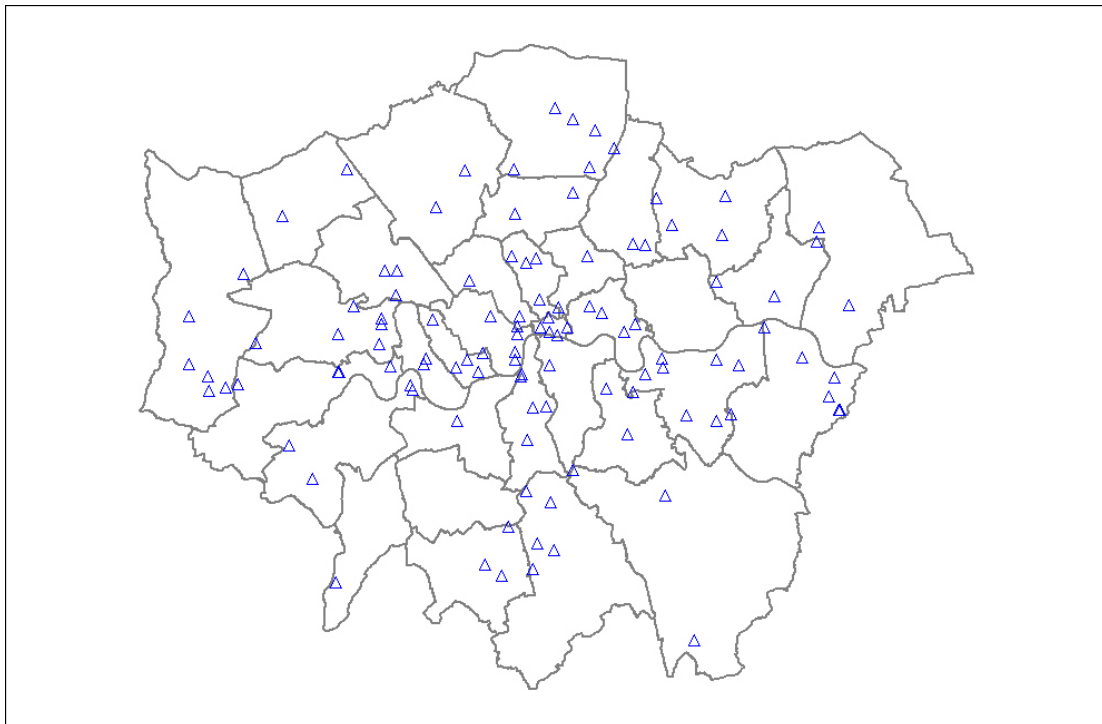


## Appendix 5: Air quality monitoring networks

Greater London has well over 100 air quality monitoring sites that are currently in operation, most of which are owned by local authorities and are part of the London Air Quality Network (LAQN). Defra also has a number of monitoring sites in London, which are part of the UK's automatic network. Figure A5.1 shows the distribution of these monitoring sites in London.

This appendix summarises the different monitoring networks and outlines which monitoring sites have been used for the analysis undertaken in this report, results of which are discussed in sections 8 and 10.

Figure A5.1 Location of monitoring sites currently in operation in Greater London.



### A5.1 London Air Quality Network (LAQN)

The LAQN is facilitated by London Council's on behalf of the London boroughs who fund the equipment. The network is operated and managed by Kings College London and real-time data is available at [www.londonair.org.uk](http://www.londonair.org.uk). Table A5.1 lists the LAQN sites which are currently in operation in London.

Table A5.1 List of operating London Air Quality Network sites in London (as of end 2007).

<b>Borough and site name</b>	<b>Site classification</b>
Barking & Dagenham 1 Rush Green	suburban
Barking & Dagenham 2 Scrattons Farm	suburban
Barking & Dagenham 3 North Street	roadside
Barnet 1 Tally Ho Corner	kerbside
Barnet 2 Finchley	urban background
Bexley 1 Slade Green	suburban
Bexley 2 Belvedere	suburban
Bexley 3 Thamesmead	suburban
Bexley 4 Erith	industrial
Bexley 5 Bedonwell	suburban
Bexley 7 Thames Road North	roadside
Bexley 8 Thames Road South	roadside
Brent 3 Harlesdon	roadside
Brent 4 Ikea	roadside
Brent 5 Neasden Lane	industrial
Bromley 5 Biggin Hill	suburban
Bromley 7 Central	roadside
Camden 1 Swiss Cottage	kerbside
Camden 3 Shaftesbury Avenue	roadside
Camden 5 St Martins Lane	urban background
City of London Senator House	urban background
City of London Farringdon Street	roadside
City of London Sir John Cass School	urban background
City of London Beech Street	roadside
City of London Wallbrook Wharf	kerbside
Croydon 2 Purley Way	roadside
Croydon 3 Thornton Heath	suburban
Croydon 4 George Street	roadside
Croydon 5 Norbury	kerbside
Croydon 6 Euston Road	suburban

