Environment Agency

UK Air Pollutants

Key facts and monitoring data

The Environment Agency is the leading public body protecting and improving the environment in England and Wales.

It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

This report is the result of research commissioned and funded by the Environment Agency's Science Programme.

Published by:
Environment Agency, Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, BS32 4UD
Tel: 01454 624400 Fax: 01454 624409
www.environment-agency.gov.uk

ISBN: 1844325466

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Dissemination Status: Publicly available

Keywords: Air, pollution, A to Z, digest, background, concentrations, ambient, monitoring, data summaries, annual, mean, SO_2, NO_2, PM_{10}, $PM_{2.5}$, O_3, VOCs PAH, Dioxins and Furans.

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Science Project reference: SC030174

Product code: SCHO0306BKJM-E-P

Foreword

Good air quality is important for our health and the health of our environment. The more we know about air pollution, the more effectively we will be able to improve air quality.

The UK Air Pollutants (UKAP) digest is a convenient and up-to-date desktop companion for everyone who works to implement and fulfil modern air-quality regulations at local and national levels. UKAP summarises ambient air-pollution data for 143 pollutants, including nitrogen oxides, ozone-depleting substances and persistent organic pollutants. Each pollutant entry presents UK-wide monitoring data 2000 - 2003 and details of chemical formula and structure.

Entries for the 51 most important pollutants include summaries of emission trends, emission inventories, environmental standards, monitoring sites and concentration statistics. UKAP also links to other sources of air-quality data, including online monitoring data and information on health effects.

UKAP is the first publication to collate such a wide variety of UK air pollutant information, and presents it in a clear and user-friendly format. It is an essential reference for all those involved in planning, regulating and managing local air quality to protect people's health and improve our environment.

The Environment Agency's Science Group produced UKAP from a project awarded to the National Environmental Technology Centre (Netcen) in 2004, as part of our air science research. Science Group underpins the work of the Environment Agency by providing sound knowledge of the environment and by helping to develop methods for managing it efficiently and effectively.

Steve Killeen, Head of Science, Environment Agency
April 2006

Executive Summary

The *UK Air Pollutants: key facts and monitoring data* (*UKAP*) digest is a stand-alone compendium of ambient air-quality information, designed to assist with planning, regulation and management of local air quality. Information in the *UKAP* may be of use to industrial operators, consultants, regulators, local authorities and local residents groups involved in drawing up permits, managing local air quality, planning regional strategies or analysing trends and variations in air quality throughout the country.

The inspiration for the *UKAP* was the *Air Quality A to Z* (*A to Z*) produced by the Meteorological Office in 1995. The *A to Z* contained a compilation of ambient air-pollution monitoring data primarily from the first half of the 1990's for 249 pollutants. Since then, there have been major changes in UK emissions and the country's overall pollution climate, while monitoring of certain pollutants has also increased substantially. The Environment Agency therefore identified a need for a new, up-to-date compilation of ambient air-pollution monitoring data to assist in its regulation of major industries.

The *UKAP* digest includes monitoring data from 2000 to 2003 on 143 pollutants, including:

- SO_2
- PM_{10} and $PM_{2.5}$ particles
- Black smoke
- NO_2
- CO
- O_3
- VOCs
- Trace metals
- POPs
- Ozone-depleting substances
- Greenhouse gases
- Acidic substances in rain and aerosol
- Dioxins and furans
- PAHs.

For more than 50 of these pollutants, extra information is also included, such as emission trends, emission inventories, air-quality standards, air-quality concentration summaries and plots for 2003, and maps of monitoring sites. The inclusion of this meta-information alongside the ambient monitoring data is unique to the *UKAP* and is intended to increase its usefulness to users who need a broad introduction to a particular pollutant, or who require indicative air-quality data for scoping purposes

Acknowledgements

UKAP represents the work of many people, in particular Jaume Targa, Xingyu Xiao, Justin Goodwin and Jon Bower of Netcen, Dick Derwent, rdscientific, and Hope Brett and Roger Timmis from the Environment Agency.

