Southwark Air Quality Annual Status Report 2017

May 2018

This report provides an overview of air quality in Southwark during 2017 and also lists progress with regard to the Air Quality Action Plan. It has been produced to meet the requirements of the London Local Air Quality Management statutory process[1].

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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

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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 microns in diameter
$PM_{2.5}$	Particulate Matter less than 2.5 microns 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 Enacted[2]
Nitrogen Dioxide - NO_2	200 $\mu g.m^{-3}$ not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
	40 $\mu g.m^{-3}$	Annual mean	31 Dec 2005
Particulate Matter - PM_{10}	50 $\mu g.m^{-3}$ not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 $\mu g\ m^{-3}$	Annual mean	31 Dec 2004
Particulate Matter - $PM_{2.5}$	25 $\mu g.m^{-3}$	Annual mean	2020
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020
Sulphur Dioxide - SO_2	266 $\mu g.m^{-3}$ not to be exceeded more than 35 times a year	15 minute mean	31 Dec 2005
	350 $\mu g.m^{-3}$ not to be exceeded more than 24 times a year	1 hour mean	31 Dec 2004
	125 $\mu g.m^{-3}$ not to be exceeded more than 3 times a year	24 hour mean	31 Dec 2004

[2] Note: Date by which to be achieved by and maintained thereafter.

1. Air Quality Monitoring

Within Southwark there are two continuous air quality monitoring stations. In 2017 these were supplemented by 66 Nitrogen Dioxide diffusion tubes throughout the Borough. During 2017 the number of diffusion tube sites reduced from 86 to 66 due to the completion of the MAQF funded air quality improvement projects and completion of monitoring to assess the impact of the closure of the Tower Bridge on air quality in Autumn 2016.

1.1 Locations

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

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
SWK 5	Old Kent Road	534844	177515	Roadside	Yes	1	5	2.0	NO_x, NO_2 & PM_{10}	Chemiluminescence and FDMS TEOM
SWK 6	Elephant and Castle	531884	178835	Urban background	Yes	10	35	3.5	NO_x, NO_2, O_3 & PM_{10}	Chemiluminescence, UV Absorption & TEOM

Table C Details of Non-Automatic Monitoring Sites for 2017

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (m)	Affixed height (m)	Pollutants monitored	Tube co-located with an automatic monitor?
SDT 1	AQMS Old Kent Road - Tube 1	534849	177512	Roadside	Yes	1	5	2.5	NO_2	Yes
SDT 2	AQMS Old Kent Road - Tube 2	534849	177512	Roadside	Yes	1	5	2.5	NO_2	Yes
SDT 3	AQMS Old Kent Road - Tube 3	534849	177512	Roadside	Yes	1	5	2.5	NO_2	Yes
SDT 4	Rotherhithe Old Road SE16	535675	178796	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 5	Drummond Road SE16	534640	179336	Kerbside	Yes	6	0.5	2.5	NO_2	No
SDT 6	Adjacent to 168 Queens Road SE15	535253	176679	Kerbside	Yes	14	0.5	2.5	NO_2	No
SDT 7	Adjacent to 167A Rye Lane SE5	534333	176155	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 8	Dunstans Road	534553	174263	Kerbside	Yes	8	0.5	2.5	NO_2	No
SDT 9	Dulwich Common	533473	173205	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 10	Adjacent to 2 Village Way SE21	532940	174392	Kerbside	Yes	13	0.5	2.5	NO_2	No
SDT 11	Adjacent to 11 Camberwell Church Street SE5	532663	176740	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 12	AQMS Elephant & Castle - Tube 1	531882	178834	Urban background	Yes	10	35	2.5	NO_2	Yes
SDT 13	AQMS Elephant & Castle - Tube 2	531882	178834	Urban background	Yes	10	35	2.5	NO_2	Yes
SDT 14	AQMS Elephant & Castle - Tube 3	531882	178834	Urban background	Yes	10	35	2.5	NO_2	Yes
SDT 15	Blackfriars Road SE1	531641	180290	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 18	Tower Bridge Approach Tower Bridge Road	533599	180062	Roadside	Yes	3	0.5	2.5	NO_2	No

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 (m)	Affixed height (m)	Pollutants monitored	Tube co-located with an automatic monitor?
SDT 20	Tower Bridge School fence Tower Bridge Road	533518	179844	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 24	Opposite Papa John's Tower bridge Road	533444	179620	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 29	Opposite Haddon Hall Tower Bridge Road	533108	179117	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 31	Bricklayers Arms West	532938	179043	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 37	Wansey Street Lamppost north Reference (1068 / 09)	532340	178711	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 38	Walworth Road opposite junction to Elephant Road west	532074	178825	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 39	New Kent Road Lamppost 3 north (Metro Central)	532053	179070	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 41	New Kent Road Lamppost 29 north side (Rodney Place)	532390	178974	Kerbside	Yes	20	0.5	2.5	NO_2	No
SDT 42	St Peters Hills Primary School	536047	180343	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 48	Adjacent to Beechwood Court 3 Crystal Palace Parade	535514	178708	Kerbside	No	20	0.5	2.5	NO_2	No
SDT 49	Lamppost 129 / 08 Lynton Road west	533873	178592	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 52	Kingsdale Foundation School Alleyn Park SE22	533150	172123	Kerbside	No	10	0.5	2.5	NO_2	No
SDT 54	Camberwell Grove	532951	176417	Kerbside	Yes	10	0.5	2.5	NO_2	No

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 (m)	Affixed height (m)	Pollutants monitored	Tube co-located with an automatic monitor?
SDT 55	Lamppost 11A St Georges Way South	533350	177603	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 57	Notre Dame School	531531	179256	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 61	Junction of Brunel Road and Rupack Street	535176	179665	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 66	Adjacent to Prince of Orange Lower Road	535384	179161	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 77	Adjacent to steps to Park St Southwark Bridge Rd	532294	180406	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 81	Lamppost No 02 Borough High Street	532690	180212	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 82	Lamppost no 01 Adjacent to 125 Borough High St	532572	180029	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 84	Little Dorritt Park Entrance Lamppost No 8	532487	179850	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 87	Lamppost (0139 – 43) 188A Lower Road	535795	178828	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 88	Lamppost 52 Jamaica Road	534457	179454	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 89	School Fence St James' CoE Primary School Jamaica Road	534241	179435	Roadside	Yes	0.5	2	2.5	NO_2	No
SDT 90	Lamppost Adjacent to 375 Old Kent Road	533800	178220	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 91	Lamppost adjacent to 221 Old Kent Road	533379	178556	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 92	School Fence Ilderton Road SE16	535222	178032	Roadside	Yes	0.5	2	2.5	NO_2	No
SDT 93	Lamppost No 9 adjacent to 14 Hanover Park	534243	176558	Roadside	Yes	2	0.5	2.5	NO_2	No
SDT 94	Post adjacent to 88A Peckham High Street	534200	176736	Roadside	Yes	2	0.5	2.5	NO_2	No
SDT 95	Court Lane	533700	173892	Kerbside	Yes	2	0.5	2.5	NO_2	No

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 (m)	Affixed height (m)	Pollutants monitored	Tube co-located with an automatic monitor?
SDT 96	Lamppost adjacent to 201 Rye Lane	534371	176079	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 97	Barry Road	533940	173998	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 98	South Circular Road Junction with Underhill Road	534503	173251	Kerbside	No	9	0.5	2.5	NO_2	No
SDT 99	Etherow Street	534010	174018	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 100	Post adjacent to 1d Calton Avenue	533159	174191	Kerbside	Yes	2	0.5	2.5	NO_2	No
SDT 101	Lamppost 307 - 19 Adjacent to 91 Herne Hill	532303	174756	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 102	Lamppost No 1 De Crespigny Park	532599	176277	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 103	Lamppost 369 - 7 Coldharbour Lane	532471	176388	Kerbside	Yes	15	0.5	2.5	NO_2	No
SDT 104	Lamppost (08) Newington Causeway	531835	178686	Kerbside	Yes	15	0.5	2.5	NO_2	No
SDT 105	Lamppost adjacent to entrance of Oliver Goldsmith School Southampton Way	533592	176851	Kerbside	Yes	0.5	0.5	2.5	NO_2	No
SDT 106	Post adjacent to 80 Camberwell Road	532409	177597	Kerbside	Yes	18	0.5	2.5	NO_2	No
SDT 107	Lamppost 1045 - 45 adjacent to 351 Walworth Road	532426	178051	Kerbside	Yes	10	0.5	2.5	NO_2	No
SDT 108	Borough High Street / Harper Road Junction (255 - 14)	532262	179462	Kerbside	Yes	6	0.5	2.5	NO_2	No

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 (m)	Affixed height (m)	Pollutants monitored	Tube co-located with an automatic monitor?
SDT 109	Harper Road / Falmouth Road Junction Lamppost (255 - 14)	532460	179229	Kerbside	Yes	7	0.5	2.5	NO_2	No
SDT 110	Globe Academy School Harper Road Lamppost 1422 - 06	532496	179101	Kerbside	Yes	15	0.5	2.5	NO_2	No
SDT 111	Lamppost 31A - 239 Walworth Road	532294	178354	Kerbside	Yes	5	0.5	2.5	NO_2	No
SDT 112	Adjacent to 3 West Square on Parking Sign	531621	179112	Kerbside	Yes	3	0.5	2.5	NO_2	No
SDT 113	Lamppost adjacent to 43 Westminster Bridge Road	531481	179421	Kerbside	Yes	7	0.5	2.5	NO_2	No
SDT 114	Lamppost No 1 Goose Green / East Dulwich Road	533799	175324	Kerbside	Yes	10	0.5	2.5	NO_2	No

1.2 Comparison of Monitoring Results with AQOs

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

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

Site ID	Site type	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean Concentration ($\mu g.m^{-3}$)						
				2011	2012	2013	2014	2015	2016	2017
SWK5	Roadside	97	97	**46** (73%)	**52** (80%)	**55** (>90%)	38 (32%)	**42** (69%)	**53** (80%)	**42**
SWK6	Urban Background	97	97	N/A	N/A	**42** (85%)	37 (84%)	**41**(80%)	39 (90%)	34

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

Any NO_2 annual mean in excess of 60 $\mu g.m^{-3}$, indicating a potential exceedance of the NO_2 hourly mean AQS objective limit, would be shown in **bold** and **underlined**.

The above data shows that at the site on the Old Kent Road, the annual mean concentration has exceeded the objective of 40$\mu g.m^{-3}$ every year, except 2014, since its installation in 2011.

The data also shows that the annual mean concentration at the Elephant & Castle site is under the NO_2 objective this year. This fall is probably due to a combination of the reduction in the number of active construction sites in the locality and highway changes that resulted in the roadside kerb moving 10m further away from the monitoring station due to the installation of cycle ways. This site is now compliant with the NO_2 objective.

Neither site breached the 60 $\mu g.m^{-3}$ level to indicate a potential exceedance of the NO_2 hourly mean AQS objective limit in 2017

The data trends from the monitoring stations in Southwark can be seen in Figure 1 on the next page.

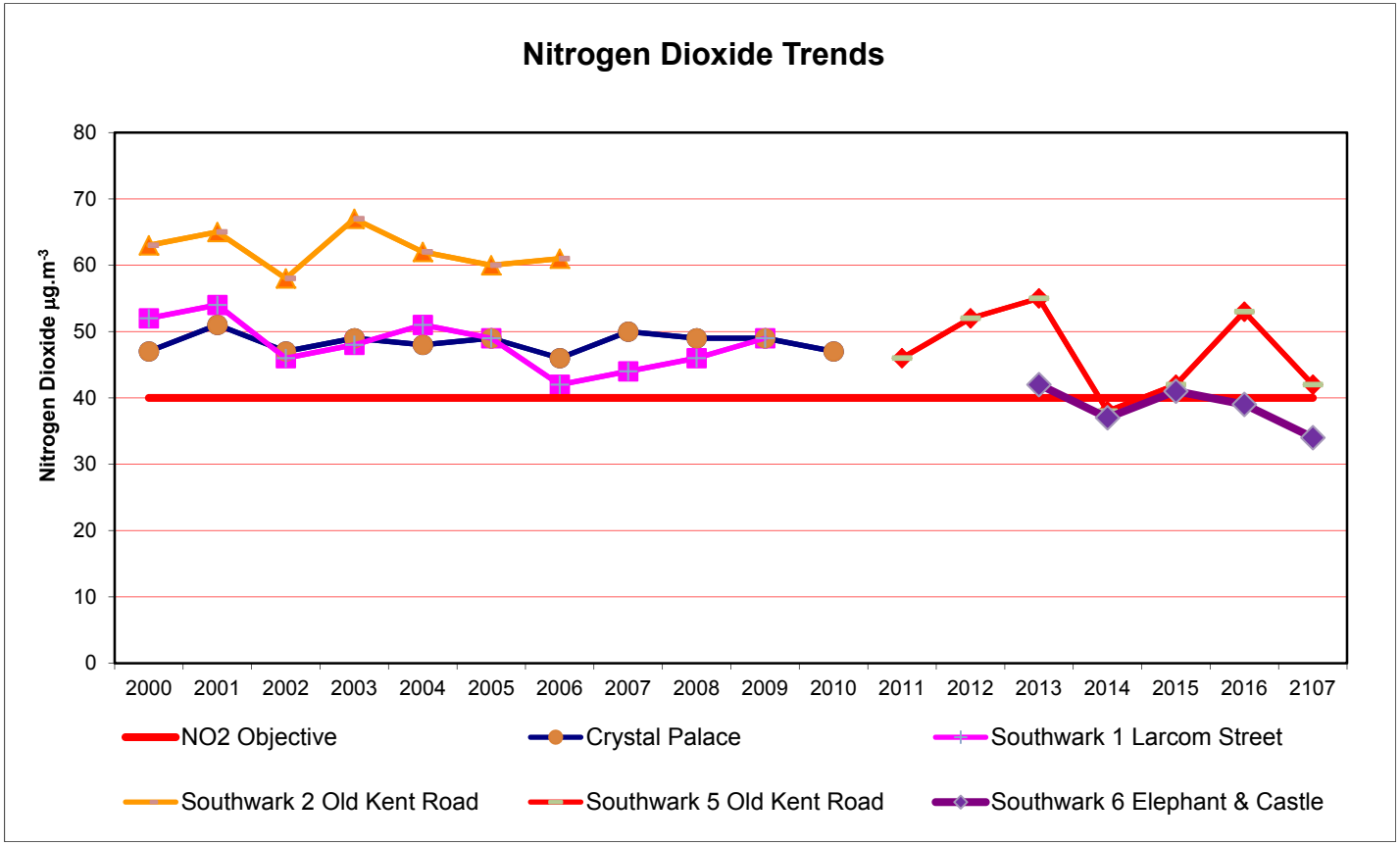

Figure 1 **Trends in Annual Mean NO2 Concentrations Measured at the Borough's Automatic Monitoring Sites**

