Lambeth Air Quality Annual Status Report for 2021

Date of publication: 17 October 2022

This report provides a detailed overview of air quality in Lambeth during 2021. It has been produced to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process[1].

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[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19))

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Abbreviations

Abbreviation	Description
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
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	Standard / 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
Nitrogen dioxide (NO_2)	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
Particles (PM_{10})	40 µg m^{-3}	Annual mean	31 Dec 2004
Particles ($PM_{2.5}$)	25 µg m^{-3}	Annual mean	2021
Particles ($PM_{2.5}$)	Target of 15% reduction in concentration at urban background locations	3-year mean	Between 2010 and 2021
Sulphur dioxide (SO_2)	266 µg m^{-3} not to be exceeded more than 35 times a year	15-minute mean	31 Dec 2005
Sulphur dioxide (SO_2)	350 µg m^{-3} not to be exceeded more than 24 times a year	1-hour mean	31 Dec 2004
Sulphur dioxide (SO_2)	125 µg m^{-3} mot to be exceeded more than 3 times a year	24-hour mean	31 Dec 2004

Notes:

(1) Date by which to be achieved by and maintained thereafter

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2021

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA? If so, which AQMA?	Distance to Relevant Exposure (m)	Distance to Kerb of Nearest Road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
LB4	Brixton Road	531070	175593	Kerbside	Y	0.5	0.5	2	NO_2, PM_{10}	BAM1020, NO_x Analyser
LB5	Vauxhall Bondway Interchange	530317	177952	Industrial	Y	5	3	2	NO_2, PM_{10}, SO_2	BAM1020, NO_x Analyser, SO_2 Analyser
LB6	Streatham Green	529971	171570	Background	Y	15	6	2	NO_2, PM_{10}	BAM1020, NO_x Analyser

Table C. Details of Non-Automatic Monitoring Sites for 2021

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA? If so, which AQMA?	Distance to Relevant Exposure (m)	Distance to Kerb of Nearest Road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Tube co-located with an automatic monitor (Y/N)
DT1	Brixton AQ Monitoring Station – co-located	531070	175593	*Kerbside*	*Y*	*0.5*	*0.5*	*2*	NO_2	*Y*
DT2	Brixton AQ Monitoring Station – co-located	531070	175593	*Kerbside*	*Y*	*0.5*	*0.5*	*2*	NO_2	*Y*
DT3	Brixton AQ Monitoring Station – co-located	531070	175593	*Kerbside*	*Y*	*0.5*	*0.5*	*2*	NO_2	*Y*
DT4	Waterloo Rd / Exton Street	*531139*	*180048*	*Roadside*	*Y*	*1*	*0.5*	*2.2*	NO_2	*N*
DT5	Waterloo Rd / Holmes Terrace	*531214*	*179907*	*Roadside*	*Y*	*2*	*0.5*	*2.2*	NO_2	*N*
DT6	98 The Cut	*531494*	*179951*	*Roadside*	*Y*	*1*	*0.5*	*2.2*	NO_2	*N*
DT7	278-282 Kennington Lane (between St. Oswald's Place and Vauxhall St)	*530817*	*178122*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	NO_2	*N*
DT8	Archbishop Tenninson School, 55 Kennington Oval	*530868*	*177740*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	NO_2	*N*
DT9	Alverstone House, Kennington Park Road	*531196*	*177653*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	NO_2	*N*
DT10	Brixton Road/Prima Road	*531250*	*177464*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	NO_2	*N*
DT11	13 Clapham Road outside Belgrave Hotel	*531093*	*177419*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	NO_2	*N*
DT12	223 Clapham Road outside Richarsdon Court and Costcutter	*530404*	*176321*	*Roadside*	*Y*	*0.2*	*0.5*	*2.2*	NO_2	*N*
DT13	Clapham Road, close to Grantham Road	530363	*176269*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	NO_2	*N*
DT14	378 Clapham Road (by Savoy Mews)	*530105*	*175956*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	NO_2	*N*

DT15	Clapham Road, outside Roy Ridley House	*530009*	*175719*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT16	Clapham Common tube station, outside Joe Public Café	*529413*	*175284*	*Roadside*	*Y*	*1*	*2*	*2.2*	*NO_2*	*N*
DT17	8 Stockwell Park Walk	*530916*	*175784*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT18	Stockwell Road/Bellefields Road	*531020*	*175699*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT19	Brixton Road bus stop Q (outside KFC)	*531027*	*175320*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT20	Effra Road/Kellett Road	*531038*	*175092*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT21	22 Brixton Water Lane	*531231*	*174607*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT22	St. Matthew's Estate, outside 6 Hicken Road	*530928*	*174849*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT23	Brixton Hill/Horsford Road (Corpus Christi RC School)	*530781*	*174682*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT24	Brixton Hill/New Park Road	*530150*	*173680*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT25	Christchurch House, Christchurch Road (South Circular)	*530461*	*173470*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT26	Streatham Hill/Wavertree Road	*530452*	*173105*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT27	Streatham Hill Station/opposite 10 Streatham High Road	*530255*	*172632*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT28	Streatham High Road/Leigham Avenue	*530217*	*172353*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT29	Streatham High Road/Becmead Avenue	*530130*	*172013*	*Roadside*	*Y*	*0.5*	*0.5*	*2. 2.*	*NO_2*	*N*
DT30	Public space outside 316 Streatham High Road (opp Stanthorpe Road)	*530015*	*171489*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT31	243A Streatham Hill (bus stop opposite Streatham Station)	*530101*	*171148*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*

DT32	Clapham High Street (Clapham Library)	*529730*	*175446*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT33	Clapham, Old Town	*529217*	*175648*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT34	South Circular - past bus stop	*529130*	*174288*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT35	South Circular – Oaklands Estate, outside Hawkesworth House	*529263*	*174190*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT36	South Circular – Poynders Court	*529420*	*173996*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT37	South Circular – Christchurch Road/Roupell Road	*530821*	*173309*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT38	South Circular – Fenstanton Primary	*531160*	*173103*	*Roadside*	*Y*	*1*	*1*	*2.2*	*NO_2*	*N*
DT39	South Circular – Tulse Hill/Norwood Road	*531731*	*173026*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT40	South Circular – Lords Close	*532341*	*172918*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT41	Norwood Road/York Hill	*531839*	*172552*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT42	380 Norwood Road (O'Girasol)	*531923*	*172225*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT43	West Norwood Bus Station	*531936*	*171795*	*Roadside*	*Y*	*2*	*2*	*2.2*	*NO_2*	*N*
DT44	223-225 Gipsy Road	*533016*	*171534*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT45	Gipsy Hill Station	*533328*	*171264*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT46	Herne Hill 1	*531989*	*174329*	*Roadside*	*Y*	*3*	*3*	*2.2*	*NO_2*	*N*
DT47	Herne Hill 2	*531860*	*174353*	*Roadside*	*Y*	*0.3*	*0.1*	*2.2*	*NO_2*	*N*
DT48	Loughborough Junction 1	*531972*	*175331*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT49	Loughborough Junction 2	*531856*	*175680*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
DT50	Acre Lane	*530657*	*175133*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
DT51	Crown Lane School next to bus stop	*531557*	*171047*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX1	Opposite SIS building	*530371*	*178067*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX2	Goding street, New Spring Gardens Walk	*530483*	*178200*	*Roadside*	*Y*	*0.5*	*2*	*2.2*	*NO_2*	*N*
VX3	Glasshouse walk and Vauxhall walk	*530571*	*178300*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*

VX4	In front of Tintagel House	530408	178326	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX5	Next to Embarkment bus stop	530440	178522	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX6	Vauxhall walk – Jonathan Street	530619	178466	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX7	Opposite Vauxhall Primary School	530802	178356	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX8	Opposite the Jolly Gardeners	530753	178616	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX9	Opposite the Fire Brigades Headquarter	530493	178745	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX10	Opposite The Workshop	*530565*	*178760*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
VX11	Old paradise street – opposite St Gabriel's House	*530729*	*178897*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
VX12	Old paradise street opposite 1-28 superton walk	*530858*	*178878*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
VX13	Opposite Lambeth Palace (Stop SD)	530607	178961	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR1	In front of Pret A Manger	531267	179825	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR2	Opposite the Wellington	531189	179969	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR3	Tenison Way bus Stop	531006	180079	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR4	Next to bridge by Azzurro Italian bar Sutton Walk	530951	180064	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SR5	At corner, opposite Gail's	*530835*	*179873*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR6	London Eye bus stop	*530768*	*179896*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SR7	Silver lamppost on grass, behind sign "Welcome to Jubille Garden"	*530655*	*180011*	*Urban Centre*	*Y*	*0.5*	*115*	*4*	*NO_2*	*N*
SR8	By bridge on Belvedere Road	*530823*	*180123*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR9	Entrance of Southbank Centre	*530845*	*180251*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SR10	By The Green Room	530965	180267	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*

SR11	Opposite The Understudy	*531020*	*180433*	*Urban Centre*	*Y*	*0.3*	*70*	*2.2*	*NO_2*	*N*
SR12	Upper Ground and Cornwall Road	*531118*	*180337*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR13	Upper Ground and Duchy Street	531287	180420	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR14	On fence by The Wharf	*531222*	*180500*	*Urban Centre*	*Y*	*0.3*	*90*	*2.2*	*NO_2*	*N*
SR15	Coin street and Stamford Street	*531259*	*180282*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR16	Cornwall Road by “Meantime in London B&B”	*531205*	*180162*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR17	Opposite Property Partners	*531283*	*179951*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR18	Opposite Culture Grub	*531418*	*179913*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR19	At corner, opposite KCL Maxwell Building	*531056*	*180134*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR20	On road sign on top of the stairs on bridge	*530935*	*180259*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SR21	On bridge, on road sign right before the stairs	*530902*	*180319*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	
LTN1	At the junction with Acre Lane and Concanon Road	*530622*	*175112*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN2	At the junction with Bedford Road and Clapham Park Road	*530068*	*175106*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN3	At the opposite end of Bedford Road outside 7oZ Coffee	*530043*	*175668*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN4	At the junction with Edithna Street and Landor Road	*530465*	*175865*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN5	Where Ferndale Road bends to the side by Pulross Road	*530917*	*175578*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN7	Hillside Road – Palace Road	*531152*	*172881*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN8	Downtown Avenue – Faygate Road	*530763*	*172840*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*

LTN9	Lydhurst Road – Faygate Road	*530728*	*172576*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN10	Leighame Vale – Hitherfield Road	*531110*	*172389*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN11	Leigham Court Road – Culverhouse Gardens	*530650*	*172226*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN12	Leigham Court Road/Valley Road/Leigham Vale.	*530940*	*172132*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN13	. Top of wellfield road	*530288*	*171810*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN14	289 Leigham Court Road.	*531181*	*171612*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN15	203/205 Valley Road.	*530713*	*171417*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
LTN16	Streatham Wells LTN baseline monitoring. Corner of Hopton Road	*530498*	*171054*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
SCOOT	Brixton Road – Opposite St Johns Cresent	*531137*	*175822*	*Roadside*	*Y*	*0.3*	*0.5*	*2.2*	*NO_2*	*N*
AS1	Archbishop Sumner Church of England Primary School – Kennington Road j/w Reedworth Road	*531242*	*178675*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
AS2	Archbishop Sumner Church of England Primary School – Reedworth Road near play area	*531345*	*178627*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
JP1	Jessop Primary School 1- Milkwood Road j/w Heron Rd	*532008*	*175397*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
JP2	Jessop Primary School 2 – opposite 57 Heron Road	*532086*	*175297*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
JP3	Jessop Primary School 3 – by main entrance of the school	*532030*	*175130*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
LI	Loughborough Primary School –	*531672*	*176207*	*Urban Centre*	*Y*	*0.5*	*5*	*2.2*	*NO_2*	*N*

	inside playground by metal gates									
LO	Loughborough Primary School – on Loughborough Road near the playground	*531651*	*176150*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
RS1	Rosendale Primary School – Turney Road opposite school gate on a sign	*532317*	*173611*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
STA1	St Anne's Catholic Primary School – sign post near entrance to school on Durham Street	*530703*	*177997*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
STA2	St Anne's Catholic Primary School – on school fence on Harleyford Road by the playground	*530621*	*177957*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SS1	St Stephen's Church of England Primary School – near to the entrance to school on Dorset Road	*530501*	*177330*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SP1	Sudbourne Primary School – Hayter Road by school entrance	*530628*	*177333*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SP2	Sudbourne Primary School – Sudbourne Road near the playground	*530738*	*174966*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
SH1	Sunny Hill Primary School – school metal fence	*530775*	*171653*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
VP1	Vauxhall Primary School – on Tyers Terrace	*530810*	*178254*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
VP2	Vauxhall Primary School – Vauxhall Street by school entrance	*530800*	*178341*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*

WP1	Wyvil Primary School – on signpost	*530281*	*177513*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*
WP2	Wyvil Primary School – school metal fence	*530246*	*177510*	*Roadside*	*Y*	*0.5*	*0.5*	*2.2*	*NO_2*	*N*

1.2 Comparison of Monitoring Results with AQOs.

Table D. Annual Mean NO_2 Ratified and Bias-adjusted Monitoring Results

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
LB4 (Brixton Road)	Automatic	N/A	100	**129**	**92 (118)**	**75 (95)**	**74.2 (95)**	**60.1 (75)**	**56.2(60.5)**	**57.6 (62.2)**
LB5 (Vauxhall Bondway Interchange)	Automatic	N/A	95	**75**	**65 (69)**	**61 (65)**	**51.1 (54)**	**45.6 (48)**	33.7 (36.4)	32.5 (35.3)
LB6 (Streatham Green)	Automatic	N/A	65	29	33 (34)	28.8(29)	33.8 (34)	31.8 (32)	25.8(26)	27.4 (27.9)
DT1, DT2, DT3	Diffusion	93.3	77.8	N/A	N/A	N/A	**76.0**	**75.4**	**56.9**	**58.7**
DT4	Diffusion	50	41.7	N/A	N/A	N/A	39.1	35.5	25.9	24.2
DT5	Diffusion	70	58.3	N/A	N/A	N/A	**57.9**	**49.6**	34.1	**44.0**
DT6	Diffusion	80	66.7	N/A	N/A	N/A	**43.2**	38.0	25.1	30.3
DT7	Diffusion	100	83.3	N/A	N/A	N/A	**48.8**	**41.6**	29.2	30.9
DT8	Diffusion	100	83.3	N/A	N/A	N/A	**49.9**	**46.7**	31.4	35.4
DT9	Diffusion	90	75.0	N/A	N/A	N/A	**57.1**	**50.7**	35.1	40.0
DT10	Diffusion	70	58.3	N/A	N/A	N/A	36.8	33.4	24.5	23.1
DT11	Diffusion	90	75.0	N/A	N/A	N/A	**48.6**	**45.7**	31.2	27.8
DT12	Diffusion	100	83.3	N/A	N/A	N/A	**50.6**	**47.8**	36.0	39.1
DT13	Diffusion	90	75.0	N/A	N/A	N/A	**50.9**	**47.5**	36.4	38.2
DT14	Diffusion	100	83.3	N/A	N/A	N/A	**50.4**	**49.3**	37.4	**40.0**
DT15	Diffusion	70	58.3	N/A	N/A	N/A	**49.8**	**51.1**	39.5	38.5
DT16	Diffusion	90	75.0	N/A	N/A	N/A	**43.0**	37.3	31.3	33.6
DT17	Diffusion	90	75.0	N/A	N/A	N/A	**44.6**	**44.8**	35.2	**41.8**

