



London Air Quality Network

Summary Report 2013

February 2015

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Environmental Research Group

King's College London

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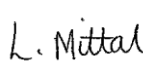
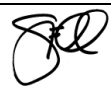
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1 Introduction

This report details the results of air pollution measurements made on the London Air Quality Network during 2013. Measurements have been presented with specific reference to the UK Air Quality Strategy (AQS) Objectives and the EU Limit Values.

The London Air Quality Network (LAQN) is a unique resource, providing robust air pollution measurements that are essential to underpin air quality management and health studies. The public face of the network, the LondonAir web site (www.londonair.org.uk), is visited by thousands of Londoners seeking hourly updated air pollution information.

The LAQN was formed in 1993 to coordinate and improve air pollution monitoring in London. The majority of London's 33 boroughs supply measurements to the network and in addition these data are increasingly being supplemented by measurements from local authorities surrounding London, thereby providing an overall perspective of air pollution in London and the Home Counties.

The LAQN is operated and managed by the Environmental Research Group (ERG) at King's College London. QA/QC audits are carried out by the National Physical Laboratory (NPL). Each borough funds air quality monitoring in its own area. The Department of Environment, Food and Rural Affairs (Defra) funds King's to operate the Marylebone Road site and to maintain several of the LAQN sites as affiliate sites to the UK Automatic Urban and Rural Network (AURN). This Defra support assists the operation of the overall LAQN. Analysis of LAQN measurements has been augmented by measurements from directly-funded Defra sites in London. Measurements from Defra sites were provided by R-AEA from the National Air Quality Archive and were included within the LAQN database. Transport for London has also funded monitoring to help assess the air pollution impacts of the Congestion Charging Scheme and Low Emission Zone.

2 Air quality Strategy Objectives and EU Limit Values

There is ample evidence of the adverse health effects caused by air pollution (WHO, 2006, 2013). In response to these health impacts, the Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland (Defra, 2008) sets out the UK's way forward on air quality issues, details objectives to be achieved, and proposes measures to help reach them. These UK objectives largely reflect EU Limit Values (EC, 2008). The GLA and the London boroughs and district councils outside the capital have responsibilities for the management of air quality and must work towards the attainment of AQS objectives. The AQS Objectives and EU Limit Values are detailed in Table 1. Monitoring progress towards the attainment of these Objectives and Limit Values forms a core activity for the LAQN.

Pollutant	Air Quality Objective Concentration	Measured as	To be achieved by
Carbon Monoxide (CO)	10.0 mg m ⁻³	Maximum daily running 8-hour mean	31 December 2003
Nitrogen Dioxide (NO ₂)	200 µg m ⁻³ not to be exceeded more than 18 times a year	1-hour mean	31 December 2005
	40 µg m ⁻³	Annual mean	31 December 2005
Sulphur dioxide (SO ₂)	350 µg m ⁻³ , not to be exceeded more than 24 times a year	1-hour mean	31 December 2004
	125 µg m ⁻³ , not to be exceeded more than 3 times a year	24-hour mean	31 December 2004
	266 µg m ⁻³ , not to be exceeded more than 35 times a year	15-minute mean	31 December 2005
Ozone (O ₃)	100 µg m ⁻³ not to be exceeded more than 10 times a year	8 hourly running or hourly mean	31 December 2005
Particles (PM ₁₀) (gravimetric)	50 µg m ⁻³ , not to be exceeded more than 35 times a year	Daily mean	31 December 2004
	40 µg m ⁻³	Annual mean	31 December 2004
Particles (PM _{2.5}) (gravimetric)	25 µg m ⁻³ (target)	Annual mean	2020
	20% cut in urban background exposure	Annual mean	2010 - 2020

Table 1: AQS Objectives and EU Limit Values.

3 Results

The AQS Objective results measured at LAQN sites during 2012 are detailed in Tables 2 to 8.