<b>Borough and site name</b>	<b>Site classification</b>
Crystal Palace 1 Crystal Palace Parade	roadside
Ealing 1 Ealing Town Hall	urban background
Ealing 2 Action Town Hall	roadside
Ealing 6 Hangar Lane	roadside
Ealing 7 Southall	urban background
Ealing 8 Horn Lane	industrial
Ealing 10 Court Way	urban background
Enfield 1 Bushill Park	suburban
Enfield 2 Church Street	roadside
Enfield 3 Salisbury School, Ponders End	urban background
Enfield 4 Derby Road	roadside
Greenwich 4 Eltham	suburban
Greenwich 5 Trafalgar Road	roadside
Greenwich 7 Blackheath	roadside
Greenwich 8 Woolwich Flyover	roadside
Greenwich 9 Westthorne Avenue	roadside
Greenwich 10 A206	roadside
Greenwich 12 Millennium Village	suburban
Greenwich 13 Plumstead High Street	roadside
Greenwich Bexley 6 Falconwood	roadside
Hackney 4 Clapton	urban background
Hackney 6 Old Street	roadside
Haringey 1 Town Hall	roadside
Haringey 2 Priory Park	suburban
Harrow 1 Stanmore	urban background
Harrow 2 North Harrow	roadside
Havering 1 Rainham	roadside
Havering 3 Romford	roadside
Heathrow Airport	urban background
Hillingdon 1 South Ruislip	roadside
Hillingdon 2 Hillingdon Hospital	roadside

## Appendix 5: Air quality monitoring networks

<b>Borough and site name</b>	<b>Site classification</b>
Hillingdon 3 Oxford Avenue	roadside
Hounslow 2 Cranford	suburban
Hounslow 4 Chiswick High Rd	roadside
Hounslow 5 Brentford	roadside
H'smith and Fulham 1 Hammersmith Broadway	roadside
H'smith and Fulham 2 Brook Green	urban background
Islington 2 Holloway Road	roadside
Kens and Chelsea 1 North Kensington	urban background
Kens and Chelsea 3 Knightsbridge	roadside
Kens and Chelsea 4 Kings Road	roadside
Kingston 1 Chessington	suburban
Lambeth 1 Christchurch Road	roadside
Lambeth 2 Vauxhall Cross	roadside
Lambeth 3 Loughborough Junction	urban background
Lambeth 4 Brixton Rd	kerbside
Lambeth 5	roadside
Lewisham 1 Catford	urban background
Lewisham 2 New Cross	roadside
Marylebone Rd	kerbside
Redbridge 1 Perth Terrace	urban background
Redbridge 3 Fulwell Cross	kerbside
Redbridge 4 Garner Close	roadside
Redbridge 5 A406	roadside
Richmond 1 Castleneau	roadside
Richmond 2 Barnes Wetlands	suburban
Richmond 27 Lincoln Avenue	roadside
Southwark 1 Elephant and Castle	urban background
Sutton 3 Carshalton	suburban
Sutton 4 Wallington	kerbside
Sutton 5 Beddington Lane	industrial
Tower Hamlets 1 Poplar	urban background

Borough and site name	Site classification
Tower Hamlets 2 Mile End Road	roadside
Tower Hamlets 3 Bethnal Green	urban background
Tower Hamlets 4 Blackwall Tunnel	roadside
Waltham Forest 1 Dawlish Road	urban background
Waltham Forest 3 Chingford	roadside
Wandsworth 2 Town Hall	urban background

## A5.2 Automatic Urban and Rural Network

Within the Greater London area, there are some additional monitoring sites which are part of Defra's Automatic Urban and Rural Network (the AURN) but which are separate to the LAQN. Table A5.2 lists those sites which are currently operating in Greater London.

Table A5.2 Automatic Urban and Rural Network sites operating in Greater London.