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
DT18	Diffusion	100	83.3	N/A	N/A	N/A	**54.1**	**48.2**	31.1	**57.9**
DT19	Diffusion	70	58.3	N/A	N/A	N/A	**70.6**	**63.1**	38.8	**54.6**
DT20	Diffusion	90	75.0	N/A	N/A	N/A	38.7	35.7	30.6	34.9
DT21	Diffusion	100	83.3	N/A	N/A	N/A	31.6	34.9	22.3	24.8
DT22	Diffusion	90	75.0	N/A	N/A	N/A	28.4	28.5	21.3	22.4
DT23	Diffusion	60	50.0	N/A	N/A	N/A	37.8	29.4	24.7	28.2
DT24	Diffusion	80	66.7	N/A	N/A	N/A	36.3	33.4	24.6	25.7
DT25	Diffusion	70	58.3	N/A	N/A	N/A	**57.0**	**50.1**	35.8	**49.2**
DT26	Diffusion	90	75.0	N/A	N/A	N/A	35.0	34.0	27.6	**40.2**
DT27	Diffusion	90	75.0	N/A	N/A	N/A	**63.3**	**62.9**	**53.7**	**64.5**
DT28	Diffusion	80	66.7	N/A	N/A	N/A	**50.3**	**52.7**	**42.6**	**52.6**
DT29	Diffusion	100	83.3	N/A	N/A	N/A	**62.9**	**62.7**	**49.1**	**58.9**
DT30	Diffusion	100	83.3	N/A	N/A	N/A	**54.2**	**52.7**	35.9	**46.6**
DT31	Diffusion	90	75.0	N/A	N/A	N/A	**69.7**	**62.7**	**49.9**	**61.3**
DT32	Diffusion	100	83.3	N/A	N/A	N/A	35.8	36.8	23.8	22.7
DT33	Diffusion	100	83.3	N/A	N/A	N/A	36.0	32.2	23.8	23.8
DT34	Diffusion	100	83.3	N/A	N/A	N/A	**55.6**	**51.2**	36.4	**43.2**
DT35	Diffusion	90	75.0	N/A	N/A	N/A	**46.3**	**40.7**	29.6	34.1
DT36	Diffusion	100	83.3	N/A	N/A	N/A	**52.6**	**48.8**	**41.2**	39.6
DT37	Diffusion	90	75.0	N/A	N/A	N/A	**45.9**	39.4	31.8	30.3
DT38	Diffusion	90	75.0	N/A	N/A	N/A	**53.7**	**47.9**	35.2	39.1
DT39	Diffusion	80	66.7	N/A	N/A	N/A	**50.3**	**44.9**	34.9	**40.1**
DT40	Diffusion	100	83.3	N/A	N/A	N/A	**51.5**	**46.9**	36.3	36.0
DT41	Diffusion	90	75.0	N/A	N/A	N/A	**49.4**	**41.9**	32.0	36.5
DT42	Diffusion	100	83.3	N/A	N/A	N/A	**52.6**	**49.9**	35.6	35.8
DT43	Diffusion	100	83.3	N/A	N/A	N/A	39.7	38.1	29.9	29.7
DT44	Diffusion	90	75.0	N/A	N/A	N/A	35.3	35.4	25.0	28.1

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
DT45	Diffusion	90	75.0	N/A	N/A	N/A	34.2	28.0	27.2	23.0
DT46	Diffusion	70	58.3	N/A	N/A	N/A	**42.8**	36.0	29.9	30.7
DT47	Diffusion	100	83.3	N/A	N/A	N/A	**46.1**	**47.2**	30.4	34.4
DT48	Diffusion	80	66.7	N/A	N/A	N/A	**46.8**	**48.7**	35.3	**42.3**
DT49	Diffusion	100	83.3	N/A	N/A	N/A	39.6	29.0	26.4	21.3
DT50	Diffusion	100	83.3	N/A	N/A	N/A	**45.7**	**42.6**	32.2	**44.5**
DT51	Diffusion	100	83.3	N/A	N/A	N/A	N/A	38.9	28.2	28.0
VX1	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	29.8	24.2
VX2	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	23.4	21.8
VX3	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	21.3	22.5
VX4	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	32.3	35.7
VX5	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	30.3	32.0
VX6	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	27.1	24.3
VX7	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	21.9	24.1
VX8	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	26.1	25.8
VX9	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	34.9	37.5
VX10	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	25.5	26.2
VX11	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	23.8	23.4
VX12	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	20.2	20.1
VX13	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	31.3	33.0
SR1	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	28.5	31.1
SR2	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	26.6	32.8
SR3	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	38.4	**40.6**
SR4	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	35.5	**43.4**
SR5	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	31.7	36.9
SR6	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	30.4	29.7
SR7	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	23.9	26.9

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
SR8	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	24.9	28.4
SR9	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	NA	27.8
SR10	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	28.7	30.1
SR11	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	23.5	25.0
SR12	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	24.3	25.8
SR13	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	23.0	24.6
SR14	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	20.4	24.1
SR15	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	28.9	29.8
SR16	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	23.6	24.6
SR17	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	24.8	25.8
SR18	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	26.4	26.4
SR19	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	31.6	36.5
SR20	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	**44.1**	37.4
SR21	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	29.3	36.5
LTN1	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	26.6	25.1
LTN2	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	34.7	34.8
LTN3	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	30.4	34.9
LTN4	Diffusion	100	83.3	N/A	N/A	N/A	N/A	N/A	24.6	23.6
LTN5	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	22.4	27.2
LTN7	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	25.8	22.5
LTN8	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	28.7	21.0
LTN9	Diffusion	100	83.3	N/A	N/A	N/A	N/A	N/A	20.7	17.0
LTN10	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	34.0	26.2
LTN11	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	**42.4**	**48.3**
LTN13	Diffusion	30	25.0	N/A	N/A	N/A	N/A	N/A	N/A	27.8
LTN14	Diffusion	40	33.3	N/A	N/A	N/A	N/A	N/A	N/A	20.3
LTN15	Diffusion	60	50.0	N/A	N/A	N/A	N/A	N/A	N/A	25.0

Site ID	Site type	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
LTN16	Diffusion	40	33.3	N/A	N/A	N/A	N/A	N/A	N/A	26.0
SCOOT	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	35.0	**46.7**
AS1	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	20.3	25.8
AS2	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	22.9	27.7
JP1	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	17.4	24.9
JP2	Diffusion	50	41.7	N/A	N/A	N/A	N/A	N/A	22.8	17.1
JP3	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	NA	17.2
LI	Diffusion	50	41.7	N/A	N/A	N/A	N/A	N/A	20.7	**45.0**
LO	Diffusion	60	50.0	N/A	N/A	N/A	N/A	N/A	20.4	26.3
RS1	Diffusion	90	75.0	N/A	N/A	N/A	N/A	N/A	19.5	19.3
STA1	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	32.1	**40.2**
STA2	Diffusion	100	83.3	N/A	N/A	N/A	N/A	N/A	35.2	38.4
SS1	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	23.0	20.4
SP1	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	21.3	19.4
SP2	Diffusion	80	66.7	N/A	N/A	N/A	N/A	N/A	19.0	31.1
SH1	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	22.5	18.4
VP1	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	21.1	22.1
VP2	Diffusion	60	50.0	N/A	N/A	N/A	N/A	N/A	21.7	22.7
WP1	Diffusion	60	50.0	N/A	N/A	N/A	N/A	N/A	25.2	27.4
WP2	Diffusion	70	58.3	N/A	N/A	N/A	N/A	N/A	24.5	28.9

Notes:

The annual mean concentrations are presented as µg m^{-3}.

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

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

Means for diffusion tubes have been corrected for bias.

All means have been “annualised” in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Results have been distance corrected where applicable.

(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%).

Continuous monitoring sites have been adjusted to a point of relative public exposure. The unadjusted data is shown in brackets. Diffusion tubes data is presented prior to adjustment to the point of relevant public exposure – please see Table N for more details

For more details on diffusion tubes monitoring, please see Appendix B.

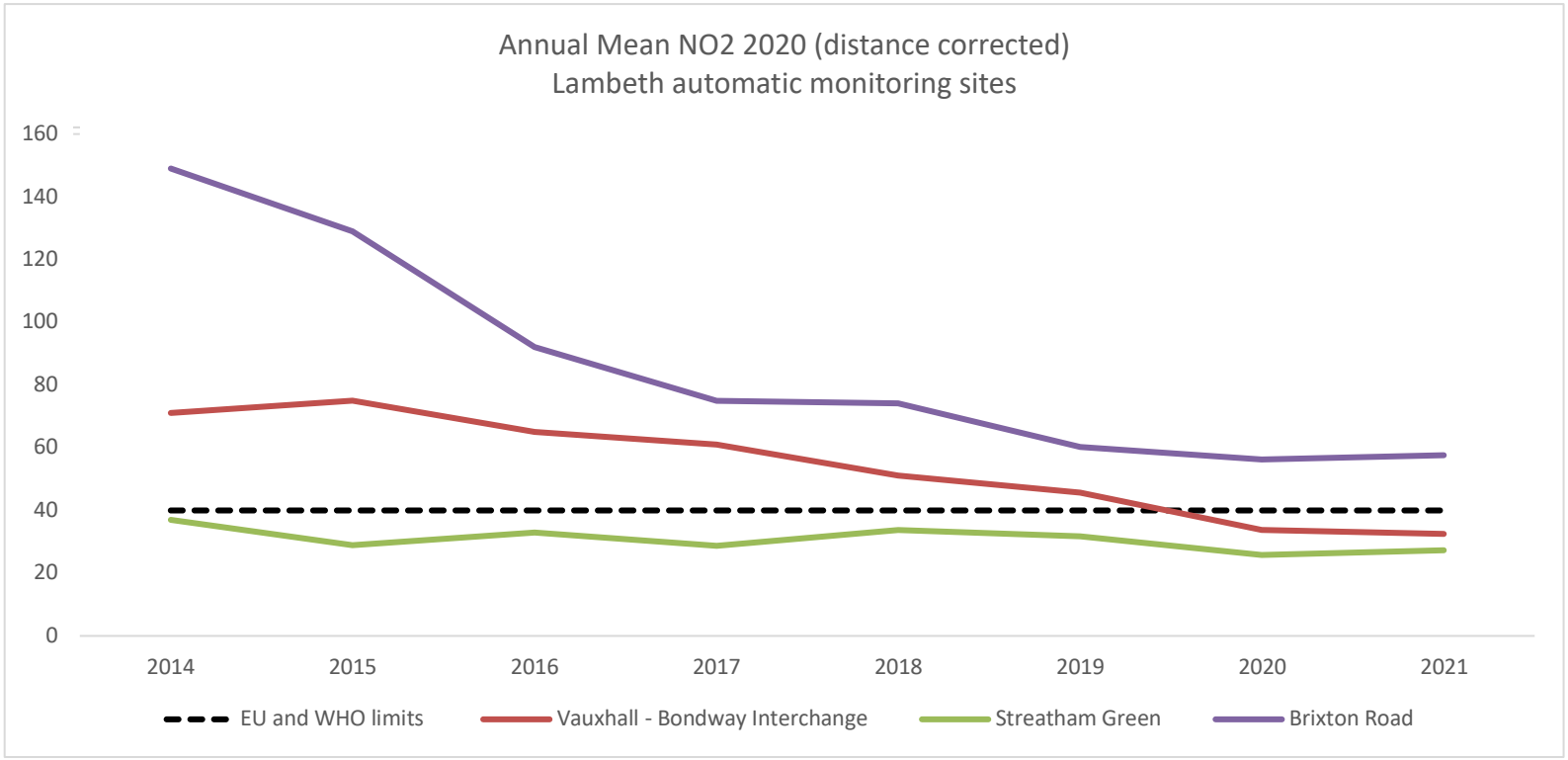
Automatic monitoring

Since 2014, NO_2 levels have decreased by 61% at Brixton Road LB4, by 54% at Vauxhall LB5, and by 26% at Streatham Green LB6. However, between 2020 and 2021, NO_2 levels increased at Brixton Road LB4 (2.5%) and Streatham Green LB6 (6.2%), while falling at Vauxhall LB5 (3.6%).

LB4 kerbside site at Brixton Road has exceeded the Air Quality Objective in 2020. It has exceeded the objective every year, and continues to register high concentrations of NO_2. NO_2 levels are of concern at the site, as many people live and work in the area, and Brixton Road is used every day by pedestrians and cyclists.

LB5 industrial site at Vauxhall did not exceed the Air Quality Objective. This is the second year the site has not exceeded the objective. The Vauxhall bus station will be redeveloped in the coming years, and the air quality monitoring station will be relocated. As part of the relocation, we expect to reduce the size of the enclosure of the air quality monitoring station.

LB6 background site at Streatham Green did not exceed the Air Quality Objective.



Passive monitoring

This report presents results for 118 diffusion tube locations across Lambeth. Across all diffusion tubes for which there was comparable data in 2020 and 2021, there was an average increase in NO_2 levels of 2.97 µg m-3. However, comparing 2021 with 2019 data, across all diffusion tubes for which there was comparable data, average NO_2 levels across all diffusion tubes were lower by 6.92 µg m-3. As set out in Appendix B, issues with diffusion tube collections mean that these figures should be treated with some caution.

Impact of Covid-19 and road transport

Covid-19 restrictions had a significant impact on traffic levels, with lower traffic levels in the spring and autumn/winter lockdowns of 2020, and lower traffic levels in the late-winter lockdown of 2021. Automatic Traffic Count data collected by Transport for London at all monitoring sites in Lambeth shows 2.9% higher traffic levels for the whole of 2021 compared to the whole of 2020. This may explain increased levels of NO_2 recorded at Brixton LB4, Streatham Green LB6, and at numerous diffusion tube locations.

