

Islington Air Quality Annual Status Report2019



This report provides a detailed overview of air quality in Islington during 2019. It has been produced to meet the requirements of the London Local Air Quality Management statutory process¹.

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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

Executive Summary

Background of Report

Islington Council is working hard to improve air quality and reduce the impact of air pollution on everyone in the borough.

Air quality refers to the condition of the air around us and how many pollutants (chemicals or substances) it contains. The more pollutants the air contains the more air pollution there is and the worse the air quality is.

Poor air quality is a concern as air pollution can impact health. In periods of high pollution some people with existing heart and respiratory conditions, such as asthma, may find their condition gets worse. Over the long term air pollution can increase the risk of respiratory and cardiovascular conditions, reduce lung development in children and is also increasingly being linked to a range of other health conditions.

Local authorities are required by the Government and the Mayor of London to monitor air pollution in the borough, and take action to reduce it, as well as report on this every year in the form of this Annual Status Report (ASR).

This report provides details of the air quality in Islington in 2019 and a brief summary of the actions taken by the London Borough of Islington to improve air quality in this period.

Air Quality in Islington

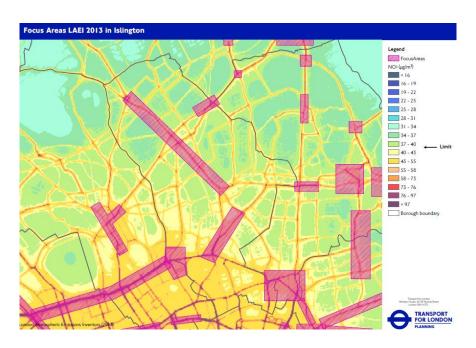
There are set EU objectives for a number of known air pollutants. Where it is unlikely that one or more of the objectives will be met in their borough, a local authority must declare an Air Quality Management Area (AQMA) and produce an action plan to describe the steps to be taken to meet the air quality objectives.

In August 2000, we completed a review showing that despite a steady improvement of air quality in Islington, the objectives for two pollutants - nitrogen dioxide (NO_2) and particulate matter of 10 microns diameter (PM_{10}) - were not likely to be achieved. As a consequence we declared an AQMA across a large part of the borough in 2001, which was expanded to the whole of the borough in 2003. This AQMA is still in place.

We are currently exceeding EU limits for NO_2 in parts of the borough and meeting the limits that are set by the EU for all other air pollutants, although we remain focused on particulate matter (PM_{10} and $PM_{2.5}$) because these pollutants have detrimental impacts on health at any level.

Air quality is not the same throughout the borough, there are areas of better and poorer air quality, often related to proximity to busy roads. The main areas of concern (or Focus Areas) are the A1 Holloway Road from Highbury to Archway, Angel Town Centre, Seven Sisters Road at Finsbury Park, Old Street and the Kings Cross/Caledonian Road area.

The map below shows the annual mean NO_2 concentrations in Islington and its surrounding boroughs for 2013 as well as highlighting the focus areas of higher pollution levels mentioned above. This map is created by GLA and TfL using LAEI data.



We have been monitoring air quality since 2000 and have ten long term roadside sites (with an additional three for a triplicate study) and eleven long term urban background sites across the borough. These are the sites that are reported on in this document. We also have additional monitoring sites for specific projects as required.

In 2019 NO_2 levels measured were below the annual objective of $40\mu g/m^3$ for all of the background monitoring sites. For the second time some of our roadside sites also met or were below the objective, including for the first time, our automatic station on Holloway Road.

Two of these monitoring sites, one roadside and one urban background, also provide data on other pollutants and over shorter timescales. These showed no exceedances of the NO_2 hourly objective of $200\mu g/m^3$. This reflects the general trend over the last seven years of data in this report, with very few hourly exceedances. These sites both show that PM_{10} is below the annual objective of $40\mu g/m^3$ at $20\mu g/m^3$ on the roadside site on Holloway Road and $19\mu g/m^3$ at the background Arsenal site. Both sites also meet the 24 hour objectives for PM_{10} of $50\mu g/m^3$ 35 times a year a site, with 16 exceedances between them.

More detailed results can be found in the report.

Actions to Improve Air Quality

Our new <u>Air Quality Strategy 2019-23</u> came into place in 2019, outlining the actions we plan to take to improve air quality in Islington. There are many actions but these are grouped into the following categories:

- Protecting the vulnerable
 - Improving health and inequality
 - o Partnership working with schools
 - Monitoring local air quality
- Keeping Islington moving
 - Improving our fleet and reducing overall fuel usage
 - o Encouraging a shift to active travel and cleaner vehicles
 - Working with partners to tackle air quality on a wider scale
- Better air- better health- better environment
 - Minimise emissions from the construction
 - Lead by example
 - Concentrate ion air quality focus areas
 - Work with partners to introduce new policies

This report details our progress in 2019 against the actions outlined in our strategy, however some key highlights can be found below.

New Policies

As well as the new air quality strategy several other policies were progressed in 2019 which will be essential in helping to improve air quality.

These include:

- Declaration of an environment and climate emergency in June 2019
- Release of the Draft Islington Transport Strategy 2019-2041 in September 2019which includes a policy to improve air quality by reducing transport related pollutants that are harmful in health, targeting an 81% reduction in NOx emissions, 38% decrease in PM₁₀ and 50% decrease in PM_{2.5} compared to 2013.
- Continued consultation on the Draft Islington Local Plan in 2019 with the plan submitted to the Secretary of State in February 2020, the last stage before adoption can occur. This includes policies to reduce pollution in construction and development.

Further information on how these policies link to our Air Quality Strategy and progress against our action plan can be found in this report.

Transforming Neighbourhoods: Archway and City Fringe

The Archway Zero Emission Network (ZEN) and Business Low Emission Neighbourhood (BLEN) schemes were completed in 2019. Some key outcomes include:

Archway ZEN

- Contact with 210 businesses about air quality and reducing emissions, with 120 businesses engaged and 36 businesses taking measures to reduce their pollution as a result
- 1,500 people in the local community engaged
- A range of awareness raising events

Archway BLEN

- A new Clean Air Walk from Archway to Whittington Hospital
- A range of planting schemes including a pocket park, planters, green screens and green walls on roads, schools, Whittington Hospital and Archway Station
- Idling training for Metroline bus drivers at the garage on Holloway Road and Whittington Cars taxi drivers

The Cleaner Deliveries Smarter Business scheme started in Archway in 2019, offering hundreds of businesses cleaner delivery options. 18 businesses signed up for cargo bike deliveries instead of petrol/diesel vehicles and five started using the micro consolidation centre built in 2019, reducing deliveries by allowing bulk purchases and storage in this centre.

In June 2019 a further three years of funding was secured from the Mayor's Air Quality Fund for City Fringe ZEN, with plans to expand uptake and offers in existing areas and into new locations, which will include Clerkenwell in Islington. In 2019 19 new businesses and 20 new residents joined in Islington, with eight emission reducing measures (such as cycle training or trials of electric vehicles) taken up by businesses.

Awareness raising events

In 2019 we ran 11 anti-idling events, informing over 300 people about air quality and the impacts of engine idling. Two of these were part of the London wide Idling Action scheme, and included training of six volunteers as well as three air quality workshops in schools to 350 students, and a school assembly.

For Car Free Day 2019 St John Street was closed and used to demonstrate a street without cars; with a play area, cycle training, electric bike trials, Pedal Power bikes for those with disabilities, den building, trampolining, arts and crafts, storytelling, a local band and stands on sustainability, air quality and local charities. Around 1,000 people attended.

Residents were encouraged to apply for one off play streets where roads are closed, resulting in 16 one off play streets on Car Free Day with varied activities and games.







Activities at Car Free Day 2019, St John Street

For Clean Air Day 2019 we worked with Hargrave Park Primary to teach students, staff and teachers about air pollution, idling and active travel. This included a week of lessons and activities, an anti-idling event including students and a play street with activities and air quality information.

For Cycle to Work Day 2019 an information pack was created for businesses with information about air quality, active travel, communication plans and local information for the business e.g. nearest bike shop. 26 people had their bikes checked for free through Dr Bike.

School Work

Children are one of the groups more vulnerable to air pollution and as such we have worked hard to improve air quality at the borough's schools and engaged with pupils, parents, guardians and teachers.

In 2019 a further nine schools started the School Streets pilot scheme, making a total of ten schools across the borough where roads outside the schools are closed to traffic at drop off and pick up time to improve air quality and road safety.



Winton Primary School celebrate Islington's tenth School Street

We worked with schools in a range of other ways in 2019, including:

- Starting air quality audits of all schools in the borough, completing seven audits.
 These audits assess current air quality and sources of pollution at the school and recommend measures to improve air quality.
- We worked with Prior Weston School to implement the recommendations of the
 audit it received through the Mayor of London's scheme. This included ivy screens
 around the perimeter of the playground as well as air quality engagement work
 through workshops, sensory planting, an assembly and the creation of a low
 pollution walking map for the school.
- We conducted a Clean Air Day event as explained above and seven of our anti-idling events were held outside schools



Ivy green screen and walking map at Prior Weston Primary School

In 2018 we started monitoring air quality outside every school in the borough, publishing these results in early 2020. We continued our monitoring in 2019 and the results can be found in Appendix C of this report. As seen with our long term monitoring sites there was an average decrease in pollution from 2018 to 2019, but with great variation across schools.

How to Get Involved

You can get more information on air quality on our website.

You can do your bit to improve air quality. Think about how you travel, decrease your car use especially for short trips and think about whether you could walk, cycle or use public transport instead. If you need to drive think about car sharing, car clubs or low emission vehicles and try not to idle your engine. You can also impact air pollution by improving the energy efficiency of your home or business and avoid using open fires or un-seasoned wood. Come along to one of our air quality events, such as Car Free Day, or volunteer for idling events in the borough which include training through Idling Action London.

You can contact the council's Pollution Team on <u>pollution@islington.gov.uk</u> for further air quality information and guidance.

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Abbreviations

AQAP Air Quality Action Plan

AQMA Air Quality Management Area

AQO Air Quality Objective

BEB Buildings Emission Benchmark

CAB Cleaner Air Borough
CAZ Central Activity Zone

EV Electric Vehicle

GLA Greater London Authority

LAEI London Atmospheric Emissions Inventory

LAQM Local Air Quality Management

LLAQM London Local Air Quality Management

NRMM Non-Road Mobile Machinery

 PM_{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

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)		Inlet height (m)	Pollutants monitored	Monitoring technique
IS2	Holloway Road	530650	185750	Roadside	Υ	1	3	3	CO, NO ₂ , PM ₁₀	TEOM
IS6	Arsenal	531328	186067	Urban Background	Υ	1	N/A	2.5	NO ₂ , PM ₁₀	TEOM

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?
BIS005/03	Caledonian Road	53070 8	18351 0	Roadside	Y	0	1	2.5	NO ₂	N
BIS005/02	Rosebery Avenue	53132 7	18259 2	Roadside	Y	0	1	2.5	NO ₂	N
BIS005/06	City Road	53255 6	18273 9	Roadside	Y	1	3	2.5	NO ₂	N
BIS005/07	Old Street	53263 2	18244 9	Kerbside	Y	0	<0.5	2.5	NO ₂	N

