

School of
Health and
Life Sciences
Seiph
Environmental
Research Group



**UK Automatic Urban Network
London Air Quality Network Affiliated Sites**

**Management Report
January to March 2001**

Prepared for the Department of the Environment, Transport and the Regions by:

**David Green
Principal Air Quality Analyst
*King's College – Environmental Research Group***

Contents Page

1.	SEIPH Interface with Data Dissemination Unit (DDU)	3
1.1	Data handling	3
2.	Site Performance	3
2.1	Scaling of Data for January - March 2001	3
2.2	Quality Control / Quality Assurance (QA/QC)	3
2.3	Data for January - March 2001	3
2.3.1	Bromley Central	6
2.3.2	Eltham	6
2.3.3	North Kensington	6
2.3.4	Sutton Roadside	6
 Tables		
Table 1	Data capture for January 2001	4
Table 2	Data capture for February 2001	4
Table 3	Data capture for March 2001	5
Table 4	Data capture for January - March 2001	5

Management Report January - March 2001

1. SEIPH Interface with the Data Dissemination Unit (DDU)

1.1 Data Handling

Between January and March 2001, King's College Environmental Research Group have estimated that over 99% of hourly E-mails arrived at the DDU to meet their timetabled requirements. Accurate figures of punctual e-mails can be obtained from the DDU.

2. Site Performance

2.1 Scaling of Data for January - March 2001

Scaling of data was carried out as in previous months using the zero and span readings from fortnightly calibration checks. Validation of data was carried out twice daily and reviewed again at the end of each month.

2.2 Quality Control / Quality Assurance (QA/QC)

The QA/QC Unit (NPL) carried out routine equipment intercalibrations at the London affiliated AURN sites during this quarter to assess the performance of the instruments.

Site	Intercalibration Dates
Bromley Central	23 January 2001
Camden Kerbside	25 January 2001
Eltham	23 January 2001
Haringey Roadside	24 January 2001
London Haringey	24 January 2001
Hackney	23 January 2001
Hounslow Roadside	25 January 2001
London North Kensington	24 January 2001
Lewisham	25 January 2001
Marylebone Road	24 January 2001
London Southwark	22 January 2001
Southwark Roadside	25 January 2001
Sutton Roadside	22 January 2001
London Sutton	22 January 2001
Tower Hamlets Roadside	24 January 2001
London Wandsworth	22 January 2001

2.3 Data for January - March 2001

Data capture rates for January, February and March are detailed in Tables 1 to 3. The data capture rates for each month are expressed as a percentage of valid hourly averages, after excluding data lost due to calibration and the faults discussed. The overall data capture rates for the quarter January - March 2001 are detailed in the Table 4.

Specific issues affecting data collection and quality at each site are discussed in Sections 2.3.1 to 2.3.9. Details of faults are given where data capture rates fall below 95% for the quarter.

Table 1: Data capture for January 2001

Site	Hourly Data capture % January 2001				
	CO	PM10	NO _x	O ₃	SO ₂
Bromley Central	93		79		
Camden Kerbside		96	99		
Eltham		99	99	99	99
Haringey Roadside		99	99		
London Haringey				99	
Hackney	99		99	95	
Hounslow Roadside	98		98		
London North Kensington	80	88	88	84	88
Lewisham			99	99	99
Marylebone Road	99	97	99	93	99
London Southwark	99		99	99	99
Southwark Roadside	99		99		99
Sutton Roadside	93	74	99		98
London Sutton			91	99	
Tower Hamlets Roadside	99		99		
London Wandsworth			99	99	

Table 2: Data capture for February 2001

Site	Hourly Data capture % February 2001				
	CO	PM10	NO _x	O ₃	SO ₂
Bromley Central	99		99		
Camden Kerbside		99	99		
Eltham		99	99	99	99
Haringey Roadside		95	99		
London Haringey				99	
Hackney	94		99	99	
Hounslow Roadside	99		99		
London North Kensington	95	97	82	96	96
Lewisham			99	99	99
Marylebone Road	98	99	98	98	98
London Southwark	99		99	99	99
Southwark Roadside	95		95		95
Sutton Roadside	99	99	99		99
London Sutton			99	99	
Tower Hamlets Roadside	99		90		
London Wandsworth			99	99	

Table 3: Data capture for March 2001

Site	Hourly Data capture % March 2001				
	CO	PM10	NO _x	O ₃	SO ₂
Bromley Central	98		99		
Camden Kerbside		99	99		
Eltham		99	73	95	99
Haringey Roadside		99	99		
London Haringey				99	
Hackney	95		99	95	
Hounslow Roadside	99		99		
London North Kensington	93	96	96	96	96
Lewisham			97	97	97
Marylebone Road	97	97	97	97	97
London Southwark	96		96	98	95
Southwark Roadside	99		99		99
Sutton Roadside	99	99	99		86
London Sutton			99	99	
Tower Hamlets Roadside	99		99		
London Wandsworth			97	97	

Table 4: Data capture for January - March 2001

Site	Hourly Data capture % January - March 2001				
	CO	PM10	NO _x	O ₃	SO ₂
Bromley Central	97		93		
Camden Kerbside		98	99		
Eltham		99	90	98	99
Haringey Roadside		98	99		
London Haringey				99	
Hackney	96		99	95	
Hounslow Roadside	99		99		
London North Kensington	89	93	89	92	93
Lewisham			99	99	99
Marylebone Road	98	98	98	96	98
London Southwark	98		98	98	98
Southwark Roadside	98		98		98
Sutton Roadside	97	90	99		94
London Sutton			97	99	
Tower Hamlets Roadside	99		96		
London Wandsworth			99	98	

2.3.1 Bromley Central

NO_x data capture 93%

A photomultiplier tube fault led to the loss of 112 hours of data.

Further data loss was sustained when PAH monitoring equipment was installed in the cabin; this led to a power interruption for 32 hours. This equipment is part of another DETR monitoring network and has since been moved to a separate location within the local authority.

2.3.2 Eltham

NO_x data capture 90%

A chopper motor fault resulted in the loss of 177 hours data. This data loss was higher than expected because the ESU did not have the necessary parts in stock.

2.3.3 North Kensington

CO data capture 89%

PM₁₀ data capture 93%

NO_x data capture 89%

O₃ data capture 92%

SO₂ data capture 93%

This site has been augmented by further DETR funded particulate monitoring equipment. However, the power supply to the cabin was not sufficient to supply the extra equipment, this resulted in frequent power interruptions and consequent data loss during the last quarter.

Substantial work was undertaken to install an additional, independent power supply to run this new equipment. Further work has also been commissioned to install a larger air conditioning unit that will overcome the temperature problems that have been experienced as a result of vandalism to the existing unit.

Unfortunately, this work has required frequent power interruptions over the quarter that has led to the loss of some data.

2.3.4 Sutton Roadside

PM₁₀ data capture 90%

A power supply board fault required several ESU visits to trace and finally necessitated the removal of the unit to the workshop for repair, this led to 147 hours of data loss.

SO₂ data capture 94%

99 hours of data were lost due to a pump diaphragm fault during March.