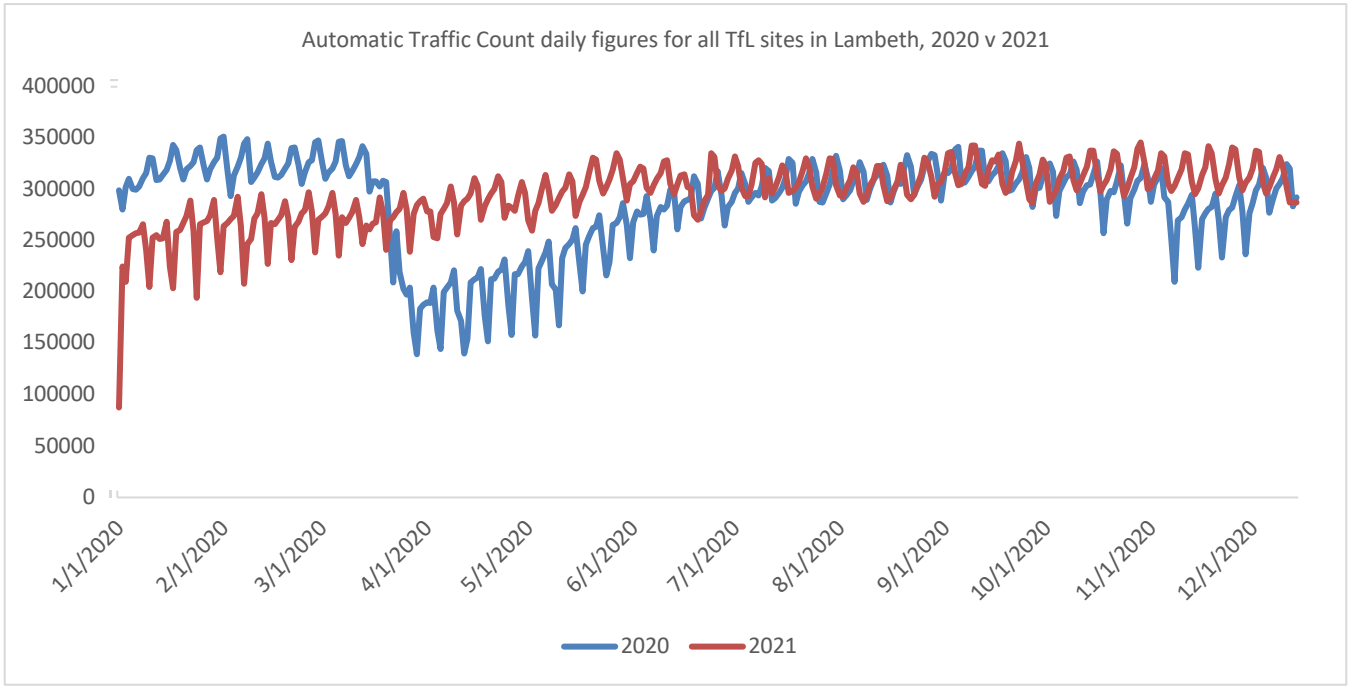

Automatic Traffic Count daily figures for all TfL sites in Lambeth, 2020 v 2021
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2020
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020
2020
2021

Table E. NO_2 Automatic Monitoring Results: Comparison with 1-hour Mean Objective, Number of 1-Hour Means > 200 µg m^{-3}

Site ID	Valid data capture for monitoring period %([a])	Valid data capture 2021 %([b])	2015	2016	2017	2018	2019	2020	2021
LB4 (Brixton Road)	N/A	100%	**883**	**539**	**75**	**83 (247.87)**	11 **(196)**	1	4
LB5 (Vauxhall Bondway Interchange)	N/A	95%	4	1	0	0	0	0	0
LB6 (Streatham Green)	N/A	65%	0	0 (0)	0	0	0	0	0

Notes

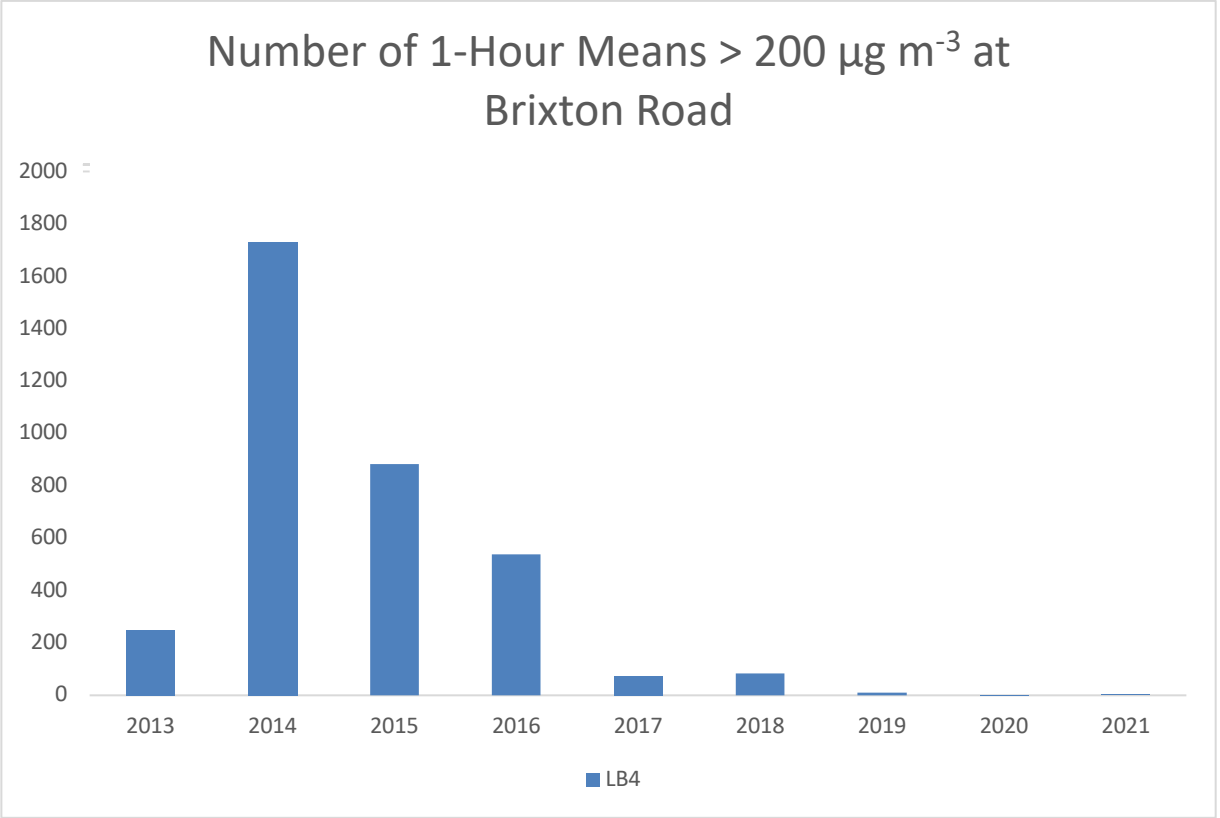
Results are presented as the number of 1-hour periods where concentrations greater than 200 µg m^{-3} have been recorded.

Exceedance of the NO_2 short term AQO of 200 µg m^{-3} over the permitted 18 hours per year are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(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%)



The LB4 site on Brixton Road registered four exceedances of the 1-hour mean objective this year, compared to just one exceedance in 2020. This is within the permitted 18 hours per year.

Both LB5 Vauxhall Bondway Interchange and LB6 Streatham Green continued to meet the objective

Lambeth’s background site only has 65% data capture for 2021 due to a sampling issue. More information on this can be found in Appendix C.

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

Site ID	Valid data capture for monitoring period %([a])	Valid data capture 2021 %([b])	2015	2016	2017	2018	2019	2020	2021
LB4 (Brixton Road)	N/A	100%	28 (26.9)	40	35	30 (29)	25	24	25
LB5 (Vauxhall Bondway Interchange)	N/A	98%	**43**	39 (38)	37	34	38	**46**	**46**
LB6 (Streatham Green)	N/A	99%	18.2 (19)	20 (22)	28 (26)	20	19	18	18

Notes

The annual mean concentrations are presented as µg m^{-3}.

Exceedances of the PM_{10} annual mean AQO of 40 µg m^{-3} are shown in **bold**.

All means have been "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.

(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%).

Vauxhall LB5 has breached the annual mean objective of 40 µg m-3 in 2020 and 2021. This is the highest PM_{10} concentration ever recorded at the site. It is believed that the spikes recorded at the station since 2019 are due to contamination from a tube vent

which belongs to Transport for London, which is situated immediately next to the air quality station. This vent was previously sealed and has been left open since 2019. **The pollution from the vent is contaminating the readings, and we therefore believe those not to be representative of PM_{10} concentrations in the Vauxhall area.** The Vauxhall monitor will be moved in 2022 to a nearby location, with a lightweight monitor taking the place of the current monitor.

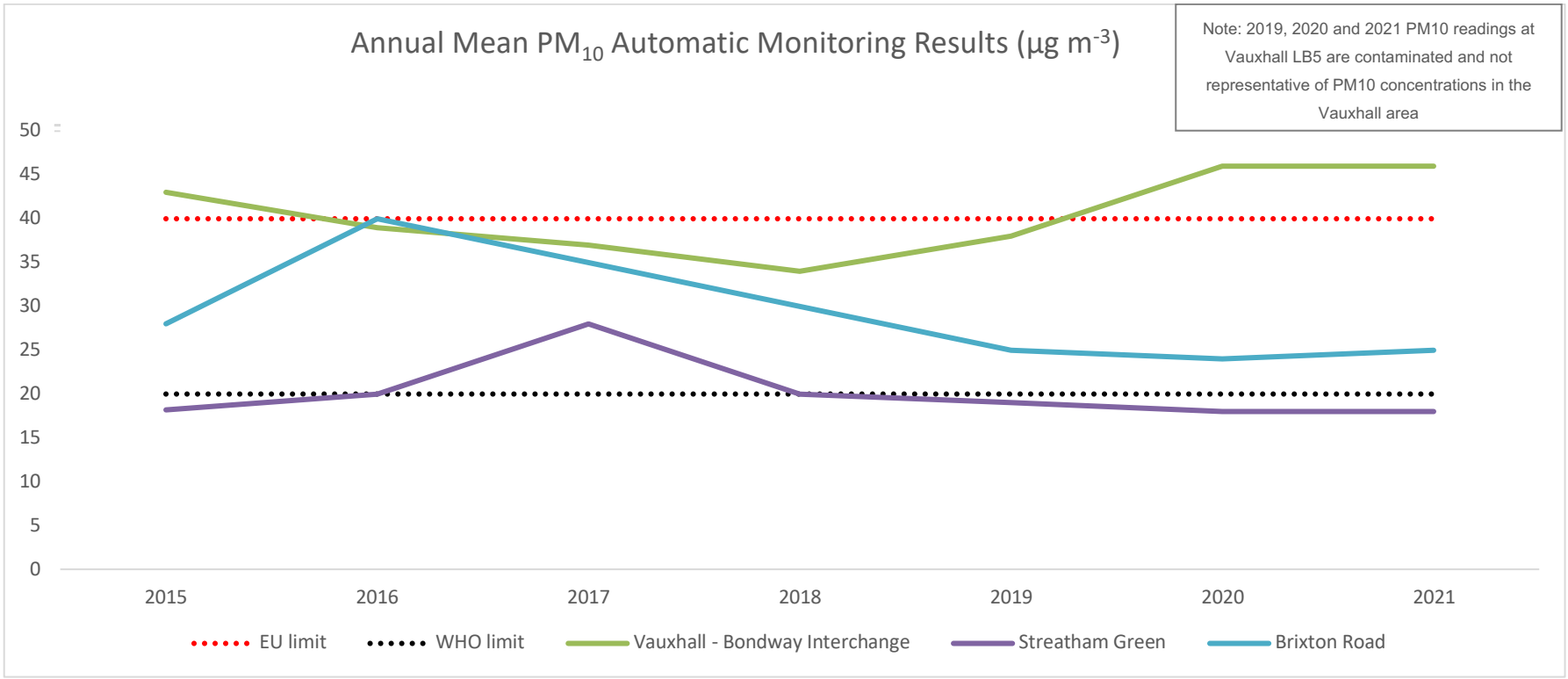


Table G. PM_{10} Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM_{10} 24-Hour Means > 50 µg m^{-3}

Site ID	Valid data capture for monitoring period %[a]	Valid data capture 2021 %[b]	2015	2016	2017	2018	2019	2020	2021
LB4 (Brixton Road)	N/A	100%	11 **(39.5)**	**57**	27	13 **(46)**	10 **(38.1**)	11	10
LB5 (Vauxhall Bondway Interchange)	N/A	98%	**73 (60.6)**	**43 (62.7)**	**64**	**45**	**74**	**142**	**148**
LB6 (Streatham Green)	N/A	99%	1 (34.5)	2 (33.8)	11 (10)	3	5	4	1

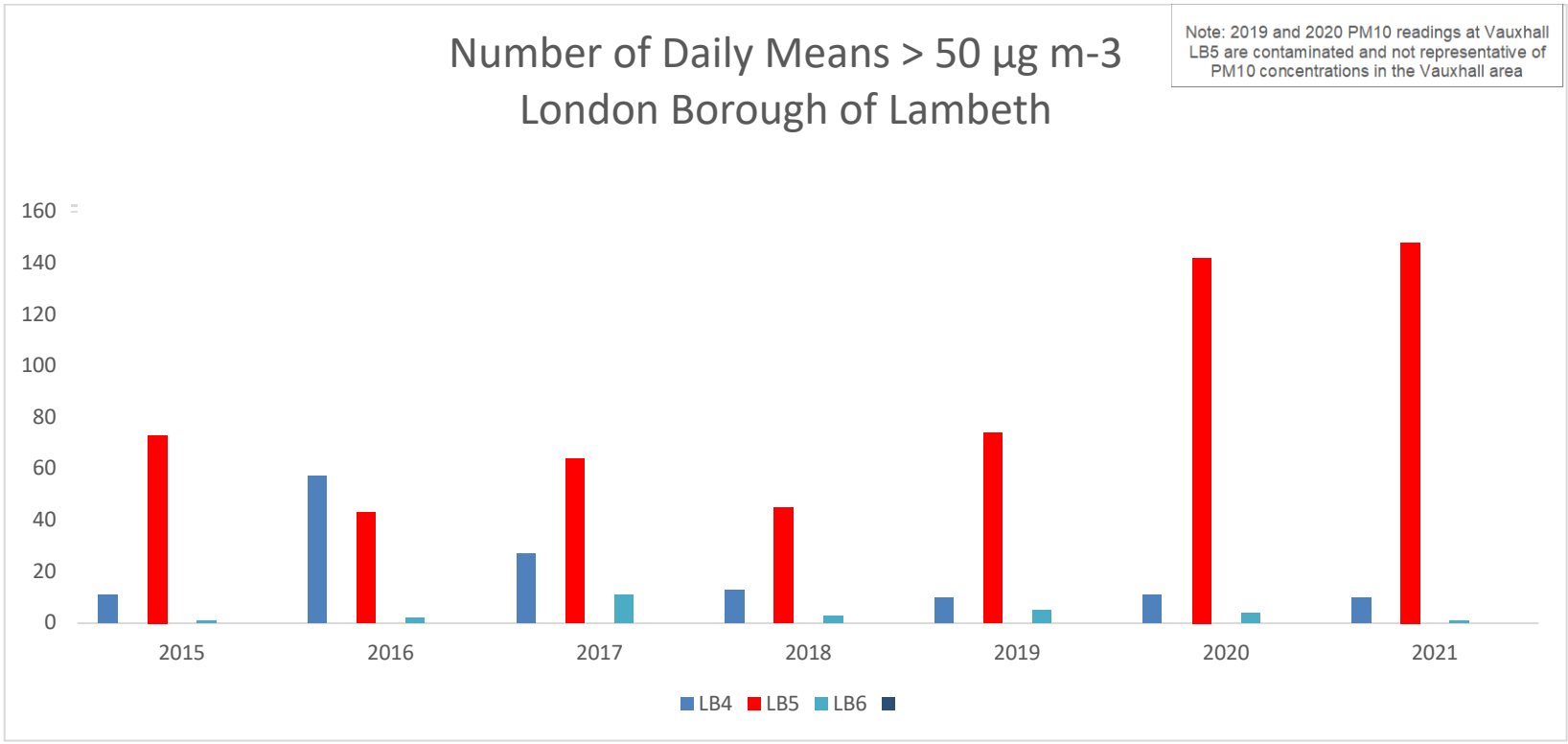
Notes

Exceedances of the PM_{10} 24-hour mean objective (50 µg m^{-3} over the permitted 35 days per year) are shown in **bold.**

Where the period of valid data is less than 85% of a full year, the 90.4th percentile is provided in brackets.

(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%).



At Vauxhall LB5 the objective was exceeded. In 2021, 148 days recorded a daily mean above 50 µg m-3, four times the permitted limit of 35 days/year. This is the highest breach level ever recorded at one of our sites. It is believed the exceedances are due to contamination from a tube vent which belongs to Transport for London, which is situated immediately next to the air quality station's sensors. This vent was previously sealed and has been left open since 2019. **The pollution from the vent is contaminating the**

readings, and we therefore believe those not to be representative of PM_{10} concentrations in the Vauxhall area. The Vauxhall monitor will be moved in 2022 to a nearby location, with a lightweight monitor taking the place of the current monitor.