The project team would also like to thank:

- Phil Adsley, Peter Coleman, Chris Conolly, Paul Cumine, Joanna Jackson, Andrew Kent, Hiroyoshi Konno and Keith Vincent from Netcen for assisting in data compilation and analysis. Trevor Davies and Nigel Watts of Netcen have also provided invaluable advice on the Air Quality Archive.
- The Air Quality Archive (www.airquality.co.uk), managed by Netcen on behalf of the Department for Environment, Food & Rural Affairs (Defra) and the Devolved Administrations (DAs).
- Defra and the DAs for their support of the Automatic Urban and Rural Network, Non-Automatic Networks, the Acid Deposition Monitoring Network, PAH Network, TOMPs Network, Hydrocarbon Networks and other UK air-pollution monitoring programmes.
- Defra and the DAs for their support of the National Atmospheric Emissions Inventory.
- Peter Simmonds, Simon O'Doherty and Brian Greally from the University of Bristol's School of Chemistry for providing access to greenhouse gases and ozone-depleting substances data from Mace Head, Ireland.
- Philippe Ciais and Marcel Ramonet of the Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette, France, for providing access to carbon dioxide data for Mace Head, Ireland.
- Kevin Jones and Robert Lee from the University of Lancaster's Department of Environmental Sciences for providing access to POPs data.

Acronyms

AQS	Air Quality Strategy for England, Scotland, Wales and Northern Ireland
AURN	Automatic Urban and Rural Network
CAS	Chemical Abstracts Service
Defra	Department for Environment, Food and Rural Affairs
DL	Detection Limit
EA	Environment Agency
EAL	Environmental Assessment Level
EC	European Community
EPA	Environmental Protection Act
EPAQS	Expert Panel on Air Quality Standards
EPER	European Pollutant Emission Register
fg m^{-3}	femtograms per cubic metre (equivalent to 10^{-15} g m^{-3})
grav.	Data measured using a gravimetric analyser
grav. equiv.	Data not measured with a gravimetric analyser which have been adjusted to become gravimetric equivalent (for example, TEOM data have been adjusted using a factor of 1.3)
K	Kerbside site
LAEI	London Atmospheric Emissions Inventory
mg l^{-1}	milligrams per litre (equivalent to 10^{-3} g l^{-1})
mg m^{-2}	milligrams per square metre (equivalent to 10^{-3} g m^{-2})
NAEI	National Atmospheric Emissions Inventory
ng m^{-3}	nanograms per cubic metre (equivalent to 10^{-9} g m^{-3})
PAH	Polycyclic Aromatic Hydrocarbons
pg m^{-3}	picograms per cubic metre (equivalent to 10^{-12} g m^{-3})
POP	Persistant Organic Pollutant
ppb	parts per billion
QA/QC	Quality Assurance and Quality Control
R	Remote site
Rd	Roadside site
Rur	Rural site
SU	Sub-urban site
TEOM	Tapered Element Oscillating Microbalance (method to measure PM_{10} and $PM_{2.5}$ in real time)
UB	Urban Background site
UC	Urban Centre site
UI	Urban Industrial site
UK	United Kingdom
UKAP	UK Air Pollutants: key facts and monitoring data digest
VOC	Volatile Organic Compound
WHO	World Health Organisation
WIYB	What's In Your Backyard
μg m^{-3}	micrograms per cubic metre (equivalent to 10^{-6} g m^{-3})

Contents

1 Introduction

In 1995, the Meteorological Office at Bracknell produced an *Air Quality A to Z* (hereafter termed *A to Z*) for the Air Quality Division of the then Department of the Environment. The *A to Z* contained a compilation of ambient air-pollution monitoring data primarily from the first half of the 1990's on the widest possible range of substances present in the air, in particulate matter and in rain in the UK. Measurements and derived statistics covering 249 pollutants in rural, urban, kerbside and industrial environments were included. The *A to Z* was designed to increase awareness of the scope and utility of available air-quality data and, in particular, to help those involved in planning, regulating and managing local air quality. The air-quality community has used the *A to Z* to this effect since then.

However, ambient air-quality data from the early 1990s has steadily become less applicable for current air-quality assessments. There have been significant changes over the past decade in emissions, in air quality itself and in the monitoring networks used to collect data. Moreover, our basic understanding of air quality in the UK has grown and the requirements of air-quality policy development have changed accordingly.

During the 1980s and 1990s, air-quality monitoring was regarded primarily as a research activity and as a means of generating the basic understanding to begin the process of formulating air-quality policy. Much of the air-quality monitoring was exploratory or research-oriented and concerned with evaluating techniques and establishing networks. This research has now come to fruition and provides the basis for air-quality strategy development in the UK. As a result, the monitoring that formed the basis for policy development has been rationalised and formalised.