Site name	Site classification
Bloomsbury AURN	urban background
Kingsbury AURN	suburban
West London AURN	urban background
Westminster AURN	urban background
Teddington AURN	suburban
Hillingdon AURN	suburban
Harlington AURN	urban background
Kensington and Chelsea Cromwell Rd	roadside

## A5.3 London local authority monitoring

In addition to the sites listed above, some local authorities in London manage their own monitoring sites, to their own local standards of data control. For example, the City of London runs monitoring sites at Sir John Cass School, Wallbrook Wharf and Farringdon Street and City of Westminster owns a site at Charing Cross library. These are part of the LAQN, but do not operate to the same level of data control. The London Borough of Newham has several monitoring sites including Wren Close and Cam Road which are not part of the LAQN. Data quality control at these sites was deemed to be at a high enough level to include them in the data analysis in Section 8.

## A5.4 Data quality assurance and control

Air quality measurements are made through a variety of continuous monitoring equipment. These measurements are subject to a two stage quality assurance process of validation and ratification. Data validation is performed by calibrating the monitoring equipment to ensure its best performance. The ratification process occurs after the data is obtained and takes into account the service history and performance of the equipment over time and further quality checks. Equipment in both the LAQN and AURN monitoring sites are required to be type approved through European regulations and regular audits are carried out by independent organisations.

## A5.5 London wide trend analysis

Table A5.3 provides a summary and brief description of the monitoring sites from these networks that were chosen for the analysis carried out in Section 8.

Table A5.3 Summary of sites used for London wide trend analysis.

Site Code	Site name	Pollutants	Site classification and geographical location
BX1	Slade Green	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> ,	Background/outer London
BX2	Belvedere	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> ,	Background/outer London
BX7	Thames Rd North	PM <sub>2.5</sub> , O <sub>3</sub>	Roadside/outer London
BX8	Thames Rd South	PM <sub>2.5</sub> , O <sub>3</sub>	Roadside/outer London
GB6	A2 Falconwood	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , O <sub>3</sub>	Roadside/outer London
EA2	Acton Town Hall	PM <sub>10</sub> , PM <sub>2.5</sub> ,	Roadside/inner London
MY1	Marylebone Road	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , O <sub>3</sub>	Roadside/inner London
BL0	Bloomsbury	PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
HK4	Clapton	PM <sub>2.5</sub> , O <sub>3</sub>	Background/inner London
BN1	Tally Ho Corner	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/outer London
CR4	George Street	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/outer London
CY1	Crystal Palace Parade	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/outer London
H11	South Ruislip	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/outer London
CD1	Swiss Cottage	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
CD3	Shaftesbury Ave	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
GR5	Trafalgar Road	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
HG1	Haringey Town Hall	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
HS4	Chiswick High Rd	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
IS2	Holloway Rd	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London
KC2	Cromwell Rd	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/inner London

Appendix 5: Air quality monitoring networks

Site Code	Site name	Pollutants	Site classification and geographical location
RI2	Barnes Wetlands	PM <sub>10</sub> , NO <sub>2</sub>	Background/inner London
BG2	Scrattons Farm	PM <sub>10</sub>	Background/outer London
BN2	Finchley	PM <sub>10</sub> , NO <sub>2</sub>	Background/outer London
HR1	Stanmore	PM <sub>10</sub> , NO <sub>2</sub>	Background/outer London
HS2	Cranford	PM <sub>10</sub> , NO <sub>2</sub>	Background/outer London
LH2	Heathrow	PM <sub>10</sub>	Background/outer London
KC1	North Kensington	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
NEW3	Newham Wren Clse	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
TH1	Poplar	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
TH3	Bethnal Green	PM <sub>10</sub> , NO <sub>2</sub>	Background/inner London
WL1	Dawlish Rd	PM <sub>10</sub> , NO <sub>2</sub>	Background/inner London
BY7	Central Bromley	NO <sub>2</sub>	Roadside/outer London
CR2	Purley Way	NO <sub>2</sub>	Roadside/outer London
CR5	Norbury	NO <sub>2</sub>	Roadside/outer London
EN4	Derby Rd Edmonton	NO <sub>2</sub>	Roadside/outer London
HV1	Rainham	NO <sub>2</sub> ,	Roadside/outer London
RB3	Fullwell Cross	NO <sub>2</sub>	Roadside/outer London
KC3	Knightsbridge	NO <sub>2</sub> ,	Roadside/inner London
KC4	Kings Rd	NO <sub>2</sub>	Roadside/inner London
RB4	Garner Close	NO <sub>2</sub>	Roadside/inner London
TH2	Mile End Rd	NO <sub>2</sub>	Roadside/inner London
BG1	Rush Green	NO <sub>2</sub> ,	Background/outer London
BT1	Kingsbury	NO <sub>2</sub> ,	Background/outer London
CR6	Euston Road	NO <sub>2</sub>	Background/outer
EA1	Ealing Town Hall	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London
EN1	Bushill Park	NO <sub>2</sub>	Background/outer London
EN3	Ponders End	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London
HF1	Broadway	NO <sub>2</sub>	Roadside/inner London
GR4	Eltham	NO <sub>2</sub> ,	Background/outer London
H10	Hillingdon AURN	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London
RBI	Perth Terrace	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London

