring sites.

Discussion of Choice of Factor to Use

We did not participate in the colocation study in 2019 and have therefore used the Gradko Mar/Apr 2020 bias adjustment factor for 50% TEA/acetone diffusion tubes (0.87).

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

No annualisation was required for calculating 2019 annual mean pollutant concentrations for NO_2, PM_{10} or $PM_{2.5}$, for any method of measurement.

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

Site	Site Type	Annual Mean (µg/m³)	Period Mean (µg/m³)	Ratio
N/A				
			Average	

Distance Adjustment

Not required.

Appendix B Full Monthly Diffusion Tube Results for 2019

Table M. NO_2 Diffusion Tube Results

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean NO_2 (µg/m^3)													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual mean – raw data [c]	Annual mean – bias-adj[c]
CA4A Euston Road (new)	-	91.7%		92.00	80.90	92.08	82.40	82.47	77.37	65.09	78.08	68.79	81.85	72.16	79.38	**69.06**
CA27 Euston Road LAQN colocation	-	100%	66.86	93.99	72.18	80.07	70.54	77.77	67.94	64.19	76.04	67.98	76.39	66.22	73.35	**63.81**
CA6 St. George's Gardens	-	75%	41.03		28.86	23.54	23.08		22.09	24.38		27.84	35.76	28.44	28.34	24.65
CA28 St. George's Gardens East	-	100%	37.99	47.15	33.87	31.11	21.66	24.44	23.89	24.99	28.60	32.47	39.38	36.13	31.81	27.67
CA7 Frognal Way	-	100%	34.28	41.04	27.29	22.63	17.36	16.41	18.00	19.59	22.67	27.09	35.91	32.43	26.23	22.82
CA10 Tavistock Gardens	-	100%	50.16	51.26	40.86	39.04	25.59	31.93	30.81	24.60	34.44	32.67	49.94	45.73	38.09	33.13
CA11 Tottenham Court Road	-	83.3%	70.78	77.51	78.55	65.02	70.96	65.19		69.54	73.73		70.61	61.74	70.36	**61.22**
CA15 Swiss Cottage	-	75%	63.36	64.80		54.67	56.26	54.47	49.74		53.85	49.14	68.30		57.18	**49.74**
CA16 Kentish Town Road	-	100%	55.33	64.88	50.78	66.75	49.20	49.96	47.54	42.46	46.75	49.40	54.80	43.27	51.76	**45.03**
CA17 47 Fitzjohn's Avenue	-	91.7%	63.14	61.74	54.50	45.35	47.75	52.07	44.81	34.17	35.34		53.90	44.96	48.88	**42.53**
CA20A Brill Place (new)	-	91.7%	56.36	50.85		57.44	41.49	50.98	37.87	37.59	52.35	40.65	60.54	59.17	49.57	**43.13**
CA21 Bloomsbury Street	-	91.7%	78.89	75.24	75.84	66.20	41.02	42.35	42.51	36.87		53.63	56.92	43.51	55.73	**48.48**
CA23 Camden Road	-	100%	61.67	75.92	63.59	72.52	57.03	66.38	58.52	42.41	53.88	54.44	61.31	56.29	60.33	**52.49**
CA24 Chetwynd Road	-	100%	54.04	54.38	45.58	37.89	36.04	30.83	30.22	33.60	36.11	39.42	46.10	41.92	40.51	35.24

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean NO_2 (µg/m^3)													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual mean – raw data [c]	Annual mean – bias-adj[c]
CA25A Emmanuel Primary School (new)	-	91.7%	53.68	48.33	42.64	41.51	36.72	36.65	35.82		38.46	44.39	60.76	39.93	43.53	37.88
CA26 Witanhurst Lane	-	100%	45.17	52.68	38.01	36.44	32.62	36.58	27.10	25.27	35.63	33.19	47.30	38.46	37.37	32.51
CA29 Endsleigh Gardens	-	91.7%	59.43	71.83	52.04	57.58	48.30	51.51	49.97		49.97	46.34	62.65	61.59	55.57	**48.34**
CA30 Dartmouth Park Hill	-	100%	54.33	57.15	46.15	37.08	39.03	36.23	34.47	30.68	40.21	39.75	52.15	43.68	42.58	37.04
CA31 Acland Burghley School (Burghley Road)	-	91.7%	40.03	33.76	31.33	25.58	22.96	23.55	22.35		54.42	25.68	36.58	30.47	31.52	27.42
CA32 Oakford Road	-	91.7%	43.27	48.57	35.31	32.52	24.73		22.89	20.17	29.94	30.46	45.59	36.12	33.60	29.23
CTLEN1 Haverstock School (Haverstock Hill)	-	100%	43.16	49.20	36.40	40.18	32.84	29.21	28.76	31.29	35.22	37.27	50.31	31.87	37.14	32.31
CTLEN2 Harmood Street	-	100%	46.61	49.79	34.88	36.20	26.38	25.70	27.31	31.26	31.81	33.29	49.97	34.70	35.66	31.02
CTLEN3 Hartland Road	-	83.3%	48.79		39.03	35.27	28.10	26.12	27.19	28.29		37.39	51.25	35.93	35.73	31.09
CTLEN4 Hawley Primary School (Hawley Road)	-	91.7%	59.58	67.16	42.66	46.14	38.03	37.25	36.86	43.19		51.60	56.84	51.30	48.24	**41.97**
CTLEN5 Kentish Town Road	-	91.7%	61.91	68.66	54.73	44.65		34.55	39.82	43.33	40.77	51.81	65.29	50.79	50.57	**44.00**
CTLEN6 Hawley Crescent	-	100%	56.67	67.34	48.32	41.49	34.09	33.65	36.23	38.42	35.68	30.40	57.34	44.78	43.70	38.02
CTLEN7 Jamestown Road	-	100%	46.72	60.34	44.58	48.58	39.85	31.83	33.30	36.62	35.37	46.49	54.73	43.45	43.49	37.84
CTLEN8 Camden High Street (Bridge)	-	100%	51.17	60.68	49.79	47.13	46.37	35.83	39.31	39.38	40.01	48.48	57.79	43.16	46.59	**40.53**
CTLEN9 Camden High Street (Camden News)	-	100%	55.27	61.74	45.93	38.84	41.62	33.34	35.83	39.80	41.21	28.66	55.84	45.15	43.60	37.93

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2019 % [b]	Annual Mean NO_2 (µg/m³)													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual mean – raw data [c]	Annual mean – bias-adj[c]
CTLEN10 Camden High Street (American Candy)	-	100%	66.32	73.46	52.40	47.53	50.43	43.18	48.19	52.40	44.00	50.05	61.31	53.24	53.54	**46.58**
CTLEN11 Britannia Junction	-	100%	69.67	83.28	61.99	55.14	50.95	49.64	54.46	55.88	50.14	61.73	71.96	61.94	60.57	**52.69**
CTLEN12 Cavendish School (Arlington Road)	-	100%	39.76	58.76	35.93	39.36	29.80	24.69	29.84	30.58	34.37	42.72	50.70	41.53	38.17	33.21
CTLEN13 Holy Trinity & St. Silas School (Hartland Road)	-	91.7%		47.62	31.86	28.87	24.98	21.66	22.95	21.46	28.93	33.86	46.42	38.58	31.56	27.46

Exceedance of the NO_2 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%