At the same time, there has been a growth in the influence of broad European policy initiatives, which are primarily exerted through a series of binding air-quality framework and daughter directives. Many of these contain statutory requirements for air-quality monitoring. As a result, there has been a steady shift from the inquisitive, research-led motives for air-quality monitoring to the more legislated and formal requirements of the EU Directives. In short, the nature and primary emphasis of air monitoring in the UK has shifted since 1995 from research to compliance assessment.

The Environment Agency has identified the need for a new compilation of up-to-date ambient air-quality monitoring data to help with its regulation of major industries. The compiled data may also be useful to industrial operators, consultants, local authorities and local residents groups involved in drawing up permits, managing local air quality, planning regional strategies or analysing trends and variations in air quality throughout the country. The content in the new data digest reflects the transformation of UK monitoring activities over the past decade, with national networks rather than research programmes now contributing most of the data.

In general, this new digest, known as *UK Air Pollutants*: *key facts and monitoring data* (*UKAP*), contains fewer substances than the *A to Z*, but offers considerably improved spatial coverage and temporal resolution for these species. For example, there are fewer volatile organic compounds and trace elements in the current digest, but many

more sites have reported urban levels of regulated air pollutants such as particulate matter, ozone and nitrogen dioxide.

A major new feature of the *UKAP* is that it provides supplementary statistical and background information on many of the measured chemical species. A total of 143 pollutants are profiled in the digest covering all the main classes of air pollutant, specifically:

- SO_2
- PM_{10} and $PM_{2.5}$ particles
- Black smoke
- NO_2
- CO
- O_3
- VOCs
- Trace metals
- POPs
- Ozone-depleting substances
- Greenhouse gases
- Acidic substances in rain and aerosol
- Dioxins and furans
- PAHs.

For each of the pollutants featured, summaries of monitoring data gathered from 2000 to 2003 are presented together with their chemical formula, CAS Number and chemical structure. For 51 of these pollutants, where more data are available, the digest also contains information on:

- emission trends;
- emission inventories;
- environmental standards;
- concentration variations at each typical monitoring site environment for the pollutant averaging times relevant to regulatory standards;
- locations of monitoring sites.

This additional meta-information will, hopefully, increase the usefulness of the *UKAP* to users who need a broad introduction to a particular pollutant or who require indicative air-quality data for scoping purposes. However, users will frequently need more detailed air-quality data and information relating to particular pollutants. While the digest cannot answer every question directly, it does contain a section giving references and links to sources of more detailed information on the following:

- environmental standards;
- online sources of monitoring data;
- information on health effects of atmospheric pollutants;
- trends in UK air quality;
- What's In Your Backyard (WIYB) (information on Environment Agency-regulated processes in England and Wales).

1.1 Further guidance

It is beyond the scope of this digest to give specific advice on carrying out detailed air-quality assessments in particular locations. However, more comprehensive guidance on these issues can be found in the following documents.

- *Review of background air-quality data and methods to combine these with process contributions* (Stedman *et al.*, 2005).
- *Review of background air-quality data and methods to combine these with process contributions: technical modelling aspects* (Abbott *et al.*, 2005).

1.2 A note on the use of data from Mace Head

Accurate estimates of 'background' pollutant concentrations are important when assessing industrial or other source impacts on the ambient environment for regulatory purposes. Generally speaking, background pollutant concentrations can be more rigorously defined – and hence more accurately monitored – for long-lived air pollutants that become well-mixed on the global scale than for short-lived air pollutants. This is particularly the case for long-lived greenhouse gases, ozone-depleting substances and persistent organic pollutants (POPs).

For such relatively stable air pollutants, observations at a remote location, such as the Atlantic Ocean sea-board of north-west Europe, will provide a reliable and rigorous indication of background concentrations in the UK. This digest therefore incorporates data from the baseline atmospheric monitoring station established at Mace Head, Ireland. Although not in the UK, measurements from this location provide invaluable information on background concentrations of a wide range of common and long-lived air pollutants.