Key to site types:

RU	=	Rural
S	=	Suburban
U	=	Urban background
R	=	Roadside
K	=	Kerbside
I	=	Industrial

3.1 Carbon Monoxide

Site Name	Type	Capture Rate (%)	No occurrences of rolling 8hr mean $\geq 10\text{mgm}^{-3}$ (8.6ppb)	Achieved?
Islington - Holloway Road	R	76	0	n/a
Kensington and Chelsea - North Ken	U	99	0	yes
Newham - Cam Road	R	23	0	n/a
Newham - Wren Close	U	24	0	n/a
Tower Hamlets - Mile End Road	R	30	0	n/a
Wandsworth - Wandsworth Town Hall	U	99	0	yes
Westminster - Marylebone Road	K	99	0	yes

Table 2: AQS Objective results for CO

3.2 Nitrogen Dioxide

Site Name	Type	Capture Rate (%)	Annual Mean < 40 ug ^m ⁻³	Annual Mean Achieved?	No more than 18 occurrences of hourly mean > 200ug ^m ⁻³ (104.7ppb)	Hourly Mean Achieved?
Barking and Dagenham - Rush Green	S	93	27	yes	0	yes
Barking and Dagenham - Scrattons Farm	S	43	33	n/a	0	n/a
Bexley - Belvedere	S	98	27	yes	0	yes
Bexley - Belvedere West	U	93	24	yes	0	yes
Bexley - Erith	I	99	28	yes	0	yes
Bexley - Slade Green	S	98	28	yes	0	yes
Brent - John Keble Primary School	R	47	37	n/a	0	n/a
Brent - Neasden Lane	I	83	39	n/a	0	n/a
Brentwood - Brentwood Town Hall	U	95	25	yes	0	yes
Camden - Bloomsbury	U	98	51	no	0	yes
Camden - Euston Road	R	88	111	n/a	398	no
Camden - Shaftesbury Avenue	R	82	77	n/a	10	n/a
Camden - Swiss Cottage	K	99	71	no	42	no
Castle Point - Hadleigh	R	77	30	n/a	0	n/a
City of London - Beech Street	R	96	85	no	221	no
City of London - Sir John Cass School	U	98	47	no	0	yes
City of London - Walbrook Wharf	R	98	122	no	771	no
Croydon - George Street	R	87	49	n/a	0	n/a
Croydon - Norbury	K	90	77	no	23	no
Croydon - Purley Way A23	R	78	37	n/a	0	n/a
Dacorum - High Street Northchurch	R	79	26	n/a	0	n/a
Ealing - Hanger Lane Gyratory	R	91	74	no	56	no
Ealing - Horn Lane	I	76	57	n/a	0	n/a
Ealing - Southall	U	85	33	n/a	0	n/a
Ealing - Southall Railway	R	85	35	n/a	1	n/a
Ealing - Western Avenue	R	85	65	n/a	17	n/a
Enfield - Bowes Primary School	R	54	47	n/a	0	n/a
Enfield - Bush Hill Park	S	78	30	n/a	0	n/a
Enfield - Derby Road	R	96	44	no	0	yes
Enfield - Prince of Wales School	U	76	27	n/a	0	n/a
Greenwich - A206 Burrage Grove	R	99	45	no	0	yes
Greenwich - Blackheath	R	86	48	n/a	1	n/a
Greenwich - Eltham	S	97	21	yes	0	yes
Greenwich - Fiveways Sidcup Rd A20	R	95	58	no	7	yes
Greenwich - Millennium Village	I	75	38	n/a	2	n/a
Greenwich - Plumstead High Street	R	97	37	yes	0	yes
Greenwich - Trafalgar Road	R	99	41	no	0	yes
Greenwich - Westthorne Avenue	R	99	46	no	4	yes
Greenwich - Woolwich Flyover	R	99	64	no	8	yes
Greenwich and Bexley - Falconwood	R	93	51	no	11	yes
Hackney - Old Street	R	99	64	no	0	yes
Hammersmith and Fulham - Shepherds Bush	R	53	78	n/a	11	n/a