Figure 2, on the next page, shows the mean results from all roadside and background monitoring stations within the London Air Quality Network[3]. The trend for the background sites shows a gradual reduction to below the objective. However, the trend for roadside locations is not noticeably reducing and they universally exceed the NO_2 objective.

[3] London Datastore - London Average Air Quality Levels accessed at http://data.london.gov.uk/dataset/london-average-air-quality-levels

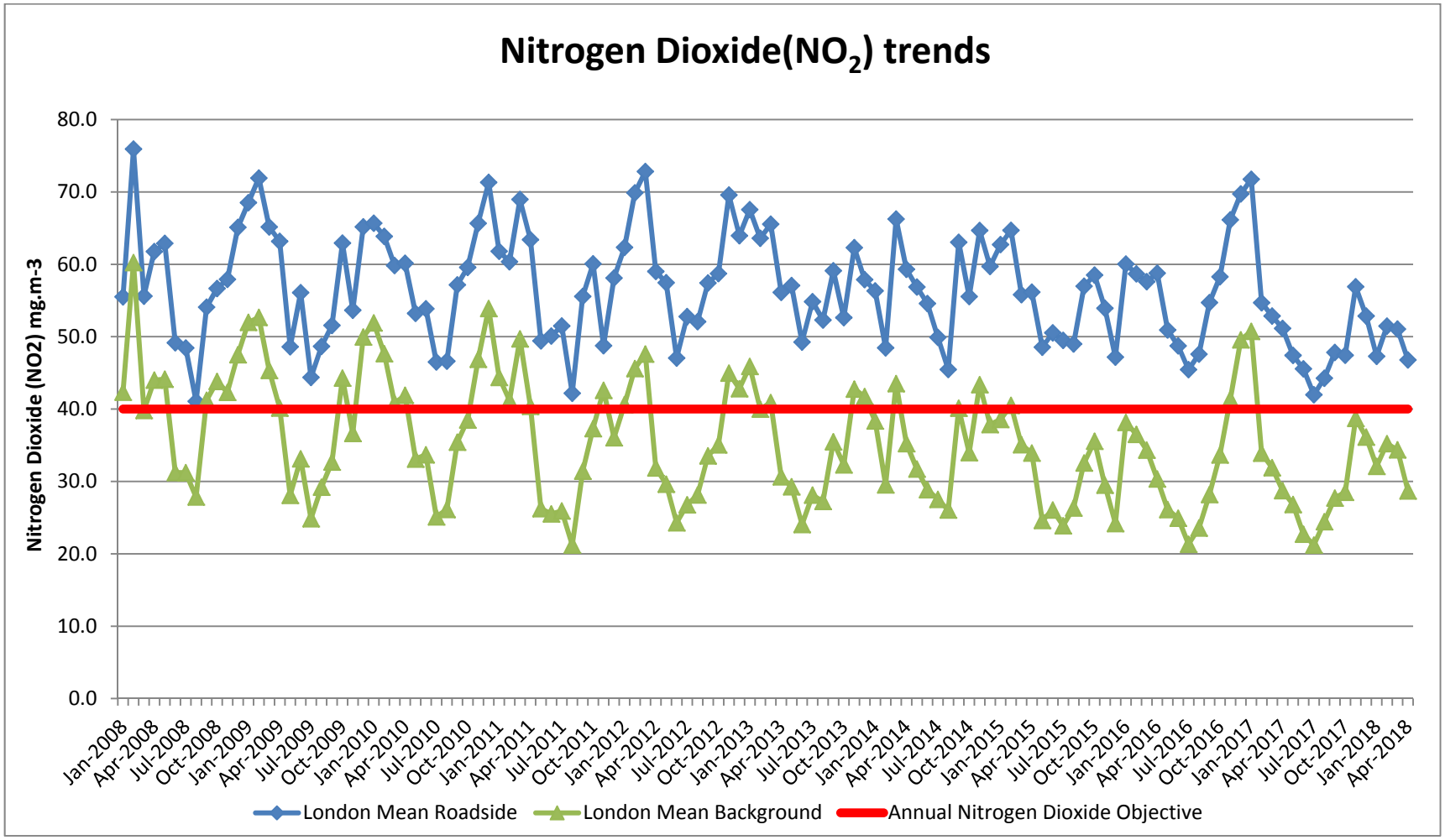

Figure 2 **Trends of the Monthly Mean NO_2 Concentrations at Roadside and Background Sites in the London Area**
(Source GLA accessed at http://data.london.gov.uk/dataset/london-average-air-quality-levels)

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

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Number of hourly means measured > 200 µg.m^{-3}						
			2011	2012	2013	2014	2015	2016	2017
SWK5	97	97	10 (73%)	6 (80%)	4 (>90%)	1 (32%)	1 (69%)	1 (80%)	0
SWK6	97	97	N/A	N/A	0 (85%)	0 (84%)	0 (80%)	0 (90%)	0

Note: Any exceedance of the NO_2 short term AQO of 200µg.m^{-3} (over the 18 days per year permitted) would be shown in **bold**.

In Southwark, in 2017, the number of exceedances of the hourly mean >200µg.m^{-3} objective permitted have not exceeded 18, thus meet the AQO.

Since 2011 the number of exceedances being recorded at roadside have been reducing.

Table F **Long term NO_2 Diffusion Tube Monitor Results in the Borough ($\mu g.m^{-3}$)**

Site ID	2012	2013	2014	2015	2016	2017
SDT 1 - 3	**50.0**	**56.7**	**57.6**	**48.1**	**47.0**	**42.0**
SDT 4	**52.3**	**61.9**	**63.5**	**57.2**	**54.6**	**47.6**
SDT 5	35.6	38.4	38.2	35.8	34.1	29.3
SDT 6	**48.6**	**51.6**	**54.3**	**49.7**	**42.9**	**42.0**
SDT 7	**51.3**	**57.0**	**61.5**	**52.5**	**44.3**	**41.7**
SDT 8	32.6	37.0	33.8	31.6	31.1	27.9
SDT 9	**45.6**	**50.5**	**54.0**	**47.0**	**44.8**	**41.2**
SDT 10	33.6	36.6	34.9	33.7	30.1	28.0
SDT 11	**72.0**	**80.1**	**78.1**	**70.4**	**60.0**	**55.1**
SDT 12 - 14	**50.7**	**66.3**	**70.6**	**65.7**	**58.9**	**44.7**
SDT 15	**57.2**	**66.0**	**66.4**	**57.3**	**63.5**	**53.0**

Note: The results in **bold** are where exceedances of the NO_2 annual mean AQD of $40\mu g.m^{-3}$ have been monitored.
The results in **bold** and **underlined** are where NO_2 annual means in excess of $60\mu g.m^{-3}$ have been monitored, indicating potential exceedance of the NO_2 hourly mean objective limit.

Table F above contains the results from the sites in Southwark where there are results for *at least 5 years*. The data has been corrected for distance to a point of relevant exposure, as described in the LLAQM Technical Guidance TG (16). The results at each site have varied due to weather and local conditions, but, the overall assessment is there are many locations that have exceeded the objective value continuously, and compared to previous years there are more locations that are just above the objective as overall measured levels continue to slowly reduce.

Over recent years the NO_2 diffusion tube survey was significantly extended to increase the spatial distribution of monitoring locations across the borough and to evaluate air quality project work. The results of the expanded survey will be included in this table in future years when 5 years data has been gathered at those locations. The expanded survey ensures all the GLA Air Quality Focus Areas in Southwark are being monitored.

Table G **Annual Mean PM_{10} Automatic Monitoring Results ($\mu g.m^{-3}$)**

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean Concentration ($\mu g.m^{-3}$)						
			2011	2012	2013	2014	2015	2016	2017
SWK5	91	91	27 (80%)	25 (82%)	30 (85%)	23 (32%)	21 (60%)	24 (94%)	22
SWK6	99	99	N/A	N/A	23 (80%)	19 (>90%)	20 (77%)	26 (79%)	19

Note: Any exceedance of the PM_{10} annual mean AQO of 40μgm^{-3} would be shown in **bold**.

The PM_{10} annual mean concentrations have met the national air quality objective. There has been a slight upward trend of the PM_{10} annual mean concentrations over the previous three years, but this year monitored levels have fallen as can be seen in Figure 3.

The trends for the entire London Air Quality Network roadside and background monitoring stations can be seen in Figure 4 and these also show that current concentrations are well below the objective limit for both roadside and background monitors.

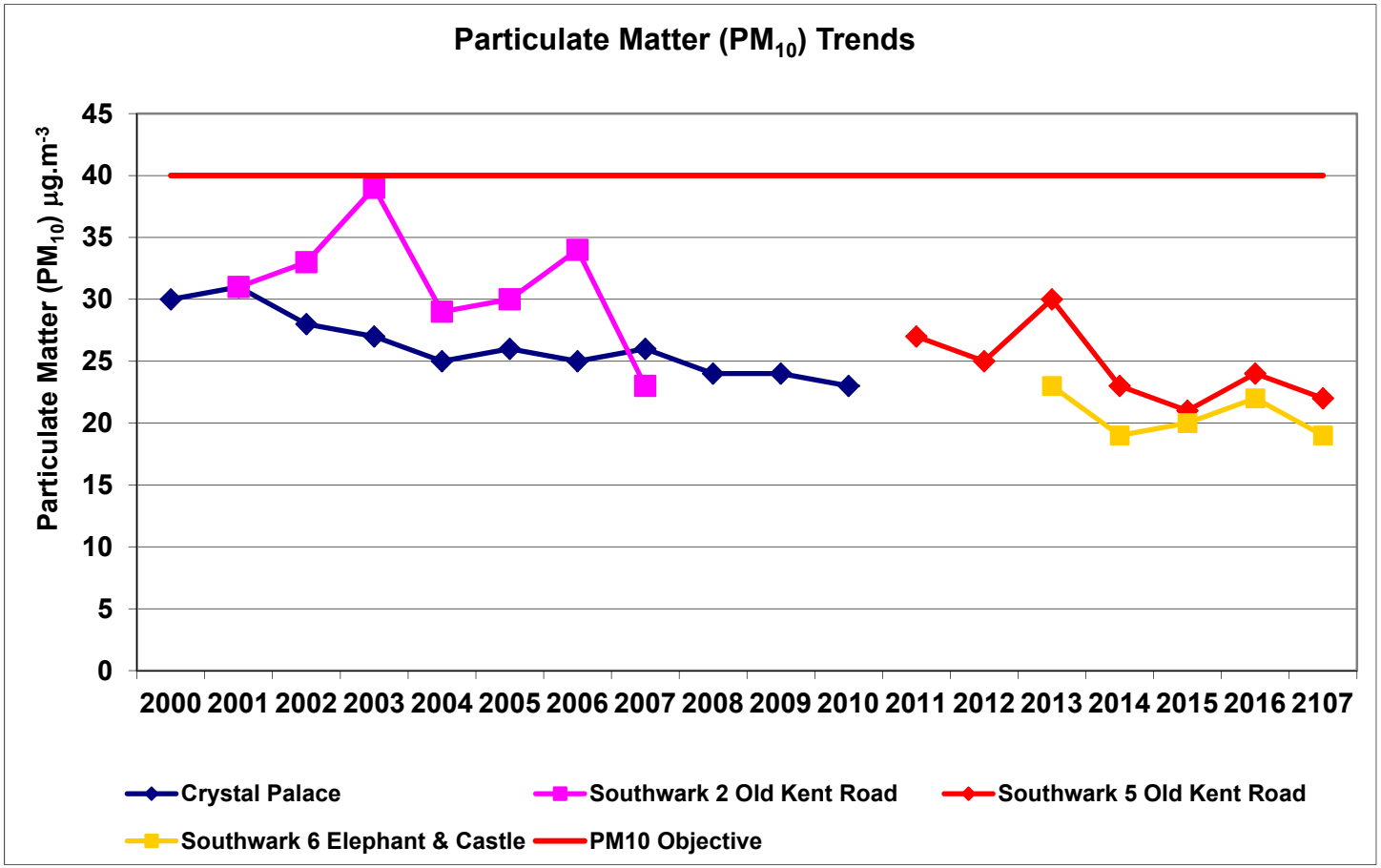

Figure 3 **Trends in Annual Mean PM_{10} Concentrations of the Authority's PM_{10} monitoring stations**