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?
BIS005/08	Highbury Corner	53167 2	18473 9	Roadside	Υ	2	2	2.5	NO ₂	N
BIS005/09	Balls Pond Road	53288 3	18481 6	Kerbside	Υ	0	<0.5	2.5	NO ₂	N
BIS005/11	Holloway Road	53102 4	18536 7	Roadside	Y	0	1.5	2.5	NO ₂	N
BIS005/13	Junction Road	52920 2	18609 0	Roadside	Y	0	1	2.5	NO ₂	N
IS005/01*	Navigator Square [#]	52940 1	18685 5	Roadside	Y	0	12	2.5	NO ₂	N
Hol 1~	Holloway Road	53065 0	18575 0	Roadside	Y	1	3	3	NO ₂	Υ
Hol 2~	Holloway Road	53065 0	18575 0	Roadside	Υ	1	3	3	NO ₂	Υ
Hol 3~	Holloway Road	53065 0	18575 0	Roadside	Υ	1	3	3	NO ₂	Υ
BIS005/04	Percy Circus	53092 1	18286 1	Urban Backgroun d	Y	0	N/A	2.5	NO ₂	N
BIS005/05	Myddelton Square	53131 5	18299 1	Urban Backgroun d	Y	0	N/A	2.5	NO ₂	N
BIS005/01	Arran Walk	53231 7	18447 2	Urban Backgroun d	Y	1	N/A	2.5	NO ₂	N
IS005/03	Sotheby Road	53225 6	18598 3	Urban Backgroun d	Y	0	N/A	2.5	NO ₂	N

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?
BIS005/10	Highbury Fields	53174 8	18544 2	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N
BIS005/12	Lady Margaret Rd	52932 0	18579 5	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N
IS005/02	Zoffany Park	52988 3	18701 5	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N
BIS005/14	Elthorne Park	53000 0	18740 2	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N
BIS005/15	Turle Road/Wray Crescent	53047 7	18694 2	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N
IS005/04	Upper Street (Waterloo Terrace)	53162 5	18410 0	Urban Backgroun d	Υ	0	N/A	2.5	NO ₂	N

^{*} Locations remain the same for most sites with the exception of Navigator Square and Highbury Corner where road layouts lead to change in location of the monitor. Highbury Corner remains almost in the same place, however Navigator Square is further away from the roadside than the previous permanent location, however exposure remains relevant as the monitor is located in an area of high pedestrian use, therefore the last few years of data are not necessarily comparable to the longer term data. The rest of the monitors remain in the same place, however their coordinates and distance to kerb and exposure were reassessed to ensure they were as accurate as possible, # formerly Archway Close name changed with change in road layout, ~ used for collocation study.

Additional monitoring at schools can be found in Appendix C.

1.2 Comparison of Monitoring Results with AQOs

The results presented are after adjustments for "annualisation", bias 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)

			Valid data	Valid		Ann	ual Mean	Concent	ration (μ	g m ⁻³)	
Site ID	Site name	Site type	capture for monitoring period % ^a	data capture 2019 % ^b	2013 ^c	2014°	2015°	2016 °	2017°	2018 °	2019 °
BIS005/03	Caledonian Road	Roadside	100	100	47	51	58	53	43	36	39
BIS005/02	Roseberry Avenue	Roadside	100	100	57	58	62	62	54	51	44
BIS005/06	City Road	Roadside	92	92	42	49	53	53	48	45	45 (43)
BIS005/07	Old Street	Roadside	100	100	60	56	65	55	58	45	41
BIS005/08	Highbury Corner	Roadside	83	83	63	61	67	64	55	48	44 (47)
BIS005/09	Balls Pond Road	Roadside	83	83	56	59	64	58	50	43	44
BIS005/11	Holloway Road	Roadside	100	100	57	<u>61</u>	<u>65</u>	57	50	44	41
BIS005/13	Junction Road	Roadside	92	92	41	46	53	46	42	36	34
IS005/01	Navigator Square	Roadside	92	92	51	58	55	55	41*	40*	42*
BIS005/04	Percy Circus	Urban Background	100	100	38	40	45	46	40	35	32

			Valid data	Valid		Annı	ual Mean	Concent	ation (μ	g m ⁻³)	
Site ID	Site name	Site type	capture for monitoring period % ^a	data capture 2019 % ^b	2013 °	2014°	2015 °	2016 °	2017 °	2018 °	2019 °
BIS005/05	Myddelton Square	Urban Background	100	100	37	39	39	38	39	35	28
BIS005/01	Arran Walk	Urban background	100	100	30	32	39	35	32	30	26
IS005/03	Sotheby Road	Urban background	100	100	32	32	31	37	31	30	25
BIS005/10	Highbury Fields	Urban Background	92	92	31	32	33	34	28	28	26
BIS005/12	Lady Margaret Rd	Urban background	100	100	33	33	35	36	34	31	28
IS005/02	Zoffany Park	Urban Background	92	92	28	28	33	33	29	29	27
BIS005/14	Elthorne Park	Urban Background	100	100	30	30	33	35	31	29	26
BIS005/15	Turle Road	Urban Background	100	100	30	32	33	37	31	32	26
IS005/04	Upper Street (Waterloo Terrace)	Urban Background	100	100	34	37	40	39	39	30	27
IS2	Holloway Road	Automatic Roadside	98	98	54	55	<u>61</u>	60	49	47	40
IS6	Arsenal	Automatic Background	95	95	40		29	33	31	27	25

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

NO₂ annual means in excess of 60 μg 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%

^{*}Diffusion tube location varied with road layout changes over the last few years and in 2019 remained in the same place but further away from the road kerb. Data may not therefore be directly comparable to previous years.

In 2019 two roadside sites, Caledonian Road and Junction Road, recorded values below the annual objective level of $40\mu g/m3$ for the second time, while the automatic site on Holloway Road was at the objective of $40\mu g/m3$ for the first time in seven years. All of the background sites remained below the annual objective level.

The majority of the sites recorded lower nitrogen dioxide levels than 2018 with only three sites showed higher values.

Trends per site over the last seven years are varied, however if you look at average values (figure 1) the last few years have shown a decrease in nitrogen dioxide but the trend over seven years is less clear with an increase for a few years and then decrease for the next few years.

Figure 1. Average annual nitrogen dioxide levels over last seven years diffusion tubes and automatic sites

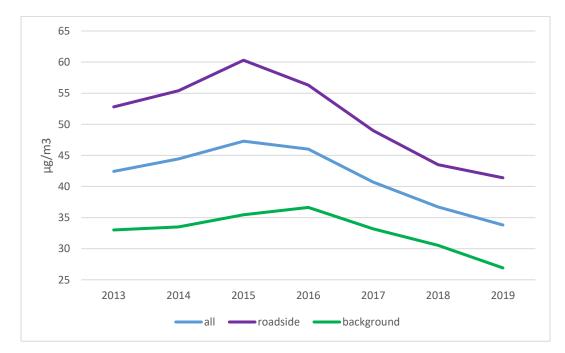


Table E. NO₂ Automatic Monitor Results: Comparison with 1-hour Mean Objective

	Valid data	Valid data capture 2019 % ^b	Number of Hourly Means > 200 μg m ⁻³							
Site ID	capture for monitoring period % ^a		2013°	2014 °	2015°	2016 °	2017°	2018 °	2019 °	
IS2- Holloway	98	98	3	0	0	0	0	0	0	
IS6- Arsenal	95	95	10	0	0	0	1	0	0	

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

The results of the one-hour mean remain well below the objective of less than 18 times over 200µg m³, with no exceedances in 2019. This continues the trend of the last seven years.

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

	Valid data	Valid data	Annual Mean Concentration (μg m ⁻³)								
Site ID	capture for monitoring period % ^a	nitoring capture		2014°	2015°	2016 °	2017°	2018°	2019°		
IS2- Holloway	95	95	27	21	22	21	21	20	20		
IS6- Arsenal	100	100	22	20	19	18	18	20	19		

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%

Notes: Exceedance of the PM_{10} annual mean AQO of 40 μg m⁻³ are shown in **bold**.

 PM_{10} continues to remain below the annual objective of 40 μ g m³ in 2019.

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

	Valid data	Valid data capture 2019 % ^b	Number of Daily Means > 50 μg m ⁻³							
Site ID	ite ID capture for monitoring period % a		2013 °	2014°	2015°	2016 °	2017°	2018°	2019 °	
IS2- Holloway	95	95	10	6	3	7	6	2	7	
IS6- Arsenal	100	100	7	5	1	3	3	1	9	

Notes: Exceedance of the PM_{10} short term AQO of 50 μ g m⁻³ over the permitted 35 days per year or where the 90.4th percentile exceeds 50 μ g 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.

The results of the one-hour mean increased compared to 2018 but remain well below the objective of less than 35 times over 50µg m-3, with 7 and 9 exceedances for the two locations in 2019. This continues the trend of the last seven years.

^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%

^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 H provides a brief summary of Islington's progress against the Air Quality Action Plan, showing progress made this year. This reports on progress against Islington's new Air Quality Strategy for 2019-23.

Table H. Delivery of Air Quality Action Plan Measures

Measure	Action	Progress in 2019
Reducing emission	ons from transport	
Minimise traffic at sensitive locations during busy times		In 2019 a further nine schools started the School Streets pilot scheme, making a total of ten schools across the borough where roads outside the schools are closed to traffic at drop off and pick up time. Consultations were carried out at a further three schools.
	walking/cycling/scooting to school. Expand to further schools / nurseries etc. Support Play Streets. Monitor air quality outside schools and nurseries, assess the ways of publishing the details when data ratified.	As part of Car Free Day 2019 residents were encouraged to apply for one off play streets, resulting in 16 one off play streets on Car Free Day. In order to assist applications the form for a one off play street event was simplified. Every new street that took part was contacted following the event and encouraged to apply for a permanent Play Street, which one did.
		We continued to monitor air quality at all schools in the borough in 2019, adding one extra monitoring site. In December 2019 we also started monitoring at all nurseries in the borough. Data from our first year of monitoring in 2018 was prepared for publications in 2019 and was released in February 2020. The 2019 data can be found in appendix C in this report.
Working with sch	nools	
Schools air quality audits	Approach Islington schools that have been selected by The Mayor to conduct air quality audits and support them to install the recommended measures when the auditing is finalised. Audit all schools in the borough.	In 2019 we worked with Prior Weston School to implement the recommendations of the Mayor's air quality audit. These included green screens around the school playground, interactive planting events, air quality workshops and mapping events, a school assembly, playground information event and production of low pollution walking maps. This was funded through Council WIP, GLA audit funding, ISEP businesses and the Greener Community Fund.

Measure	Action	Progress in 2019
		In 2019 we started a scheme to audit all schools in the borough, with seven audits conducted in 2019. Following the audit a report will be created for the school recommending measures the school can take to reduce pollution. Three of these reports were completed in 2019 and in some case schools took immediate action, for example producing idling signs or applying for funding.
Improve knowledge about local air pollution near the schools	Following funding from DEFRA for ten local schools offering air quality monitoring continue working with schools to advise pupils, carers, staff and visitors on current pollution levels	In 2019 we started a new Defra funded scheme at Elizabeth Garrett Anderson School assessing the impacts of filter systems on indoor air pollution and the ability of sensors to monitor this. It is planned that results will be analysed and released in 2020.
Schools active	near the schools, forecast pollution levels using airTEXT, information on air pollution including causes, impacts, ways to lower exposure and low pollution walking maps to get to school. Work with schools on joint engagement	For Clean Air Day 2019 we worked with Hargrave Park Primary School to teach students and staff about air pollution, idling and active travel. This included a week of lessons and activities, an anti-idling event where students spoke to drivers and a play street with activities and air quality information.
travel campaign	programme to encourage active travel and raise awareness of poor air quality. Use the Theatre in Education programme to offer	Seven anti-idling events were held at schools in 2019, with further schools included in wider events, providing advice on anti-idling and air quality more generally.
	schools advice on sustainable travel, active travel and air quality for all pupils from KS1 to KS3. Use DEFRA funded school screen air	NO_2 air quality monitoring was conducted outside every school in the borough throughout 2019 and this data was released and sent to each school early 2020.
	pollution awareness project to promote active travel as a way to reduce pollution and exposure. Other activities can include promotion of Walk to School Week, Bikeability training for pupils and anti-idling action events.	In 2019 we worked with Prior Weston School to implement the recommendations of the Mayor's air quality audit. These included green screens around the school playground, interactive planting, air quality workshops, school engagement events and production of low pollution walking maps.
	a committee of proposed and committee of the committee of	In 2019 we started a scheme to audit all schools in the borough, with seven completed in 2019.
		In 2019 as part of the Low Emission Neighbourhood in Archway green screens were installed around the playground of St Johns Upper Holloway School, helping to raise awareness of air quality.