Site Name	Type	Capture Rate (%)	Annual Mean < 40 ug ^m ⁻³	Annual Mean Achieved?	No more than 18 occurrences of hourly mean > 200ug ^m ⁻³ (104.7ppb)	Hourly Mean Achieved?
Haringey - Priory Park South	U	93	25	yes	0	yes
Haringey - Haringey Town Hall	R	97	44	no	1	yes
Harrow - Pinner Road	R	96	42	no	1	yes
Harrow - Stanmore	U	99	24	yes	0	yes
Havering - Rainham	R	78	30	n/a	0	n/a
Havering - Romford	R	76	33	n/a	0	n/a
Hillingdon - Harlington	U	83	38	n/a	5	n/a
Hillingdon - Keats Way	S	98	53	no	0	yes
Hounslow and Ealing - Gunnersbury Avenue	R	94	56	no	5	yes
Islington - Arsenal	U	99	40	yes	10	yes
Islington - Holloway Road	R	80	54	n/a	3	n/a
Kensington and Chelsea - Earls Court Rd	K	91	95	no	140	no
Kensington and Chelsea - Kings Road	R	94	84	no	47	no
Kensington and Chelsea - Knightsbridge	R	99	90	no	466	no
Kensington and Chelsea - North Ken	U	99	37	yes	0	yes
Lambeth - Bondway Interchange	I	60	62	n/a	0	n/a
Lambeth - Brixton Road	K	38	113	n/a	250	no
Lambeth - Streatham Green	U	63	43	n/a	2	n/a
Lewisham - Catford	U	99	48	no	3	yes
Lewisham - Loampit Vale	R	98	57	no	26	no
Lewisham - New Cross	R	98	51	no	0	yes
Merton - Morden Civic Centre	R	85	40	n/a	10	n/a
Mole Valley - Dorking	U	92	22	yes	0	yes
Newham - Cam Road	R	24	53	n/a	0	n/a
Newham - Wren Close	U	25	43	n/a	0	n/a
Reading - Caversham Road	R	24	58	n/a	2	n/a
Reading - Kings Road	R	23	66	n/a	4	n/a
Reading - New Town	U	98	27	yes	0	yes
Redbridge - Gardner Close	R	99	45	no	1	yes
Redbridge - Perth Terrace	U	94	35	yes	1	yes
Reigate and Banstead - Horley	S	97	22	yes	0	yes
Reigate and Banstead - Horley South	S	99	28	yes	0	yes
Reigate and Banstead - Poles Lane	RU	96	19	yes	0	yes
Richmond Upon Thames - Barnes Wetlands	S	97	24	yes	0	yes
Richmond Upon Thames - Castlenau	R	99	39	yes	2	yes
Richmond Upon Thames - Hanworth Road (high level)	K	85	43	n/a	2	n/a
Richmond Upon Thames - Hanworth Road (low level)	K	78	45	n/a	0	n/a
Richmond Upon Thames - Ntl Physical Lab	S	98	21	yes	0	yes
Sevenoaks - Bat and Ball	R	94	29	yes	0	yes
Sevenoaks - Greatness Park	U	84	20	n/a	0	n/a
Southwark - A2 Old Kent Road	R	93	58	no	6	yes
Southwark - Elephant and Castle	U	85	42	n/a	0	n/a
Sutton - Beddington Lane	I	93	36	yes	9	yes
Sutton - Carshalton	S	79	29	n/a	0	n/a