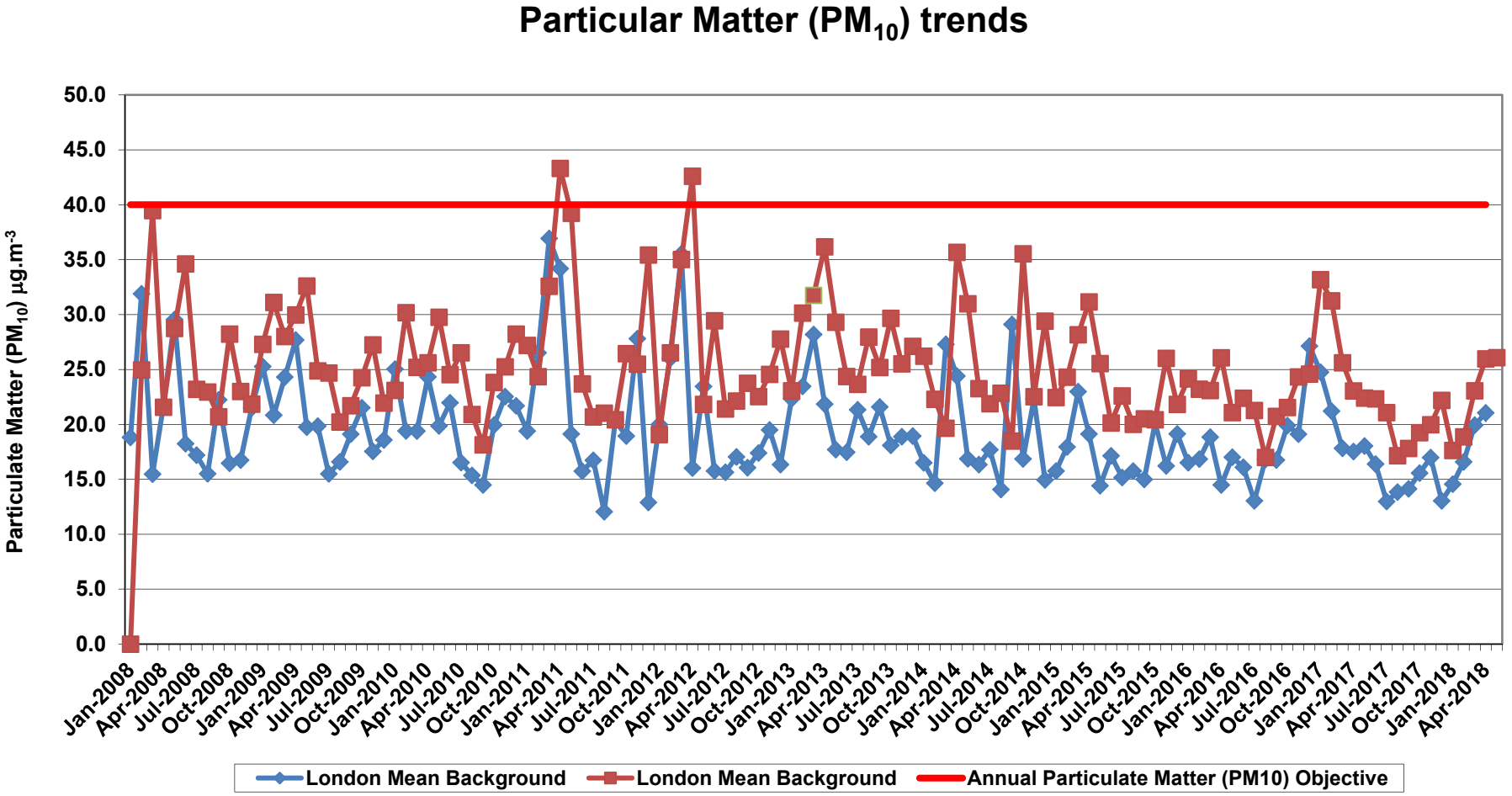

Figure 4 **Trends of the monthly mean Particulate Matter (PM_{10}) concentrations at roadside and background sites in the London area** (Source GLA accessed at http://data.london.gov.uk/dataset/london-average-air-quality-levels)

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

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Number of Daily Means > 50 µg.m^{-3}						
			2011	2012	2013	2014	2015	2016	2017
SWK5	93	93	31 (80%)	19 (82%)	30(85%)	10 (32%)	4 (60%)	18 (94%)	19
SWK6	99	99	N/A	N/A	3 (80%)	0 (>90%)	1 (77%)	21 (79%)	1

Note: Exceedance of the PM_{10} short term limit of 50µg.m^{-3} (over the permitted 35 days per year or where the 90.4th percentile exceeds 50µg.m^{-3}) would be shown in **bold**.

There has been no exceedance of the objective limit for PM_{10} in Southwark in 2017.

Particulate Matter ($PM_{2.5}$)

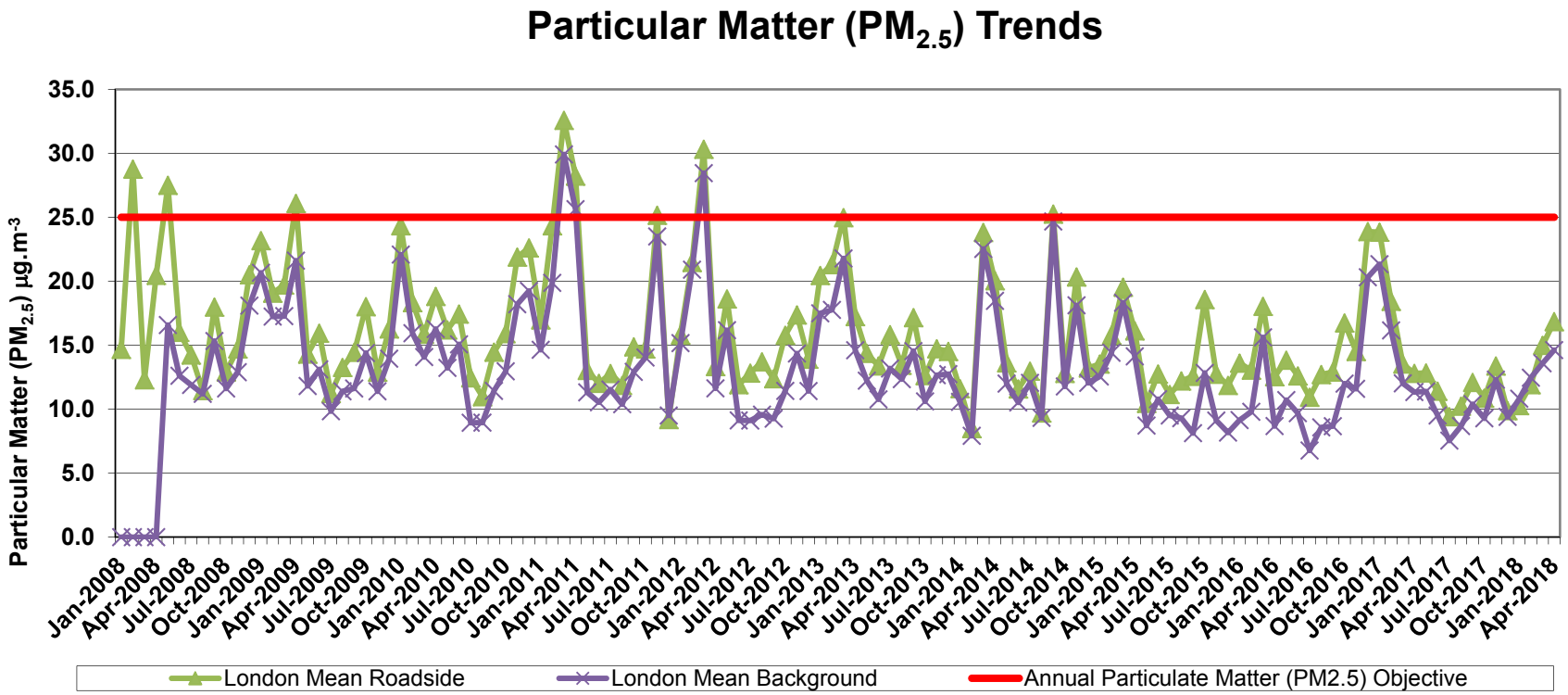

Figure 5 **Trends of the Monthly Mean Particulate Matter ($PM_{2.5}$) Concentrations at Roadside and Background Sites in the London Area**

(Source GLA accessed at http://data.london.gov.uk/dataset/london-average-air-quality-levels

Southwark does not currently monitor $PM_{2.5}$. Figure 5 shows the average concentrations of all the $PM_{2.5}$ roadside and background monitors in the London Air Quality Network. The AQO for $PM_{2.5}$ is 25µg.m^{-3} by 2020. As can be seen from the graph above average $PM_{2.5}$ is below the AQO for London and has a slow downward trend.

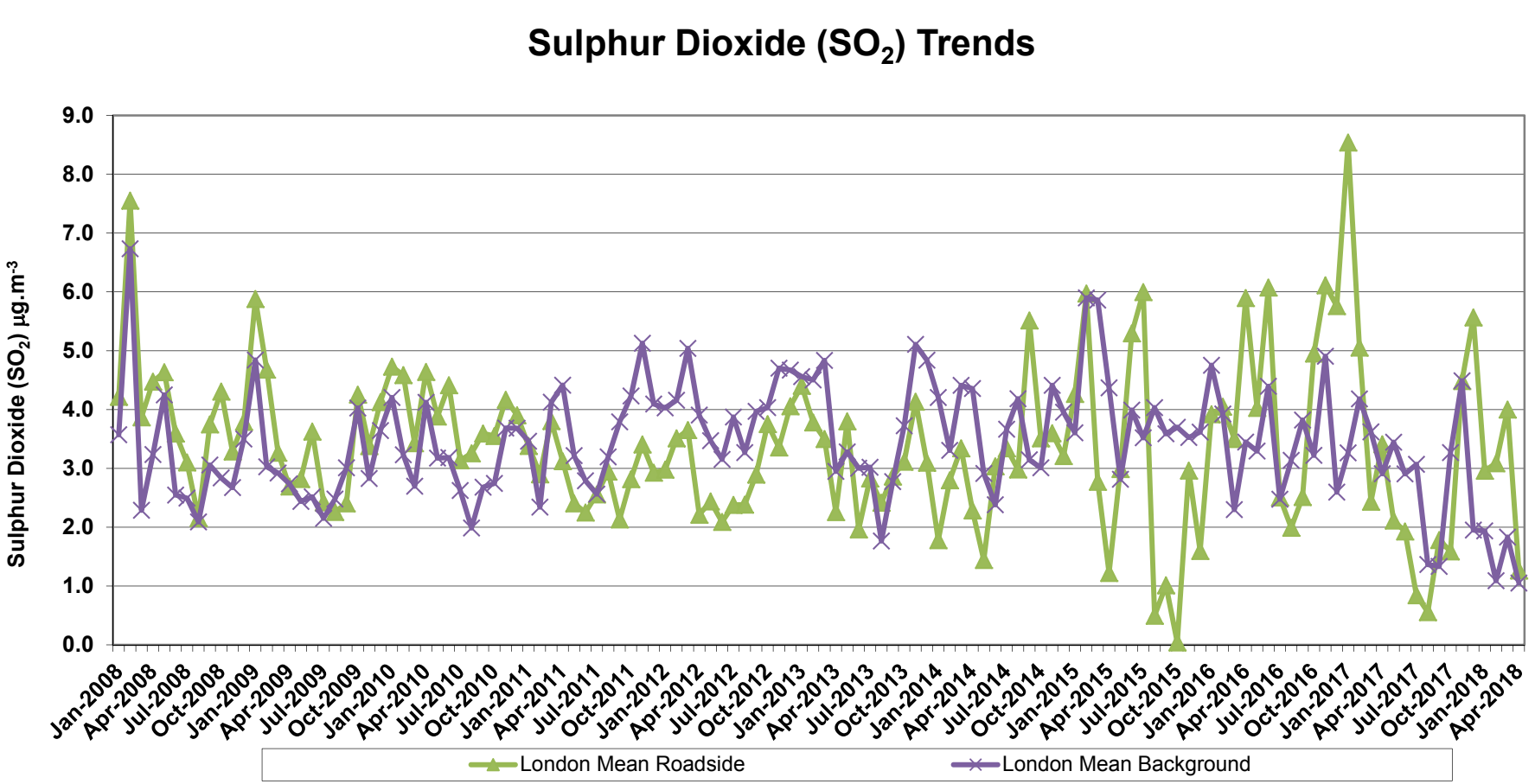

Figure 6 **Trends of the Monthly Mean Sulphur Dioxide (SO_2) Concentrations at Roadside and Background Sites in the London Area**
(Source GLA accessed at http://data.london.gov.uk/dataset/london-average-air-quality-levels)

Southwark does not monitor for SO_2. Figure 6 shows the average concentrations of all the SO_2 roadside and background monitors in the London Air Quality Network. The concentrations are well below the various objective limits. The 24 hour mean objective not to be exceeded more than 3 times a year is 125µg.m^{-3}.