Measure	Action	Progress in 2019
		In 2019 we ran 55 level two (on road) and 32 level one (off road) Bikeability training courses in schools, training 1388 children. Additionally we ran 14 weeks of Bikeability training in parks during school holidays, training 294 children.
Work closely with Islington's Health and Wellbeing Board (HWB).	Islington's HWB published Islington's Joint Health and Wellbeing Strategy in 2016 and one of the priorities include prevention and management of long term conditions. We will	We have worked on a number of initiatives to promote a healthier and more active community in 2019, as evidenced by the range of measures described throughout this action plan. For example, work with schools, businesses and changes to road layouts.
	support promoting healthier and more active families through various initiatives including developing healthy environment and access to physical activity and active travel.	Islington is committed to the Healthy Streets approach and in 2019 the MAQF Healthy Streets Everyday scheme started, with Islington as the lead borough. This includes 16 boroughs working to make London's streets healthier.
Schools travel plans	Work with schools to offer school travel plans including AQ information and actions to reduce emissions and exposure to encourage a change in travel patterns. Encourage schools to review, update and engage with the STARS programme and work towards accreditation.	In the 2019/20 academic year sixty six schools in the borough engaged in STARS with five gold, one silver, 33 bronze and 27 working towards bronze. There are 130 activities that can contribute to a schools STARS accreditation including; walking, scooting, cycling, public transport, smarter driving, independent travel, road safety, consultation, promotion, curriculum, funding and partnership.
	Support all schools to achieve the highest accreditation.	The STARS programme is being used to aid the schools taking part in the School Streets scheme, encouraging alternative forms of travel to encourage and support the reduction in travel and emissions around the schools.
Raising AQ awar	eness	
Provide public AQ information displays	Assess the best use for the screens and air quality monitors to inform local residents on current air quality information and raise awareness of significant effects pollution can	In 2019 stationary sensors were used to assist several projects across the borough, enabling us to better demonstrate local air quality for specific schemes. For example; pollution was measured at the school taking part in Clean Air Day and at the canal as part of the EcoZone scheme.
	present if exposed for prolonged periods. Trial various locations for the screens and look for extra funding to get permanent displays.	As part of the Archway ZEN scheme two monitors were also put up, one on the roadside and one on a background road. The live results as well as long term trends were then displayed in 2019 on a website, alongside information about air quality, active travel and using side streets. This website was also displayed on a display screen in the library for several months.

Measure	Action	Progress in 2019
	Demonstrate that we all can make a difference through our own choices and behaviour.	Hand held monitors were also used in air quality workshops to help create low pollution maps at Prior Weston School and as part of idling engagement work at the Metroline bus garage on
		Holloway Road, where measurements from idling buses in 2018 were displayed in the workshops that took place in 2019 to aid engagement.
National lead on airTEXT service and promote the service to	Continue leading on and working with other local authorities and GLA to ensure that our residents can get free alerts when high air pollution levels are predicted. Promote the	In 2019 Islington renewed its agreement to lead on and take part in the airTEXT scheme. At the end of 2019 there were 699 airTEXT subscribers in Islington, an increase of 47 since the end of 2018.
residents.	scheme through SHINE, school awareness programmes and other media. Work with Whittington Health professionals on promoting the service to asthma sufferers.	AirTEXT and other alert and route checking services are promoted on our website and leaflets. Information on airTEXT was presented at the Metroline bus garage and Whittington Cars training conducted in 2019 as well as on the air quality website and library screens used in Archway ZEN. As well as in school audit reports. In 2019 airTEXT was promoted through the SHINE service, leading to 20 sign ups in Islington and 24 pan-London sign ups.
Reduction in idling vehicles	Work with other boroughs on London wide campaign to target idling vehicles and increase awareness of air pollution from idling vehicles. Produce promotional materials including anti	In 2019 there were nine council led idling events, where we spoke to 282 people, including 47 idling vehicles. At these events anti-idling and general air quality leaflets were handed out and lamppost signs put up where required.
	idling signage, website, leaflets and work with schools, hospitals, businesses on wider engagement of their staff.	As part of the London wide Idling Action scheme, in 2019 we ran two events talking to 41 idlers and trained six volunteers for these. We also ran three air quality workshops in schools to 350 students, and ran one school assembly.
		As part of our Archway schemes in January and February 2019 we conducted anti idling training at Metroline bus garage just off of Holloway Road, speaking to 100 staff at several events, with a leaflet produced specifically for the bus depot sent to all 800 staff. In March 2019 we conducted training for the taxi drivers of Whittington Cars, who are frequently used at Whittington Hospital. 'No idling' signs were installed around Whittington Hospital, following on from the ambulance idling training conducted in 2018.
AQ awareness events	Islington regularly participates in national awareness initiatives including Clean Air Day, Car Free Day, Walk to Work scheme and	For Car Free Day 2019 St John Street was closed and used to demonstrate a street without cars; with a play area, cycle training, electric bike trials, Pedal Power bikes for those with disabilities, den building, trampolining, arts and crafts, storytelling, a local band and stands

Measure	Action	Progress in 2019
Measure	others to increase the understanding of air quality problems. We'll work in partnership with other local authorities and organisations to continue raising awareness about air pollution effects and how to minimise them.	on sustainability, air quality and local charities. Around 1,000 people attended. Residents were encouraged to apply for one off play streets, resulting in 16 one off play streets on Car Free Day with varied activities and games. For Clean Air Day 2019 we worked with Hargrave Park Primary to teach students, staff and teachers about air pollution, idling and active travel. This included a week of lessons and activities, an anti-idling event including students and a play street with activities and air quality information. For Cycle to Work Day 2019 an information pack was created for businesses with information about air quality, active travel, communication plans and local information for the business e.g. nearest bike shop. 26 people had their bikes checked for free through Dr Bike. In 2019 we ran 11 idling events (with two as part of the London wide Idling Action London), informing over 300 people about air quality and the impacts of idling. In Archway the Clean Air Walk from Whittington Hospital to Archway was opened with an
		event attended by representatives from the Council, local businesses and the hospital. Dr Bike sessions, where trained mechanics checked bikes for free, were held every third Tuesday of the month throughout 2019.
Encourage active participation of residents in AQ actions	Recruit volunteers for various campaigns and projects including anti idling initiative and keep them informed about any upcoming events. Invite volunteers for various public information events, including AQ conference etc. Aim to train staff at various organisations within the borough about AQ messages and support them to spread the message to colleagues, friends and families.	In 2019 six volunteers were trained as part of our Idling Action events. The Archway Town Centre Group and Nag's Head Town Centre Group both helped spread messages of air quality and zero emissions throughout their networks as part of the Archway schemes and Cleaner Deliveries Smarter Business schemes. In January and February 2019 we conducted anti idling training at Metroline bus garage, speaking to 100 staff at several events, with a leaflet produced specifically for the bus depot sent to all 800 staff. In March 2019 we conducted training for the taxi drivers of Whittington Cars, who are frequently used at Whittington Hospital.

Measure	Action	Progress in 2019
		In 2019 we worked with Islington Clean Air Parents Group to get a better idea of issues effecting parents and students and to help to raise awareness about air quality.
Leading by exam	iple	
Look for funding and work with world class academic institutions	Islington is amongst the leading boroughs tackling air pollution through various initiatives and will aim to work with various universities on further research on air quality.	Using Defra funding we worked with King's College London in 2019 on a scheme at Elizabeth Garrett Anderson assessing the impacts of filter systems on indoor air pollution and the ability of sensors to monitor this. It is planned that results will be analysed and released in 2020. In 2019 the Mayor's Air Quality Fund funded Healthy Streets Everyday scheme started, with Islington as the lead borough. This includes 16 boroughs working to make London's streets healthier. As part of this scheme Westminster will be monitoring the impacts of measures.
Energy usage		
Improvements to heating systems	Improve heating systems through replacement of inefficient boilers as part cyclical improvement work. Carry out the improvement works on domestic properties as well as school and business premises. Offer the grant support scheme to vulnerable private sector residents. Apply the most effective measures whenever possible, including through external schemes such as RE:NEW, RE:FIT, ECO Flex, Mayor of London Warmer Homes and Section 106 Carbon Offset Funding when improving insulation and replacing boilers.	Through our SHINE service for vulnerable residents we referred 28 Islington households to the ECO/Warmer Homes scheme for improvements to heating and/or insulation from April 2019 to March 2020 and declared 12 households in the ECO-flex group for vulnerable residents that do not receive qualifying benefits. In 2019 four vulnerable residents had new boilers installed through the council's Safe and Warm scheme (this followed the successful boiler replacement scheme which installed over 800 boilers over several years). From April 2019 to February 2020 507 new high efficiency boilers were installed in domestic council managed/tenanted properties (this figure includes boiler upgrades and replacement of faulty boilers).
Promotion of energy efficiency Leading by exam	Provide energy saving advice to residents within the borough. Refer vulnerable residents to SHINE services including <i>air</i> TEXT. Work with businesses in ZEN areas on energy efficiency audits to minimise the emission and cost.	3,643 Islington residents were provided with energy saving advice from April 2019 to March 2020. 12,068 referrals were made to additional services the SHINE scheme (which makes sure you get all the help you need to stay warm, increase income and stay healthy in your home), including 20 signups for airTEXT.

Measure	Action	Progress in 2019
Apply tiered parking charges for short term parking spaces	Applied surcharge on parking diesel vehicles in short term parking spaces from January 2018. Continue tiered parking permits based on fuel emissions. Review parking policies to take into consideration impacts on air quality and health.	From March 2019 the surcharge for diesel vehicles in short stay parking increased from £2 per hour to £3 per hour. From April 2019 the surcharge for diesel vehicles on the resident parking permit increased from £99.65 per year to £120 per year.
Renew our fleet and replace vehicles with the cleanest possible technology	Conduct the review of the fleet to identify which vehicles may be operated as electric, biomethane, hydrogen, compressed natural gas (CNG), euro VI and ultra-low emission and consider the changes during next procurements. Procure first CNG powered welfare bus and assess the possibility of replacing wider fleet including heavy goods vehicles. Investigate possibilities of retrofitting the most polluting vehicles where no other	The fleet procurement strategy is to purchase the lowest emission vehicles possible, using the following order of preference- electric, hybrid, petrol and then diesel. In 2019 the fleet continued to be replaced with cleaner vehicles- 109 diesel Euro 5 vehicles were replaced with eight electric vehicles and 101 petrol Euro 6 vehicles. 28 diesel Euro V vehicles were replaced with diesel Euro VI vehicles. Further orders were made in 2019 for vehicles to be upgraded in 2020. These included five cleaner Euro 6 diesel vehicles, 30 Euro 6 petrol vehicles, 17 electric and five hybrid vehicles in place of existing diesel vehicles. The new electric vehicles on order include heavy duty vehicles such as refuse collectors.
	option is viable. Review council's vehicles usage. Analyse the possibility of car park spaces to be converted into bike storages where feasible.	A CNG bus was operational throughout 2019. In 2019 the council applied for £1.5 million funding from the Good Growth Fund to electrify the council's fleet. This funding was awarded in March 2020, and along with the council's £1.5 million match funding will allow the installation of electric charging infrastructure at the Waste and Recycling Centre to allow all vehicles there to be electrified by 2030. The vehicle to grid scheme at the Town Hall was developed through 2019, and officially launched at the beginning of January 2020, is understood to be the first functioning multi vehicle to grid system in the country and uses vehicles' batteries to reduce carbon use in the
Adopt transport	Explore reduction of traffic and co-ordinate the	building. In 2019 Islington launched a consultation on its new draft Transport Strategy 2019-2041
reduction strategy	work with TfL so that both strategies work together. Propose re-designing of key streets	underpinned by a vision for a 'healthy, fair, accessible and enjoyable transport environment in Islington' with objectives to make the borough healthy, safe and secure, efficient, green and