Site Name	Type	Capture Rate (%)	Annual Mean < 40 $\mu\text{g m}^{-3}$	Annual Mean Achieved?	No more than 18 occurrences of hourly mean > 200 $\mu\text{g m}^{-3}$ (104.7ppb)	Hourly Mean Achieved?
Sutton - Wallington	K	52	70	n/a	67	no
Sutton - Worcester Park	K	99	49	no	9	yes
Thurrock - Calcutta Road Tilbury	R	98	35	yes	0	yes
Thurrock - London Road (Grays)	U	96	27	yes	0	yes
Thurrock - London Road (Purfleet)	R	96	63	no	4	yes
Thurrock - Stanford-le-Hope	R	96	28	yes	0	yes
Tower Hamlets - Blackwall	R	98	58	no	0	yes
Tower Hamlets - Mile End Road	R	96	61	no	1	yes
Tower Hamlets - Poplar	U	49	33	n/a	0	n/a
Tower Hamlets - Victoria Park	U	96	33	yes	0	yes
Wandsworth - Battersea	R	87	45	n/a	0	n/a
Wandsworth - Putney	U	90	40	yes	2	yes
Wandsworth - Putney High Street	K	99	124	no	1580	no
Wandsworth - Putney High Street Facade	R	98	106	no	661	no
Wandsworth - Wandsworth Town Hall	U	95	48	no	0	yes
Westminster - Horseferry Road	U	98	45	no	0	yes
Westminster - Marylebone Road	K	98	85	no	59	no
Westminster - Oxford Street	K	85	135	n/a	1502	no
Windsor and Maidenhead - Clarence Road	R	90	41	no	1	yes
Windsor and Maidenhead - Frascati Way	R	99	46	no	0	yes

Table 3: AQS Objective results for NO₂

3.3 Nitrogen Oxides

Site Name	Type	Capture Rate (%)	Annual Mean NO _x as NO ₂ ugm ⁻³
Barking and Dagenham - Rush Green	S	93	40
Barking and Dagenham - Scrattons Farm	S	43	58
Bexley - Belvedere	S	98	43
Bexley - Belvedere West	U	93	39
Bexley - Erith	I	99	56
Bexley - Slade Green	S	98	48
Brent - John Keble Primary School	R	47	73
Brent - Neasden Lane	I	83	86
Brentwood - Brentwood Town Hall	U	95	34
Camden - Bloomsbury	U	98	89
Camden - Euston Road	R	88	355
Camden - Shaftesbury Avenue	R	82	179
Camden - Swiss Cottage	K	99	188
Castle Point - Hadleigh	R	77	50
City of London - Beech Street	R	96	301
City of London - Sir John Cass School	U	98	80
City of London - Walbrook Wharf	R	98	360
Croydon - George Street	R	87	107
Croydon - Norbury	K	90	203
Croydon - Purley Way A23	R	78	90
Dacorum - High Street Northchurch	R	79	65
Ealing - Hanger Lane Gyratory	R	91	261
Ealing - Horn Lane	I	76	149
Ealing - Southall	U	85	54
Ealing - Southall Railway	R	85	81
Ealing - Western Avenue	R	85	165
Enfield - Bowes Primary School	R	54	124
Enfield - Bush Hill Park	S	78	47
Enfield - Derby Road	R	96	101
Enfield - Prince of Wales School	U	76	48
Greenwich - A206 Burrage Grove	R	99	86
Greenwich - Blackheath	R	86	116
Greenwich - Eltham	S	97	33
Greenwich - Fiveways Sidcup Rd A20	R	95	143
Greenwich - Millennium Village	I	75	74
Greenwich - Plumstead High Street	R	97	74
Greenwich - Trafalgar Road	R	99	81
Greenwich - Westthorne Avenue	R	99	97
Greenwich - Woolwich Flyover	R	99	190
Greenwich and Bexley - Falconwood	R	93	113
Hackney - Old Street	R	99	157
Hammersmith and Fulham - Shepherds Bush	R	53	212
Haringey - Priory Park South	U	93	38