The Mace Head data in the digest are given as 'background' or 'average' concentration values for specified monitoring periods. The 'background' concentrations are derived exclusively from air masses that have travelled across the 'clean' Atlantic Ocean en route to the Mace Head station whereas the 'average' concentrations are derived from all air masses arriving at Mace Head during the monitoring period.

2 Using the Digest

2.1 Factors to consider before using UKAP data

The digest can be used directly to obtain information about ambient pollutant levels in different situations and environment types. However, when a detailed assessment of air quality in a particular location is required, a number of factors need to be considered in order to decide if the concentration data provided are applicable. These factors are considered below.

2.1.1 Source components of ambient concentrations

Ambient concentrations of atmospheric pollutants are typically made up of contributions from local, regional and long-range sources, which may be biogenic (natural environment) or anthropogenic (man-made) in origin. In regulatory air-quality assessments, it is often necessary to distinguish the contribution to ambient concentrations from a particular industrial source from that derived from all other sources. The contribution from those other sources is conventionally referred to as 'background'.

The data in this digest show the typical prevailing concentrations of pollutants in general categories of location. These concentrations may or may not include impacts from individual sources of interest – for example, a particular industrial chimney or process. It is therefore important to understand the sources influencing the monitored concentrations in the digest before using the data as 'background' values. Detailed guidance on estimating background concentrations from monitored air-quality data is given in Stedman *et al.* (2005).

2.1.2 Site environment

Related to the point above, different site environments are influenced by different sources. It is therefore important in air-quality assessments to use monitoring data from a similar environment to that being studied. Appendix A includes full details of the different site types presented in the *UKAP*.

2.1.3 Extrapolation issues

Care needs to be taken when extrapolating data from a monitoring site in a particular location and applying it to an environment some distance away. Distances of less than approximately 10 km are likely to be acceptable, while those beyond 50 km may not be. This will depend on whether there are significant other sources of pollution or abrupt changes in topography in the area around the monitor. Users should seek guidance on how to deal with this issue.

2.1.4 Data quality

It is always important to assess the quality of data being used in an air-quality assessment. This will vary with the monitoring technique used to generate the data and with the quality assurance/quality control (QA/QC) procedures applied to the monitoring system. Wherever possible, such details should be fully considered and evaluated before using the data.

2.1.5 Averaging times

Environmental standards exist for a variety of averaging times, and users should ensure that they calculate background concentrations for the same averaging times. This has implications for the length of time a monitor must have been operating to provide representative data for the calculations. There are also a number of complex issues regarding the combination of background and process contributions over different averaging periods, particularly when comparing environmental standards that are often formulated in terms of annual percentiles. Stedman *et al*. (2005) and Abbott *et al.* (2005) give guidance on these issues.

2.1.6 Reporting units/weighting factors

The units in which the monitoring data are reported should be checked before using the data. It is also necessary to be aware that toxicity weighting factors are applied to toxic pollutants to produce toxic equivalent concentrations.