2. Actions to Improve Air Quality

2.1 Air Quality Action Plan Progress

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

Table I **Delivery of Air Quality Action Plan Measures**

No.	Measure		Action	Progress	Further information
1.1	Air quality monitoring	Maintain the two continuous air quality monitoring stations	Ensure that the air quality monitoring stations at the Elephant & Castle and the Old Kent Road are maintained, serviced and calibrated to current guidance	Maintenance & calibration of the air quality monitoring stations has improved leading to improved data reliability	Met target. Currently considering potential location/s for a 3rd AQ monitoring station
1.2		Maintain the NO_2 diffusion tube survey	Ensure that the NO_2 diffusion tube monitoring is maintained in accordance with current guidance	NO_2 diffusion tube monitoring has been maintained in accordance with current guidance.	Met target
1.3				Data for the NO_2 diffusion tube monitoring is available at http://www.southwark.gov.uk/environment/air-quality/air-quality-data-monitoring-stations	Met target
1.4		Review the use of low-cost sensor technology to support air quality modelling	Support the University consortium 'Managing air for green inner cities' (MAGIC) project (London Road)	The Authority has facilitated the use of the Elephant & Castle Monitoring station to co-locate a MAGIC AQ sensor, to compare the data from the sensor and the continuous monitors. Awaiting the results of the project.	Met target. Officers also attended seminar on low-cost sensor technology in early 2018

No.	Measure		Action	Progress	Further information
1.5	London Local Air Quality Management Framework	Prepare and produce all London Local Air Quality Management Framework reports as required	All reports required by the London Local Air Quality Management Framework produced and submitted	This report to be submitted by the Framework deadline of 31st May 2018	Met target
1.6		Respond to all appropriate air quality consultations	Review all air quality consultation requests and respond where appropriate	During the year, the EPT received 18 air quality consultations, reviewed 100%, and responded to 16. The 2 with no response were where we had no comments	Met target, list of consultations can be in Appendix C of this report
1.7		Ensure the air quality action plan is current	Review the local air quality action plan to ensure it is up to date	The local air quality action has been reviewed and potential new measures for consideration are listed in section 2.2 of this report.	Met target
1.8		Have a communication plan for relevant air quality improvement actions	Devise an air quality communication plan	An annual air quality communication plan has been devised	Met target
1.9		Support the Mayor of London's call for a government scrappage scheme for private diesel vehicle	3 Public statement/s of support from Cabinet Member	1 Statement supporting the Mayor of London call for scrappage scheme can be found at http://www.southwark.gov.uk/environment/air-quality/strategies-plans-letters-and-reports	Partially met target
1.10	London Local Air Quality Management Framework	Support the Mayor of London's call that the Government should modify the Vehicle Excise Duty regime to disincentive the purchase of diesel vehicles	3 Public statement/s of support from Cabinet Member	1 Statement supporting the Mayor of London call for modifications of VED scheme can be found at http://www.southwark.gov.uk/environment/air-quality/strategies-plans-letters-and-reports	Partially met target
1.11		Support the introduction of a new or revised Clean Air Act that improves public protection from atmospheric pollution	Explore whether there is support for new or revised Clean Air Act or a new London Act with the GLA and London Councils	The Authority has explored whether there is support for a new/revised Clean Air Act via the CIEH & their work with the Health Air Coalition. Currently London Councils have not expressed unified support for a new CAA.	Met target and will continue to lobby for a new CAA

No.	Measure		Action	Progress	Further information
2.1	Local Air Quality Assessments	Ensure that Southwark Council's air quality technical guidance provides the latest advice on air quality assessment and mitigation	Devise air quality technical guidance	Air quality technical guidance produce and can be accessed at http://www.southwark.gov.uk/environment/air-quality/strategies-plans-letters-and-reports?chapter=2	Met target
2.2			Include the air quality technical guidance standards in an SPD	SPDs to be updated following the adoption of the New Southwark Plan in 2019.	N/a – target in future
2.3	Environmental Standards	Planning applications assessed to ensure that all developments will meet the requirements of the local air quality technical guidance	Assessment of all relevant planning applications with reference to the air quality technical guidance	All relevant planning applications have been assessed by EPT to ensure the developments will meet local air quality technical guidance standards	Met target
2.4	Increase the awareness of residents, businesses & visitors of the need to reduce emissions to atmosphere	Promote the reduction of total emissions to atmosphere	Public information campaign on domestic or commercial heating fuel type and fuel economy	Facebook and twitter messages sent out on the corporate accounts in autumn and at Xmas of 2017.	Met target and more substantive public campaign is planned for 2018
2.5	Low Emission Neighbourhood	Review the effectiveness of the pilot GLA funded Low Emissions Neighbourhoods projects	Review the evaluation reports from the MAQF Low Emission Neighbourhoods schemes	No evaluation reports have yet been produced and made public, a watching brief will be maintained	N/a

No.	Measure		Action	Progress	Further information
3.1	Encourage residents and those working in the borough to walk and cycle	Encourage children and parents to walk or cycle to school or nursery	Promote School Travel Plans & increase the number of schools attaining TfL STARs Silver or Gold accreditation each year	In September 2017, 63 of 104 schools in the Borough are accredited. With 32 schools being Bronze, 14 schools being Silver and 14 schools being Gold	Target is on course to be met in July 2018
3.2				During the summer of 2017, the School Travel Plan team drew up a set of guidelines for schools to achieve accreditation and also to help toward improving overall air quality in London	Met target. The Sustainable Travel team also produced "Get Fit, Don't Sit" walking maps for 12 schools in the Borough. An example can be seen on the back cover of this report
3.3		Encourage Southwark staff to commute by walking or cycling	Promote the Authority's Travel Plan.	No progress on this action	Did not meet target
3.4			Provide greater access to cycles for staff	Review of the Cycling provision has taken place at the Authority's main buildings and the showers have refurbished, sufficient provision for cyclists is in place at present	In progress toward target. The Sustainability Team has a target to increase cycling parking to 150% of the current number of cyclists for each council building to meet the Authority's Green Building Target for 2018
3.5					
3.6		Encourage employees of businesses in Southwark to commute by foot or cycle	Encourage employees of businesses in Southwark walk or cycle through the promotion of business specific travel plans	Supported by Southwark, Better Bankside and Team London Bridge have been working with businesses around London Bridge, Borough High Street and Borough Market to produce business specific travel plans	Met target
3.7		Encourage residents to walk or cycle in the Borough	Promote active travel through relevant public health work streams and services including physical activity and healthy weight	Continued incorporation of opportunities for active travel in newly developed/ & refreshed strategies, including the physical activity & sport strategy and the wellbeing strategy Active travel is included in internal and external campaigns plans The recently published active travel JSNA has been used to inform local decision-making Dockless cycle hire is available throughout the borough working with Ofo and Mobike	Met target & will continue work to increase active travel within Southwark

No.	Measure		Action	Progress	Further information
3.8	Increase public awareness of air quality forecasting and information on avoidance of high levels of pollutants	Public aware of how to access AirText, CityAir and Walkit apps	Promotion of availability of AirText, CityAir and Walkit apps	The promotion of AirText, CityAir and Walkit apps on the air quality webpages at http://www.southwark.gov.uk/environment/air-quality/protecting-yourself-from-poor-air-quality, is promoted via all related social and other media campaigns. Also a standard paragraph containing the links is added to all written responses to air quality related queries	Met target. Measure to be kept under review
3.9	Evidence based policy	Ensure action to tackle the health impact where air quality information is intelligence led and evidence based	Provide public health advice and guidance on the health impacts of air quality and any mitigating actions	Air quality has been made a local public health priority. The air quality JSNA is complete and its recommendations made	Met target & will continue to review new advice/guidance/evidence as it emerges
3.10	Web information on air quality	Southwark website content has comprehensive information and appropriate guidance on air quality	Ensure web-based information is accurate and up to date	The website has been reviewed and updated. Suggestions from users have been considered and if appropriate incorporated on the website	Met target & will review air quality web pages annually moving forward. Measure to be kept under review
3.11	Increase awareness of air quality issues	Public and businesses aware of the impact of their actions on air quality	Communication campaign on personal or business behaviour change to improve air quality	Completed London Bridge and Shad Thames Delivery and Servicing Strategies. Shad Thames DS Partnership to encourage a more coordinated and consistent approach within Shad Thames.	Met target
3.12		Provide general public with advice on what they can do to improve air quality	Prepare guidance for general public on what they can do to improve air quality	Active travel/ use click & collect/ shop local campaigns completed in summer 2017. (#cyclehappy & #onething)	Met target. A further campaign is planned for Summer 2018
3.13		Notify all 5 Community Councils of revised Air Quality Strategy 2017 – 2022	Present new Air Quality Strategy 2017 – 2022 at Community Councils	All the Community Councils were notified of the new AQAP and offered a presentation. Two of the five Community Councils (Nunhead and Bermondsey) received a presentation.	Met target

No.	Measure		Action	Progress	Further information
3.14	Protect health vulnerable groups including children, the ill and the elderly from poor air quality	Ensure those advising people in poor respiratory health have advice on reducing personal exposure to atmospheric pollutants	Work with clinicians via Breathlessness Group of CCG to ensure GPs have access to appropriate prompts, advice and information for use in GP surgery consultations	We are in contact with a local GP responsible for 'Breathlessness' for the CCG and have organised engagement with other NHS partners through the Health & Well-being Board	Met target. The Air Quality JSNA will be presented to the Nurses Forum, along with an interactive session to help them identify their contribution to supporting vulnerable groups. We have prepared information leaflets on occupational respiratory stressors, condensation & mould and domestic air quality for the medical profession's support database/library (started in 2017 & completed in 2018)
3.15		Provide advice to schools and nurseries with regard to improving air quality in and around their premises and on how to avoid high pollution environments	Devise advice to schools on air quality	Developed guidance for schools on air quality which was disseminated and placed on our website in 2017	Met target. Plan to review the guidance and re-issue it later this year having regard to the results of the GLA air quality audits for schools

No.	Measure		Action	Progress	Further information
4.1	Reducing Emissions from Delivery and Servicing	Develop a freight consolidation solution for Southwark	Carry out a joint feasibility study with Lambeth, Wandsworth and Croydon	Feasibility study indicated minimal or no benefit from implementation of a consolidation solution	Met target. Measure completed
4.2			If the feasibility study is positive, implement and monitor the preferred solution	Not applicable	N/A
4.3					
4.4		If consolidation centre opens – All Southwark Council suppliers to use the proposed freight consolidation solution where possible	Ensure in-contract documentation that all Southwark Council suppliers are required to use any implemented consolidation solution	Not applicable now due to the outcome of Measure 4.1	N/A
4.5		All non-consolidation solution suppliers to the Authority with a large fleet to join the Fleet Operator Recognition Scheme (FORS) and obtain Silver accreditation as a minimum	Within the contract documentation that all suppliers of large fleet are required to hold Silver accreditation of the Fleet Operator Recognition Scheme (FORS) or it be achieved within six months of the contract being signed, along with an ongoing commitment to use ULEV's	Due to start in March 2019	N/A
4.6		To support sustainable logistical measures in the north of the Borough	Work with stakeholders to promote the combination and rationalisation of deliveries using low & zero emission vehicles and local distribution hubs for final stage delivery Explore–the feasibility of new technologies for smart deliveries	With support from Southwark Council, Better Bankside and Team London Bridge have introduced a Freight Forum and are organising a waste consolidation project based at Borough Market.	Met target