Site Name	Type	Capture Rate (%)	Annual Mean NO _x as NO ₂ ugm ⁻³
Haringey - Haringey Town Hall	R	97	98
Harrow - Pinner Road	R	96	99
Harrow - Stanmore	U	99	42
Havering - Rainham	R	78	56
Havering - Romford	R	76	69
Hillingdon - Harlington	U	83	66
Hillingdon - Keats Way	S	98	107
Hounslow and Ealing - Gunnersbury Avenue	R	94	172
Islington - Arsenal	U	99	59
Islington - Holloway Road	R	80	147
Kensington and Chelsea - Earls Court Rd	K	91	270
Kensington and Chelsea - Kings Road	R	94	208
Kensington and Chelsea - Knightsbridge	R	99	230
Kensington and Chelsea - North Ken	U	99	58
Lambeth - Bondway Interchange	I	60	153
Lambeth - Brixton Road	K	38	437
Lambeth - Streatham Green	U	63	77
Lewisham - Catford	U	99	100
Lewisham - Loampit Vale	R	98	138
Lewisham - New Cross	R	98	131
Merton - Morden Civic Centre	R	85	110
Mole Valley - Dorking	U	92	33
Newham - Cam Road	R	24	96
Newham - Wren Close	U	25	69
Port Talbot Margam AURN	I	95	25
Reading - Caversham Road	R	24	128
Reading - Kings Road	R	23	177
Reading - New Town	U	98	43
Redbridge - Gardner Close	R	99	87
Redbridge - Perth Terrace	U	94	56
Reigate and Banstead - Horley	S	97	34
Reigate and Banstead - Horley South	S	99	47
Reigate and Banstead - Poles Lane	RU	96	27
Richmond Upon Thames - Barnes Wetlands	S	97	36
Richmond Upon Thames - Castlenau	R	99	79
Richmond Upon Thames - Hanworth Road (high level)	K	85	105
Richmond Upon Thames - Hanworth Road (low level)	K	78	102
Richmond Upon Thames - Ntl Physical Lab	S	98	32
Sevenoaks - Bat and Ball	R	94	61
Sevenoaks - Greatness Park	U	84	30
Southwark - A2 Old Kent Road	R	93	155
Southwark - Elephant and Castle	U	85	79
Sutton - Beddington Lane	I	93	64
Sutton - Carshalton	S	79	55
Sutton - Wallington	K	52	152
Sutton - Worcester Park	K	99	122

Site Name	Type	Capture Rate (%)	Annual Mean NO _x as NO ₂ ugm ⁻³
Thurrock - Calcutta Road Tilbury	R	98	66
Thurrock - London Road (Grays)	U	96	46
Thurrock - London Road (Purfleet)	R	96	203
Thurrock - Stanford-le-Hope	R	96	57
Tower Hamlets - Blackwall	R	98	146
Tower Hamlets - Mile End Road	R	96	135
Tower Hamlets - Poplar	U	49	50
Tower Hamlets - Victoria Park	U	96	49
Wandsworth - Battersea	R	87	90
Wandsworth - Putney	U	90	68
Wandsworth - Putney High Street	K	99	324
Wandsworth - Putney High Street Facade	R	98	257
Wandsworth - Wandsworth Town Hall	U	95	92
Westminster - Horseferry Road	U	98	77
Westminster - Marylebone Road	K	98	281
Westminster - Oxford Street	K	85	408
Windsor and Maidenhead - Clarence Road	R	90	88
Windsor and Maidenhead - Frascati Way	R	99	106

Table 4: Annual Mean values for NO_x

3.4 Ozone

Site Name	Type	Capture Rate (%)	No more than 10 days where maximum rolling 8hr mean $\geq 100 \mu\text{g m}^{-3}$ (50ppb)	Achieved?
Bexley - Belvedere West	U	94	20	no
Bexley - Slade Green	S	99	16	no
Brent - Ikea	R	58	0	n/a
Camden - Bloomsbury	U	98	1	yes
Ealing - Southall	U	89	10	n/a
Greenwich - Eltham	S	99	6	yes
Greenwich - Plumstead High Street	R	98	0	yes
Greenwich - Westthorne Avenue	R	93	2	yes
Greenwich - Woolwich Flyover	R	100	0	yes
Greenwich and Bexley - Falconwood	R	100	3	yes
Hackney - Old Street	R	99	0	yes
Haringey - Priory Park South	U	97	16	no
Hillingdon - Harlington	U	95	13	no
Hillingdon - Keats Way	S	97	4	yes
Kensington and Chelsea - North Ken	U	98	10	yes
Lewisham - Catford	U	97	0	yes
Newham - Cam Road	R	18	0	n/a
Newham - Wren Close	U	23	0	n/a
Reading - New Town	U	99	12	no
Redbridge - Perth Terrace	U	90	14	no
Reigate and Banstead - Poles Lane	RU	99	18	no
Richmond Upon Thames - Barnes Wetlands	S	90	15	no
Richmond Upon Thames - Hanworth Road	K	80	0	n/a
Richmond Upon Thames - Ntl Physical Lab	S	68	25	no
Sevenoaks - Greatness Park	U	83	18	no
Southwark - Elephant and Castle	U	85	1	n/a
Sutton - Carshalton	S	93	4	yes
Thurrock - London Road (Grays)	U	98	5	yes
Tower Hamlets - Blackwall	R	89	1	n/a
Tower Hamlets - Poplar	U	34	3	n/a
Wandsworth - Wandsworth Town Hall	U	98	8	yes
Westminster - Horseferry Road	U	99	4	yes
Westminster - Marylebone Road	K	98	0	yes

