

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

## **Management Report January to March 2003**

**Prepared for the Department for Environment, Food and Rural  
Affairs (DEFRA), Scottish Executive, Welsh Assembly  
Government and the DoE in Northern Ireland**

<b>Title</b>	UK Automatic Urban Network London Air Quality Network Affiliated Sites Management Report, January to March 2003
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# Table of Contents

<b>1</b>	<b>King's ERG Interface with the Data Dissemination Unit (DDU)</b> .....	<b>5</b>
1.1	Introduction .....	5
1.2	Data Handling .....	5
<b>2</b>	<b>Site Performance</b> .....	<b>5</b>
2.1	Scaling of Data for January to March 2003.....	5
2.2	Quality Control / Quality Assurance (QA/QC).....	5
2.3	Data for January to March 2003 .....	5
2.3.1	London Haringey.....	7
2.3.2	Hounslow Roadside .....	7
2.3.3	London Southwark .....	8

## List of Tables

Table 1:	QA/QC Audit Dates .....	5
Table 2:	Hourly Data Capture % for January 2003 .....	6
Table 3:	Hourly Data Capture % for February 2003.....	6
Table 4:	Hourly Data Capture % for March 2003 .....	7
Table 5:	Hourly Data Capture % for January to March 2003 .....	7



# London Air Quality Network Affiliate Site Management Report January to March 2003

## 1 King's ERG Interface with the Data Dissemination Unit (DDU)

### 1.1 Introduction

This report details the equipment performance for the AURN affiliate sites where ERG is contracted as CMCU by DEFRA under contract number EPG 1/3/168.

The report highlights issues causing data capture to fall below 90% during the quarter and also summarises issues causing annual data capture to fall below 90%.

### 1.2 Data Handling

Between January and March 2003, King's College London Environmental Research Group (ERG) has estimated that over 95% 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 to March 2003

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 audits at the London affiliated AURN sites during this quarter to assess the performance of the instruments.

Site	Start Date
Bromley Roadside	04/02/03
Camden Kerbside	08/01/03
Eltham	12/02/03
Haringey Roadside	09/01/03
London Haringey	09/01/03
Hackney	17/02/03
Hounslow Roadside	Site Closed
London North Kensington	06/01/03
Lewisham	07/02/03
Marylebone Road	07/01/03
London Southwark	03/02/03
Southwark Roadside	05/02/03
Tower Hamlets Roadside	26/02/03
London Wandsworth	25/02/03

Table 1: QA/QC Audit Dates

### 2.3 Data for January to March 2003

Data capture rates for January, February and March are detailed in Table 2, Table 3, and Table 4. The data capture rates for each month are calculated from valid hourly averages, after excluding data lost due to calibration and the faults discussed. The overall data capture rates for the quarter January to March are detailed in the Table 5.

Specific issues affecting data collection and quality at each site are discussed in sections 2.3.1 to 2.3.3. Details of faults are given where data capture rates fall below 90% for the quarter.

Site	Hourly Data Capture % for January 2003				
	CO	PM <sub>10</sub>	NO <sub>x</sub>	O <sub>3</sub>	SO <sub>2</sub>
Bromley Central	81.6		99.5		
Camden Kerbside		99.5	98.7		
Eltham		99.7	99.5	99.2	98.5
Haringey Roadside		98.9	98.7		
London Haringey				99.5	
Hackney	99.6		99.6	98.8	
Hounslow Roadside	0		0		
London North Kensington	98.8	98.7	99.1	99.1	98.9
Lewisham			99.5	99.5	99.5
Marylebone Road	98.0	98.1	99.2	99.3	99.5
London Southwark	99.5		0	99.1	98.3
Southwark Roadside	98.5		98.9		99.1
Tower Hamlets Roadside	99.6		99.7		
London Wandsworth			99.5	99.5	