No.	Measure		Action	Progress	Further information
4.7	Reducing Emissions from Delivery and Servicing	Reduce Southwark commercial fleet emissions	Switch to use of low or no emission vehicles	Two contracts for supply of 169 commercial fleet were awarded in 2017. The majority of these vehicles have now been delivered. All are compliant with the requirements of the Ultra-Low Emission Zone. Where practicable EVs were procured, 12 in all. This has given the council the opportunity to test performance of EVs to inform future procurement decisions	Met target
4.8			Produce mileage and efficiency guidance for services	No progress. This is due to limited resource in the Fleet Services Team. This has now been resolved and we anticipate being able to complete this action by July 2018	Did not meet target
4.9		Introduction of telematics on commercial fleet	Install telematics on commercial fleet	A tender process for vehicle telematics is currently under way. We anticipate being able to award a contract and commence use of up to date telematics system by June 2018	Did not meet target
4.10		Smarter Driver Training for drivers of all Southwark fleets	Introduce Smarter Driver training requirement for all current fleet drivers	No progress. This is due to limited resource in the Fleet Services Team to manage the project. This has now been resolved and we anticipate being able commence a training programme starting in July 2018	Did not meet target
4.11		Smarter Driver Training for drivers of all Southwark fleets	Introduce Smarter Driver training requirement for all new fleet drivers	The Authority anticipate implementing this in July 2018	Did not meet target
4.12	Travel planning	Maintain an up to date Council Travel Plan consistent with the aims of the air quality action plan	Undertake survey of staff travel arrangements	No progress has been made with this measure.	Did not meet target
4.13			Review the Authority's Travel Plan	This measure depends on 4.12 being actioned.	Did not meet target
4.14	Reducing emissions from Taxies & Private Hire Vehicles	Smarter Driver Training for drivers of all taxis and private hire vehicles	Ask the GLA & TfL to introduce a requirement that all PCO licences include a Smarter Driver training element	Requested that this was included in the recent response to TfL consultation "Improving safety in PHVs"	Met target
4.15		Support the London Mayor's requirement that all newly licenced taxis be zero emission capable from 2018	Support TfL in the identification and installation of EV charging points	Supported TfL to install 7 rapid chargers on the TLRN Currently considering further locations for rapid charging technology	Met target

No.	Measure		Action	Progress	Further information
4.16	Reducing vehicle emissions	Reduced emissions from buses in the borough	Work with TfL & GLA to deliver low emission bus zones in Southwark	Support TfL to deliver the Low Emission Bus corridor through Camberwell and Peckham - ongoing	Partially met target. Measure in process
4.17		Work with TfL and other London Boroughs to extend the Ultra-Low Emission Zone (ULEZ) to the South Circular initially with a long term option to extend to the M25	Respond to all consultations and via any relevant forums on the ULEZ recommending the ULEZ be to the South Circular initially with a long term option to extend to the M25	Responded to TfL third phase consultation on extending the ULEZ to the South/North Circular.	Met target
4.18		Reduce fine particle emissions from tyre, brake and clutch components	Engage with appropriate researchers and industries to increase research to reduce fine particle emissions from tyre, brake and clutch components	No progress has been made with this measure Will discuss this at the APRIL Transport Group	Did not meet target
4.19	Emissions from vehicles	Vehicle idling awareness	Run public awareness campaign	The Authority has worked with 14 other Boroughs and carried out 4 vehicle idling campaigns in the Borough. The second phase report can be found at http://www.southwark.gov.uk/environment/air-quality/strategies-plans-letters-and-reports	Met target
4.20		Enforcement of the provisions of the Road Traffic Act	Train all JET officers, & Bankside Wardens in Road Traffic Act vehicle idling enforcement	Training has been undertaken, but due to the requirements of traffic legislation, the JET Officers and Bankside warden cannot issue PCN's	Met target. Measure completed
4.21		Enforcement of the provisions of the Road Traffic Act	Explore the inclusion of vehicle idling enforcement into the current Parking Enforcement Contract	The Authority has negotiated to include vehicle idling enforcement in the Parking Enforcement Contract	Met target. Measure completed
4.22		Enforcement of the provisions of the Road Traffic Act	Authorise the Council's staff & Parking Enforcement Officers to issue PCN for vehicle idling offences	The Authority is enforcing vehicle idling through a Traffic Management Order, Only civil enforcement officers are authorised to issue Penalty Charge Notices	Met target. Measure completed

No.	Measure		Action	Progress	Further information
4.23	Emissions from vehicles	Variable vehicle parking charges to promote use of less polluting vehicles	Review the charges for on-street parking & permits	Already give discounts to low emission vehicles. There is an action in the most recent council plan to re-consider all parking and permit charges more widely. Further proposals are expected Dec 18	Met target. Further action to be taken and measure in process
4.24			Review the charges for Housing Estate parking permits	Proposals are expected Dec 18	N/A
4.25		Promote the reduction of total emissions to atmosphere	Public information campaign on alternative fuels for fleets/cars	The Authority is working with 'Better Bankside' BID and 'Team London' BID to promote alternative fuels as part of the Borough LEN project. Campaign to be in 2018. The Authority is awaiting the release of the £300,000 grant for the installation of vehicle electric charging points on lampposts as part of the "Go Ultra Low Emissions Scheme"	Met target. Measure in process
4.26	Air quality around schools	Reduce parent & carer parking close to primary schools and nurseries	Pilot School Streets at 5 primary schools or nurseries	A list of potential primary school locations suitable for a School Streets intervention was devised	Partially met target. Measure in process
4.27				Funding has been obtained to pilot school streets at 2 primary schools in the borough for in 2018 / 2019	
4.28		GLA Air Quality Audits for primary school/s	Air Quality Audit/s facilitated	2 GLA Air Quality Audits have been received for Charlotte Sharman & Oliver Goldsmith Primary Schools	Met target
4.29			Identify funding to implement the Air Quality Audit recommendations	Waiting for the official release of the GLA Air Quality audits report in Summer 2018. Goose Green School has installed a green screen in its playground after obtaining from the Mayor of London Greener City Fund and sponsorship from other local commercial companies Schools have been advised of funding sources via Southwark Schools Air Quality Network	Met target
4.30	Reduce private vehicles in the Borough	Promote the use of shared mobility in Southwark	Continue to promote & encourage shared mobility systems	Reviewed the shared mobility offer within the borough. The Kerbside Strategy and shared mobility offer are awaiting approval - July 2018	Met target

No.	Measure		Action	Progress	Further information
5.1	Reduction of carbon emissions	Require developers to contribute to reducing atmospheric emissions	Achieve minimum 35% regulated carbon emissions reduction on Part L of 2013 Building Regulations on all new major developments	35 of the eligible 40 developments achieved 35% or more CO_2 savings against 2013 building regulations, equating to 87.5% of applications. Continue to apply policy. 95% of applications potentially achievable, although should be acknowledged feasibility varies on a site-by-site basis and is dependent on context	Met target. Continue to apply & refine policy
5.2			Any of the 35% minimum CO_2 reduction not achieved on-site to be secured through S106 for the "Green Fund" (carbon off-setting projects) for the equivalent remaining regulated carbon emission savings	Of the 8 schemes which did not achieve 35% on site, all (100%) secured carbon off set funds by S106 to ensure policy compliance.	Met target. Continue to apply & refine policy.
5.3			New homes on all major developments to be zero carbon as per London Plan policy 5.2, achieved either on-site or via financial contributions for off-setting	Many of the homes approved during calendar year 2017 were submitted to the council prior to October 2016, when the zero carbon homes requirement became policy. However, of those which were on schemes submitted post-October 2016, 100% achieved zero carbon homes standard, primarily through offsetting	Met target. Continue to apply & refine policy.
5.4			All major developments to achieve Air Quality Neutral Standards onsite	Of the 41 major apps assessed, 23 (56%) were confirmed to meet Air Quality Neutral standards. Some schemes were not explicitly assessed in terms of air quality (i.e. had AQAs submitted as part of application documents). The submission of AQAs is not dependent on whether an app is a major app, but rather whether it meets the requirements in the council's validation checklist. Some AQAs did not refer to Air Quality Neutral, others referred to it in terms of the introductory policy context without going into further detail. However, later in 2017 the policy was applied more frequently, with more AQN testing in AQAs being reported in approved applications.	Met target. Continue to apply policy more thoroughly. Possibly review AQAP wording to reflect when AQAs are submitted (and so AQN reported on) i.e. reference validation checklist requirement rather than major applications?

No.	Measure		Action	Progress	Further information
5.5		Require developers to contribute to reducing atmospheric emissions	Where Air Quality Neutral standards not achieved on-site, off-setting funds secured through section 106 to ensure development meets the air quality neutral standard equivalent	Approach to Air Quality offsetting still in development along with New Southwark Plan and Old Kent Road Area Action Plan, which are due for adoption in 2019 rather than 2018 as previously anticipated.	Met target and will continue to apply & refine policy
5.6			Commit and spend all off-setting funds on carbon off-setting projects	Through applications approved in calendar year 2017 approx. £300,000 was secured through carbon offsetting contributions. Not yet allocated due to officer currently working up a formal procedure and priority list for allocation and spend	Target not yet met but in process and will be met in due course
5.7	Improve the energy efficiency in Southwark homes	Promote reduced energy consumption and bills	Promote low cost energy efficiency measures	To be progressed in September 2018	N/A
5.8		Maximise funding streams available to improve energy efficiency	Bid for funding where funding will be beneficial to energy efficiency and fit in with the overall council objectives	The Authority has secured HNDU funding for energy mapping and master planning. We are looking at ECO funding with a major supplier for EWI projects. The Authority will be looking for funding based on the new ECO deal	Target met. Further bids will be pursued as available
5.9	Improve energy efficiency in Southwark homes	Install ultra-low NO_x boilers in council & TMO housing	Install ultra-low NO_2 boilers when boilers are replaced in council and TMO housing	1,894 ultra-low NO_2 boilers replaced during 2017/18	Target met
5.10		Develop & implement a strategy for communal boiler upgrades and renewals within council housing	Develop & implement the strategy for communal boiler upgrades and renewals	Work ongoing. To recruit a strategic project manager to take this work forward. Recruitment process is in progress	Did not meet target
5.11		Monitor the effect of energy efficiency improvements in the Council's social housing planned renewal programme	Implement monitoring regime for improvement programme in the social housing planned works programme	We implemented the energy module in Asset Management System in 17/18 and are now able to report change through the investment programme	Target met
5.12	Promote the use of renewable	Reorganise the use of space in operational council	Improve the use of Council buildings making them more sustainable, flexible, cost &	Forward planning to close 5 satellite buildings in November 2019. New workplace furniture and operations, and installing LED lighting from halogen	Partially met target. Measure in process

No.	Measure		Action	Progress	Further information
	energy and minimise the energy demand of Southwark estate	buildings to reduce overall energy demand	space efficient	in the main office buildings. The change will be monitored annually through the Modernise Strategy	
5.13		Be aware of the energy used and generated by the Authority's operational buildings	Publish on-line information of the energy used and any generated by the Authority's operational buildings	The Council's emissions generated from its operational stock are captured by our annual Carbon Reduction Commitment return. The results of all participants is published in an annual report available on Government website https://www.gov.uk/guidance/crc-energy-efficiency-scheme-annual-report-publication	Target met
5.14	Promote the use of renewable energy and minimise the energy demand of Southwark Housing	Explore the opportunity to install renewable energy technologies in Southwark housing	Through extra funding, explore the opportunity of installing renewable energy technologies & energy efficiency measures and retrofitting insulation	Work to be progressed when the strategic project manager has been appointed	Partially met target. Measure in process
5.15			Explore options to set up community energy schemes on estates		
5.16			Explore use of low energy alternatives and motion sensor systems to major repairs to lighting systems on estates	Southwark Housing has done some specific schemes that use LED lighting, and moving forward are replacing estate lighting with LED type (where it needs replacing) and in all new installations	Partially met target. Measure in process
5.17	Ensure new developments minimise their impact on local air quality and climate change	Develop robust air quality planning policies	Develop robust air quality planning policies in the New Southwark Plan, Old Kent Road Area Action Plan & any new and revised Neighbourhood Plans	Consulted on proposed submission version of New Southwark Plan with specific AQ policy - 'P66 : Improving air quality'. Currently analysing responses	Partially met target. Measure in process
5 18		Highlight design guidance for best practice in reducing emissions to air	Develop a revised Sustainable Design and Construction SPD that includes up to date guidance on improving air quality	SPDs to be updated following the adoption of the New Southwark Plan in 2019	N/A

No.	Measure		Action	Progress	Further information
5.19	Increase number of Southwark Council Homes using renewable energy	Increase no. of Southwark Council Homes using renewable energy from SELCHP	Connect more dwellings to SELCHP	This work will be part of work for the strategic manager. Currently working with Veolia and Environment colleagues to identify future potential dwellings planned in Peckham	Partially met target. Measure in process