Table 5: AQS Objective results for O₃

3.5 Sulphur Dioxide

Site Name	Type	Capture Rate (%)	No more than 35 occurrences of 15min mean $\geq 350\mu\text{g m}^{-3}$ (100ppb)	Achieved?
Barking and Dagenham - Rush Green	S	94	0	yes
Bexley - Slade Green	S	83	0	n/a
Camden - Bloomsbury	U	86	0	n/a
Castle Point - Hadleigh	R	95	0	yes
Enfield - Derby Road	R	96	0	yes
Greenwich - Eltham	S	91	0	yes
Kensington and Chelsea - North Ken	U	97	0	yes
Lambeth - Bondway Interchange	I	59	0	n/a
Lambeth - Brixton Road	K	47	0	n/a
Lewisham - Catford	U	89	0	n/a
Lewisham - New Cross	R	99	0	yes
Newham - Cam Road	R	25	0	n/a
Newham - Wren Close	U	25	0	n/a
Thurrock - Calcutta Road Tilbury	R	83	0	n/a
Thurrock - London Road (Grays)	U	97	0	yes
Tower Hamlets - Poplar	U	49	0	n/a
Tower Hamlets - Victoria Park	U	80	0	n/a
Wandsworth - Wandsworth Town Hall	U	94	0	yes
Westminster - Marylebone Road	K	79	0	n/a

Table 6: AQS Objective results for SO₂

3.6 Particulate Matter PM₁₀

Site Name	Type	Capture Rate (%)	Annual Mean < 40 ug m ⁻³	Annual Mean Achieved?	No more than 35 occurrences of daily mean >= 50 ug m ⁻³	Daily Mean Achieved?
Barking and Dagenham - Scrattons Farm	S	22	18	n/a	0	n/a
Bexley - Belvedere	S	99	21	yes	8	yes
Bexley - Belvedere FDMS	S	99	19	yes	8	yes
Bexley - Belvedere West	U	95	20	yes	5	yes
Bexley - Belvedere West FDMS	U	89	18	n/a	3	n/a
Bexley - Erith	I	99	28	yes	33	yes
Bexley - Manor Road East Gravimetric	I	98	33	yes	56	no
Bexley - Manor Road West Gravimetric	I	92	33	yes	53	no
Bexley - Slade Green	S	98	20	yes	5	yes
Brent - Ikea	R	90	34	yes	38	no
Brent - John Keble Primary School	R	95	25	yes	10	yes
Brent - Neasden Lane	I	98	33	yes	42	no
Camden - Bloomsbury	U	93	18	yes	3	yes
Camden - Shaftesbury Avenue	R	75	29	n/a	15	n/a
Camden - Swiss Cottage	K	98	20	yes	7	yes
City of London - Beech Street	R	96	32	yes	35	yes
City of London - Sir John Cass School	U	96	22	yes	8	yes
City of London - Upper Thames Street	R	90	42	no	71	no
Croydon - George Street	R	95	25	yes	13	yes
Croydon - Thornton Heath	S	10	23	n/a	0	n/a
Ealing - Hanger Lane Gyrotory	R	96	30	yes	19	yes
Ealing - Horn Lane TEOM	I	94	38	yes	76	no
Ealing - Southall	U	90	20	yes	3	yes
Ealing - Southall FDMS	U	69	21	n/a	8	n/a
Ealing - Southall Railway	R	98	23	yes	11	yes
Ealing - Western Avenue	R	82	32	n/a	20	n/a
Enfield - Bowes Primary School	R	49	22	n/a	4	n/a
Enfield - Derby Road	R	88	31	n/a	28	n/a
Greenwich - A206 Burrage Grove	R	64	28	n/a	18	n/a
Greenwich - Blackheath	R	95	30	yes	29	yes
Greenwich - Fiveways Sidcup Rd A20	R	67	31	n/a	31	n/a
Greenwich - Millennium Village	I	76	26	n/a	20	n/a
Greenwich - Plumstead High Street	R	56	20	n/a	3	n/a
Greenwich - Trafalgar Road	R	99	23	yes	8	yes
Greenwich - Westthorne Avenue	R	90	24	yes	17	yes
Greenwich - Woolwich Flyover	R	99	32	yes	26	yes
Greenwich and Bexley - Falconwood FDMS	R	71	30	n/a	28	n/a
Hackney - Old Street	R	98	29	yes	19	yes
Hammersmith and Fulham - Shepherds Bush	R	44	34	n/a	16	n/a
Haringey - Haringey Town Hall	R	62	26	n/a	11	n/a
Harrow - Pinner Road	R	97	26	yes	15	yes
Harrow - Stanmore	U	99	19	yes	2	yes
Havering - Rainham	R	31	17	n/a	0	n/a