Measure	Action	Progress in 2019
	where reducing traffic is essential to protect vulnerable road users. Investigate options of road user charging including workplace parking levies and work with the Mayor to strengthen these developments.	clean, meeting demand, accessible, high quality, sustainable developments, vibrant, fair and smart.
Retain Bronze Fleet Operator recognition Scheme (FORS) and aim for gold	Include FORS into council's procurement policies including all aspects of safety, efficiency, and environmental protection. Measure, monitor and improve performance to obtain and retain gold accreditation. Ensure our fleet and drivers are adhering to FORS standards.	A FORS audit was completed in 2019, and the bronze standard retained.
Freight consolidation scheme	Work with other London boroughs on freight consolidation and discuss with our partner Camden Council inviting local businesses to join the scheme to minimise supply deliveries reducing vehicle traffic and emissions.	In 2019 the freight consolidation centre was moved to King's Cross to create a space more central for both participating boroughs. WEGO couriers who specialise in ultra-low emission vehicles, including electric vehicles and cargo bikes are now used. A greater value is now also placed on lower emissions through the procurement process for all new agreements, including environmental impact assessments and potential requirements for additional measures to meet the councils sustainability aims.
Improving infras	structure	
Increase cycle parking around the borough	Install 400 cycle parking hangers around the borough to improve safety and modal shift to greener transport.	By the end of 2021-22 the council plans to install 400 public bike hangars on roads around the borough. By the end of 2019, 221 had been installed. 18 new bike hangars and two new secure cycle shelters were installed on estates across the borough from April 2019 to March 2020, providing secure storage for 156 more cycles.
Improve cycle network routes and connections of quiet ways through the borough	Work with cycling groups to review and connect viable low traffic exposure routes to increase cycle confidence, safety and low pollution exposure. Review all one way roads to consider giving two-way cycle advantage. Improve signage along cycle routes.	In 2019 initial feasibility studies were conducted for Cycleway 27, Amwell Street improvements and cycle tracks on Liverpool Road (C38). Construction began on the north section of Cycleway 38. The consultation and traffic orders were completed for protected cycle lanes on Balls Pond Road (CS1). Consultations were conducted on cycle access and public realm improvements on Bride Street and Arlington Way and a protected cycle lanes on Green Lanes in Hackney, with a section in Islington. Detailed designs for cycle assess improvements on Popham Street and Baldwin Terrace were also completed.

Measure	Action	Progress in 2019
		The Draft Islington Transport Strategy released in 2019 contains Low Traffic Neighbourhood initiatives which will include road closures, protected cycle routes, improved crossings and public spaces. It also includes targets for active and sustainable travel- 87% of trips to be made by active, efficient and sustainable modes by 2041 and 93% residents will live within 400m of the London wide strategic cycle network.
Improve public transport facilities in the borough	Work with TfL on bus reliability programme. Improve facilities at public transport hubs, including cycle storage outside stations. Examine council's roads space and improve reallocations of road space to prioritise pedestrians/cyclist over car parking. Support the delivery of Crossrail 2 to relieve crowding on existing lines such as Victoria and Piccadilly lines. Lobby for expanding night tube services in Islington and retaining night bus services in the borough. Continue to request provision of an all zero emission fleet at the Metroline bus garage as soon as possible.	The council committed to working with TfL for high-quality public transport services. The 2019/20 bus priority programme focused on delivering bus priority improvements along bus route 271 between Highbury Corner and New North Road such as bus stop alterations and junction improvements. Designs were progressed for the bus priority improvements on City Road south of Old Street roundabout
Enhance and plan the infrastructure of electric charging points across the borough	Enhance the current network of electric charging points in the borough including rapid, fast and lamppost chargers and plan future expansion to prepare for increasing demand.	We have a programme to deliver 100 on-street EV charging points each year. There are currently 190 on-street EV charging points in the borough and we are on track to deliver 400 before the end of 2022. We are working with a number of different network operators to provide rapid, fast and lamppost charging points.
Increase car clubs availability in the borough	Support car clubs to increase availability of vehicles in the borough particularly ULEV and	Statistics from Department for Transport show that the number of electric vehicle registered in Islington is dramatically increasing each year. The Draft Islington Transport Strategy released in 2019 contains an initiative to work with car club providers to move to an all-electric car club fleet in Islington.

Measure	Action	Progress in 2019
	zero exhaust emissions vehicles, including vans.	
Political influence	ce and commitment	
Support geographical expansion of ULEZ	Engage with TfL, GLA and other London boroughs on the expansion of ULEZ. Respond to various consultations to point out the benefits of extending ULEZ to whole of Islington as soon as possible. Lobby Mayor of London to tighten the criteria for ULEZ to reduce exclusions. To push for a strengthening of the ULEZ so that it becomes a zero emission (exhaust) zone.	In 2019 we provided extensive advertising about the upcoming ULEZ, alongside the Mayor of London's campaign. We produced an information leaflet that was delivered to every resident, business, charity, TRA, TMO, estate agent and housing authority within the ULEZ area. We also created a webpage with information on ULEZ, including information on active travel and electric vehicles. For example, cycling and walking routes, electric car charging points, free Bikeability courses and car sharing spaces.
Call on Mayor to put into practice diesel free London by 2025	Support Mayor of London to review all aspects and policies to implement diesel free London by 2025 to improve public health crisis caused by air pollution. Develop a diesel free strategy for Islington as part of trend in diesel free direction, including diesel and petrol vehicles sale ban in 2040. Explore the option of rejecting parking permits to diesel vehicles in Islington before 2025 to support diesel free London notion.	From March 2019 the surcharge for diesel vehicles in short stay parking increased from £2 per hour to £3 per hour. From April 2019 the surcharge for diesel vehicles on the resident parking permit increased form £99.65 per year to £120 per year. In 2019 the fleet continued to be replaced with cleaner vehicles- 109 diesel Euro 5 vehicles were replaced with eight electric vehicles and 101 petrol Euro 6 vehicles. 28 diesel Euro V vehicles were replaced with diesel Euro VI vehicles. Orders were also made for further vehicles to be upgraded in 2020, including five cleaner Euro 6 diesel vehicles, 30 Euro 6 petrol vehicles, 17 electric and five hybrid vehicles in place of existing diesel vehicles. In 2019 the Council applied for £1.5 million funding from the Good Growth Fund to electrify the Councils fleet. This funding was awarded in March 2020, and will along with the councils £1.5 million match funding will allow the installation of electric charging infrastructure at the Waste and Recycling Centre to allow all vehicles there to be electrified by 2030.
Raising AQ awa		
Promote active travel	Work with TfL on planned improvement works to ensure all new road improvements are considerate of walking and cycling, creating safer and cleaner spaces for active travel,	In 2019 we launched a new Clean Air Route from Whittington Hospital to Archway. The Clean air walk in Archway encourages visitors, staff and users of the Whittington Hospital to travel to Archway town centre using side streets to avoid the harmful pollution on Highgate Hill. We also started assessing ways to improve and link clean air routes in the borough.

Measure	Action	Progress in 2019
Clean air walking routes	including all current and future works such as Highbury Corner, Old Street and Clerkenwell Green. Look at trailing smarter travel scheme incentives. Provision of personalised travel information. Improvements to footpaths, signage and directions to encourage people to walk. Promote active travel as part of Active 10 and other NHS initiatives. Create map of Clean Air Routes and promote within the borough. Increase, develop and expand Clean Air Walking Routes	As part of the Archway ZEN scheme two monitors were put up, one on the roadside and one on a background road. In 2019 the live results as well as long term trends were displayed on a website, alongside information about air quality, active travel and using less polluting side street routes. This website was also displayed on a display screen in the library for several months. In 2019 we worked with Prior Weston School to implement the recommendations of the Mayor's air quality audit. This included the creation of a low pollution walking route around the school. The Draft Islington Transport Strategy released in 2019 contains an initiative to deliver a comprehensive network of accessible, safe, clean-air walking routes between key destinations, including between primary schools, adventure playgrounds, green spaces and estates. The Strategy also includes an initiative to deliver Liveable Neighbourhoods across the borough. These seek to reduce traffic and improve air quality on the majority of streets in the borough, and thus will achieve clean air routes across the borough. The Council has long been committed to making walking it easy, safe and enjoyable to walk and cycle, as evidenced by its existing programme of transport schemes such as Highbury Corner, Old Street and Clerkenwell Green which were progressed in 2019. 32 Dr Bike events were held in 2019, checking 613 bikes.
Healthy Streets implementation	Work towards implementing the Healthy Streets Approach to encourage walking and cycling and protect children from poor air quality	Islington is committed to the Healthy Streets approach and in 2019 the MAQF Healthy Streets Everyday scheme started, with Islington as the lead borough. This includes 16 boroughs working to make London's streets healthier. In 2019 Islington launched a consultation on its new draft Transport Strategy 2019-2041 underpinned by a vision for a 'healthy, fair, accessible and enjoyable transport environment in Islington' with objectives to make the borough healthy, safe and secure, efficient, green and clean, meeting demand, accessible, high quality, sustainable developments, vibrant, fair and smart. This strategy is underpinned by the healthy streets approach and indicators.

Measure	Action	Progress in 2019
		A number of schemes in 2019 show Islington's commitment to the Healthy Streets approach including; our new Clean Air Walk at Whittington Hospital, redevelopment of Highbury Corner.
Identify barriers for cycling to work and for leisure	Look at barriers for cycling within council own employees and local businesses. Identify need for further cycle training, confidence building, facilities and cycle provision. Investigate and negotiate staff membership for bike hire. Consider personalised travel planning for employees.	In 2019 steps were taken to begin a pool bike scheme for staff in the council. A fleet of bikes have been collected and plans to manage these are under way.
Promote smarter driving training	Ensure all employees driving council vehicles are familiar with eco driving techniques. Promote eco driving amongst general public to drive down pollution from brake and tyre wear etc.	In 2019 we investigated the potential for training council staff as well as businesses through the Idling Action London scheme. Initial approaches have been made to businesses with reports of idling vehicles. All new council drivers complete a driving assessment which includes a briefing on driving techniques relating to emissions.
Prioritising focus	areas	teeriniques relating to emissions.
Angel (from Angel station to Essex Road station)	Cooperation with Angel BID to involve local business in minimising air pollution, new electric charging infrastructure, improving bus fleet that use the routes in and around Angel,	The Angel BID angel.london helped us to advertise air quality information and events in 2019 such as Cycle to Work Day, Car Free Day and idling events among their network, online and newsletter.
	work with local schools on behaviour change, monitoring, auditing and implementing greening measures where feasible.	In 2019 we investigated options for future events such as Car Free Day in the area. We also submitted bids for internal and external funding in the area.
		We held one anti-idling event at a school in the Angel area in 2019. We also conducted several other projects in schools just outside the area in 2019, including further idling events, audits, school streets and an air filter study.
Holloway Road (Highbury Corner to Archway)	Improvements to Highbury Corner gyratory, requirement for bus fleet to meet highest standards as soon as possible, increasing	Work on the transformation of Highbury Corner was completed in 2019. This included new segregated cycle lanes on all sides of the new junction, a new public space, new pedestrian crossings, more green space and a new two-way route for cycling.