Site Code	Site name	Pollutants	Site classification and geographical location
ST3	Carshalton	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London
TD0	Teddington	NO <sub>2</sub> , O <sub>3</sub>	Background/outer London
CT1	Senator House	NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
HG2	Priory Park	NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
SKI	Elephant & Castle	NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
WM0	Westminster AURN	NO <sub>2</sub> , O <sub>3</sub>	Background/inner London
NEW2	Newham Cam Rd	O <sub>3</sub>	Background/inner London
LW1	Catford	O <sub>3</sub>	Background/inner London
RI2	Castleneau	PM <sub>10</sub> , NO <sub>2</sub>	Roadside/Inner London

## A5.6 Regional trend analysis

Table A5.4 provides a summary of those air quality monitoring sites which have been used in Section 10 to undertake the regional air quality analysis. These sites are either part of Defra's Automatic Urban and Rural monitoring network or they are run by the local authorities in the relevant area.

Table A5.4 Summary description of UK regional comparator air quality monitoring sites.

Site name	Area	Pollutants measured	Site classification
Canterbury	Kent	PM <sub>10</sub> , NO <sub>2</sub>	Background
Chatham	Kent	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Folkestone	Kent	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Maidstone	Kent	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Rochester	Kent	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub> , PM <sub>2.5</sub>	Background
Gravesham Industrial	Kent	NO <sub>2</sub>	Background
Thanet Margate	Kent	NO <sub>2</sub>	Background
Thanet Rural	Kent	O <sub>3</sub>	Background
Tunbridge Wells	Kent	NO <sub>2</sub>	Background
Ashford	Kent	PM <sub>10</sub> , NO <sub>2</sub>	Roadside
Dover Centre	Kent	PM <sub>10</sub> , NO <sub>2</sub>	Roadside
Maidstone A229	Kent	PM <sub>10</sub> , NO <sub>2</sub>	Roadside
Canterbury roadside	Kent	NO <sub>2</sub>	Roadside
Chatham roadside	Kent	NO <sub>2</sub>	Roadside
Dartford St Clements	Kent	NO <sub>2</sub>	Roadside



*Appendix 5: Air quality monitoring networks*

<b>Site name</b>	<b>Area</b>	<b>Pollutants measured</b>	<b>Site classification</b>
Dartford Town Centre	Kent	NO <sub>2</sub>	Roadside
Dover Old Town Hall	Kent	NO <sub>2</sub>	Roadside
Harwell	Oxford	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Oxford St Ebbes	Oxford	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Oxford Centre	Oxford	NO <sub>2</sub>	Roadside
Bolton	Manchester	PM <sub>10</sub> , O <sub>3</sub>	Background
Oldham West End House	Manchester	PM <sub>10</sub> , O <sub>3</sub>	Background
Tameside Two Trees	Manchester	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Background
Trafford	Manchester	PM <sub>10</sub> , NO <sub>2</sub>	Background
Manchester Picaddilly	Manchester	NO <sub>2</sub> , O <sub>3</sub>	Background
Manchester Town Hall	Manchester	NO <sub>2</sub>	Background
Bury	Manchester	PM <sub>10</sub> , NO <sub>2</sub> , O <sub>3</sub>	Roadside
Glazebury	Manchester	O <sub>3</sub>	Background
Manchester South	Manchester	O <sub>3</sub>	Background
Salford M60	Manchester	PM <sub>10</sub> , O <sub>3</sub>	Roadside