Table I. 2021 SO_2 Automatic Monitoring Results: Comparison with Objectives

Site ID	Valid data capture for monitoring period %[(a)]	Valid data capture 2021 %[(b)]	Number of 15-minute means > 266 µg m^{-3}	Number of 1-hour mean > 350 µg m^{-3}	Number 24-hour mean > 125 µg m^{-3}
LB5 (Vauxhall Bondway Interchange)	N/A	100%	0	0	0

Notes

Results are presented as the number of instances where monitored concentrations are greater than the objective concentration.

Exceedances of the SO_2 objectives are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year).

If the period of valid data is less than 85%, the relevant percentiles are provided in brackets.

(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%).

There were no exceedances of SO_2 concentrations which is in line with previous years' results.

2. Action to Improve Air Quality

2.1 Air Quality Action Plan Progress

Table J provides a brief summary of Lambeth progress against the Air Quality Action Plan, showing progress made this year. New projects which commenced in 2021 are shown at the bottom of the table.

Table J. Delivery of Air Quality Action Plan Measures

Action n.	LLAQM Action Matrix Theme	Action	Deadline	Progress
1.1	**Emissions from Developments and Buildings (actions 1-9)**	Include a policy on air quality as part of the Local Plan review	Early 2021	• The Lambeth Local Plan was adopted in September 2021. Section 9 of the Lambeth Local Plan sets out that Lambeth will apply London Plan policy SI1 Improving air quality to all development proposals in the borough, along with associated Mayoral guidance on Air Quality Neutral and Air Quality Positive standards. • The London Plan 2021 forms part of Lambeth's development plan (together with the Local Plan and any made neighbourhood plan) and therefore London Plan policy SI1 on air quality now applies to development proposals in the borough.
1.2		Work with neighbourhood planning forums on area-specific air quality policies in emerging neighbourhood plans	Throughout Plan	• We are committed to support and work together with any local community that wants to write a Neighbourhood Plan, with policies that improve air quality for local residents. • The council has one neighbourhood plan – South Bank and Waterloo Neighbourhood Plan, which includes policies on air quality stating that development proposals must show how they contribute to the improvement of air quality in South Bank and Waterloo, and encourages development along identified pedestrian routes.
1.3		Explore the potential for allocation of funds from s106 planning obligations aimed at offsetting air quality impacts from a development.	Throughout Plan	In 2021, Lambeth funding from Neighbourhood CIL and S106 funding was given to:

		Explore potential to add an Air Quality Fund should Lambeth CIL Charging Schedule be reviewed		• **Lambeth Community Solar – Norwood School project -** £15,000 worth of S106 funding allocated in **June 2020** to part finance the installation costs of a solar photovoltaic (PV) system at Norwood School. The 83kW solar PV will save an average of 18 tonnes CO2e a year, which contributes towards Lambeth's ambition to be carbon neutral by 2030. None of this funding allocation has been spent yet. • **CLIP Investment Programme Air Quality** - £45,000 worth of Neighbourhood CIL was allocated in **Oct 2017** to run air quality projects to identify and implement localised solutions under Theme 5 of the AQAP in order to reduce residents' exposure to poor air quality. £34,982.83 has been spent to date. Last expenditure occurred in Apr 2020.
1.4		Identify and manage the impact of growth and regeneration on waste management and industrial processes regulated under the Environmental Permitting Regulations	Throughout Plan	• Our Air Quality Guidance Note requires Air Quality Assessments submitted with planning applications to consider the impact of industrial processes regulated under the Environmental Permitting Regulations (EPR). Our map of Part B industrial processes regulated under LAPPC, alongside the LAPPC public register, should inform developers. • Lambeth Climate Change and Climate Change and Sustainability Team was consulted on all air quality aspects of major planning applications, applications affecting sensitive receptors, such as schools, and applications for developments within Air Quality Focus Areas.
2.1		Educate and raise awareness amongst developers of Non-Road Mobile Machinery (NRMM) and enforce NRMM policies	Complete	As explained in our 2019 ASR, this action is now complete
2.2		Develop internal processes to continue to educate and raise awareness amongst developers of NRMM; and enforce NRMM policies after funding expires in March 2019	Throughout Plan	• We are continuing to work with Merton and other boroughs as part of the pan-London NRMM project, which is now funded until March 2022 by the Mayor's Air Quality Fund to continue to educate and raise awareness amongst developers. • A Lambeth Sustainability Officer has undergone training on auditing NRMM on construction sites from the Regulatory Services Partnership.

				• Participation in the NRMM project is secured until March 2022 to continue to educate and raise awareness amongst developers of NRMM and enforce NRMM policies.
2.3		Continue to research pollution mitigation measures as part of London Low Emission Construction Partnership (LLECP); promote LLECP scheme, findings and recommendations among developers operating in the borough	Complete	As explained in our 2019 ASR, this action is now complete
2.4		Continue work and legacy of LLECP after funding expires in March 2019	March 2022	• As explained in previous ASRs, funding from the MAQF is secured until March 2022 to continue to educate and raise awareness amongst developers of NRMM, and enforce NRMM policies. • A Lambeth Sustainability Officer has undergone training on auditing NRMM on construction sites from the Regulatory Services Partnership.
2.5		Carry out an investigation into whether a Construction Impact Monitoring Officer(s) should be recruited to monitor and enforce against dust from construction		As explained in our 2019 ASR, this action is now complete
3		CHP and biomass air quality policies	Throughout Plan	• The new Local Plan will discourage the use of CHP in line with the New London Plan. These policies will be followed when planning applications are reviewed, along with our policies on biomass plant and ultra-low NOx boilers in the Lambeth Air Quality Guidance Note. • Lambeth Climate Change and Climate Change and Sustainability Team is consulted on all air quality aspects of major planning applications, applications affecting sensitive receptors such as schools and applications for sites in Air Quality Focus Areas. This includes review of emissions from proposed energy centres. Relevant emissions standards in line with the Sustainable Design and Construction SPG are secured by planning condition

4		Implementing London Plan Air Quality Neutral Policy	Throughout Plan	• As previously stated, the Revised Lambeth Local Plan Proposed Submission Version 2020 states that Lambeth will implement Mayoral guidance on Air Quality Neutral and Air Quality Positive standards.
5		Ensuring adequate, appropriate, and well-located green space and infrastructure is included and protected in developments	Throughout Plan	• Lambeth Sustainability is consulted on all air quality aspects of major planning applications, applications affecting sensitive receptors such as schools and applications for sites in Air Quality Focus Areas. Green infrastructure and additional green spaces are recommended in general to improve air quality, amenity and biodiversity. Green infrastructure and green screens may be recommended to protect future users from air pollution where the development may expose them to poor air quality, but this is only considered where risk can't be mitigated through design. • We are looking to invest in additional capacity for reviewing planning applications for air quality considerations. • We are undertaking a review of the air quality guidance note which will strengthen the advice for developers to include greening as part of developments for biodiversity, air quality and wellbeing.
6		Ensuring emissions from construction are minimised	Throughout Plan	• We are continuing to work with LB Merton on the pan-London NRMM project to increase compliance with NRMM engine emissions standards. • Construction sites determined to be high risk for dust impacts, or medium risk and close to a sensitive receptor will be required to monitor PM10 on site and stop activities when exceedances of a trigger level occur. • Our Air Quality Guidance Note includes information regarding minimising emissions during construction and is under review. • Sustainability Officers also review Air Quality and Dust Management Plans, Construction Environmental Management Plans, Method Statements and Construction Logistics Plans submitted by developers for air quality impacts during construction. • Lambeth Planning Enforcements investigate reports of poor air quality suspected to be due to construction. • Our Construction Site Compliance Officer is still in post to work in the north of the borough to reduce pollution from construction and logistics. • We will be investing in additional capacity for reviewing planning applications for air quality considerations, and this will include the construction phase.

7		Ensuring that Smoke Control Zones are appropriately identified and fully promoted and enforced	March 2021	• In October 2020 we successfully applied to the DEFRA Air Quality Grant Scheme 2020/21 and have been awarded £31.5k. The initial phase of the project is begun in late 2021, with NO2 and PM data being collected from walking routes in Streatham and Clapham. The data will be used in 2022 to create a report of the findings and help shape a borough-wide awareness raising campaign. • Our online resources continue to remain available on our dedicated webpage of the air quality website. Woodburning regulations are changing, and more power is given to local authorities to tackle this source of pollution. We update our online resources with new relevant information on a regular basis. • We have joined woodburning working group led by the GLA, with the aim of coordinating our actions to tackle woodburning with other London-boroughs and remain updated on relevant legislation. • Our residents can report a breach of a Smoke Control Order by completing an online form.
8.1		Lambeth Housing to make full use of funding available under RE:NEW scheme and to replace at least 250 boilers each year	Throughout Plan	• During the period August 2019 until March 2021, we replaced 1,026 boilers. • We are working with other London boroughs as part of the West London Coalition for the Green Homes Grant Local Authority Delivery scheme, led by LB Ealing. The coalition was awarded grant funding for retrofit of homes likely to be living in fuel poverty and has been delivering energy efficiency improvement works in homes across the borough throughout 2021. Lambeth Council also provided £100,000 top-up funding for additional measures to further benefit households. The scheme primarily focused on fabric upgrades such as insulation, plus 8 highly inefficient gas boilers were replaced.
8.2		Promoting RE:NEW scheme to individual households, social and private landlords to increase uptake of the scheme in the borough	Throughout Plan	• Sustainability Officers held a series of workshops for residents to advise how to reduce energy and save money, including on: 4 November 2019, 25 February 2020 and 12 March 2020. • Sustainability Officers redesigned and/or produced new guides for residents, to raise awareness of air pollution and minimise energy consumption at home. • The Green Homes Grant phase 1 was promoted in 2021 via direct mail outs to EPC E, F and G households who may be eligible for the scheme. We also promoted the opportunity via advice centres in Lambeth, third sector forums and internal networks. Housing Associations were also contacted to participate.

				• Round 4 of the GLA's group buying scheme Solar Together London was promoted to residents by direct mail, social media, search engine optimisation and newsletters. Nearly 100 residents accepted their offer of solar panel installation, among the highest of the inner London boroughs.
8.3		Explore opportunities for Lambeth to make full use of the RE:FIT information support scheme to retrofit all remaining public buildings including schools, libraries and leisure centres	Throughout Plan	• The council is investing £9.2m to retrofit 23 schools, a selection of corporate and community buildings, and Brockwell Hall, funded through a combination of Public Sector Decarbonisation Scheme grant and council capital investment. • The council has secured an additional £1.5m grant funding retrofit Brixton Recreation Centre, Upper Norwood Library, and 14 Bayliss Road. • In 2022 the council plans to submit a funding application to retrofit the buildings with the largest energy consumption in the council's portfolio, including schools and leisure centres.
9		Review and enforce emissions management control techniques at facilities the Council regulates under the Environmental Regulations	Throughout Plan	• In 2021, part B permit holders in Lambeth decreased from 60 to 58, with no new permits being issued. Evidence was submitted on time to Defra. • Lambeth has no Part A installations
10	**Public Health and Awareness Raising (Actions 10-23)**	Director of Public Health is fully briefed on the scale of the problem, what is being done and what is needed	Throughout Plan	• The climate change and Sustainability team continues to have a strong relationship with the public health team, and have worked closely on the development of Lambeth's new Air Quality Action Plan.
11		Public Health teams support engagement with local stakeholders (businesses, schools, community groups and healthcare providers) and are asked for their support	Throughout Plan	• Due to the impact of Covid-19 in 2021, Public Health had limited resources to support engagement on Air Quality. Moving into 2022, Public Health has more capacity to help with supporting engagement.
12.1		JSNA includes air quality as a key theme and has up to date information on air quality impacts	Throughout Plan	• Public Health is keen to work with colleagues across the Council to include measurable key indicators in the air quality action plan, with a view to embedding evaluation and developing remedial actions to improve outcomes.

12.2		Communications campaign highlighting health impacts of poor air quality	Throughout Plan	• We updated our air quality webpage with new content on Lambeth's new Air Quality Vision and how we will be working towards WHO interim targets on air quality. Our health resources for older residents have been re-designed in 2020 to be more appealing and are available here • In 2020 Lambeth conducted a co-location trial of 5 lightweight air quality monitors, to test their reliability. Following this trial, Lambeth has taken the decision to rollout a first wave of lightweight air quality monitors in 2022.
13		Strengthening co-ordination with Public Health by ensuring that at least one consultant grade public health specialist within the borough has air quality responsibilities outlined in their job profile	Throughout Plan	• During 2020/21 Lambeth Public health team was under significant pressure to respond to the COVID19 pandemic. However, they were able to mobilise Public Health trainee to a) work on the APHR including the chapter on air quality b) update action cards for key stakeholders.
14		Ensure that the lead officer for Transport has been fully briefed on the Public Health duties and the fact that all directors (not just Director of Public Health) are responsible for delivering them, as well as on air quality opportunities and risks related to transport in the borough	Throughout Plan	• Sustainability officers continue to work closely with the Transport team on Air Quality issues and ensure that officers are briefed on all Public Health duties. • The lead officer for Transport has provided updates to this Action Table. The ASR has been signed off by Lambeth Assistant Director for Sustainable Growth and Climate Change Response
15.1		Prepare information pack for businesses on how to help improve air quality and reduce exposure for employees and customers	Throughout Plan	• Our business info pack available here has been re-designed to be more appealing and continues to remain available on our website. We update it on a regular basis with new content, and we continue to direct businesses onto it at every opportunity (e.g. during online meetings, conferences, in-person events). • We continue to work with BIDs on a regular basis to raise awareness of air pollution among their businesses.
15.2		Annual business engagement event to educate and raise	Throughout Plan	• Throughout 2021, Lambeth council engaged with a range of businesses and anchor institutes through our Climate Action Plan workstreams, to raise awareness around sustainability and better

		awareness regarding air quality; and to find joint working opportunities		understand how we can work with BIDs to improve air quality in Lambeth.
16.1		Promote and build on the work of airTEXT to alert sensitive receptors and other vulnerable citizens of high pollution days	Throughout Plan	• In 2021 Lambeth submitted a joint bid with Southwark to redevelop the current airTEXT alert system to improve sign ups and reach, as well as creating a new digital system to be used by schools and health care setting within both boroughs. • Lambeth Council continues to promote airTEXT
16.2		Increase promotion of cycling and walking websites and apps, such as walkit.com	Throughout Plan	• Link to www.lambeth.gov.uk/cycling with everything that goes out • Link to cycleconfident.com to book cycling also • Suggested use of TfL journey planner to plan cycling and walking journeys including Santander
17.1		Continue to actively engage with all schools in the STARS programme	Throughout Plan	• Lambeth continues to encourage and support schools to take part in TfL STARS programme
17.2		Continue to support schools to implement travel plans moving from bronze to silver to gold	Throughout Plan	• In 2021,20 Lambeth schools achieved bronze accreditation, 7 achieved silver, and 9 achieved gold. • Accreditation status for schools is carrying over into next year
17.3		Engage with Nurseries	Throughout Plan	• In 2020, Triangle Nursery was recommended for inclusion in the green screen programme and to be delivered in 2021/22. • In late 2020, the Climate Change and Sustainability Team allocated LIP funding towards a green screen at Guy's and St Thomas' Day Nursery. The nursery was identified as being exposed to the pollution from a major road by the Air Quality Team at Guy's and St Thomas' Hospital. The green screen was installed in 2021 and diffusion tubes have been utilised to monitor its impact.
17.4		Travel Plans Poster campaign for under 5s: link between active travel and air quality	Completed	As explained in our 2019 ASR, this action is now complete
18		Air quality at schools and other educational institutions	Throughout Plan	• We continue to work with Idling Action London to raise awareness of the dangerous impact of idling, particularly around schools. We continue to direct Lambeth schools onto the website and resources of Idling Action London at every opportunity, and we actively encourage schools to host their online sessions and assemblies. In 2021, an