Table 2: Hourly Data Capture % for January 2003

Site	Hourly Data Capture % for February 2003				
	CO	PM <sub>10</sub>	NO <sub>x</sub>	O <sub>3</sub>	SO <sub>2</sub>
Bromley Central	94.8		90.6		
Camden Kerbside		99.6	99.7		
Eltham		98.5	98.8	99.4	99.3
Haringey Roadside		99.3	66.7		
London Haringey				99.6	
Hackney	99.7		99.7	98.4	
Hounslow Roadside	0		0		
London North Kensington	99.3	99.7	99.6	99.6	99.4
Lewisham			99.3	99.4	99.4
Marylebone Road	95.8	99.0	95.2	95.7	95.8
London Southwark	99.1		0	99.1	99.1
Southwark Roadside	99.3		99.3		99.1
Tower Hamlets Roadside	99.1		99.3		
London Wandsworth			99.0	98.8	

Table 3: Hourly Data Capture % for February 2003

Site	Hourly Data Capture % for March 2003				
	CO	PM <sub>10</sub>	NO <sub>x</sub>	O <sub>3</sub>	SO <sub>2</sub>
Bromley Central	99.3		99.6		
Camden Kerbside		99.6	88.2		
Eltham		99.7	99.6	88.2	99.3
Haringey Roadside		99.6	99.6		
London Haringey				99.7	
Hackney	98.8		82.7	98.7	
Hounslow Roadside	0		0		
London North Kensington	89.5	92.7	99.3	92.5	92.3
Lewisham			99.9	99.9	99.9
Marylebone Road	99.6	99.3	99.5	99.7	99.7
London Southwark	97.5		0	97.3	97.6
Southwark Roadside	99.7		99.7		99.7
Tower Hamlets Roadside	98.8		99.3		
London Wandsworth			99.5	99.3	

Table 4: Hourly Data Capture % for March 2003

Site	Hourly Data Capture % for January to March 2003				
	CO	PM <sub>10</sub>	NO <sub>x</sub>	O <sub>3</sub>	SO <sub>2</sub>
Bromley Central	91.8		96.8		
Camden Kerbside		99.5	95.4		
Eltham		99.4	99.3	95.5	99.0
Haringey Roadside		99.3	89.0		
London Haringey				99.6	
Hackney	99.4		93.8	98.6	
Hounslow Roadside	0		0		
London North Kensington	95.7	96.9	99.3	96.9	96.8
Lewisham			99.5	99.6	99.6
Marylebone Road	97.9	98.8	98.1	98.3	98.4
London Southwark	98.7		0	98.5	98.3
Southwark Roadside	99.2		99.3		99.3
Tower Hamlets Roadside	99.2		99.4		
London Wandsworth			99.3	99.2	

Table 5: Hourly Data Capture % for January to March 2003

### 2.3.1 London Haringey

#### 2.3.1.1 Nitrogen Oxides 10%

4<sup>th</sup> – 13<sup>th</sup> February 2003 220 Hours

An incorrect compression fitting was installed on the analyzer sample inlet following a site visit. The leak in the sample was identified through data checking and a special visit was made by the LSO to carry out a repair.

#### 2.3.1.2.3.2 Hounslow Roadside

#### 2.3.1.12.3.2.1 Carbon Monoxide, Nitrogen Oxides 100%

1<sup>st</sup> January – 31<sup>st</sup> March 2003 2232 Hours

This site was housed in a local authority building that is now due to be sold. This has necessitated its relocation to a cabin at the roadside of the A4 adjacent to the M4 flyover. At present the equipment has been installed but is awaiting connection to power and telephone lines.

The new site location may lead to the site being renamed as the sampling location has changed significantly. This decision will be made in conjunction with the QA/QC unit.

### **2.3.3 London Southwark**

#### **2.3.3.1 Nitrogen Oxides 100%**

1<sup>st</sup> January – 31<sup>st</sup> March 2003                      2232 Hours

The PMT cooler has malfunctioned on 20<sup>th</sup> October 2002. The ESU were unable to source a replacement part due to the age and make of the analyser, A replacement unit was purchased by the Local Authority and installed on 4<sup>th</sup> April 2003.