Site Name	Type	Capture Rate (%)	Annual Mean < 40 $\mu\text{g m}^{-3}$	Annual Mean Achieved?	No more than 35 occurrences of daily mean $\geq 50 \mu\text{g m}^{-3}$	Daily Mean Achieved?
Havering - Romford	R	82	24	n/a	6	n/a
Hillingdon - Harlington	U	94	20	yes	8	yes
Hounslow and Ealing - Gunnersbury Avenue	R	98	35	yes	36	no
Islington - Arsenal	U	99	22	yes	7	yes
Islington - Holloway Road	R	56	27	n/a	10	n/a
Kensington and Chelsea - Cromwell Road	R	91	26	yes	12	yes
Kensington and Chelsea - Earls Court Rd	K	87	34	n/a	39	no
Kensington and Chelsea - North Ken	U	59	23	n/a	9	n/a
Kensington and Chelsea - North Ken FDMS	U	59	23	n/a	9	n/a
Lambeth - Bondway Interchange	I	46	38	n/a	22	n/a
Lambeth - Brixton Road	K	52	32	n/a	13	n/a
Lambeth - Streatham Green	U	47	17	n/a	4	n/a
Lewisham - Loampit Vale	R	94	28	yes	19	yes
Lewisham - Mercury Way	I	95	24	yes	13	yes
Lewisham - New Cross	R	99	23	yes	15	yes
Merton - Merton Road	R	94	31	yes	41	no
Mole Valley - Dorking	U	84	21	n/a	2	n/a
Newham - Cam Road	R	25	33	n/a	14	n/a
Reading - Caversham Road	R	23	37	n/a	16	n/a
Reading - Kings Road	R	22	34	n/a	9	n/a
Reading - New Town	U	92	16	yes	4	yes
Redbridge - Gardner Close	R	95	30	yes	22	yes
Redbridge - Perth Terrace	U	98	18	yes	2	yes
Reigate and Banstead - Horley	S	98	20	yes	1	yes
Richmond Upon Thames - Barnes Wetlands	S	99	20	yes	6	yes
Richmond Upon Thames - Castlenau	R	93	22	yes	10	yes
Richmond Upon Thames - Hanworth Road	K	99	25	yes	8	yes
Sevenoaks - Bat and Ball	R	96	22	yes	8	yes
Sevenoaks - Greatness Park	U	97	20	yes	4	yes
Southwark - A2 Old Kent Road	R	78	27	n/a	28	n/a
Southwark - Elephant and Castle	U	91	25	yes	16	yes
Sutton - Beddington Lane	I	95	23	yes	7	yes
Sutton - Wallington	K	58	28	n/a	11	n/a
Sutton - Worcester Park	K	72	29	n/a	17	n/a
Thurrock - London Road (Grays)	U	95	19	yes	4	yes
Thurrock - London Road (Purfleet)	R	98	27	yes	20	yes
Thurrock - Stanford-le-Hope	R	78	24	n/a	16	n/a
Tower Hamlets - Blackwall	R	92	28	yes	24	yes
Tower Hamlets - Poplar	U	49	24	n/a	6	n/a
Tower Hamlets - Victoria Park	U	96	22	yes	7	yes
Wandsworth - Battersea	R	99	31	yes	48	no
Wandsworth - Putney	U	41	24	n/a	3	n/a
Wandsworth - Putney High Street	K	94	33	yes	27	yes
Westminster - Marylebone Road	K	99	33	yes	29	yes