				idling event was planned to take place at Sunnyhill Primary School in Streatham for early 2022. • 15 schools in Lambeth received green screens in 2021
19.1		Air Quality to be considered when making decisions	Throughout Plan	• Lambeth's Air Quality Vision was formally adopted in November 2021. This included a commitment to "integrating air quality considerations into everything we do, reviewing how each department can contribute to our air quality goals, and ensuring all work and decisions undertaken by the council are consistent with our air quality goals." • The Air Quality Vision committed the council to doing everything in its power to: - Meet World Health Organisation Interim Target 2 (30µg/m3) for annual mean levels of Nitrogen Dioxide by 2030. - Meet World Health Organisation Interim Target 4 for PM10 (20 µg/m3) and PM2.5 Interim Target 4 (10µg/m3) ahead of 2030.
19.2		Air quality awareness increased amongst Lambeth officers	Throughout Plan	• The Climate Change and Sustainability Team launched Net Zero Heroes, an awareness raising programmed delivered in partnership with behaviour change experts "Jump", open to all Lambeth staff, which rewards them for completing positive environmental actions. This includes air quality actions, such as cycling to work instead of driving, taking an air pollution knowledge quiz, or participating in a step challenge. The Net Zero Heroes programme features regularly on the staff weekly newsletter. The programme's homepage can be seen here. • The Climate Change and Sustainability Team run monthly 'Climate, Cakes and Chats' lunch time sessions that address a range of climate issues, including air quality. • A question about how much co2 each officer saved by not travelling/as much was in the staff travel survey to help increase awareness
20		Work with Lambeth Youth Council to raise awareness	Throughout Plan	• The Climate Change and Sustainability team worked with Lambeth Youth Council on the development of the Climate Action Plan in 2021
21.1		Work closely with colleagues in Adult Social Care and Housing to identify vulnerable citizens	Throughout Plan	• In 2021 Lambeth secured Mayor's Resilience Fund to develop a tool to identify the impact of PM2.5 pollution on sensitive receptors in Lambeth. The data company Blockdox worked with Lambeth and the GLA to develop a map that used LAEI data to illustrate exposure and risk levels at nurseries, schools, health and care settings across the borough.

				• Lambeth will install a first wave of lightweight air quality monitors in 2022. The climate change and sustainability team has worked with public health and other council departments to ensure that key areas of the borough are covered. A range of care homes, health care settings, schools and council housing will be covered by the light weight monitors.
21.2		Work closely with Age UK and other relevant organisations to produce tailored leaflets for older citizens and to visit future events aimed specifically at older citizens	Complete	As explained in our 2019 ASR, this action is now complete
22		Engagement with black and other minority ethnic citizens	Throughout Plan	• As per Action 38, the Climate Change and Sustainability Team intends to increase the size of its AQAP Steering Group in 2022. This is to ensure the Steering Group continues to be reflective of Lambeth's population and has the capacity to support the delivery of Lambeth's new AQAP. We aim to actively recruit representatives from groups that are disproportionately affected by air pollution, including multiple minority groups and people with disabilities. We aim to recruit Lambeth residents, as well as representatives from Lambeth organisations. Our 2022 ASR will contain an update on this.
23		Annual Residents' Air Quality Conference	Throughout Plan	• Given the difficulties in delivering events during the covid-19 pandemic, and in order to maximise engagement, it was decided to combine the Annual Residents Conference with the Annual Business Engagement event. Both events were held during Lambeth Clean Air Week, in October 2020. Please refer to Action 15.2 for an update.
24.1		Procurement policy to include a requirement for suppliers providing services over £100,000 to have attained silver Fleet Operator Recognition Scheme (FORS) accreditation	Completed	As explained in our 2019 ASR, this action is now complete
24.2		Update procurement policy to give preferential scoring to bidders delivering goods	Completed	As explained in our 2019 ASR, this action is now complete

		and services with zero or low emission vehicles when there is a heavy transport element to the tender		
25		Consolidation (Low Emission Logistics)	Throughout	• We remain members of Cross River Partnership, working on a consolidation project with Brixton BID, as part of Clean Air Villages 4. Delays due to covid have affected the running time of the project. Due to this the freight and consolidation hub is due to launch in early 2022 with an extension to the running time of the project.
26	**Delivery, servicing and freight (actions 24-26)**	Introduce Virtual Loading Bays (VLB) allowing the user to book kerb space online for loading and unloading at a particular time and place; and priority for ultra-low emission delivery vehicles	Completed	In the AQAP we have now created Action 50 to monitor the development of the Brixton Liveable Neighbourhood. This action is therefore marked as complete, as it has been superseded by Action 50.
27		Obtain Fleet Operator Recognition Scheme (FORS) Gold accreditation for Lambeth's own fleet	March 2022	• Due to the current resourcing levels, covid and the plan to centralise fleet management with a new fleet management team the FORS level still remains at bronze for Lambeth landscapes. Once the new fleet management team is in place we will be setting up a multi-tiered system where by business groups can achieve varied standards of FORS for example Lambeth Parks can progress to silver and gold whilst the remaining business groups catch up.
28	**Borough Fleet Actions (actions 27-31)**	Increase the number of hydrogen, electric, hybrid, bio-methane and cleaner vehicles in the borough's fleet and accelerate uptake of new Euro VI/6 vehicles	March 2022	• We are working to increase the number of zero emission vehicles in our fleet. At present we have around a quarter of fleet as electric or hybrid: a) Parks & Leisure – 19 electric and 4 hybrid vehicles b) Housing Services – 14 electric and 22 hybrid vehicles c) Democratic services – 1 hybrid vehicle d) Libraries – 2 electric vehicles e) Waste services – 15 electric vehicles f) 17 new RCVs purchased in 2021 are all Euro 6 standard and ULEZ compliant
29		Smarter Driver Training for Lambeth fleet drivers to increase fuel efficient driving	Throughout Plan	• Lambeth will continue to deliver full training and development plan for Lambeth drivers once a fleet manager has been recruited.

30		Conduct feasibility study for introducing regenerative street sweepers into Lambeth's street cleansing fleet	March 2022	• As per our 2019 ASR, the feasibility study was completed in March 2018. In Round 3 of the Mayor's Air Quality Fund, we submitted an application in partnership with LB Southwark to investigate the impact of street sweeping on air quality. Our application was successful, and King's College London (now Imperial College) has been appointed to lead on the research. Literature research was completed in 2020, and utilised to define a methodology for a trial. In 2021, a number of street sweepers have been tested on roads in Lambeth and Southwark. Imperial College will be assessing their air quality impact and developing a report with recommendations to minimise pollution from street cleansing equipment. The repost will be finalised in early 2022. The street cleansing teams of Lambeth and Southwark are supportive of, and actively participating in the project.
31	**Borough Fleet Actions (actions 27-31)** **Localised Solutions (actions 32-39)**	Review of car users to determine whether the number of Lambeth officers driving vehicles for work could be reduced	Complete	As explained in our 2019 ASR, this action is now complete
32		Green Infrastructure	Throughout Plan	• Green screens were put up in 15 schools across Lambeth in 2021. • In 2021 the Climate Change and Sustainability Team identified a number of organisations to deliver additional local greening projects to improve the state of local air quality. LIP funding was allocated towards these projects. These were: - Loughborough Farm - Oasis Play - Roots and Shoots - Vauxhall City Farm • In 2019, CLIP funding was allocated to a number of community organisations to deliver local greening projects and improve the state of air quality. Due to delays as a result of Covid-19, some of these projects rolled over to 2021, these included: a) A number of planters and info labels for the Waterloo area, delivered by We Are Waterloo BID b) A community garden at Ethelred Estate, in Kennington • In 2021, a SuD project was implemented in Tulse Hill, known as the Ball court rain garden. A Biodiverse planter was also implemented on Atkins Road.

33		Investigate other measures, such as building a Low Emission Neighbourhood (LEN)	Throughout Plan	• Lambeth has implemented 5 Low Traffic Neighbourhoods as part of our Covid Transport Response. These were implemented as trials and in December 2021 a decision was taken to make the Railton and Oval to Stockwell schemes permanent. Key measurable objectives of the LTNs are to reduce motor vehicle traffic overall, which is expected to have a positive impact on air quality. We are currently investigating the potential for Zero Emissions Zones in Lambeth as part of our Climate Action Plan.
34		Investigate whether to install Santander bikes or other bike schemes outside Brixton Underground station, along Brixton Hill, Streatham Hill and Streatham	March 2022	• TfL have agreed they support expansion of the cycle hire scheme west to Clapham and east to Herne Hill, subject to borough's funding capital costs. Developer contributions are the most likely source of funding for further expansion and planning officers actively seek contributions from suitable developments within the expansion area on a continuous basis. • The dockless e-scooter trial continues to expand the shared mobility offer in Lambeth and there is significant room for growth in this area, both with e-scooters and dockless bike hire.
35	**Localised Solutions (actions 32-39) Highways and Transport (actions 40-51)**	Lambeth is already part of the Central London Air Quality Cluster Group, which includes Southwark. Increase joint working with other neighbouring boroughs (Wandsworth, Merton, Croydon, Bromley and Lewisham) to tackle air pollution	Throughout Plan	• Lambeth continues to work with LB Merton and the Regulatory Services Partnership (LBs Merton, Richmond and Wandsworth) on the pan-London NRMM project. • We are part of the West London Green Homes Grant group of boroughs for the Local Authority Delivery arm of the grant scheme, led by LB Ealing. • We remain a member of the London Air Quality Network to monitor air pollution across London and make real time air quality data available to all our residents • We continue to remain members of the Central London Air Quality Cluster Group, and provide regular updates to the GLA • Lambeth council attends the SE London Asthma Network, working in partnership with Lewisham, Bromley, Southwark, and Eltham.
36		Continue project to reduce pollution at Waterloo station from idling taxis	March 2022	• The issue of idling taxis at Waterloo station is referenced under Policy P5d and Project Reference Pr3 of the South Bank & Waterloo Neighbourhood Forum's now adopted Neighbourhood Plan. There is local support for action on this ongoing issue, and we are looking to address this more closely in 2022.
37		Building green screens at Schools	March 2022	• Green screens were put up in 15 schools across Lambeth in 2021.

38		Recruit citizens to help form a Steering Group to monitor our Air Quality Action Plan	Throughout Plan	• During 2021, the Lambeth Air Quality Action Plan Steering Group met March 29th and 30th September • The group continues to meet, and anyone interested in joining is encouraged to email sustainability@lambeth.gov.uk. • Lambeth started pre consultation work on our next AQAP in late 2021. Currently, the Group is made of 9 Lambeth residents and representatives from Lambeth organisations (only 5 of which are actively attending and contributing to meetings), as well as representatives from the Climate Change and Sustainability Team. In 2022 we will work on a revised vision of the Air Quality Steering Group and aim to recruit new members to ensure the Steering Group continues to be reflective of the borough's population and has the right balance of air quality knowledge and commitment, to support the delivery of our new AQAP.
39		Get sign-off for report and implement Tree Wardens scheme	Complete	As explained in our 2019 ASR, this action is now complete
40.1		Joint anti-idling project with other London Boroughs	Complete	As explained in our 2019 ASR, this action is now complete.
40.2		Continue to build on anti-idling work from MAQF project (Action Point 40.1)	March 2022	• 47 PNCs were issued in 2021, totalling £1040.00. London authorities can use the surplus in two additional areas. These are, firstly, expenditure on anything which facilitates the implementation of the London transport strategy or which is identified in that strategy as a purpose for which the surplus may be applied. Secondly, the surplus can be used on expenditure on highway maintenance. • Our application to Round 3 of the Mayor's Air Quality Fund, with the City of London and Camden as lead boroughs, was successful. Therefore, Lambeth remains a member of Idling Action until March 2022 when funding expires. • Sunnyhill Primary school received an anti-idling event in late 2021. • Lambeth Council continues to allocate idling signage in hot spot areas.
41		Work with car clubs to increase amount of electric, hydrogen and ultra-low emission vehicles in their fleet	Throughout Plan	• As per Action 25, thanks to an agreement with ZipCar and Brixton BID, an e-van continues to be available for use to Brixton businesses, at a competitive rate, to reduce pollution from deliveries. In 20/21 37 are registered to use the van. The van has saved 697.85kg of CO2 (based on a diesel equivalent 64.2mpg). driven 3761.48 miles

				• In addition to Brixton's e-van five of the borough's EV chargepoints are dedicated for car club use.
42.1		Increase amount of citizens cycling outside the 18-38 age group	March 2022	• Approximately 282 people outside of the age range tried a bike using the TBYB scheme. • Approximately 700 people outside of the age bracket took cycle training in 2021/22 • We offer Bikeability training to all schools in the borough. 3,334 children did cycle training at school
42.2		Very Important Pedestrian Days	Throughout Plan	• We closed 10 roads outside schools to celebrate our achievements with School Streets. 7 were already School Streets and 3 were ones we hope to have a School Street outside of in the coming years
43		Parking	Throughout Plan	• St Leonards CPZ has been introduced. • A diesel surcharge has been introduced in Lambeth; whereby non-Euro 6 diesel vehicles are charged an additional 50% of the parking tariff. • Lambeth will explore the role of parking charges to further improve air quality in line with its upcoming AQAP
44	**Highways and Transport (actions 40-51)**	Installation of more residential electric charging points	March 2022	• We currently have 324 charge points in the borough which are registered on the National ChargePoint register. • We have installed fast chargers on 10 different Lambeth estates • Further chargepoints will be installed on-street and on estates throughout 2022/23
45		Installation of rapid chargers to help enable the take up of electric taxis, cabs and commercial vehicles (in partnership with TfL and/or OLEV	Throughout Plan	• Currently there are 9 rapid (50kW) chargepoints operated by Lambeth. • A provider has been selected to install 8 of the 14 ultra-rapid chargers with installation due in 22/23
46		Reprioritisation of road space; reducing parking at some destinations and/or restricting parking on congested high streets and A roads to improve bus journey times, cycl	Throughout Plan	• The council has introduced a range of measures allocating road space to sustainable modes of travel. We have implemented 5 Low Traffic Neighbourhoods and are planning 3 further trial areas in 2022. In addition, we have delivered a number of Healthy Route interventions where we have created segregated space for cycling and new and improved crossings. We have worked with TfL to bring forward improvements on the roads they control, including the A3 and the A23, with measures implemented as part of the London Streetspace Plan,

		ing experience, and reduce emissions caused by congested traffic		including the removal of most of the parking on these routes and the introduction of 24/7 bus lanes. We continue to work with TfL on the A23 Streatham Hill scheme which is due for implementation when funding becomes available. In 22/23 we will publish our Kerbside Strategy which will set out how we allocate space on our streets for different uses, prioritising space for non-car modes.
47.1		Campaign for low-emission buses to serve all routes in Lambeth	Throughout Plan	• The council continues to press the Mayor to bring forward low-emission buses for the whole of Lambeth.
47.2		Continue to request extension of ULEZ to south of the borough	Throughout Plan	• The extension of the Ultra-Low Emission Zone to the south circular took place in October 2021, with the council continuing to press for it to be extended further to cover the entire borough.
48		Link air quality to road closures for street parties and the Play Streets scheme	Throughout Plan	• Play Streets implementation has been paused to allow for a new policy, webpage, application form and process to be put in place. This is ready to be launched this spring. • We have implemented 3 new School Streets bringing our total to 25. All are linked to improved air quality.
49		Read through Lambeth Transport Plan 2011-31, the Cycling Strategy and also the Transport Strategy and add any relevant actions in to AQAP	Completed	As explained in our 2019 ASR, this action is now complete.
50		Brixton Liveable Neighbourhood and Lambeth Low Traffic Neighbourhoods	Throughout Plan	• As part of our emergency response to the COVID-19 pandemic, we have been implementing emergency measures to enable people move safety around the borough. These measures include Low Traffic Neighbourhoods. We have agreed and published our programme of interventions and details can be found here. The LTNs have been implemented as trials and in December 2021 a decision was taken to make the Railton and Oval to Stockwell schemes permanent. • The Ferndale and Railton LTNs fall within the Brixton Liveable Neighbourhood area. The BLN project itself has been paused pending confirmation of further funding from TfL. We will consult on Ferndale in early 2022. • In 2020, the Transport and Climate Change and Sustainability Teams commissioned a consultancy to deliver an air quality modelling project,

				to assess the air quality implications of the LTNs. Using ADMS-Urban, the consultants will combine multiple data sources (traffic data, meteorological data, terrain data, and data from our air quality monitoring stations and diffusion tubes) to assess changes in NO2, PM10 and PM2.5 resulting from the introduction of the LTNs. As explained in Action 21.1, the modelling will result in a series of air quality maps, which will be produced in 2021 and utilised to support the LTNs consultations, and for awareness raising campaigns.

3. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in Lambeth in 2021

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	24
Number of planning applications required to monitor for construction dust	8
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	7
Number of developments required to install Ultra-Low NO_x boilers	7
Number of developments where an AQ Neutral building and/or transport assessments undertaken	23
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 with the GLA through the relevant NRMM website and that all NRMM used on-site is compliant with Stage IIIB of the Directive and/or exemptions to the policy.	22 conditions included
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.	137 conditions included 6 registered and compliant 3 unregistered/uncompliant and being chased.

Planning officers consult the Climate Change and Climate Change and Sustainability Team on all major development, all proposed development in an AQFA and all proposed development close to or to be used by a sensitive receptor, for comment and recommended conditions regarding air quality.

Lambeth is part of the pan-London NRMM project which has full-time officers doing site audits to enforce NRMM standards. A standard NRMM condition is also recommended for all decision notices the Climate Change and Climate Change and Sustainability Team reviews.

3.1 New or significantly changed industrial or other sources

No new sources identified.

4. Additional Activities to Improve Air Quality

4.1 London Borough of Lambeth Fleet

As of April 2021, Lambeth Council's vehicle fleet included 33 battery electric vehicles, constituting 18% of the total fleet.

4.2 NRMM Enforcement Project

Lambeth continues to work with LB Merton and the Regulatory Services Partnership (LBs Merton, Richmond and Wandsworth) on the pan-London NRMM project.

4.3 Air Quality Alerts

Lambeth supports promotion of airTEXT. In 2021 Lambeth submitted a joint funding bid with Southwark to redevelop the current airTEXT alert system to improve sign ups and reach, and create a new digital alert system to be used by schools and health care settings within both boroughs.

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

Routine calibrations of equipment and periodic site audits were carried out by Enviro Technology, and Imperial College London's Environmental Research Group (ERG). Routine calibrations took place every two weeks.

In 2021, Lambeth's Climate Change and Climate Change and Sustainability Team appointed a new provider, Matts Monitors Ltd, to deliver the routine calibrations and site audits from March 2021 to March 2023. Ricardo PLC is contracted by Matts Monitors to deliver fortnightly LSO visits.

We continue to be members of the London Air Quality Network, and ERG at Imperial College London is responsible for the automatic monitoring stations' data collection and data processing.

PM_{10} Monitoring Adjustment

The correction of 1/1.04 is applied to raw PM_{10} BAM data at an hourly basis so the fully ratified PM_{10} data is reference equivalent. This is done by ERG at Imperial College London as we are part of the London Air Quality Network.

A.2 Diffusion Tubes

Analysis was performed by Gradko International Ltd. Tubes are prepared with 20% Triethanolamine (TEA) in Water. Tubes are analysed by UV Sprectrophometry. The preparation procedures adhere to the guidance detailed in the document 'Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for Laboratories and Users', Issue 1a Feb.2008 (issued by AEA Energy and Environment). Gradko participate in the independent AIR-PT scheme and partake in the annual co-location study. Co-located diffusion tubes are installed at Brixton Road air quality monitoring station LB4. We have compared the diffusion tube data at our colocation site to reference equivalent NO_2 analysers and submitted our questionnaire to DEFRA.

Discussion of Choice of Factor to Use

A national bias-adjustment factor of 0.84 has been used (Gradko bias adjustment factor for 20% TEA in Water in 2021), instead of a local bias-adjustment factor. Co-located diffusion tubes are set up at LB4 Brixton Road but only nine months of diffusion tube data were available due to missing tubes and unreliable data.

The bias-adjustment factors used in previous years are outlined below.

Table L. Bias Adjustment Factor

Year	Local or National	If Local, Version of National Spreadsheet	Adjustment Factor
2021	National	03/22	0.84
2020	National		0.81
2019	National		0.93
2018	National		0.93

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Data capture by our diffusion tubes was less than 75% at all sites. Therefore, all means had to be annualised. The annualization factor is presented in Table M.

We have used background data from the following sites: Sk6 (London Borough of Southwark); Covent Garden WM5 (Westminster City Council) and Bloomsbury BL0 (London Borough of Camden). All stations had at least 85% data capture in 2021. WM5 and BL0 are background sites located in nearby boroughs – well within the recommended radius of under 50 miles – and are all representative of typical London urban background locations. Lambeth's background site only has 65% data capture for 2021 and so could not be used for annualization. More information on this can be found in Appendix C.

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

Diffusion Tube ID	Annualisation Factor Streatham Green LB6 (Lambeth)	Annualisation Factor Elephant and Castle SK6 (Southwark)	Annualisation Factor Covent Garden WM5 (Westminster)	Annualisation Factor Bloomsbury BL0 (Camden)	Average Annualisation Factor	Annual Mean without anomalies (µg/m3)	Annualised Data Simple Annual Mean without anomalies (µg/m3)	Comments
DT3	-	-	0.95	0.97	0.96	70.8	67.9	
DT4	-	-	1.06	1.02	1.04	27.8	28.9	
DT5	-	-	0.95	0.96	0.96	54.8	52.4	
DT6	-	-	1.11	1.09	1.10	32.8	36.1	
DT10	-	-	0.9	0.93	0.92	30.1	27.5	
DT15	-	-	1.01	1.07	1.04	44.1	45.8	
DT19	-	-	1.07	1.1	1.09	59.9	65.0	
DT23	-	-	1.12	1.14	1.13	29.7	33.6	
DT24	-	-	1.01	0.99	1.00	30.6	30.6	
DT25	-	-	1.08	1.1	1.09	53.8	58.6	
DT28	-	-	1.09	1.11	1.10	56.9	62.6	
DT39		-	1.03	1.07	1.05	45.4	47.7	
DT44			1.01	1.02	1.02	33.4	33.9	
DT46	-	-	1.15	1.14	1.15	31.9	36.5	
DT48	-	-	1.09	1.07	1.08	46.6	50.3	
LNT1	-	-	1.08	1.07	1.08	27.8	29.9	
LTN 5	-	-	1.05	1.09	1.07	30.3	32.4	

LTN10	-	-	1.08	1.07	1.08	29.06	31.2	
LTN11	-	-	1.02	1.03	1.03	56.1	57.5	
LTN12	-	-	0.82	0.87	0.85	75.2	63.5	
LTN13	-	-	0.82	0.87	0.85	39.2	33.1	
LTN14	-	-	1.02	1.12	1.07	22.6	24.2	
LTN15	-	-	0.98	1.06	1.02	29.2	29.8	
LTN16	-	-	0.83	0.95	0.89	34.8	31.0	
VX1	-	-	1.16	1.15	1.16	24.9	28.8	
VX3	-	-	1.12	1.14	1.13	23.7	26.8	
VX4	-	-	1.07	1.1	1.09	39.2	42.5	
VX5	-	-	1.02	1.03	1.03	37.1	38.0	
vx7	-	-	1.06	1.07	1.07	26.9	28.7	
VX8			1.12	1.13	1.13	27.3	30.8	
VX9	-	-	1.06	1.07	1.07	42.0	44.7	
VX10	-	-	1.04	1.07	1.06	29.6	31.2	
SR2	-	-	1.06	1.07	1.07	36.6	39.0	
SR5	-	-	1.06	1.07	1.07	41.2	43.9	
SR6	-	-	1.22	1.22	1.22	29.0	35.4	
SR7	-		0.89	1.1	1.00	32.2	32.0	
SR8	-	-	1.28	1.16	1.22	27.7	33.8	
SR9	-	-	1.15	1.14	1.15	28.9	33.1	
SR10	-	-	1.15	1.14	1.15	31.3	35.9	
SR11		-	1.16	1.19	1.18	25.4	29.8	
SR13	-	-	1.06	1.11	1.09	27.0	29.3	
SR14	-	-	1.02	1.04	1.03	27.9	28.7	
SR16	-	-	1.11	1.05	1.08	27.1	29.3	

SR17	-	-	1.15	1.14	1.15	26.8	30.7	
SR18	-	-	1.07	1.1	1.09	29.0	31.5	
SR20	-	-	1.1	1.09	1.10	40.6	44.5	
SR21	-	-	1.12	1.14	1.13	38.5	43.5	
LI	-	-	0.85	0.91	0.88	60.9	53.6	
LO	-	-	1.11	1.1	1.11	28.4	31.3	
WP1	-	-	1.13	1.11	1.12	29.1	32.6	
WP2	-	-	0.99	1.03	1.01	34.1	34.4	
SCOOT	-	-	1.13	1.15	1.14	48.8	55.6	
JP1	-	-	1.09	1.11	1.10	27.0	29.7	
JP2	-	-	0.97	0.94	0.96	21.3	20.3	
JP3	-	-	1.08	1.07	1.08	19.0	20.4	
SP1	-	-	1.01	0.99	1.00	23.1	23.1	
SP2	-	-	1.12	1.14	1.13	32.8	37.1	
VP1	-	-	1.04	1.08	1.06	24.8	26.3	
VP2	-	-	1.12	1.2	1.16	23.3	27.0	
STA1		-	1.02	1.04	1.03	46.5	47.9	
SS1	-		1.04	1.06	1.05	23.1	24.2	
AS1	-	-	0.99	1.03	1.01	30.5	30.8	
AS2	-	-	1.03	1.02	1.03	32.2	33.0	
RS1	-	-	1.06	1.07	1.07	21.5	22.9	
SH1	-	-	0.95	0.96	0.96	22.9	21.9	

Due to missing data at the Streatham Green background monitoring site, this was not used in the annualization process. More information around this can be found in appendix c.

Table N. NO_2 Fall off With Distance Calculations

Distance correction has been completed for the following sites, due to the NO2 Annual Mean Concentration (bias adjusted and annualised) being greater than 36 µg m-3 (within 10% of the annual mean objective) and receptors not being located at a point of relevant exposure. This is to estimate the concentration at the nearest receptor. The NO_2 Fall-Off with Distance Calculator (Version 4.2), developed by Defra, has been used to perform the calculations. We have used an average of Sk6 (London Borough of Southwark); Covent Garden WM5 (Westminster City Council) and Bloomsbury BL0 (London Borough of Camden) figures as the background site.

Site Name/ID	Distance (m)		NO_2 Annual Mean Concentration (µg/m^3)			Comment
	Monitoring Site to Kerb	Receptor to Kerb	Background	Monitored at Site	Predicted at Receptor	
DT1, DT2, DT3	0.5	1.0	24.3	58.7	**54.5**	Predicted concentration at Receptor above AQS objective.
DT5	0.5	2.5	24.3	44.0	*38.4*	Predicted concentration at Receptor within 10% the AQS objective.
DT9	0.5	1.0	24.3	40.0	*38.1*	Predicted concentration at Receptor within 10% the AQS objective.
DT12	0.5	0.7	24.3	39.1	*38.2*	Predicted concentration at Receptor within 10% the AQS objective.

DT13	0.5	0.8	24.3	38.2	*37.0*	Predicted concentration at Receptor within 10% the AQS objective.
DT14	0.5	0.8	24.3	40.0	*38.7*	Predicted concentration at Receptor within 10% the AQS objective.
DT15	0.5	1.0	24.3	38.5	*36.8*	Predicted concentration at Receptor within 10% the AQS objective.
DT17	0.5	1.0	24.3	41.8	*39.7*	Predicted concentration at Receptor within 10% the AQS objective.
DT18	0.5	1.0	24.3	57.9	**53.8**	Predicted concentration at Receptor above AQS objective.
DT19	0.5	0.8	24.3	54.6	**52.1**	Predicted concentration at Receptor above AQS objective.
DT25	0.5	1.0	24.3	49.2	**46.2**	Predicted concentration at Receptor above AQS objective.
DT26	0.5	0.5	24.3	40.2	**40.2**	Predicted concentration at Receptor above AQS objective.
DT27	0.5	1.0	24.3	64.5	**59.5**	Predicted concentration at Receptor above AQS objective.
DT28	0.5	1.0	24.3	52.6	**49.1**	Predicted concentration at Receptor above AQS objective.
DT29	0.5	1.0	24.3	58.9	**54.7**	Predicted concentration at Receptor above AQS objective.
DT30	0.5	1.0	24.3	46.6	**43.9**	Predicted concentration at Receptor above AQS objective.
DT31	0.5	0.8	24.3	61.3	**58.2**	Predicted concentration at Receptor above AQS objective.
DT34	0.5	0.8	24.3	43.2	**41.7**	Predicted concentration at Receptor above AQS objective.
DT36	0.5	1.0	24.3	39.6	*37.8*	Predicted concentration at Receptor within 10% the AQS objective.
DT38	1.0	2.0	24.3	39.1	*37.0*	Predicted concentration at Receptor within 10% the AQS objective.
DT39	0.5	1.0	24.3	40.1	*38.1*	Predicted concentration at Receptor within 10% the AQS objective.
DT41	0.5	1.0	24.3	36.5	35.0	

DT48	0.5	0.8	24.3	42.3	**40.8**	Predicted concentration at Receptor above AQS objective.
DT50	0.5	1.0	24.3	44.5	**42.1**	Predicted concentration at Receptor above AQS objective.
VX9	0.5	0.8	24.3	37.5	*36.4*	Predicted concentration at Receptor within 10% the AQS objective.
SR3	0.5	0.8	24.3	40.6	*39.2*	Predicted concentration at Receptor within 10% the AQS objective.
SR4	0.5	1.0	24.3	43.4	**41.1**	Predicted concentration at Receptor above AQS objective.
SR5	0.5	0.8	24.3	36.9	35.8	
SR19	0.5	0.8	24.3	36.5	35.5	
SR20	0.5	0.8	24.3	37.4	*36.3*	Predicted concentration at Receptor within 10% the AQS objective.
SR21	0.5	0.8	24.3	36.5	35.5	
LTN11	0.5	0.8	24.3	48.3	**46.3**	Predicted concentration at Receptor above AQS objective.
SCOOT	0.5	0.8	24.3	46.7	**44.8**	Predicted concentration at Receptor above AQS objective.
LI	5.0	5.5	24.3	45.0	**44.4**	Predicted concentration at Receptor above AQS objective.
STA1	0.5	1.0	24.3	40.2	*38.3*	Predicted concentration at Receptor within 10% the AQS objective.
STA2	0.5	1.0	24.3	38.4	*36.7*	Predicted concentration at Receptor within 10% the AQS objective.