Measure	Action	Progress in 2019
	amount of pollution absorbing plants, behaviour change campaign to promote active travel as well as use of side routes when cycling and walking, continue and increase ZEN promotion in Archway through offering various opportunities for businesses to participate and decrease pollution. Install delivery lockers to minimise home deliveries.	We conducted two quality audits at schools in the area in 2019 and one School Street road closure trial started in the area in 2019 at Yerbury Primary. 155 businesses were engaged throughout 2019 as part of Cleaner Deliveries, Smarter business project, with 18 businesses signed up for cargo bike deliveries instead of petrol/diesel vehicles and five using the micro consolidation centre that was built in 2019, reducing deliveries by allowing bulk purchases. In January and February 2019 we conducted anti idling training at Metroline bus garage, speaking to 100 staff at several events, with a leaflet produced specifically for the bus depot sent to all 800 staff. The Archway ZEN and LEN schemes were both completed in March 2019. The ZEN scheme saw a total of 1,500 people engaged, 210 businesses contacted and 36 actively taking measures to reduce pollution. The LEN scheme included the creation of a Clean Air Walk to Whittington Hospital, planting projects on Junction Road, schools, Whittington Hospital and Archway Station. The Highbury Corner gyratory removal was substantially completed in 2019 with the new junction launched October 2019. The transformation includes segregated cycle lanes, new green public space and new pedestrian crossings.
Finsbury Park (including parts of Hackney and Haringey)	Working closely with TfL and neighbouring boroughs on possible improvements to cycle routes, collaboration with Town Centre management, increasing greening, mitigation requirement for all new developments in the area to minimise impacts of air pollution during construction stages and modelled future impacts.	One School Street started in 2019 in this focus area at Ambler Primary School. In 2019 TfL worked with the council on the feasibility of a new cycle route from Camden to Tottenham, through Finsbury Park Town Centre Group.

Measure	Action	Progress in 2019
King's Cross/ Caledonian Road (including parts of Camden) Old Street/ Shoreditch (including parts of Hackney and Tower Hamlets)	Proposed gyratory improvements of existing road network, work closely with London Borough of Camden on minimising the impacts from developments bordering with Islington, improvements to electric charging facilities in the area, increasing cycle facilities and green infrastructure. Proposed Old Street gyratory improvements, active travel promotion as part of new walking/cycling routes, ongoing City Fringe ZEN and LEN offers to businesses and residents to make various air quality positive actions, ULEV streets, green screens possibilities near sensitive locations such as schools, hospitals, school audits, close working partnership with City of London and Hackney, increase of electric charging facilities.	One School Street started in 2019 in this focus area at Winton Primary School. We are working with TfL to provide safe cycle infrastructure and better pedestrian conditions around the King's Cross Gyratory. Transport for London has developed draft proposals to improve the King's Cross gyratory for discussion with Islington and Camden councils In June 2019 a further three years of funding was secured from the Mayor's Air Quality Fund for City Fringe ZEN, with plans to expand uptake and offers in existing areas and into new locations. 2019 saw a networking event, workshops with businesses, recruitment of new businesses and project partners and the beginning of plans for an e-cargo bike sharing scheme. In 2019 19 new businesses and 20 new residents joined in Islington, with eight emission reducing measures (such as cycle training or trials of electric vehicles) taken up by businesses. TfL are working with us to make Old Street more pedestrian and cycle friendly by removing the gyratory. This work progressed in 2019, including closure of an arm of the roundabout to traffic and directing traffic in two ways around the junction and creating pedestrian and cycle routes through the works. The council is also working to make a new iconic gateway public space. Construction work at Old Street Roundabout to remove the gyratory is underway and is being led by Transport for London.
Dalston Lane (Mainly Hackney)	Ongoing work with Hackney Council and supporting their actions whenever possible, monitoring construction activity in close proximity to Dalston Lane to ensure further pollution impact is avoided or mitigated through various conditions.	These focus areas are mainly located in other boroughs and we continued working with the respective boroughs wherever possible. In 2019 we worked with on a range of wider schemes with these boroughs across e.g. Idling Action London, Clean Air Hospital Framework, and City Fringe ZEN.

Measure	Action	Progress in 2019
King's Cross/Euston/ Marylebone Road (Mainly Camden)	Close working partnership with Camden and TfL on projects to minimise the impact from moving and stationary traffic in the area, increased construction impact monitoring and calls for reducing impacts through planning conditions, ongoing work with local communities, businesses and schools, improving charging facilities to encourage use of electric vehicles for personal and business use.	
Leading by exam	ple	
Increase greening of the borough with pollution capturing and absorbing plants	Ensure adequate, appropriate and well located green space and infrastructure is planned for all new developments. When choosing the species and locations, consider eventual canopy size and possible local pollution hotspots e.g. junctions, busy roads. Look at options for planting greenery close to local schools, nurseries, hospitals, GP surgeries and other places near vulnerable residents.	In 2019 we worked with Prior Weston School to implement the recommendations of the Mayor's air quality audit. This included planting of green screens designed to reduce pollution around the school playground. As part of the Archway LEN project in 2019 green screens and planters were installed outside Whittington Hospital. Current policies require new developments to protect and enhance biodiversity and minimise impacts on trees, shrubs and other vegetation of significance. In 2019 a new Draft Local Plan was developed (which was submitted for examination in early 2020), which included greater requirements for greening, with five separate policies created. For example, use urban greening factor to ensure sufficient greening, protect landscape and biodiversity, green roofs and vertical greening. At developments where a potentially significant health impact is identified detailed actions to mitigate must be submitted and Public Health will offer support and advice in this process.
Reduce pollution on Islington waterways	Work with Canal and River Trust to reduce pollutants concentrations around Regent's Canal by Implementing Eco Zones in the area. Look at possibility of using the canal for freight servicing e.g. waste collection	Work continued on the Canal Eco Zone in 2019. This included two meetings/consultations to inform the scheme design- one with boat businesses, boat safety scheme examiners and rangers and one with boaters. Updates were designed for the Canal and River Trust website. A final plan for the number and placement of electric charging bollards was created and a contractor hired. King's College London started a study monitoring air quality inside boats

Measure	Action	Progress in 2019
		using various heating methods and this will continue in winter 2020/21. New monitors were also purchased and installed along the canal. Leaflets, surveys and events were also planned for a communication and education campaign for boaters on air quality when the eco chargers are installed.
		Install was planned for early 2020, however this has been postponed due to the coronavirus. The communication and education campaign has also therefore been postponed.
		Work started in 2019 with neighbouring boroughs on joint communications along canals to ensure consistent messaging.
Power generation identification	Map the locations of generators (CHP, back-up generators, etc.) and review power sources in the city to remove excess pollution away from residents. Review standard planning conditions regarding power generators. Utilise the heat from London Underground network to provide cheaper and greener heat to local residents in	In 2019 phase two of the Bunhill Heat Network scheme became operational. This scheme was launched in 2020 and is the first in the world to use heat from underground trains to heat properties on the network. This now includes over 1,300 properties (including over 500 properties on the King's Square Estate and Moreland School, both of which were added in this phase of the networks development). Work on generators started in 2019 with consideration of medium combustion plants in the
	Bunhill ward and look for further opportunities for heat networks and local secondary heat.	borough including monitoring of air quality and issues at a site.
Participate in Cleaner Air Borough initiative	Work towards GLA's initiative to obtain kite mark demonstrating Islington's commitment to improving air quality.	We continue to work to improve air quality in the borough and were awarded this mark in the first year of the scheme. There have been no new applications since this date but we will aim to obtain this kite mark when it opens again for applications.
Bid for available external funding	Apply for air quality funding to resource air quality improvements actions and projects in Islington.	In 2019 we worked on a number of new and existing schemes using funding for air quality from internal and external sources.
		The following projects were funded through the Mayor's Air Quality funding (MAQF) 2016-19 or Air Quality Business Fund and finished in 2019: • Archway ZEN (solo scheme)
		 Archway Business LEN (with Archway Town Centre Group) City Fringe ZEN (Hackney lead borough) City Fringe LEN (Hackney lead)

Measure	Action	Progress in 2019
		 NRMM (Merton lead) Idling Action London (City of London lead) Freight Consolidation Service (Camden lead)
		 The following projects were funded through the MAQF 2019-22 started in 2019: Healthy Streets Everyday (Islington lead borough) Idling Action London (City of London and Camden lead) NRMM Zone enforcement (Merton lead) ZEN Phase 3 (Hackney lead)
		In 2019 we started work on two Defra funded schemes; one to test air quality filters in a school and the ability of sensors to monitor this (with additional contributions from Engie), and another to engage boaters along the canal in air quality and the upcoming EcoZone. These schemes will be completed in 2020. We were also awarded funding to start two projects in 2020; one to monitor and map burning in domestic properties in the borough and the other as part of the joint Clean Air Villages bid.
		The Canal Eco Zone using funding from Defra, Canal and River Trust and the council also continued in 2019 with installs planned for 2020.
		Many of the schemes above also used internal Council funding sources including ward improvement funds or some of the Local Implementation Plan (LIP) allocated to boroughs from TfL.
		The LIP was also used to fund air quality audits of all schemes in the borough as well as School Streets role out.
		A Public Health funded scheme with Whittington Hospital was also started in 2019, looking to create a Clean Air Hospital Plan and help implement measures.

Measure	Action	Progress in 2019
Set up internal	Pull together key internal stake holders to	In 2019 we worked with Prior Weston School to implement the recommendations of the Mayor's air quality audit. These included green screens around the school playground, interactive planting events, air quality workshops and mapping events, a school assembly, playground information event and production of low pollution walking maps. This was funded through Council WIP, GLA audit funding, ISEP businesses and the Greener Community Fund. We used TfL funding for our Cleaner Deliveries, Smarter Businesses scheme in 2019 engaging with 155 businesses and signing up 18 businesses to use a cargo bike instead of petrol or diesel vehicle and signing five up to use a micro consolidation centre set up locally for the scheme. We applied for further funding in 2019, such as the Good Growth Fund, and are awaiting results. Changes in key internal stake holders delayed progress in 2019, this will be pursued again in
coordination meeting	coordinate work that impacts on air quality across the borough.	2020.
Implement recommendations of the Health scrutiny into air quality	Assess and implement the recommendations of the Health scrutiny into air quality.	The last recommendations from the Health Scrutiny were made in 2018, these recommendations were included in the new Air Quality Strategy where relevant and work was carried out to meet these recommendations in 2019. For example in 2019; diesel surcharge was increased from £2 per hour to £3 per hour for visitor parking and from £99.65 per year to £120 per year for resident parking permits, nine School Streets were started and three further consultations started, continued air quality monitoring outside every school, events with schools e.g. Clean Air Day and the Draft Transport Strategy including Liveable Neighbourhoods across the borough went out for consultation.
	e and commitment	
Lobby central government	Lobby central government to review Clean Air Act to provide legally enforceable right to clean air with new powers to regulate all emission sources (canals, solid fuels, etc.) and empower local authorities. Challenge government to ensure the current air pollution limits remain	In 2019 we wrote to TfL and the Mayor of London asking them to introduce new rules for idling at official taxi ranks. We also supported the City of London's Emissions Reduction Bill which would, among other things, enable higher fines for idling.