Site Name	Type	Capture Rate (%)	Annual Mean < 40 $\mu\text{g m}^{-3}$	Annual Mean Achieved?	No more than 35 occurrences of daily mean $\geq 50 \mu\text{g m}^{-3}$	Daily Mean Achieved?
Westminster - Marylebone Road FDMS	K	94	29	yes	21	yes
Westminster - Oxford Street	K	83	31	n/a	25	n/a

Table 7: AQS Objective results for PM_{10} .

All PM_{10} measurements have been converted to reference equivalent by the methods recommended in Defra's Local Air Quality Management Technical Guidance (Defra, 2009), i.e. TEOM measurements have been corrected using the Volatile Correction Model (VCM) and BAM measurements have been multiplied by 0.83.

3.7 Particulate Matter PM_{2.5}

Site Name	Type	Instrument	Capture Rate (%)	Annual Mean ug m ⁻³ uncorrected
BT Tower - FDMS	U	FDMS	4	13
Bexley - Belvedere	S	TEOM	99	10
Bexley - Belvedere West	U	TEOM	92	9
Bexley - Erith	I	FDMS	89	16
Bexley - Slade Green FDMS	S	FDMS	98	16
Bexley - Thamesmead	S	TEOM	98	9
Brent - Ikea	R	TEOM	86	14
Camden - Bloomsbury	U	FDMS	61	12
Camden - Swiss Cottage	K	FDMS	98	16
City of London - Farringdon Street	K	BAM	97	27
Ealing - Southall	U	TEOM	90	10
Greenwich - A206 Burrage Grove	R	FDMS	72	18
Greenwich - Eltham	S	FDMS	65	15
Greenwich - Millennium Village	I	FDMS	89	15
Greenwich - Plumstead High Street	R	FDMS	88	15
Greenwich - Westthorne Avenue	R	FDMS	93	17
Greenwich - Woolwich Flyover	R	TEOM	96	15
Greenwich and Bexley - Falconwood FDMS	R	FDMS	96	16
Hackney - Old Street	R	TEOM	98	14
Haringey - Haringey Town Hall	R	FDMS	97	18
Harrow - Stanmore	U	FDMS	85	13
Havering - Rainham	R	FDMS	28	11
Hillingdon - Harlington	U	FDMS	98	14
Kensington and Chelsea - Cromwell Road	R	FDMS	89	16
Kensington and Chelsea - North Ken	U	FDMS	95	15
Lewisham - New Cross	R	FDMS	98	18
Reading - New Town	U	FDMS	90	10
Redbridge - Gardner Close	R	BAM	92	17
Richmond Upon Thames - Ntl Physical Lab	S	FDMS	51	17
Thurrock - Stanford-le-Hope	R	FDMS	87	14
Tower Hamlets - Blackwall	R	FDMS	90	16
Westminster - Marylebone Road	K	TEOM	96	20
Westminster - Marylebone Road FDMS	K	FDMS	96	20

Table 8: AQS Objective results for PM_{2.5}

4 References

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