Appendix B Full Monthly Diffusion Tube Results for 2021

Due to Covid-19 the Climate Change and Sustainability Team was unable to change the diffusion tubes in January and February 2021. Diffusion tube change over continued as normal in March 2021. Lambeth Council has commissioned a third-party bike courier to change diffusion tubes since late 2020. Due to a number of issues with the courier service, some diffusion tubes have been left in place for more than one month, or multiple diffusion tubes installed at the same location, leading to anomalous results and some uncertainty over the reliability of data.

To address this, monthly readings which are greater than double or less than half the value of the Raw Annual Mean, have been classified as anomalies, and excluded from the data used to calculate results set out in Table D. These readings are highlighted in red in Table O.

To address this data reliability issue, the collection of diffusion tubes will be brought back in-house during 2022.

Table O. NO_2 Diffusion Tube Results

Site ID	Data Capture for Monitoring Period (%)[a]	Data Capture (%) [b]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Raw Annual Mean (µg/m3) [c]	Annual mean without anomalies (µg/m3) [c]	Bias Adjusted and Annualised Mean without anomalies (µg/m3) [c]	Distance corrected annual mean (µg/m3) [c]
DT1	90	75.0	-	-	251.78	69.03	69.01	71.7	62.39	69.54	81.04	73.98	78.08	60.24	88.7	70.56	**59.3**	**55.0**
DT2	90	75.0	-	-	284.76	65.49	67.99	73.80	66.79	67.16	84.50	80.44	75.12	59.06	92.5	71.15	**59.8**	**55.4**

DT3	100	83.3	-	-	300.68	71.02	67.55	73.02	-	-	82.47	77.91	71.38	52.01	99.5	70.77	**57.1**	**53.1**
DT4	50	41.7	-	-	34.44	27.16	-	25.85	18.85	-	-	-	-	32.46	27.8	27.75	24.2	
DT5	70	58.3	-	-	<0.54	66.57	41.14	34.18	41.88	37.19	<0.61	80.74	-	82.05	42.8	54.82	**44.0**	38.4
DT6	80	66.7	-	-	30.04	49.19	27.58	22.09	24.07	22.66	-	55.23	-	31.41	32.8	32.78	30.3	
DT7	100	83.3	-	-	44.11	37.56	33.75	37.10	30.50	32.93	40.62	34.77	44.10	32.93	36.8	36.84	30.9	
DT8	100	83.3	-	-	37.58	45.68	44.78	38.53	35.88	37.04	54.54	41.92	44.35	41.01	42.1	42.13	35.4	
DT9	90	75.0	-	-	48.40	-	47.88	44.79	41.75	43.57	58.13	57.50	49.08	37.4	47.6	47.61	40.0	38.1
DT10	70	58.3	-	-	30.94	30.43	27.26	-	-	-	34.66	29.49	35.54	22.31	30.1	30.09	23.1	
DT11	90	75.0	-	-	40.44	39.61	35.69	33.55	0	31.50	46.95	37.16	32.31	33.4	36.7	33.06	27.8	
DT12	100	83.3	-	-	53.70	42.47	44.73	48.90	40.88	42.13	58.13	47.99	46.76	39.98	46.6	46.57	39.1	38.2
DT13	90	75.0	-	-	50.89	49.23	49.19	45.24	39.53	40.37	54.85	43.10	-	36.81	45.5	45.47	38.2	37
DT14	100	83.3	-	-	52.19	48.02	52.18	43.77	41.96	44.32	49.26	48.69	57.55	38.84	47.7	47.68	**40.0**	38.7
DT15	70	58.3	-	-	-	-	42.82	-	38.88	39.01	50.92	41.95	50.46	44.51	44.1	44.08	38.5	36.8
DT16	90	75.0	-	-	-	40.91	40.72	37.53	38.22	35.72	48.01	39.71	40.76	38.35	40.0	39.99	33.6	
DT17	90	75.0	-	-	56.22	53.20	46.22	53.22	46.34	49.18	63.57	40.35	-	39.99	49.8	49.81	**41.8**	39.7
DT18	100	83.3	-	-	83.62	83.33	39.99	46.29	54.43	118.38	38.47	122.41	51.89	50.97	69.0	68.98	**57.9**	**53.8**
DT19	70	58.3	-	-	59.25	62.59	-	60.41	55.07	58.20	72.79	-	-	51.02	59.9	59.90	**54.6**	**52.1**
DT20	90	75.0	-	-	40.74	34.17	38.79	35.37	36.96	31.13	41.81	45.64	-	69.37	41.6	41.55	34.9	
DT21	100	83.3	-	-	33.79	30.75	24.81	25.10	24.45	21.04	32.82	23.82	291.53	49.45	55.8	29.56	24.8	
DT22	90	75.0	-	-	32.11	24.94	22.60	20.32	34.85	18.35	27.01	26.85	32.82	-	26.6	26.65	22.4	
DT23	60	50.0	-	-	-	31.97	28.23	23.07	28.11	-	38.96	28.04	-	-	29.7	29.73	28.2	

DT24	80	66.7	-	-	34.95	33.83	18.29	29.73	30.36	<0.00	-	33.06	33.00	31.79	27.3	30.63	25.7	
DT25	70	58.3	-	-	55.30	60.27	52.80	50.45	-	48.62	61.53	47.52	-	-	53.8	53.78	**49.2**	**46.2**
DT26	90	75.0	-	-	49.84	44.07	28.67	43.25	<0.00	78.74	64.15	44.30	48.22	30	43.2	47.92	**40.2**	**40.2**
DT27	90	75.0	-	-	75.56	66.52	84.01	80.17	-	78.53	85.99	77.62	82.42	59.73	76.7	76.73	**64.5**	**59.5**
DT28	80	66.7	-	-	-	48.39	57.38	59.88	58.58	55.14	61.65	58.79	55.61	-	56.9	56.93	**52.6**	**49.1**
DT29	100	83.3	-	-	53.70	74.07	76.78	71.26	77.32	68.22	85.58	69.51	67.75	56.9	70.1	70.11	**58.9**	**54.7**
DT30	100	83.3	-	-	56.07	68.15	55.17	54.00	55.21	52.89	59.64	52.70	57.61	43.25	55.5	55.47	**46.6**	**43.9**
DT31	90	75.0	-	-	69.50	76.57	62.62	78.10	81.19	68.94	89.95	-	72.70	57.14	73.0	72.97	**61.3**	**58.2**
DT32	100	83.3	-	-	29.94	30.82	27.14	21.87	23.67	20.31	31.76	27.97	32.91	24.39	27.1	27.08	22.7	
DT33	100	83.3	-	-	30.85	27.19	28.19	22.56	25.92	24.00	35.50	32.32	31.29	25.53	28.3	28.34	23.8	
DT34	100	83.3	-	-	57.89	59.63	58.28	52.84	51.90	41.45	55.12	45.00	55.10	37.51	51.5	51.47	**43.2**	**41.7**
DT35	90	75.0	-	-	37.42	40.05	42.07	38.53	38.08	37.25	45.15	42.08	44.48	<0.46	40.6	40.57	34.1	
DT36	100	83.3	-	-	49.66	43.17	49.33	44.89	46.08	44.46	54.36	48.96	52.88	38.17	47.2	47.20	39.6	37.8
DT37	90	75.0	-	-	37.51	36.81	35.81	30.95	33.09	24.55	40.85	34.10	-	51.46	36.1	36.13	30.3	
DT38	90	75.0	-	-	49.54	41.12	47.14	42.53	44.04	40.70	49.96	50.45	53.26	-	46.5	46.53	39.1	37
DT39	80	66.7	-	-	47.00	39.50	42.45	-	35.88	40.92	50.00	66.59	-	41.23	45.4	45.45	**40.1**	38.1
DT40	100	83.3	-	-	47.76	41.66	46.08	34.92	38.45	39.90	50.49	46.53	45.92	36.82	42.9	42.85	36.0	
DT41	90	75.0	-	-	45.03	41.61	37.48	35.31	39.82	31.89	-	84.37	39.75	36.26	43.5	43.50	36.5	35
DT42	100	83.3	-	-	175.82	43.94	41.28	39.27	39.76	37.51	48.73	47.44	48.87	36.36	55.9	42.57	35.8	
DT43	100	83.3	-	-	37.49	38.63	34.42	28.79	27.77	26.58	41.11	40.26	42.66	565.6	88.3	35.30	29.7	
DT44	90	75.0	-	-	85.84	34.42	31.43	26.27	26.40	-	54.22	29.42	35.49	29.74	39.2	33.42	28.1	

DT45	90	75.0	-	-	26.33	26.48	22.58	19.43	19.85	-	54.18	26.18	28.05	23.62	27.4	27.41	23.0	
DT46	70	58.3	-	-	37.74	33.21	34.41	28.57	28.06	27.86	33.54	-	-	-	31.9	31.91	30.7	
DT47	100	83.3	-	-	40.34	41.74	42.82	40.07	37.40	36.39	49.53	41.42	43.25	36.74	41.0	40.97	34.4	
DT48	80	66.7	-	-	45.38	38.92	54.44	39.22	41.13	42.63	-	52.25	58.72	-	46.6	46.59	**42.3**	**40.8**
DT49	100	83.3	-	-	28.93	26.69	18.90	21.84	23.18	23.07	26.11	25.35	32.32	26.81	25.3	25.32	21.3	
DT50	100	83.3	-	-	105.55	31.99	34.31	28.37	29.56	366.86	62.88	73.45	38.38	72.69	84.4	53.02	**44.5**	**42.1**
DT51	100	83.3	-	-	36.58	32.97	34.12	28.70	31.22	25.07	42.10	35.57	36.20	31.15	33.4	33.37	28.0	
VX1	90	75.0	-	-	38.88	32.97	0	28.73	30.79	30.09	0	63.02	0	-	24.9	24.94	24.2	
VX2	90	75.0	-	-	28.51	25.04	21.97	20.47	22.61	22.85	30.30	30.97	30.61	-	25.9	25.93	21.8	
VX3	90	75.0	-	-	29.09	24.00	21.94	19.28	20.63	16.18	29.77	28.74	-	-	23.7	23.70	22.5	
VX4	90	75.0	-	-	37.35	-	36.19	33.90	35.05	36.43	47.15	41.93	45.71	-	39.2	39.21	35.7	
VX5	90	75.0	-	-	38.66	33.90	31.87	29.85	30.09	-	43.43	39.15	49.94	-	37.1	37.11	32.0	
VX6	90	75.0	-	-	32.17	26.38	27.12	24.98	23.11	22.21	31.98	31.66	41.16	-	29.0	28.97	24.3	
VX7	90	75.0	-	-	27.31	<0.52	43.02	18.17	17.83	18.24	30.40	26.96	33.41	-	26.9	26.92	24.1	
VX8	90	75.0	-	-	31.82	28.38	26.43	22.17	23.43	23.41	33.01	30.10	0.73	-	24.4	27.34	25.8	
VX9	90	75.0	-	-	39.10	39.77	35.48	33.89	34.84	31.61	<0.61	71.08	49.91	-	42.0	41.96	37.5	36.4
VX10	90	75.0	-	-	29.93	27.95	-	26.31	24.23	23.13	32.70	33.12	39.12	-	29.6	29.56	26.2	
VX11	90	75.0	-	-	29.68	26.01	-	-	20.76	21.51	30.77	28.89	36.97	-	27.8	27.80	23.4	
VX12	90	75.0	-	-	26.60	22.73	21.04	20.51	19.96	17.34	27.70	25.52	33.79	-	23.9	23.91	20.1	
VX13	90	75.0	-	-	43.13	38.62	35.90	35.95	33.10	40.22	42.46	37.92	46.77	-	39.3	39.34	33.0	
SR1	90	75.0	-	-	34.98	35.29	29.82	34.51	35.48	33.12	41.81	40.54	47.83	-	37.0	37.04	31.1	

SR2	90	75.0	-	-	<0.54	54.03	31.31	24.66	29.11	24.63	56.82	35.74	<0.59	-	36.6	36.61	32.8	
SR3	90	75.0	-	-	43.60	43.95	48.25	44.71	45.22	53.02	38.55	53.86	63.33	-	48.3	48.28	**40.6**	39.2
SR4	90	75.0	-	-	40.95	43.04	57.80	46.00	51.73	44.81	56.59	57.84	66.62	-	51.7	51.71	**43.4**	**41.1**
SR5	90	75.0	-	-	<0.54	54.67	37.48	30.17	38.68	33.71	47.40	43.39	44.31	-	41.2	41.23	36.9	35.8
SR6	90	75.0	-	-	<0.54	-	-	-	29.82	28.15	-	-	-	-	29.0	28.99	29.7	
SR7	80	66.7	-	-	-	-	-	-	-	-	32.90	31.51	-	-	32.2	32.21	26.9	
SR8	90	75.0	-	-	-	26.60	27.36	25.40	31.41	-	-	-	-	-	27.7	27.69	28.4	
SR9	90	75.0	-	-	29.70	26.79	31.63	24.45	27.41	26.65	35.81	-	-	-	28.9	28.92	27.8	
SR10	90	75.0	-	-	29.80	29.23	35.08	26.08	31.30	30.19	37.65	-	-	-	31.3	31.33	30.1	
SR11	90	75.0	-	-	-	27.29	25.45	19.50	22.70	21.12	29.95	31.64	-	-	25.4	25.38	25.0	
SR12	90	75.0	-	-	33.15	30.85	26.43	24.62	28.11	23.96	33.54	34.54	40.88	-	30.7	30.68	25.8	
SR13	90	75.0	-	-	-	30.33	-	21.39	24.19	21.96	30.10	29.23	31.99	-	27.0	27.03	24.6	
SR14	90	75.0	-	-	27.23	25.31	24.98	-	37.33	18.80	27.76	29.81	31.90	-	27.9	27.89	24.1	
SR15	90	75.0	-	-	33.82	33.92	37.46	29.82	32.57	26.03	38.45	39.43	47.88	-	35.5	35.49	29.8	
SR16	90	75.0	-	-	32.33	27.67	25.62	-	-	22.94	-	-	-	-	27.1	27.14	24.6	
SR17	90	75.0	-	-	30.76	26.74	27.12	23.19	26.40	23.32	30.06	-	-	-	26.8	26.80	25.8	
SR18	90	75.0	-	-	<0.54	-	28.49	22.42	23.34	24.59	32.84	33.41	37.95	-	29.0	29.01	26.4	
SR19	90	75.0	-	-	39.15	42.00	41.79	38.25	41.55	41.40	51.47	45.40	50.54	-	43.5	43.51	36.5	35.5
SR20	90	75.0	-	-	-	37.63	3.53	29.30	-	-	55.00	-	-	-	31.4	40.64	37.4	36.3
SR21	90	75.0	-	-	34.51	187.37	40.45	41.43	35.08	32.99	44.92	40.43	-	-	57.1	38.5	36.5	35.5
LTN1	80	66.7	-	-	-	33.48	28.66	23.94	26.80	21.70		57.74	2.08	28.34	24.8	27.15	25.1	