No.	Measure		Action	Progress	Further information
6.1	Smoke Control Zone	Enforcement of the Clean Air Acts	Ensure that all retail premises selling wood and coal are aware that the whole of Southwark is a Smoke Control Area	When the Authority receives intelligence that unauthorised fuels are being sold a visit will made to ensure shoppers are aware that using the fuel needs to be compliant with legislation. During routine petrol station inspections officers check if unauthorised fuels are available.	Target met
6.2		Discourage burning of logs and house coal	Undertake a communication campaign during the Autumn to highlight pollution caused by using non - smokeless fuels	Social media campaign occurred around Bonfire Night 17 re the burning of non – smokeless fuels and items. This was repeated in Tweets over the Xmas 17 holiday period	Target met. To be repeated in Autumn 2018
6.3	Emissions from industrial premises know to emit emissions to air	Regulation of EPA Part B processes	All IPPC premises in the Borough inspected in accordance with their risk assessment	All the IPPC premises have been inspected in accordance with their risk assessment and checked to ensure full compliance with the permits	Target met
6.4	Green infrastructure	Increase the amount of green infrastructure	Explore all opportunities to install green infrastructure	Latest major scheme completed (Crystal Palace Parade) includes green infrastructure. New major schemes currently under design (Balfour Street & Shad Thames Streets have green infrastructure as an integral part of the design. Beginning process of agreeing palate of plants for use in schemes based on environmental impact and ease of maintenance. Close out process being modified to ensure all new green infrastructures is properly recorded.	Target met. Further improvements to green infrastructure planned
6.5	Healthy Streets	Assess the Borough's Highways against the criteria in TfL's Healthy Streets approach	Highway projects to be assessed against the TfL's Healthy Streets criteria	The Council's quality plan template is being adapted to include improvements against identified healthy street indicators as scheme objectives. All major schemes are to result in improvement of the Healthy Street criteria (as identified as being appropriate to the scheme).	Met target and will continue to apply & refine policy

No.	Measure		Action	Progress	Further information
6.6	Emissions from development	Emissions from construction work minimised	Ensure that all strategic and major developments are aware of the Authority's Technical Guidance for Demolition & Construction	The Environmental Protection Team ensure that all strategic & major construction sites are made aware of the Authority's Technical Guidance for Demolition & Construction and the NRMM register, through the planning process when recommending the discharge of CEMP planning condition and when discussing s61 Control of Pollution Act prior consents	Target met
6.7	Emissions from construction equipment	Ensure all Non-Road Mobile Machinery (NRMM) complies with the GLA SPG construction criteria	Ensure that all strategic & major construction sites are on the on-line NRMM register		Partially met target. Measure in process
6.8			All strategic and major construction sites are inspected for NRMM compliance	The Authority has contracted L.B. Merton to inspect NRMM compliance. 12 sites have been inspected, further inspections to be made this year	Partially met target. Measure in process
6.9	Emissions from developments and premises	Enforcement of the provisions of the Environmental Protection and Clean Air Acts	Apply the provisions of Clean Air Act 1993 S.14 (chimney height.) to appropriate developments	No Clean Air Act 1993 section 14 applications received or required to be completed this year	Target met
6.10			Investigate reports of bonfires & open burning	All 76 service requests about bonfires and open burning investigated by the Authority's Noise & Nuisance Team and the appropriate action taken	Target met
6.11	Emissions from waste management process	Enforcement of the Permit conditions at waste management sites in the Borough	Liaise with Environment Agency to ensure appropriate controls are being used to minimise and mitigate the creation of dust and fume at waste management sites	The Authority has liaised with the Environmental Agency to ensure that the appropriate controls are enforced at waste management sites in the Borough	Target met

No.	Measure		Action	Progress	Further information
7.1	GLA Air Quality Focus Areas GLA Air Quality Focus Areas	Target the improvement of air quality in the GLA Air Quality Focus Areas Target the improvement of air quality in the GLA Air Quality Focus Areas	Ensure that local air quality is monitored in the GLA Air Quality Focus Areas	All the GLA Air Quality Focus Areas are being monitored using diffusion tubes, the results can be found in Appendix B.	Target met
7.2			Implement an air quality improvement project in each GLA Air Quality Focus Areas and ensure they are linked to relevant regeneration plans and build on any existing relevant initiatives to encourage modal shift towards public transport, cycling & walking	Air Quality Focus Area 151 (Old Kent Road)	Target not met. Measure to be implemented when the Planning Area Action plan has been adopted
7.3				Air Quality Focus Area 152 (Elephant & Castle) Exploring the installation of new green infrastructure on the new E&C peninsula.	Partially met target. Measure in process
7.4				Air Quality Focus Area 153 (London Bridge)	N/a action not due to commence in 2019
7.5				Air Quality Focus Area 154 (Lower Road)	N/a action not due to commence in 2019
7.6				Air Quality Focus Area 155 (Peckham Town Centre) - This forms part of the Peckham Road Safety Scheme and Low Emission Bus Corridor. TfL are currently undertaking concept designs and modelling with the view to consulting in Summer 2018. Continue to work with TfL	Partially met target. Measure in process
7.7				Air Quality Focus Area 156 (Tower Bridge Road) Sought funding through the last round of MAQF to implement permanent changes- the bid was unsuccessful. We will look to further funding streams to implement permanent measures.	Partially met target. Measure in process
7.8				Air Quality Focus Area 157 (Walworth Road / Camberwell Road / Camberwell Green) Design being currently being scoped.	Partially met target. Measure in process
7.9				In Air Quality Focus Areas 152, & 153 and 157 explore the use geo-fencing for TfL buses to use the buses in electric mode only.	N/a, action not due to commence in 2019

No.	Measure		Action	Progress	Further information
7.10			Ensure that the implemented air quality projects in the GLA Air Quality Focus Areas are assessed	No projects started at present	N/a
7.11			Ensure that local air quality projects in the GLA Air Quality Focus Areas are comprehensively evaluated		N/a
7.12			Ensure that air quality projects implemented in the GLA Air Quality Focus Areas are regularly reviewed		N/a
7.13	Cleaner Air Borough	Ensure full consideration of GLA air quality planning policy changes	Take all actions required by GLA to retain Cleaner Air Borough status	When the New London Plan has been adopted, the air quality policy changes will be recommended to the planning policy team	Target met
7.14	The extension of the ULEZ	Extension of ULEZ to include the whole borough & to be extended to the M25 as soon as practical	Respond to GLA consultations expressing the Southwark policy stance	The Authority responded to the third stage of the ULEZ consultation, The Authority was concerned in respect of the boundary splitting the borough and insufficient work to explore the M25 option	Target met
7.15	Support GLA planning policy with regard to air quality	Ensure full consideration of GLA planning policy changes that relate to air quality	Ensure GLA air quality policy is considered in all planning decisions	25 (61%) of the 41 major applications assessed in calendar year 2017 had AQN benchmark tests undertaken as part of AQAs submitted with applications. This has been used as the marker for whether 'GLA air quality policy has been considered in all planning decisions.' For those schemes which did not refer to AQN in AQAs, AQAs and officer reports may or rather likely will have explicitly referenced other parts of LP policy. However due to AQN being the unique element of LP AQ policy	Target met. Will continue to apply & review policy

No.	Measure		Action	Progress	Further information
7.16	Mayor's Air Quality Fund	Identify projects suitable for Mayor's Air Quality funding	Review the Mayor's Air Quality funding guidance & apply for funds where possible	The next round of Mayor's Air Quality Fund is due in summer 2018	N/a
7.17	Clean Air for Londoners	Work with the GLA & TfL and other organisations towards meeting the national air quality objectives	Review all external opportunities to participate in air quality improvement projects	The Authority was not successful in obtaining funding from the Defra Air Quality Grant Scheme	Target met

No.	Measure		Action	Progress	Further information
8.1	Joint Strategic Needs Assessment	The JSNA includes air quality and has up to date information on its health impacts	Produce an air quality section for the JSNA	A JSNA assessing the impact of poor air quality on health is complete and has been published	Target met. Will monitor implementation of recommendations
8.2			Review the air quality section of the JSNA annually	JSNA is due to be reviewed in March 2019	N/a
8.3	Air Quality & Public Health	Retain local air quality as a public health priority	Provide up to date information in connection with air quality	This report to be presented to the Cabinet Member and the Well-being Board in Summer 2018	Target met
8.4	Embed Air Quality Policy	Ensure that local air quality is considered within all relevant complementary council policy developments	All relevant new policies to incorporate air quality improvement objectives	Ongoing	N/a
8.5	Air Quality Alerts	Provide poor air quality alert information to Southwark Council staff caring for health vulnerable persons with particular emphasis on nurseries, primary schools and care homes	Devise a Poor Air Quality Alert internal cascade for staff working in nurseries, primary schools and care homes	Developed introduction and contacts sections for the internal cascade when the air quality is forecasted to be either High or Very High	Target met

2.2 New measures to be considered for inclusion in the Action Plan

1) During 2017 the Port of London Authority (PLA) consulted on their Air Quality Strategy. Southwark responded to the consultation stating that it would consider adding an action regarding supporting and assisting the PLA to deliver its air quality action plan within Southwark.
2) At the beginning of 2018, the London Mayor introduced Air Quality Alerts when the air quality is forecasted to be “Moderate” or above to Care Homes, Schools and GP Surgeries. Southwark’s AQ alert protocol cascades information when the alerts are High or Very High as it was felt too many alerts would lead to alert fatigue and AQ Alerts being ignored. This will be proposed for reconsideration.
3) Each organisation receiving GLA AQ alerts shall provide feedback to the GLA.
4) The Chief Medical Officer (CMO), in their annual report for 2017, recommended:-
   a) that Clinical Commissioning Groups should analyse local air quality monitoring data for breaches of air pollution standards and publish these alongside the local hospital data for impacts on admissions for respiratory and cardiovascular disease, and
   b) that Public Health England should aggregate and analyse annual progress for a national public report to NHS England. Southwark will explore how information sharing can be formalised locally.
5) The CMO report states that Public Health England works to bring together all of the routinely produced data on the health impacts of pollution and the surveillance of pollution (including data held by local authorities, the Environment Agency and others), to ensure its availability for the public, public sector and research. Southwark will develop an action to ensure we support this aim.
6) Explore how Southwark can replicate the “Croydon Central Area Heat and Power Scheme” within Opportunity Areas.
7) Explore how Southwark can develop a Zero Emission Network in the Borough.
8) Southwark is substantially cutting investment in fossil fuels. We have already agreed to place part of our pension fund into the “Blackrock Low Carbon Target Equity Fund”
9) Southwark has set up a Schools Air Quality Network to provide a forum to promote and share actions that will improve air quality for school communities. This is already underway.
10) The Air Quality JSNA recommendations
11) The new Cabinet will bring previously unconsidered issues and ideas forward

3. Planning Update and Other New Sources of Emissions

Table J **Planning requirements met by planning applications in Southwark in 2017**

Condition	Number
Number of planning applications reviewed for air quality impacts	89
Number of planning applications required to monitor for construction dust	70
Number of CHPs/Biomass boilers refused on air quality grounds	1
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	8
Number of AQ Neutral building and/or transport assessments undertaken	22
Number of 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	1
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.	 8 0 See note below
NRMM: Greater London (excluding Central Activity Zone and Canary Wharf) Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIA of the Directive and/or exemptions to the policy.	 18 0 See note below

This table is a reflection of the best data available. Discrepancies found have been identified and data will be reviewed and improved for future reports. Several sites have approved Construction Management Plans, but have not commenced site operations. In autumn 2017, the Authority contracted L.B. Merton to review and assess NRMM compliance. Further work is required to ensure that the major construction sites are registered on the NRMM register and compliant with either Stage IIIA or Stage IIIB criteria.

3.1 New or significantly changed industrial or other sources

There were no new or significantly changed industrial or other sources, within the borough in 2017.

Construction of the energy plant at the Elephant Park has been delayed and is now scheduled for completion in 2018. This plant will consist of 24 boilers and 2 CHPs.

Another large energy plant has been proposed as part of the London College of Communication redevelopment but is still at the planning stage.

Since the last review, there have been no significant changes to the Borough's road layout.

Appendix A Details of Monitoring Sites QA/QC

A.1 Automatic Monitoring Sites

The Authority is a member of the London Air Quality Network and all the data is ratified in accordance with Kings College London QA/QC procedures for the network.

The Authority has out-sourced the Local Site Operator role to King's College London who are contracted to calibrate the all the analysers in the two monitoring stations fortnightly.

A.2 Diffusion Tube Quality Assurance / Quality Control

Diffusion Tube Bias Adjustment Factors

The Authority incorporates two local co-location diffusion tube studies, by exposing triplicate tubes at the two air quality monitoring sites in the borough at the Elephant & Castle (Urban Background) and on the Old Kent Road (Roadside). The Authority then uses the Local Air Quality Management Helpdesk spreadsheets to calculate the bias factors, which are included in the results presented in section 1.2 of this report.

QA/QC of Diffusion Tube Monitoring

The Authority has appointed Gradko International Ltd to provide and analyse the Nitrogen Dioxide diffusion tubes. The laboratory supplies the Authority 20% TEA in water diffusion tubes. The laboratory has confirmed to the Authority that it follows the procedures set out in the Practical Guidance. On the next page are the results for Gradko International from the WASP proficiency testing scheme (Table K) and the new Air Proficiency Testing (AIR PT) scheme (Table L). The Didcot Laboratory of Environmental Services Group and Gradko International submit two sets of results, whereas the other laboratories in the scheme only submit one set of results.