Measure	Action	Progress in 2019					
	valid or even tougher after leaving European Union. Pressure government to reconsider and develop national scrappage scheme. Urge HM Treasury to end red diesel subsidies.	We also took part in workshops and meetings aiding and reviewing the Governments Environmental Bill. We have taken every opportunity to respond to relevant consultations in the past and will continue to do so when these are released.					
Ban of diesel vehicles	Support any early intervention in the direction of banning diesel and petrol vehicles to minimise air pollution emitted to the	Our previous consultation responses have included a call for faster shift away from polluting vehicles.					
	atmosphere.	In 2019 the diesel surcharge was increased from £2 to £3 per hour for visitor parking and from £99.65 to £120 per year for resident's permits in the borough.					
		In 2019 we started nine School Streets banning vehicles at pick up and drop off time. In March 2019 we also started a trial banning vehicles over 3.5 tonnes from driving through Drayton Park, which is used as a short cut for lorries between the A1 and A1201.					
		In 2019 the fleet continued to be replaced with cleaner vehicles- 109 diesel Euro 5 vehicles were replaced with eight electric vehicles and 101 petrol Euro 6 vehicles. 28 diesel Euro V vehicles were replaced with diesel Euro VI vehicles. Order were also made for further vehicles to be upgraded in 2020, including five cleaner Euro 6 diesel vehicles, 30 Euro 6 petrol vehicles, 17 electric and five hybrid vehicles in place of existing diesel vehicles.					
		In 2019 the Council applied for £1.5 million funding from the Good Growth Fund to electrify the Councils fleet. This funding was awarded in March 2020, and along with the councils £1.5 million match funding will allow the installation of electric charging infrastructure at the Waste and Recycling Centre to allow all vehicles there to be electrified by 2030.					
WHO Air Quality	Work towards adopting the WHO obligations	A range of actions throughout our Air Quality Strategy will help us to improve pollution to					
Standards	and/or standards, including air quality limits	WHO levels, progress on these can be found throughout this report.					
WHO Air Quality	Work to developing an evidence based and						
Standards –	defined targets for Particulate Matters in line	In 2019 we also applied for funding to install permanent PM _{2.5} monitors to get better					
evidence base	with the WHO objectives	evidence on particulate matter in the borough, we will continue these efforts in 2020.					

Measure	Action	Progress in 2019
Work towards eliminating diesel generators	Work towards eliminating all diesel powered generators, including vehicles from parks and open spaces	In 2019 the Parks and Open Spaces Team started moving their equipment, such as leaf blowers to new electric models. They have also investigated options to add electricity points to decrease the needs for generators.
Lobbying on anti- idling	Advocate for stronger anti-idling enforcement powers	In 2019 we supported City of London's new Emissions Reduction Bill that would enable local authorities to use higher fines for idling using Fixed Penalty Notice legislation.
		We also wrote to TfL and the Mayor of London asking them to introduce new rules for idling at official taxi ranks
Reducing emission	ons from new developments	
Air quality positive standards	Require all major developments, minor new build developments and larger minor extensions to submit air quality assessment to meet London's air quality standards. Proposals mitigate or prevent adverse impacts on air quality and investigate and implement all reasonable opportunities to improve air quality. Developments in locations of poor air quality should be designed to mitigate the impact of poor air quality to within acceptable limits. Require developments in excess of 200 net additional residential units or 10,000sqm net additional gross external floor space to be Air Quality Positive and implement measures onsite to actively reduce air pollution as far as possible.	Islington's Draft Local Plan continued to be developed throughout 2019 and was submitted early 2020. This draft plan requires proposals to be at least air quality neutral. Major developments must submit an air quality assessment. Emerging Policy T7 aims to reduce emissions and harmful air pollution from freight; it supports the use of zero-emission last-mile solutions (such as cargo cycles) and requires provision to be made for electric vehicle charging points for freight vehicles. In addition, policy S7 requires developments in excess of 200 net additional residential units or 10,000sqm net additional gross external floor space to be Air Quality Positive. Major developments, minor new build developments, and larger minor extensions all have to submit an Air Quality Assessment.
Enforce NRMM	Promote, educate, raise awareness and enforce NRMM through work of our Construction monitoring officers. Work with	Our construction monitoring officers continued to assess all larger construction sites in the borough in 2019, including assessments of NRMM.
	other boroughs to submit the bid to the MAQF to continue raising awareness of NRMM policies after funding expires in March 2019.	We are part of the new MAQF funded London wide scheme to raise awareness of and enforce non road mobile machinery on construction sites that started in 2019. From April to December 2019 16 site audits were conducted through this scheme, 12 of these were

Measure	Action	Progress in 2019				
		compliant with legislation at the time of the audit (i.e. machines met emission standards and were correctly registered as being used) and the remaining four were compliant after completing the audit recommendations.				
Explore possibility for allocation funds from s106 at offsetting air quality impacts	Explore the options for obtaining AQ monitors at new development sites of particular size as part of requirements through planning obligation especially near local schools or other sensitive areas. Research opportunities to use	Seven school air quality audits were conducted in total in 2019 (funded through the Council's LIPS allocation from TfL), with three reports completed and sent to schools. These reports included suggestions for funding and several schools put in bids for funding pots as a consequence.				
from developments	the funding for air quality improvements at schools following the audits.	In 2019 we assisted Prior Weston Primary School to complete the recommendations from the Mayor's Air Quality audit, finding funding beyond the original audit funding from the GLA. This included funding from the Greener Communities Fund, ISEP and Islington Council.				
Improving air quality from construction	Require all developments to comply with Islington's Code of Construction Practice and guidance on reducing local air pollution. CIMOs to check compliance to improve air quality from construction sites. Ensure that contractors undertaking works to the highways use best practice to avoid adding to local air pollution.	Our Code of Construction Practice was updated in 2018 and our CIMOs checked compliance with this throughout 2019. Islington's Draft Local Plan continued to be developed throughout 2019 and was submitted early 2020. This plan includes policy S2 which requires all developments to submit a sustainable design and construction statement to show how they will meet sustainable design policies. This allows a proper assessment of schemes at application stage and securement of any benefits through obligations and/or conditions. While policy T5 requires development				
		proposals, especially major developments or sites that may cause disruption during construction, to adhere to best practice construction techniques to limit impacts on air quality and reduce noise and vibrations from construction and the transportation of construction waste. Information must be provided on impacts and mitigation measures, including a Construction Logistics Plan. This Draft Local Plan also states that sites must comply with best practice for construction, including Islington's Code of Practice for Construction Sites.				
Research	Continue working with KCL and other local	We continued to be part of the LLECP scheme until it ended in 2019. As part of the LLECP				
pollution	authorities in LLECP on researching,	scheme ending in 2019 a Best in Class guidance document was produced to provide guidance				
mitigation	developing and trialling construction	in the future. The non-road mobile machinery register produced as part of this scheme has				
measures	equipment which is less polluting and promote the scheme, its findings and recommendations among developers operating in the borough.	now been moved to the GLA website and learning from the project will continue to be useful.				

Measure	Action	Progress in 2019				
	Look for further funding after funding finishes in 2019 and ensure the legacy of research continues beyond 2019. Maintain air pollution consideration in EIA for procurement to ensure that improving AQ is considered by suppliers.	Air quality continues to be considered in EIA alongside climate change in an integrated manner.				
Continue reviewing all Part B installations in the borough	Ensure that all Part B installations e.g. dry cleaners, service stations etc. in Islington maintain the highest standards of air pollution emissions control.	We continued to monitor and regulate Part B installations in 2019.				
Provide advice on and encourage use of non- combustion renewable energy technologies to developers	Provide wide range of services including advice on renewable energy technologies, planning, energy management etc. to ensure the best available technologies are used. Require all developments, through planning policy, to maximise opportunities for on-site electricity and heat production from solar panels, and other renewable technologies where appropriate.	Policies currently focus on energy efficiency measures to reduce energy demand as the most cost effective way of reducing emissions.				
Adopt an integrated approach to energy supply which maximises both air quality and climate change benefits	Ensure that the heating systems of new developments do not have significant impact on local air quality by prioritising heating systems that will result in low or zero emissions of both carbon dioxide and NOx including heat networks, secondary heat or other low or zero emission sources. Require Combined Heat and Power (CHP) and ultra-low NOx gas boiler communal or district heating systems to be designed to ensure they emit very low levels of NOx and have no significant impact on local air quality.	There were several new policies and guidelines introduced in 2019 that were integrated into requirements for developments, these included GLA guidelines on carbon factors as well as new proposed London Plan and Draft Islington Local Plan, which although not formal are being given weight in planning decisions. These changes mean that there are almost no onsite CHP in 2019 and there has been a shift away from gas boilers towards heat pumps resulting in a reduction in NOx. Where gas fired heat is still used, ultra-low NOx equipment is mandated.				

Manager Description Description 2010						
Measure	Action	Progress in 2019				
Cycle storage for new developments	Work towards all new developments being required to ensure adequate cycle storage in each new home	In 2019 work continued on a new Draft Islington Local Plan (which was submitted in 2020) that included an update to residential cycling requirements so not only was cycle parking required in all new residential developments (as is current policy) but also 15% of all new cycle parking had to be designed with enough space for non-standard cycles such as cargo bikes or tricycles to ensure high quality cycle parking in all new homes, to encourage active travel for all residents.				
Work with busin	iesses					
Work with community business groups to develop and improve schemes	Engage with local businesses in ZEN Archway and City Fringe to improve local air quality, reduce energy and transport cost, identify barriers to minimising pollution. Continue to develop the work beyond ZEN areas and expand the schemes into whole borough whenever possible. Deliver superb urban environment by working on LEN initiative together with other partners. Support Archway Town Centre Management in their bid to create LEN in Archway and look for further areas of possible improvements. Escalate promotion of TfL's Deliveries Reduction Fund and help business groups to apply for funding to increase consolidation of deliveries.	The Archway ZEN and LEN schemes were completed in 2019. In total Archway ZEN contacted 210 businesses about air quality and reducing emissions, 120 businesses engaged, with 36 businesses taking measures to reduce their pollution as a result. A range of events and communication campaigns also took place and 1,500 people were engaged. The LEN scheme with the Archway Town Centre Group saw the installation of a Clean Air Walk to Whittington Hospital, various planting schemes including a pocket park, planters, green screens and green walls on roads, schools, Whittington Hospital and Archway Station. 155 businesses were engaged throughout 2019 as part of Cleaner Deliveries, Smarter business project, with 18 businesses signed up for cargo bike deliveries instead of petrol/diesel vehicles and five using the micro consolidation centre that was built in 2019, reducing deliveries by allowing bulk purchases. The training of the Metroline Bus Drivers and Whittington Cars taxi drivers conducted in 2019 in Archway will spread learning across Islington and London more widely. The Cleaner Deliveries Smarter Business scheme started in Archway in 2019 but has now been offered more widely across the borough.				
		In 2019 the City Fringe ZEN scheme was also expanded to include Clerkenwell in Islington. In 2019 19 new businesses and 20 residents joined in, with eight emission reducing measures (such as cycle training or trials of electric vehicles) taken up by businesses.				
Require new	Work with developers and businesses to	In 2019 work continued on a new Draft Islington Local Plan (which was submitted in				
developments to	ensure adequate, appropriate and well located	2020). This increased the level of policy detail in regards to greening and includes information				
maximise the	green space and infrastructure is included in	on; green roofs and vertical greening, biodiversity, sustainable drainage and cooling impacts				

Manager	A stress	Durance in 2010
Measure	Action	Progress in 2019
provision of green space, as well as maximising urban greening including green walls and intensive green roofs.	new developments particularly near sensitive sites, e.g. nurseries, schools, care homes etc. Require developments to maximise provision of urban greening through planning policy requirements and planning conditions.	as well as consideration of architectural and historic features. This reflects the importance of green roofs and walls in our sustainability objectives.
Raising awarenes		
Review Smoke control zone (SCZ)	New structure for Smoke control area to cover whole borough has been adopted in 2018 removing all previous exemptions. Promote and enforce new SCZ.	In 2019 we updated our website information on smoke control and continued to respond to all smoke complaints. We applied for funding from Defra to investigate burning in domestic properties in the
Develop communications plan related to the use of smoke free fuels and appliances	Increase awareness related to the use of smoke free fuels in open fires and woodburning stoves as recommended by central government.	borough, we were awarded this funding and the scheme will start in 2020. We continued with the development of the EcoZone along canals in the borough in 2019 and electric charging points are planned to be installed in 2020.
Improve publicity of pollution data and its availability to the public	Develop options for real time AQ monitoring data to be included on LBI website	As part of the Archway ZEN scheme in 2019 two air quality sensors were also put up, one on the roadside and one on a background road. The live results as well as long term trends were then displayed on a website, alongside information about air quality, active travel and using side streets. This website was also displayed on a display screen in the library for several months.
AQ monitoring		
Low cost sensors to measure air pollution	Introduce low cost sensors alongside existing NOx tubes to gain better understanding of local air pollution and exposure to polluted air.	In 2019 we used low cost sensors to assist in monitoring the impacts of several schemes including along canals, clean air day and School Streets as well as pollution from a data centre. A hand held monitor was also used to plot a low pollution walking map at Prior Weston school.