LTN2	90	75.0	-	-	44.88	34.35	47.10	38.50	-	33.64	46.11	45.72	47.62	34.92	41.4	41.43	34.8	
LTN3	90	75.0	-	-	41.53	39.57	39.63	36.75	35.36		70.74	38.92	39.67	31.5	37.4	41.52	34.9	
LTN4	100	83.3	-	-	32.62	29.09	27.93	22.76	21.14	18.92	34.85	31.26	34.38	28.45	28.1	28.14	23.6	
LTN5	70	58.3	-	-	32.03	-	25.86	22.44	-	4.37	31.33	26.70	-	28.34	24.4	27.78	27.2	
LTN7	90	75.0	-	-	29.20	-	23.00	21.88	23.04	21.28	32.08	30.52	34.65	25.25	26.8	26.77	22.5	
LTN8	90	75.0	-	-	29.43	24.26	21.50	19.44	-	18.98	27.91	25.90	29.93	27.29	25.0	24.96	21.0	
LTN9	100	83.3	-	-	23.41	20.86	18.17	14.93	15.35	13.84	22.30	23.29	28.02	22.39	20.3	20.26	17.0	
LTN10	80	66.7	-	-	32.12	29.37	25.91	-	21.33	20.10	28.97	28.22	30.70	-	27.1	27.09	26.2	
LTN11	80	66.7	-	-	42.16	135.27	93.13	69.60	-	28.05	40.70	40.51	40.60	-	61.3	54.45	**48.3**	**46.3**
LTN12	30	25.0	-	-	-	-	-	-	-	-	-	28.97	34.45	162.12	75.2	NA	0.0	
LTN13	30	25.0	-	-	-	-	-	-	-	-	-	42.16	44.52	30.93	39.2	39.20	27.8	
LTN14	40	33.3	-	-	-	-	-	-	-	24.43		17.34	-	25.92	22.6	22.56	20.3	
LTN15	60	50.0	-	-	-	-	-	-	26.78	23.37	34.60	-	35.87	25.36	29.2	29.20	25.0	
LTN16	40	33.3	-	-	-	-	-	-			34.70	28.92	40.68	-	34.8	34.77	26.0	
SCOOT	70	58.3	-	-	-	84.29	45.76	39.61	37.43	41.70	50.51	-	-	42.02	48.8	48.76	**46.7**	**44.8**
AS1	70	58.3	-	-	26.68	21.62	20.60	-	-	23.56	35.32	48.95	-	36.44	30.5	30.45	25.8	
AS2	70	58.3	-	-	25.74	21.43	19.47	35.05	26.36	-	36.90	-	60.56	-	32.2	32.22	27.7	
JP1	80	66.7	-	-	-	28.83	23.98	27.33	23.50	23.88	27.95	29.07	31.39	-	27.0	26.99	24.9	
JP2	50	41.7	-	-	25.23	-	18.27	15.50	-	-	-	-	25.00	22.4	21.3	21.28	17.1	
JP3	80	66.7	-	-	-	20.15	18.98	16.15	16.75	13.99	-	21.15	24.65	20.27	19.0	19.01	17.2	
LI	50	41.7	-	-	-	90.26	-	-	-	-	84.42	22.15	27.15	41.65	53.1	60.87	**45.0**	**44.4**

LO	60	50.0	-	-	102.32	23.70	24.61	20.27	-	44.83	<0.61	-	-	-	43.1	28.35	26.3	
RS1	90	75.0	-	-	2.07	<0.52	<0.59	68.18	<0.48	13.61	<0.61	23.58	27.44	-	27.0	21.54	19.3	
STA1	80	66.7	-	-	51.94	44.18	45.95	-	39.11	39.51	54.91	43.46	52.90	-	46.5	46.50	**40.2**	38.3
STA2	100	83.3	-	-	42.39	46.54	214.19	51.83	46.32	44.25	57.33	41.98	46.04	34.99	62.6	45.74	38.4	36.7
SS1	80	66.7	-	-	24.55	27.28	23.14	20.22	-	18.51	16.34	27.75	-	26.81	23.1	23.08	20.4	
SP1	80	66.7	-	-	27.44	24.21	18.82	16.84	18.60	-	-	23.73	28.51	26.63	23.1	23.10	19.4	
SP2	80	66.7	-	-	26.43	21.19	22.95	59.16	19.59	49.35	38.82	24.98	-	-	32.8	32.81	31.1	
SH1	70	58.3	-	-	24.69	22.70	20.30	-	16.61	-	25.55	-	29.02	21.77	22.9	22.95	18.4	
VP1	70	58.3	-	-	26.62	-	20.51	18.32	18.88	-	38.90	25.57	-	24.92	24.8	24.82	22.1	
VP2	60	50.0	-	-	26.18	-	-	20.10	20.29	18.10	26.78	28.45	-	-	23.3	23.32	22.7	
WP1	60	50.0	-	-	35.27	24.41	30.31	-	26.24	26.84	-	31.80	-	-	29.1	29.15	27.4	
WP2	70	58.3	-	-	34.43	36.00	-	32.99	-	29.12	37.73	<0.49	80.26	-	41.8	34.05	28.9	

Notes

Concentrations are presented as µg m^{-3}.

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

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

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

(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%).

All tubes registered NO_2 concentrations below 60 µg m-3 after distance correction (a threshold which indicates a potential exceedance of the NO_2 hourly mean objective). In 2021, 17 diffusion tubes exceeded the EU/WHO annual mean objective of 40 µg m-3. This compares to 2020 in which eight diffusion tubes exceeded the EU/WHO annual mean objective. The 17 tube locations are:

Site	µg m-3
DT27 Streatham Hill Station	59.5
DT31 Streatham bus station	58.2
DT29 Streatham High Road/Becmead Avenue	54.7
DT1, DT2, DT3 Brixton Road	54.5
DT18 Stockwell Road/Bellefields Road	53.8
DT19 Brixton Road bus stop Q (outside KFC)	52.1

DT28 Streatham High Road/Leigham Avenue	49.1
LTN11 Streatham - Leigham Court Road/Culverhouse Gardens	46.3
DT25 Christchurch House, Christchurch Road (South Circular)	46.2
SCOOT Brixton Road – Opposite St Johns Cresent	44.8
LI Loughborough Primary School	44.4
DT30 316 Streatham High Road	43.9
DT50 Acre Lane	42.1
DT34 South Circular - past bus stop	41.7

SR4 Next to bridge by Azzurro Italian bar Sutton Walk	41.1
DT48 Loughborough Junction 1	40.8
DT26 Streatham Hill/Wavertree Road	40.2

Across all diffusion tubes, there was a 2.97 µg m-3 increase in concentrations between 2020 and 2021. This may reflect an increase in traffic levels following the easing of Covid-19 lockdown restrictions. However, due to some uncertainty in the data as a result of diffusion tube collection issues noted above, these figures should be treated with caution.

Appendix C Sampling issues at Streatham Green

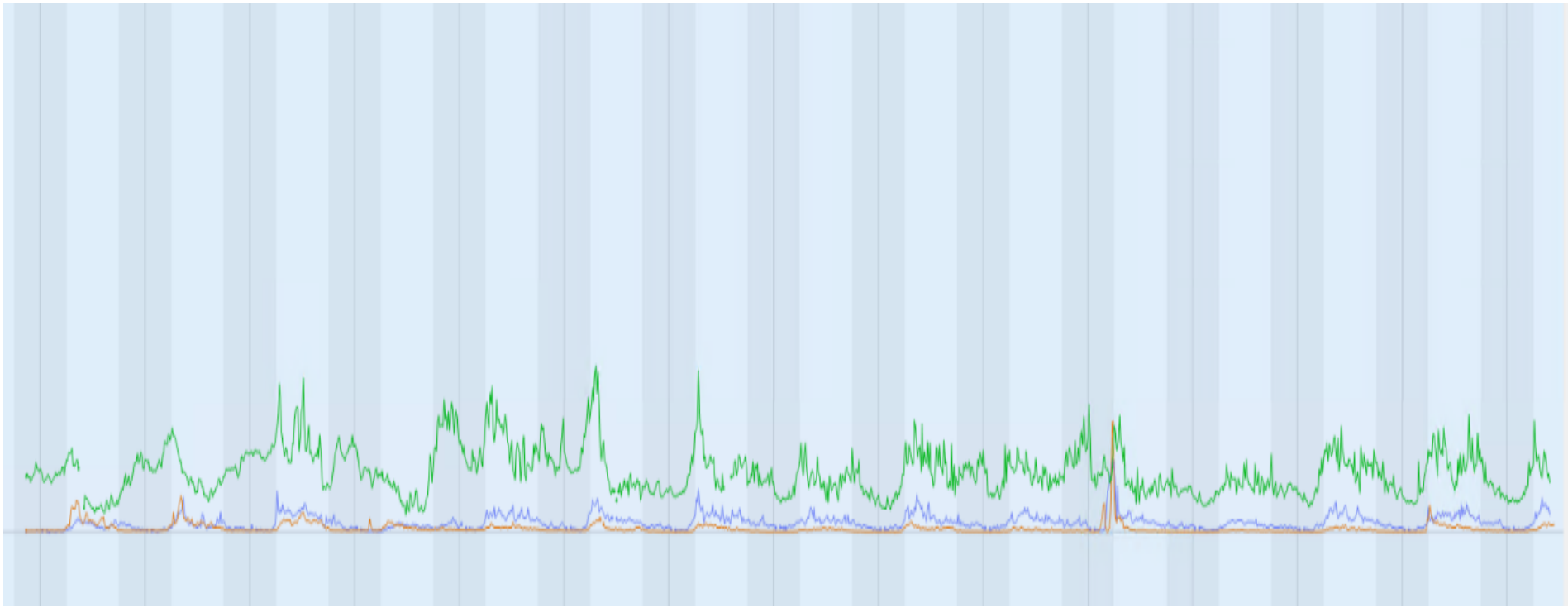
NO2 data is not available for the Streatham Green LB6 monitoring station between 26th May and 23rd September. This is due to a error with the monitoring station that was not straightforward to identify, and only fully appreciated at data ratification stage. Details are set out below:

On 11th August 2021 the Local Site Operator arrived on site and reported the screen was blank. The Environmental Research Group at Imperial (ERG) issued a callout to address the blank screen and asked to check the sealing of the NOx sample inlet conduit / integrity of the sampling system, as some of the recent data had shown unusual diurnal variation which may be indicative of partial cabin air sampling.

An Engineer arrived on site the following day, and reported the screen was beyond repair. The replacement screen was ordered. The replacement screen was installed on 20th August. On 23rd August the Duty Officer followed up with an email to ask if the engineer looked at the sample line / sample conduit when visiting for the broken NOx screen as requested on the callout, as ERG still noted an odd pattern of diurnal variation and suspected this was indicative of the analyser not fully sampling ambient air.
On 24th August the engineer arrived to investigate. They checked sample lines and leak checked.

Further to this, ERG have reviewed the NOx measurements again from Streatham Green LB6 and the diurnal pattern does more in line with what would be expected. However, the concentrations remain elevated overnight which suggests some sort of sampling issue. At background sites, NO concentrations usually drop close to 0 ppb most nights but at LB6 they typically remain at about 6 ppb. There's a similar over-read evident on the NOx concentrations.

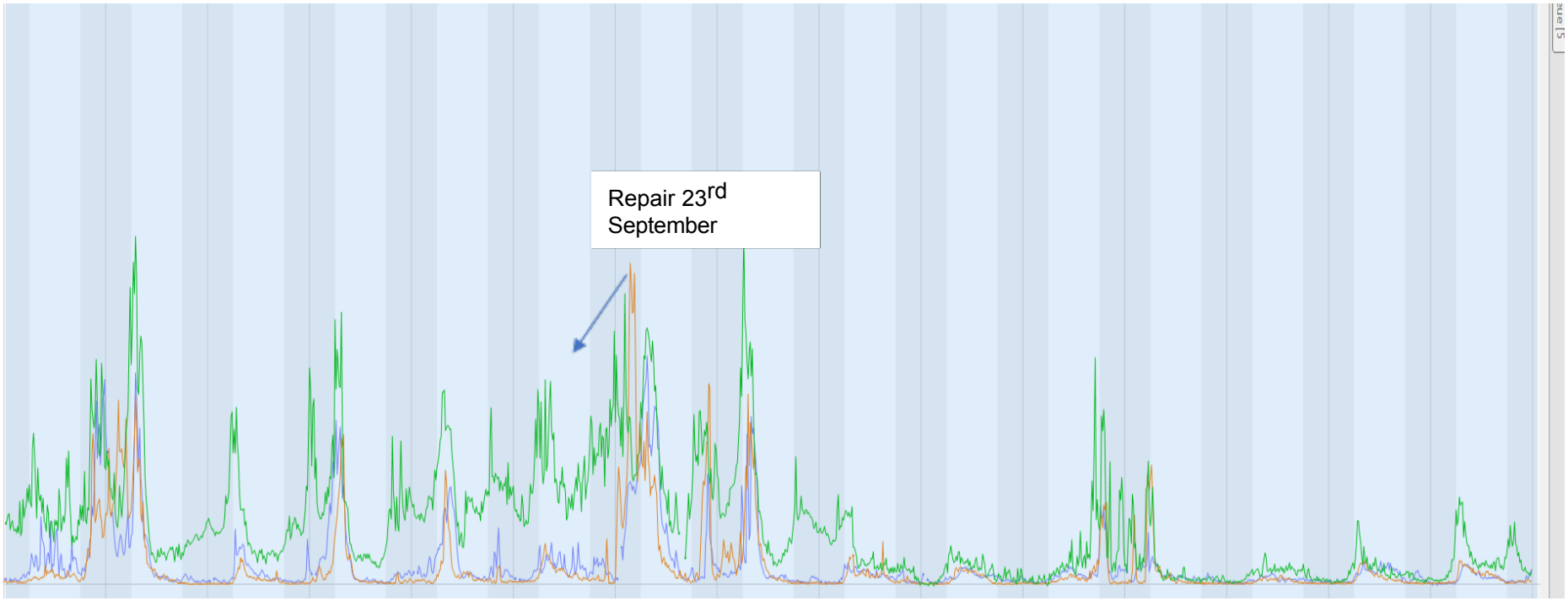
The screenshot below illustrates this: LB6 NO is in green, North Kensington NO in orange and Elephant & Castle NO in blue.



On 3rd September the engineer flow and leak checked the analyser and replaced the funnel.

On the 21st September ERG emailed to say that following another review of the LB6 NOx measurements they were still not seeing the expected pattern of diurnal variation. This is most evident in the NO measurements which don't drop close to zero in the early hours of the mornings when emissions are very low as we see at other similar sites. ERG suggested to check the sampling setup and possibly replacing the sample line as well in case that had become contaminated. ERG also suggested to investigate whether the sample line conduit is sealed to prevent any possibility of cabin air flowing up the conduit and then being sampled at the inlet.

The engineer attended on the 23rd September and found a t-piece near the roof area that had a loose nut. Following this repair the data returned to show expected variations. The graph below shows relationship between the same sites:



At the ratification process ERG have looked at longer term data. Data has been linear scaled, taking into account audit results, repairs, services and all available calibrations. Further checks were carried out to establish the starting point of the sampling issue. At this point it was found that although less severe, there was some evidence of the sampling issue prior to August. At the final

review ERG took a decision to exclude the data from 26th May, when overnight elevation became significantly higher, until final repair 23rd September.

In summary, there are three main issues that have contributed to this data loss:

1. Sampling issues are difficult to identify and it is not always obvious whether they are resolved after a visit.
2. The cause of sampling issues is not always straightforward to identify. Sampling issues have caused data loss at several sites on the ERG network and others, including the AURN, that have gone on for long periods with the cause not found after several ESU visits. ERG have introduced extra checks for this at NPL audits, but the issue in question here wasn't happening at the time of the audit.
3. The engineer's notes state that the cause of the problem was a loose capping nut that the engineer didn't know was there or why. The engineer had checked more commonly known sampling issues.

To reduce the risk that issues like this arise in the future, Lambeth will increase its audits on monitors to twice a year.