The AIR PT scheme has up 38 regular different samples and 3 different trial standards for the analytic laboratories to analyse. LGC Ltd has a programme to send out different combinations of the 41 samples in six rounds throughout the year. (The trial samples were only available for one round only.) Sample 11 contains 4x dynamically loaded Palmes type diffusion tubes.

The summary of the tube precision from the national database for Gradko International is detailed on page 50 in Table M

Table K **Performance of Gradko Laboratory using the Rolling Performance Scheme for WASP Rounds 79 – 109[4]**

	Rounds	Performance on basis of RPI, OLD CRITERIA, best 4 out of the 5 rounds	Performance on basis of RPI, NEW CRITERIA, best 4 out of the 5 rounds
April 2007 – April 2008	97 - 101	Good	Good
July 2007 – July 2008	98 - 102	Good	Good
October 2007 – October	99 - 103	Good	Good
January 2008 – January	100 -104	Good	Good
April 2008 – April 2009	101 - 105	Good	Good
July 2008 – July 2009	102 - 106	Good	Good
October 2008 – October	103 - 107	Good	Good
January 2009 – January	104 - 108	Good	Good
April 2009 – April 2010	105 - 109	Good	Good

[4] Scheme in operation until April 2010

Table L **Performance of Gradko Laboratory using the New Performance Scheme for WASP Rounds 105 – 124[5] and AIR NO_2 PT rounds AR001, to AR027.**

WASP Round	WASP R105	WASP R106	WASP R107	WASP R108	WASP R109	WASP R110	WASP R111	WASP R112	WASP R113	WASP R114	WASP R115	WASP R116
Round conducted in the period	Apr. – Jun. 2009	Jul. – Sept. 2009	Oct. – Dec. 2009	Jan. – Mar. 2010	Apr – Jun 2010	Jul – Sept. 2010	Oct. – Dec. 2010	Jan. – Mar. 2011	Apr – Jun 2011	Jul. – Sept. 2011	Oct. – Dec. 2011	Jan. – Mar. 2012
Gradko International	100%	100%	100%	100%	87.5%	100%	100%	100%	100%	100%	37.5%	100%
WASP Round	WASP R117	WASP R118	WASP R119	WASP R120	WASP R121	WASP R122	WASP R123	WASP R124	AIR PT AR001	AIR PT AR003	AIR PT AR004	AIR PT AR006
Round conducted in the period	Apr. – Jun. 2012	Jul. – Sept. 2012	Oct. – Dec. 2012	Jan. – Mar. 2013	Apr. – Jun. 2013	Jul. – Sept. 2013	Oct. – Dec. 2013	Jan. – Mar. 2014	Apr. – May 2014	Jul – Aug. 2014	Oct. – Nov. 2014	Jan. – Feb. 2015
Gradko International	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WASP Round	AIR PT AR007	AIR PT AR009	AIR PT AR010	AIR PT AR012	AIR PT AR013	AIR PT AR015	AIR PT AR016	AIR PT AR018	AIR PT AR21	AIR PT AR022	AIR PT AR024	AIR PT AR027
Round conducted in the period	April – May 2015	Jul – Aug 2015	Oct – Nov 2015	Jan – Feb 2016	Apr – May 2016	Jul – Aug 2016	Sept – Oct 2016	Jan – Feb 2017	Apr – May 2017	Sept – Oct 2017	Jan – Feb 2018	Apr – May 2018
Gradko International	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		

[5] WASP Scheme in operation from April 2010 with backdated results)

Table M Gradko Laboratory summary performance April 2009 – September 2017

Summary of Precision Results for the National Nitrogen Dioxide Diffusion Tube Collocation Studies, for Gradko Laboratory (20% TEA in Water)

2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	P	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	P	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	P	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	P	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	P	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	P	2010	P	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	P	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	G	2009	P	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
2008	P	2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G	2014	G	2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2013	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	P	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	G	2016	G	2017	G
		2009	G	2010	G	2011	G	2012	G	2013	G			2015	P	2016	G	2017	G
				2010	G	2011	G	2012	G	2013	G					2016	G	2017	G
				2010	G	2011	G	2012	G	2013	G					2016	P	2017	G
				2010	G	2011	G	2012	P	2013	G								
				2010	G	2011	G	2012	P	2013	G								
				2010	G	2011	G			2013	P								
				2010	G	2011	G			2013	P								
				2010	G	2011	G												
						2011	P												
						2011	P												

P	Poor Precision
G	Good precision

Table N Short-Term to Long-Term Monitoring Data Adjustment

Site ID	Valid data capture for monitoring period %	Valid data capture 2017%	Annual Mean NO_2														
			Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data	Am/Pm	Annualisation data
SDT40	100.00	50.00	98.17	68.57	74.51	83.97	76.79	75.67							79.61	0.94	75.05
SDT50	100.00	50.00	63.07	42.69	42.02	40.04	42.54	37.07							44.57	0.94	42.01
SDT51	83.33	41.67	54.77	33.67	34.41	27.51	24.84								35.04	0.89	31.09
SDT56	100.00	50.00	59.65	41.59	37.06	34.25	29.82	25.24							37.94	0.94	35.76
SDT62	100.00	50.00	93.14	67.28	82,24	69.51	79.44	86.30							79.13	0.94	74.59
SDT63	100.00	50.00	132.33	87.66	105.18	108.71	88.24	113.65							105.96	0.94	99.88
SDT64	100.00	50.00	90.39	61.03	62.34	64.79	70.69	60.64							68.31	0.94	64.39
SDT65	100.00	50.00	81.78	56.91	59.56	71.64	64.75	58.83							65.58	0.94	61.82
SDT67	100.00	50.00	84.39	54.97	57.75	69.16	61.05	49.59							62.82	0.94	59.22
SDT68	100.00	50.00	85.74	61.88	67.46	76.76	61.46	66.64							69.99	0.94	65.98
SDT69	100.00	50.00	108.82	68.40	93.25	65.99	87.45	82.48							84.40	0.94	79.56
SDT70	100.00	50.00	74.00	48.57	53.62	49.49	51.91	47.78							54.23	0.94	51.12
SDT71	100.00	50.00	83.70	72.06	86.40	83.11	68.50	69.28							77.18	0.94	72.75
SDT72	100.00	50.00	104.67	77.59	83.39	67.82	73.00	60.93							77.90	0.94	73.43
SDT73	100.00	50.00	72.59	48.61	49.63	42.70	45.12	39.59							49.71	0.94	46.86
SDT74	100.00	50.00	70.34	49.61	51.50	49.23	46.83	43.23							51.79	0.94	48.82
SDT75	100.00	50.00	84.00	55.85	67.21	64.31	71.14	59.87							67.06	0.94	63.21
SDT76	100.00	50.00	80.24	56.58	64.14	56.27	62.92	56.91							62.84	0.94	59.24
SDT78	100.00	50.00	84.06	62.42	71.39	53.79	63.88	57.35							65.48	0.94	61.73
SDT79	100.00	50.00	84.07	61.20	65.81	73.25	69.40	60.35							69.01	0.94	65.05
SDT80	100.00	50.00	84.72	70.55	87.00	60.23	67.51	66.95							72.83	0.94	68.65
SDT83	100.00	50.00	89.97	79.61	82.09	79.99	74.07	77.61							80.56	0.94	75.94
SDT85	100.00	50.00	87.63	65.40	62.85	67.73	57.19	60.49							66.88	0.94	63.05
SDT86	83.33	41.67	74.40	54.99	61.70	55.13	61.30								61.50	0.89	54.57
SDT87	100.00	50.00							81.43	87.67	87.13	75.57	69.11	63.98	77.48	1.06	82.50
SDT88	100.00	50.00							72.19	73.58	74.35	63.14	70.70	60.04	69.00	1.06	73.47

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2017%	Annual Mean NO_2														
			Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data	A_m/P_m	Annualisation data
SDT89	100.00	50.00							46.61	45.41	47.44	38.64	51.16	46.38	45.94	1.06	48.92
SDT90	100.00	50.00							83.16	77.97	78.72	42.33	72.17	63.73	69.68	1.06	74.19
SDT91	100.00	50.00							74.80	87.72	81.37	59.78	70.87	64.88	73.24	1.06	77.98
SDT92	100.00	50.00							67.08	73.47	67.59	58.68	59.72	58.93	64.25	1.06	68.41
SDT93	100.00	50.00							82.98	85.30	80.10	63.05	71.25	74.70	76.23	1.06	81.17
SDT94	100.00	50.00							115.22	103.87	99.00	76.15	75.26	84.25	92.34	1.06	98.32
SDT95	66.67	33.33									24.79	26.99	36.15		29.31	0.94	27.43
SDT96	83.33	41.67							49.68	50.82		36.59	48.00	45.60	46.14	1.05	48.45
SDT97	83.33	41.67							30.55	34.79		31.96	59.91	51.17	41.68	1.05	43.77
SDT98	100.00	50.00							75.83	81.03	71.39	59.60	66.11	65.81	69.96	1.06	74.49
SDT99	100.00	50.00							54.69	57.11	36.24	31.35	50.58	44.52	45.75	1.06	48.71
SDT100	100.00	50.00							43.15	46.04	45.93	31.96	46.93	46.77	43.46	1.06	46.27
SDT101	100.00	50.00							38.83	43.22	46.75	36.42	48.08	50.30	43.93	1.06	46.78
SDT102	100.00	50.00							43.07	46.47	53.90	37.76	51.32	46.97	46.58	1.06	49.60
SDT103	100.00	50.00							51.82	55.54	50.63	49.06	54.78	57.82	53.28	1.06	56.73
SDT104	83.33	41.67								84.82	90.86	74.45	77.57	75.04	80.55	1.00	80.56
SDT105	83.33	41.67							54.66		55.73	45.52	47.38	55.23	51.70	1.02	52.77
SDT106	100.00	50.00							89.07	95.35	90.16	75.60	87.11	69.25	84.42	1.06	89.89
SDT107	100.00	50.00							47.09	50.76	53.48	37.33	53.82	44.05	47.76	1.06	50.85
SDT108	100.00	50.00							38.16	40.03	44.09	39.87	61.33	48.93	45.40	1.06	48.34
SDT109	83.33	41.67							30.61	31.02	39.08	34.78		42.85	35.67	1.17	41.89
SDT110	100.00	50.00							49.40	53.75	52.00	37.19	45.81	59.67	49.64	1.06	52.86
SDT111	83.33	41.67								79.07	69.59	55.82	58.53	57.37	64.08	1.00	64.09
SDT112	100.00	50.00							27.01	31.88	33.49	35.09	35.76	41.12	34.06	1.06	36.27
SDT113	100.00	50.00							88.72	83.10	82.45	77.04	79.26	72.36	80.49	1.06	85.70
SDT114	83.33	41.67							36.49	39.33		33.76	47.20	47.02	40.76	1.05	42.80

Data Adjustment

Table N on page 51 shows the raw data, the annual mean raw data and ratio value R_A of the annual mean to the period mean. The methodology used to calculate the ratio value A_M / P_M is found in Box 4.9 of the LLAQM TG (16)[6]. The annual data was calculated from the Old Kent Road air quality monitoring site.

The methodology for calculating the R ratio (annual mean to the Period mean (A_m/P_m)) was applied to each diffusion tube site. The measured period mean concentration was multiplied by the R_a ratio to produce the annualised average. After the annualisation average was obtained the values were then factored using the bias value.

Distance Adjustment

The results of the long term diffusion tube monitoring in the borough are shown in Table F. The concentration data for the various years and locations has been calculated using the distance calculator available from the LAQM Support website[7].