Measure	Action	Progress in 2019
		We used low cost sensors in Archway to enable us to display real time data on an air quality information website for the area, showing the difference in air quality on main roads and back streets.
		We also started a study in 2019 with King's College London at Elizabeth Garrett Anderson School using low cost sensors and a reference monitor to test air filtration systems.
Working togethe	r with other organisations	
Public Health (PH) to be briefed and involved in air quality issues	Provide briefing to Public Health senior management about progress on tackling poor air quality issues and improvements. Require Director of Public Health to sign off the Annual Status Report (ASR) and Air Quality Action Plan	In 2019 Public Health funded an air quality scheme at Whittington Hospital to create an air quality action plan and help implement some of the actions. This scheme started in 2019 with the employment of a contractor and discussions with key contacts with the kick off workshop planned for 2020.
	(AQAP). Involve PH team in supporting engagement with local stakeholders.	In 2018 our public health and pollution team worked together to create a <u>factsheet on air</u> <u>quality</u> for the joint strategic needs assessment (JSNA) evidence hub, this was published in January 2019. The JSNA looks at current and future health and wellbeing needs of the Islington population and identifies future priorities for action.
		The pollution team was also invited to attend a North Central London (NCL) paediatric asthma steering group.
Marking with	More decay with other internal teams such as	Public Health also signed off this report.
Working with internal teams	Work closely with other internal teams such as transport, energy, procurement, senior management, councillors to ensure new and existing strategies and policies are assessed for public exposure to pollution and actions taken to mitigate it where possible.	As evidenced throughout this report, teams across the council worked individually and together in 2019 on schemes that will help improve air quality. For example; transport planning, traffic and parking, planning, energy, public health and communications. This includes strategies and projects that required the support and guidance from senior management and councillors.
Working with external stakeholders	Work with the range of external organisations, including other London boroughs, GLA, the NHS, scientists, other partners and residents to	As evidenced throughout this report, in 2019 we worked with a number of external organisations including London boroughs, GLA, NHS, Defra, community groups, charities and academics.

Action	Progress in 2019					
ncourage actions to reduce pollution and crease awareness.						
crease canopy cover of the borough in line ith London and borough targets, using cisting spaces and new developments	In 2019 we carried out an extensive review of trees in the borough and opportunities for future planting, commissioning work on tree canopy cover, tree inventory and planting strategy. This work included an assessment of air quality benefits. The overall canopy cover was calculated as 25% using satellite images from 2018-19. Islington is aiming to reach the London wide target of 30% canopy cover by 2050 and investigating more ambitious immediate targets and the resources required for this. A website was created providing details of trees values by ward in regards to ecosystem, runoff, tree condition, canopy cover, air pollution and amenity value. Research was conducted on best places to plant in the borough, including details of current low tree canopy, social deprivation and areas near roads that might best help reduce pollution. Current benefits from public trees in the borough in regards to pollution removal was					
it	courage actions to reduce pollution and crease awareness. crease canopy cover of the borough in line ch London and borough targets, using					

3. Planning Update and Other New Sources of Emissions

Table I. Planning requirements met by planning applications in Islington in 2019

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	12
Number of planning applications required to monitor for construction dust	12
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	4
Number of developments where an AQ Neutral building and/or transport assessments undertaken	12
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	1
Number of planning applications with S106 agreements including other requirements to improve air quality	0
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: Central Activity Zone and Canary Wharf Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered 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.	20 conditions (through CMP) 12 registered and compliant 0 unregistered/uncompliant and being chased.
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	8 conditions (through CMP) 10 registered and compliant 0 unregistered/uncompliant and being chased.
and/or exemptions to the policy.	

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

The authority is a member of the London Air Quality Network. Routine calibrations are carried out by King's College London once every two weeks.

QA/QC audits are carried out twice per year by Matts Monitors, who also provide emergency 48 hour call out services and supply all consumables for the sites.

There was a power outage at our Holloway Road site as a result of the NOx pump tripping the power, a new pump was installed however issues remained. The NOx cylinder is now turned off and daily zero/span no longer operational. A work around system for calibration was created. This meant we had no data for about a week in October.

PM₁₀ Monitoring Adjustment

The Council's two automatic monitoring sites measure Particulate Matter by TEOM. The finalised TEOM data is corrected using the Volatile Correction Model, as recommended in Defra's LAQM TG16.

A.2 Diffusion Tube Quality Assurance / Quality Control

The laboratory supplying and analysing the diffusion tubes are Lambeth Scientific Services, Inter comparison field no. NPL002 and LGC no AR0375, a UKAS accredited laboratory. They use a preparation method of 50% TEA 50% Acetone and follow Practical Guidance when preparing samples.

The results of the labs precision are as follows:

- 12 good and one poor tube precision results of the 13 diffusion tube collocation studies conducted over the past three years (2017-2019) taken from the <u>latest data</u> updated April 2020.
- Latest AIR-PT (formerly WASP) results taken from <u>AIR-PT Rounds 24 to 34</u>. No
 results were submitted for the lab for three of these eight periods. However, the five
 results submitted show 65% lab results in this period were deemed satisfactory
 (based on a z-score ≤±2), suggesting some potential issues. See Figure 2 for full
 results.

Figure 2. AIR-PT/WASP results (Rounds 24-34)

Table 1: Laboratory summary performance for AIR NO₂ PT rounds AR0024, 25, 27, 28, 30, 31, 33 and 34

The following table lists those UK laboratories undertaking LAQM activities that have participated in recent AIR NO₂ PT rounds and the $percentage \ (\%) \ of \ results \ submitted \ which \ were \ subsequently \ determined \ to \ be \ \textbf{satisfactory} \ based \ upon \ a \ z\ -score \ of \ \leq \ \pm \ 2 \ as \ defined \ above.$

AIR PT Round	AIR PT AR024	AIR PT AR025	AIR PT AR027	AIR PT AR028	AIR PT AR030	AIR PT AR031	AIR PT AR033	AIR PT AR034
Round conducted in the period	January – February 2018	April – May 2018	July – August 2018	September - October 2018	January – February 2019	April – May 2019	July – August 2019	September - November 2019
Aberdeen Scientific Services	100 %	100 %	100 %	100 %	75 %	100 %	100 %	100 %
Cardiff Scientific Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Edinburgh Scientific Services	100 %	100 %	100 %	100 %	100 %	NR [2]	100 %	25 %
SOCOTEC	100 % [1]	100 % [1]	100 % [1]	100 % [1]	87.5 % [1]	100 % [1]	100 % [1]	100 % [1]
Exova (formerly Clyde Analytical)	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Glasgow Scientific Services	100 %	100 %	50 %	100 %	100 %	100 %	100 %	50 %
Gradko International [1]	100 % [1]	100 %	100 %	100 %	75 %	100 %	100 %	100 %
Kent Scientific Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Kirklees MBC	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Lambeth Scientific Services	NR [2]	NR [2]	NR [2]	25 %	50 %	100 %	50 %	100 %
Milton Keynes Council	100 %	75 %	100 %	100 %	100 %	100 %	50 %	100 %
Northampton Borough Council	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Somerset Scientific Services	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
South Yorkshire Air Quality Samplers	100 %	100 %	100 %	100 %	100 %	100 %	100 %	75 %
Staffordshire County Council	50 %	100 %	100 %	100 %	100 %	75 %	75 %	75 %
Tayside Scientific Services (formerly Dundee CC)	100 %	NR [2]	100 %	NR [2]	100 %	NR [2]	100 %	NR [2]
West Yorkshire Analytical Services	50 %	75 %	100 %	100 %	100 %	100 %	100 %	50 %

A bias adjustment of 0.85 for 2019 has been derived for Lambeth Scientific Services from the latest version of the national bias adjustment calculator version 03/20. See Figure 3 for full results.

Figure 3. National Bias Adjustment Lambeth Scientific Services 2019

National Diffusion Tube	Bias Adju	stment	Fac	tor Spreadsheet			Spreadsl	neet Ver	sion Numbe	er: 03/20
Follow the steps below in the correct order to Data only apply to tubes exposed monthly and Whenever presenting adjusted data, you should This spreadhseet will be updated every few mor	are not suitable for co	recting individual	dual sho	ort-term monitoring periods version of the spreadsheet	ir immediate	use.		at t	eadsheet wi	
The LAQM Helpdesk is operated on behalf of Defr. partners AECOM and the National Physical Labora		ministrations by	Bureau	Veritas, in conjunction with contract		et maintained by y Air Quality Co		hysical La	aboratory. O	riginal
Step 1:	Step 2:	Step 3:				Step 4:				
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop- Down List	Where	there is only one study for a chosen comb is more than one study, use the						Where there
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is of shown, we have no data for this method at this laborators.	# a year is not shown, we have no data	If yo	ou have your own co-location study then see Helpdesk at LAQMI					Air Quality Ma	anagement
Analysed By	Method To undo your selection, choose (All) from the pop-up list	Year To undo your selection, choose (All)	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (μg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision ⁶	Bias Adjustment Factor (A) (Cm/Dm)
Lambeth Scientific Services	50% TEA in acetone	2019	KS	Marylebone Road Intercomparison	11	78	66	17.9%	G	0.85
Lambeth Scientific Services	50% TEA in acetone	2019		Overall Factor® (1 study)	T.	20.		t	Jse	0.85

Bias adjustment factors used in previous years can be found in table J.

Table J. **Bias Adjustment Factors used in previous years**

	2011	2012	2013	2014	2015	2016	2017	2018
Bias adjustment factor	1	0.83	0.8	0.87	1.24	1.17	12	1.12

^[1] Participant subscribed to two sets of test results (2 x 4 test samples) in each AIR PT round.
[2] NR No results reported
[3] Northampton Borough Council, Kent Scientific Services, Cardiff Scientific Services, Kirklees MBC and Exova (formerly Clyde Analytical) no longer carry out NO2 diffusion tube monitoring and therefore did not submit results.

Factor from Local Co-location Studies

A local collocation study was completed using data from the Holloway Road site ID IS2. The bias adjustment factor applied to the diffusion tubes from this is 0.88. See Figure 4 for full results of the collocation study.