[6] London Local Air Quality Management Technical Guidance 2016 (LLAQM.TG (16)) accessed at https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-london-boroughs

[7] https://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html

Appendix B Full Monthly Diffusion Tube Results for 2017

Table O **NO_2 Diffusion Tube Results**

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean NO_2													
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data	Annual mean – bias adjusted
SDT1	91.67	91.67		49.50	47.54	58.74	55.78	45.25	43.08	45.60	47.68	36.50	52.52	49.42	48.33	**43.01**
SDT2	91.67	91.67		49.68	50.41	56.07	54.85	44.33	42.60	45.09	75.83	34.40	57.90	48.51	50.88	**45.28**
SDT3	91.67	91.67		53.18	51.41	58.50	55.03	44.17	42.67	40.28	42.61	13.32	44.70	50.78	45.15	**40.18**
SDT4	100.00	100.00	81.83	61.21	67.45	69.35	65.60	59.82	63.07	66.49	65.22	48.57	52.32	53.97	62.91	**55.99**
SDT5	100.00	100.00	64.03	34.07	42.06	33.92	34.73	28.96	32.12	36.32	33.65	22.60	44.31	0.00	33.90	30.17
SDT6	100.00	100.00	101.30	70.97	81.20	72.41	76.54	71.74	67.47	79.26	77.09	45.27	60.94	66.19	72.53	**64.55**
SDT7	100.00	100.00	78.93	51.62	55.07	60.53	58.20	47.71	48.40	47.59	53.62	39.23	51.86	46.67	53.29	**47.43**
SDT8	100.00	100.00	59.19	41.84	40.53	33.33	35.24	28.03	26.87	30.84	32.88	30.60	44.20	42.68	37.19	33.10
SDT9	91.67	91.67	84.85	56.62	65.53		64.44	53.55	53.14	56.46	55.68	45.71	51.10	54.07	58.29	**51.88**
SDT10	100.00	100.00	53.26	38.13	37.03	35.13	42.10	35.51	30.48	35.06	34.00	26.87	40.36	36.99	37.08	33.00
SDT11	91.67	91.67	102.71	45.01	38.71	90.68	94.91	82.06	79.22	79.86		57.19	61.15	66.07	72.51	**64.53**
SDT12	83.33	83.33	74.82	41.62	44.18	39.61	45.49	31.97			41.44	45.20	85.20	44.27	49.38	**43.95**
SDT13	83.33	83.33	70.68	46.48	40.58	45.59	49.19	48.00			52.37	42.41	56.32	45.18	49.68	**44.22**
SDT14	83.33	83.33	65.59	44.03		50.68	44.41	38.34		37.36	45.29	47.14	53.05	53.86	47.98	**42.70**
SDT15	100.00	100.00	83.96	58.90	66.60	66.35	65.21	58.20	57.52	54.24	63.96	68.74	61.64	70.80	64.68	**57.57**
SDT18	100.00	100.00	99.10	71.57	81.52	69.35	86.05	82.42	81.25	82.93	88.46	73.17	63.22	74.47	79.46	**70.72**
SDT20	100.00	100.00	85.39	57.92	73.67	77.12	80.89	72.63	67.87	69.02	72.18	61.23	66.15	59.38	70.29	**62.56**
SDT24	100.00	100.00	104.56	77.43	105.71	100.53	94.46	108.07	109.87	106.61	104.57	73.31	95.08	91.08	97.61	**86.87**
SDT29	100.00	100.00	98.48	86.30	104.67	112.96	112.00	104.79	131.58	104.30	101.79	82.31	97.08	87.91	102.01	**90.79**
SDT31	100.00	100.00	89.13	55.11	71.90	59.55	66.39	64.86	60.08	59.47	64.03	61.20	62.95	55.68	64.20	**57.14**
SDT38	91.67	91.67	113.48	82.46	93.28	96.62	77.86	89.57	88.48		87.54	79.22	77.12	69.15	86.80	**77.25**

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean NO_2													
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data	Annual mean – bias adjusted
SDT39	91.67	91.67	78.72	55.17	64.11	72.90	54.91	63.33	59.83		62.35	56.78	64.48	64.91	63.41	**56.43**
SDT40	100.00	50.00	98.17	68.57	74.51	83.97	76.79	75.67							79.61	***66.79***
SDT41	100.00	100.00	101.42	72.72	88.31	88.60	73.98	76.67	74.36	80.15	74.76	78.60	68.46	77.19	79.60	**70.84**
SDT42	91.67	91.67	62.82	44.44	48.00		40.99	36.31	37.13	42.82	45.10	37.04	45.70	48.71	44.46	39.57
SDT47	58.33	58.33	0.13			0.16	0.08		0.33			0.18	0.11	0.18	0.17	0.15
SDT48	91.67	91.67	78.94	57.53	60.72	34.90	55.85	68.10	65.85		62.27	45.15	62.47	56.24	58.91	**52.43**
SDT49	100.00	100.00	59.20	42.66	39.70	33.92	35.99	31.02	29.56	33.59	33.73	32.87	39.45	44.02	37.98	33.80
SDT50	100.00	50.00	63.07	42.69	42.02	40.04	42.54	37.07							44.57	37.39
SDT51	83.33	41.67	54.77	33.67	34.41	27.51	24.84								35.04	27.67
SDT52	91.67	91.67	61.09	37.68	36.27	68.54	30.47	23.75		31.51	30.12	28.88	40.33	36.97	38.69	34.43
SDT53	91.67	91.67	51.52	36.94		30.77	27.89	24.40	24.62	26.50	30.41	24.66	39.20	38.77	32.33	28.77
SDT54	100.00	100.00	61.84	39.20	38.71	36.25	0.00	26.25	25.28	30.46	33.42	30.70	42.71	44.53	34.11	30.36
SDT55	100.00	100.00	71.01	44.93	50.38	40.78	41.38	33.85	35.86	41.00	41.74	36.75	43.33	45.19	43.85	39.03
SDT56	100.00	50.00	59.65	41.59	37.06	34.25	29.82	25.24							37.94	31.83
SDT57	100.00	100.00	79.87	38.73	59.13	56.07	56.26	43.60	44.72	47.76	49.49	46.88	56.54	52.23	52.61	**46.82**
SDT61	100.00	100.00	64.59	44.46	47.91	39.65	40.61	40.83	38.33	44.46	42.36	36.76	37.24	44.61	43.48	38.70
SDT62	100.00	50.00	93.14	67.28	82,24	69.51	79.44	86.30							79.13	**66.39**
SDT63	100.00	50.00	132.33	87.66	105.18	108.71	88.24	113.65							105.96	**88.90**
SDT64	100.00	50.00	90.39	61.03	62.34	64.79	70.69	60.64							69.85	**57.31**
SDT65	100.00	50.00	81.78	56.91	59.56	71.64	64.75	58.83							65.58	**55.02**
SDT66	100.00	100.00	59.43	45.04	43.31	34.38	41.43	32.43	32.64	34.81	38.64	30.54	26.46	40.57	38.31	34.10
SDT67	100.00	50.00	84.39	54.97	57.75	69.16	61.05	49.59							62.82	**52.70**
SDT68	100.00	50.00	85.74	61.88	67.46	76.76	61.46	66.64							69.99	**58.72**
SDT69	100.00	50.00	108.82	68.40	93.25	65.99	87.45	82.48							84.40	**70.81**
SDT70	100.00	50.00	74.00	48.57	53.62	49.49	51.91	47.78							54.23	**45.50**
SDT71	100.00	50.00	83.70	72.06	86.40	83.11	68.50	69.28							77.18	**64.75**
SDT72	100.00	50.00	104.67	77.59	83.39	67.82	73.00	60.93							77.90	**65.36**
SDT73	100.00	50.00	72.59	48.61	49.63	42.70	45.12	39.59							49.71	**41.71**
SDT74	100.00	50.00	70.34	49.61	51.50	49.23	46.83	43.23							51.79	**43.45**

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean NO_2													
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annualisation data	Annualisation mean – bias adjusted
SDT75	100.00	50.00	84.00	55.85	67.21	64.31	71.14	59.87							67.06	**56.26**
SDT76	100.00	50.00	80.24	56.58	64.14	56.27	62.92	56.91							62.84	**52.72**
SDT77	100.00	100.00	79.09	58.24	65.65	59.35	59.78	58.03	53.86	60.01	60.20	61.32	59.43	58.25	61.10	**54.38**
SDT78	100.00	50.00	84.06	62.42	71.39	53.79	63.88	57.35							65.48	**54.94**
SDT79	100.00	50.00	84.07	61.20	65.81	73.25	69.40	60.35							69.01	**57.90**
SDT80	100.00	50.00	84.72	70.55	87.00	60.23	67.51	66.95							72.83	**61.10**
SDT81	100.00	100.00	91.87	87.29	104.73	102.64	95.83	93.36	96.03	97.06	92.90	90.42	73.48	83.71	92.44	**82.27**
SDT82	100.00	100.00	103.09	77.17	85.77	77.02	93.24	78.66	82.97	70.64	78.37	77.60	60.63	71.93	79.76	**70.99**
SDT83	100.00	50.00	89.97	79.61	82.09	79.99	74.07	77.61							80.56	**67.59**
SDT84	100.00	100.00	89.81	65.28	71.78	63.85	65.59	68.79	67.72	69.98	64.44	68.86	55.52	59.20	67.57	**60.14**
SDT85	100.00	50.00	87.63	65.40	62.85	67.73	57.19	60.49							66.88	**56.11**
SDT86	83.33	41.67	74.40	54.99	61.70	55.13	61.30								61.50	**48.57**
SDT87	100.00	50.00							81.43	87.67	87.13	75.57	69.11	63.98	77.48	**73.42**
SDT88	100.00	50.00							72.19	73.58	74.35	63.14	70.70	60.04	69.00	**65.39**
SDT89	100.00	50.00							46.61	45.41	47.44	38.64	51.16	46.38	45.94	**43.53**
SDT90	100.00	50.00							83.16	77.97	78.72	42.33	72.17	63.73	69.68	**66.03**
SDT91	100.00	50.00							74.80	87.72	81.37	59.78	70.87	64.88	73.24	**69.41**
SDT92	100.00	50.00							67.08	73.47	67.59	58.68	59.72	58.93	64.25	30.89
SDT93	100.00	50.00							82.98	85.30	80.10	63.05	71.25	74.70	76.23	**72.24**
SDT94	100.00	50.00							115.52	103.87	99.00	76.15	75.26	84.25	75.68	**87.51**
SDT95	66.67	33.33									24.79	26.99	36.15		21.98	24.41
SDT96	83.33	41.67							49.68	50.82		36.59	48.00	45.60	46.14	**43.12**
SDT97	83.33	41.67							30.55	34.79		31.96	59.91	51.17	41.68	38.95
SDT98	100.00	50.00							75.83	81.03	71.39	59.60	66.11	65.81	69.96	**66.30**
SDT99	100.00	50.00							54.69	57.11	36.24	31.35	50.58	44.52	45.75	**43.35**
SDT100	100.00	50.00							43.15	46.04	45.93	31.96	46.93	46.77	43.46	**41.18**
SDT101	100.00	50.00							38.83	43.22	46.75	36.42	48.08	50.30	43.93	**41.63**
SDT102	100.00	50.00							43.07	46.47	53.90	37.76	51.32	46.97	46.58	**44.14**

Site ID	Valid data capture for monitoring period %	Valid data capture 2017 %	Annual Mean NO_2													
			Jan	Feb	March	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annualisation data	Annualisation mean – bias adjusted
SDT103	100.00	50.00							51.82	55.54	50.63	49.06	54.78	57.82	53.28	**50.49**
SDT104	83.33	41.67								84.82	90.86	74.45	77.57	75.04	80.55	**71.70**
SDT105	83.33	41.67							54.66		55.73	45.52	47.38	55.23	51.70	**46.97**
SDT106	100.00	50.00							89.07	95.35	90.16	75.60	87.11	69.25	84.42	**80.00**
SDT107	100.00	50.00							47.09	50.76	53.48	37.33	53.82	44.05	47.76	**45.26**
SDT108	100.00	50.00							38.16	40.03	44.09	39.87	61.33	48.93	45.40	**43.02**
SDT109	83.33	41.67							30.61	31.02	39.08	34.78		42.85	35.67	37.28
SDT110	100.00	50.00							49.40	53.75	52.00	37.19	45.81	59.67	49.64	**47.04**
SDT111	83.33	41.67								79.07	69.59	55.82	58.53	57.37	64.08	**57.04**
SDT112	100.00	50.00							27.01	31.88	33.49	35.09	35.76	41.12	34.06	32.28
SDT113	100.00	50.00							88.72	83.10	82.45	77.04	79.26	72.36	80.49	**76.28**
SDT114	83.33	41.67							36.49	39.33		33.76	47.20	47.02	40.76	38.09

Exceedances of the NO_2 annual mean AQO of 40µg.m^{-3} are shown in **bold**. Exceedances where there is potential for the hourly mean to be exceeded i.e. over 60µg.m^{-3} are in **bold** and **underlined.**

Appendix C List of air quality consultations

National Consultations

Defra UK Air Quality Action Plan

House of Commons Joint Select Committee Inquiry on Air Quality

DfT Road vehicles – Improving air quality and safety

DfT Consultations on Draft Airports National Policy statement: New runway capacity and infrastructure at airports in the South East of England

DfT UK Airspace Policy: A framework for balanced decisions on the design and use of airspace

DfT Air Navigation Guidance: Guidance on airspace & noise management and environmental objectives

DEFRA Call for evidence on Domestic Burning of House Coal, Smokeless Coal, Manufactured Solid Fuel and Wet Wood

Regional Consultations

TfL Improving safety in private hire vehicles (PHVs)

TfL ULEZ consultation

Port of London Draft Air Quality Strategy and Action Plan

London Heathrow Airport Consultations

Mayor of London Environmental Strategy

Mayor of London Transport Strategy

Southwark Consultations

New Southwark Plan

Kerbside Strategy


Get Fit, Don't Sit!
Walking Facts
You use 200 muscles in your body to walk!
Those who walk to school can concentrate four hours longer than those who arrive by car
You are exposed to 21% more air pollution in a car than walking.
Walking is free, healthy and zero-emissions.
Key
Walking map
Bessemer Grange Primary School
Remember to Stop, Look, and Listen when crossing all roads
@lb_southwark
facebook.com/southwarkcouncil
Southwark Council

Contact

Environmental Protection Team
Regulatory Services
Environment & Social Regeneration Directorate
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P.O. Box 64529
London
SE1P 5LX

Telephone 020 7525 4261
Email environmental.protection@southwark.gov.uk
Web www.southwark.gov.uk/airquality