AEA Energy & Environment **Checking Precision and Accuracy of Triplicate Tubes Diffusion Tubes Measurements Data Quality Check End Date** Tube 2 Tube 3 Triplicate Standard 95% CI Start Date Period Capture Precision of Variation Monitor μgm⁻³ µgm⁻³ Deviation dd/mm/yyyy dd/mm/yyyy µgm⁻³ Mean of mean Mean (CV) (% DC) Check Data 09/01/2019 06/02/2019 51.0 64.0 55.0 16.5 53.3 Good Good 2 06/02/2019 06/03/2019 53.0 58.0 55.0 55 2.5 6.3 56.6 99 Good Good 06/03/2019 03/04/2019 22.4 40.9 9.0 Good 4 03/04/2019 47 5 01/05/2019 05/06/2019 48.0 46 1.7 4.3 100 Good Good 6 05/06/2019 03/07/2019 38.0 34.0 37.0 2.1 5.2 30.7 Good Good 7 03/07/2019 31 33.5 100 29.0 2.1 5.2 Good Good 04/09/2019 16.9 9 04/09/2019 50.0 49 3.6 9.0 100 Good Good 41.3 10 02/10/2019 06/11/2019 48.0 41.0 43 4.0 10.0 Good Good 06/11/2019 04/12/2019 44.8 11 49 21.7 100 Good 12 04/12/2019 50.0 26.0 12.2 30.4 Good Overall survey precision Overall DC (Check average CV & DC 10 out of 12 periods have a CV smaller than 20% Site Name/ ID: Holloway Road Precision from Accuracy calculations) (with 95% confidence interval (with 95% confidence interval WITH ALL DATA Bias calculated using 10 periods of data Bias calculated using 12 periods of data 25% Bias factor A Inbe Without CV>20% With all data Diffusion Tubes Mean: Diffusion Tubes Mean: 46 µgm⁻³ 46 µgm⁻³ -25% Mean CV (Precision): Mean CV (Precision): Automatic Mean: 40 µgm Automatic Mean: Data Capture for periods used: 98% Data Capture for periods used: 98% Adjusted Tubes Mean: 40 (36 - 45) Jaume Targa, for AEA Version 04 - February 2011

Figure 4. Precision and accuracy of collocation study at Holloway Road

Discussion of Choice of Factor to Use

The bias adjustment factor of 0.88, gathered from the local collocation study on Holloway Road, was used for 2019. This was very similar to the value from the national bias adjustment statement for 2019 of 0.85, which was also only calculated from one study. Therefore we chose to use the local study. Furthermore, this location is one of the busier thoroughfares in the London Borough of Islington.

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

None required.

Distance Adjustment

Distance adjustments were calculated for two sites, BIS005/06 City Road and BIS005/08 Highbury Corner using the distance calculator available on the <u>LAQM Support website</u>. Figure 5 shows a snapshot of this process.

Figure 5. Distance adjustment calculation



Enter data into the pink cells

	Distan	ice (m)	NO ₂ Annual Mean Concentration (μg/m³)					
Site Name/ID	Monitoring Site to Kerb	Receptor to Kerb	Background	Monitored at Site	Predicted at Receptor			
BIS005/06	3.0	2.0	27.1	43.0	44.7			
BIS005/08	2.0	4.0	27.1	47.0	43.8			

In order to maintain consistency for analysing trends over several years the annualised and bias adjusted, but not distance corrected data is also supplied in brackets in table D as previous years do not include distance correction and we have reassessed our distance information in this year's report.

Appendix B Full Monthly Diffusion Tube Results for 2019

Table K. NO₂ Diffusion Tube Results

		Valid							Annu	al Mea	ın NO₂					
Site ID	Valid data capture for monitoring period % ^a	data		Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data ^c	Annual mean – bias adjusted
BIS005/03	100	100	61	52	38	45	38	33	34	41	47	48	55	38	44.2	39
BIS005/02	100	100	60	60	54	57	43	34	43	42	51	44	60	48	49.7	44
BIS005/06	92	92	63	53	51	64	45	38	31	47	48		48	52	49.1	45 (43)
BIS005/07	100	100	60	57	45	55	39	36	31	42	49	46	54	45	46.6	41
BIS005/08	83	83	62		48	64	53		42	48	59	51	61	49	53.7	44 (47)
BIS005/09	83	83	58	52	54	60	43		53	44	44		53	42	50.3	44
BIS005/11	100	100	65	56	47	48	41	32	37	45	48	32	61	41	46.1	41
BIS005/13	92	92	52	54	38	44	36	27	23	37	26	41		44	38.4	34
IS005/01	92	92	61	57	45	49	42	34	28	34	46		79	54	48.1	42
BIS005/04	100	100	52	46	42	27	31	28	28	34	33	32	45	38	36.3	32
BIS005/05	100	100	46	47	30	30	26	19	20	26	31	32	39	32	31.5	28
BIS005/01	100	100	38	38	32	32	21	18	22	30	28	27	41	33	30.0	26
IS005/03	100	100	44	46	29	27	21	16	17	21	25	26	39	32	28.6	25
BIS005/10	92	92	41	43	27	28	21	18	16	26		27	40	33	29.1	26

	Valid data capture for monitoring period % a	capture		Annual Mean NO ₂												
Site ID				Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data ^c	Annual mean – bias adjusted
BIS005/12	100	100	52	45	34	31	26	23	15	25	25	28	37	35	31.3	28
IS005/02	92	92	41	41	28		22	17	19	24	24	26	65	34	31.0	27
BIS005/14	100	100	51	40	29	28	23	17	21	25	27	28	28	34	29.3	26
BIS005/15	100	100	35	43	27	28	23	20	20	25	27	26	38	39	29.3	26
IS005/04	100	100	49	37	30	35	23	20	19	24	31	29	36	34	30.6	27

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

Appendix C School Monitoring Results

In order to get a better idea of pollution levels outside schools we put diffusion tubes up on roads outside the entrance to every school in the borough in 2018, as well as some additional monitors in playgrounds and classrooms. These monitors provide a figure on average nitrogen dioxide levels outside the school over the year.

These results are useful as an indication of pollution at each school but it is worth noting that they are monitoring in most cases just one point outside a school and that pollution can vary from year to year, due to a range of outside factors, for example with changes in weather.

^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 L. School Annual Mean NO₂ Ratified and Bias-adjusted Monitoring Results (μg m⁻³)

Site ID	Site name	Х	Υ	Valid data capture 2019 %	Annual Mean NO ₂		
Site ID	Site name	^	I	b	2018 ^c	2019°	
S1	Duncombe Primary School – playground	530141	187012	100	29	25	
S2	Duncombe Primary School – outside school	530108	186995	100	29	26	
S3	Hungerford Primary School / The Bridge Primary	529992	185015	100	33	30	
S4	Tufnell Park Primary School – outside old school entrance Dalmeny Road	529800	185647	100	29	25	
S5	Ambler Primary School- playground	531688	186578	83	30	28	
S6	Ambler Primary School outside school Blackstock Road	531690	186589	92	33	41	
S7	New North Academy	532209	183959	92	30	28	
S8	St Joseph's Primary School outside school	528974	187139	100	34	34	
S9	Drayton Park Primary School- Arvon Road entrance	531449	185374	92	30	29	
S10	Gillespie Primary School outside school	531805	186305	100	30	28	
S11	Yerbury Primary School	529715	186316	100	40	28	
S12	Ashmount Primary School 2- Hornsey Rise Gardens	530030	187715	83	26	24	

S13	Prior Weston Primary School/ Richard Cloudesley Primary	532429	182057	100	35	31
S14	Whitehall Park School	529425	187621	100	42	42
S15	Hargrave Park Primary School	529067	186619	92	27	28
S16	Clerkenwell Parochial CE Primary School – outside school	531193	182772	92	33	33
S17	Hugh Myddelton School	531477	182640	92	35	32
S18	Moreland Primary School / City of London Primary Academy	531924	182824	67	32	34
S19	St Peter & St Paul Catholic Primary School	531830	182395	100	32	34
S20	St Luke's CE Primary School – outside school	532459	182593	100	31	29
S21	St Luke's CE Primary School – in playground	532478	182550	92	25	26
S22	Robert Blair Primary School	530315	184567	100	37	34
S23	Sacred Heart Catholic Primary School	530927	185147	83	32	30
S24	St Mary Magdalene Academy – outside school Lough Road / New River College	531037	184761	100	27	28
S25	Laycock Primary School	531533	184564	100	30	28
S26	Thornhill Primary School	531205	184130	100	29	27
S27	St Andrew's (Barnsbury) C of E Primary School	530817	183837	100	26	25

S28	Vittoria Primary School	530965	183484	92	25	26
	<u> </u>				_	-
S29	Blessed Sacrament Catholic School	530581	183657	100	28	30
S30	Copenhagen Primary School	530544	183579	100	30	29
S31	Winton Primary School	530610	183178	92	32	30
S32	Christ the King Primary School / Arts and Media School Islington	530731	186939	92	29	24
S33	St Mark's CE Primary School	530414	186619	100	26	28
S34	Pooles Park Primary School	530988	186813	100	34	29
S35	Montem Primary School/ Samuel Rhodes Primary School	530731	186327	92	40	34
S36	Grafton Primary School	530495	186164	100	31	30
S37	Pakeman Primary School	530789	186100	100	33	27
S38	St John's Highbury Vale C of E Primary	531788	186057	100	29	25
S39	St Joan of Arc Primary School	532040	185930	100	28	26
S40	Highbury Quadrant Primary School	532366	185588	92	30	29
S41	Newington Green Primary School - outside school	532996	185431	92	35	33
S42	St Jude and St Paul's C of E Primary School	533309	185006	92	28	26
S43	Canonbury Primary School	531757	184585	75	35	31
S44	William Tyndale Primary School	531652	184313	100	34	30

S45	St Mary's C of E Primary School	531906	183993	100	31	28
S46	Rotherfield Primary School	532468	184012	92	29	30
S47	St John Evangelist RC Primary School	531588	183335	92	31	32
S48	Hanover Primary School	532017	183287	92	33	30
S49	Ambler Primary School Nursery Entrance Romily Road	531632	186489	100	30	26
S50	Ashmount Primary School 1 Crouch Hill	530291	187808	92	32	33
S51	Drayton Park Primary School- Drayton Park entrance	531406	185373	92	30	32
S52	Tufnell Park Primary School- playground	529738	185633	100	24	24
S53	Newington Green Primary- playground	532971	185360	100	28	26
S54	St Mary Magdalene Academy - playground	531014	184811	100	31	25
S55	Clerkenwell Parochial C of E Primary School classroom	531188	182760	92	24	17
S56	The Bridge Secondary School / Tufnell Park Primary School new entrance	529751	185551	100	33	27
S57	Beacon High	529828	185428	83	34	27
S59	Dania School	530887	184860	100	32	29
S60	Samuel Rhodes MLD School	532128	185109	100	36	31
S61	St Paul's Steiner School	532710	184815	92	37	39
S62	The Children's House School	533251	185076	100	34	35

S63	Highbury Fields School	531760	185499	100	37	32
S64	City of London Academy Highbury Grove	531985	185083	100	41	39
S65	North Bridge House Senior Canonbury	531985	184551	92	37	30
S66	Dallington School	531877	182328	100	37	28
S67	Italia Conti Academy	532089	182080	100	41	45
S69	The Gower School/ The Pears Family School	530972	183154	100	35	33
S70	Elizabeth Garrett Anderson School	530973	183197	100	37	35
S71	City of London Academy Islington/ Richard Cloudesley Secondary	532083	183594	100	34	31
S72	City of London Academy Highgate Hill	529745	187171	100	30	28
S73	St Aloysius College	529058	187343	100	34	37
S74	St Mary Magdalene Academy Liverpool Road	531204	184844	100	No data	36
LEN 15	Central Foundation School	532914	182374	58	34	38
Z16	St John's Upper Holloway C of E Primary School	529546	186501	92	33	32

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

^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 bias adjusted, and if valid data capture is less than 75% "annualised" in accordance with LLAQM Technical Guidance