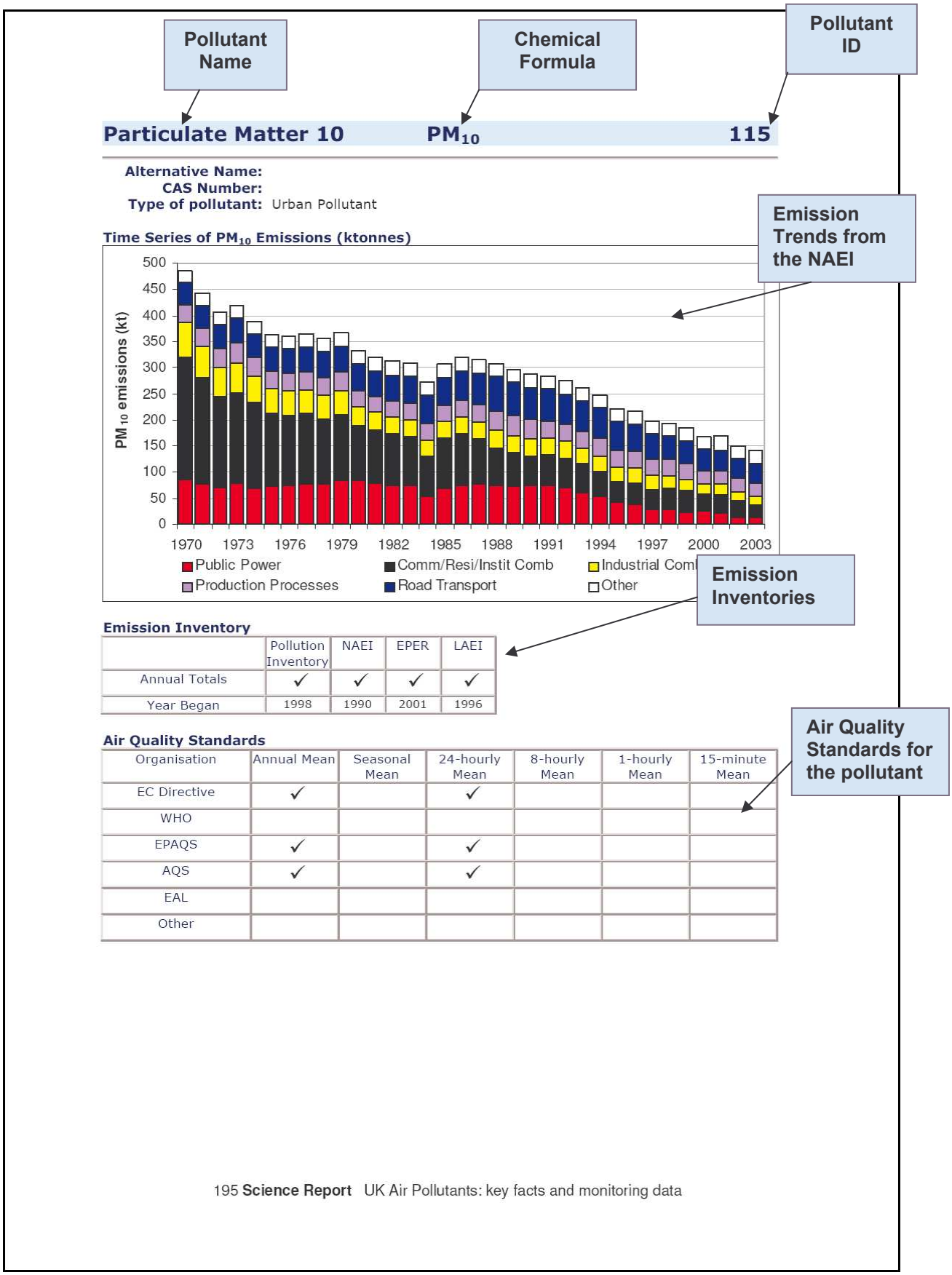
2.2 UKAP format

In this digest, pollutant-specific data are presented in one of three formats, depending on the amount of information available.

- Pollutants with complete information;
- One-page pollutants with data summaries;
- One-page pollutants with no summary data.

A guide to interpreting data and meta-information from each format type follows over the next few pages. A sample diagram of each of the formats used is provided in sections 2.2.1, 2.2.2 and 2.2.3.

2.2.1 Pollutants with complete information

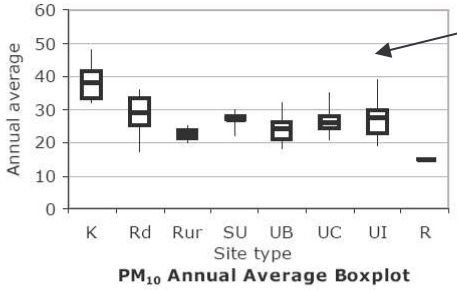


Particulate Matter 10 PM_{10} 115

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (μgm^{-3})

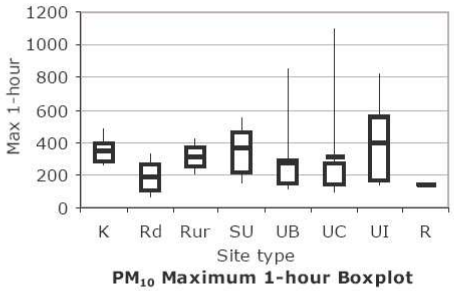
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	3	38	32	48	32	47
Rd	8	29	17	36	19	36
Rur	2	23	20	25	20	25
SU	5	27	22	30	23	30
UB	20	24	18	32	20	30
UC	18	26	21	35	21	30
UI	4	27	19	39	20	37
R	1	15	15	19	15	15



PM_{10} Annual Average Boxplot

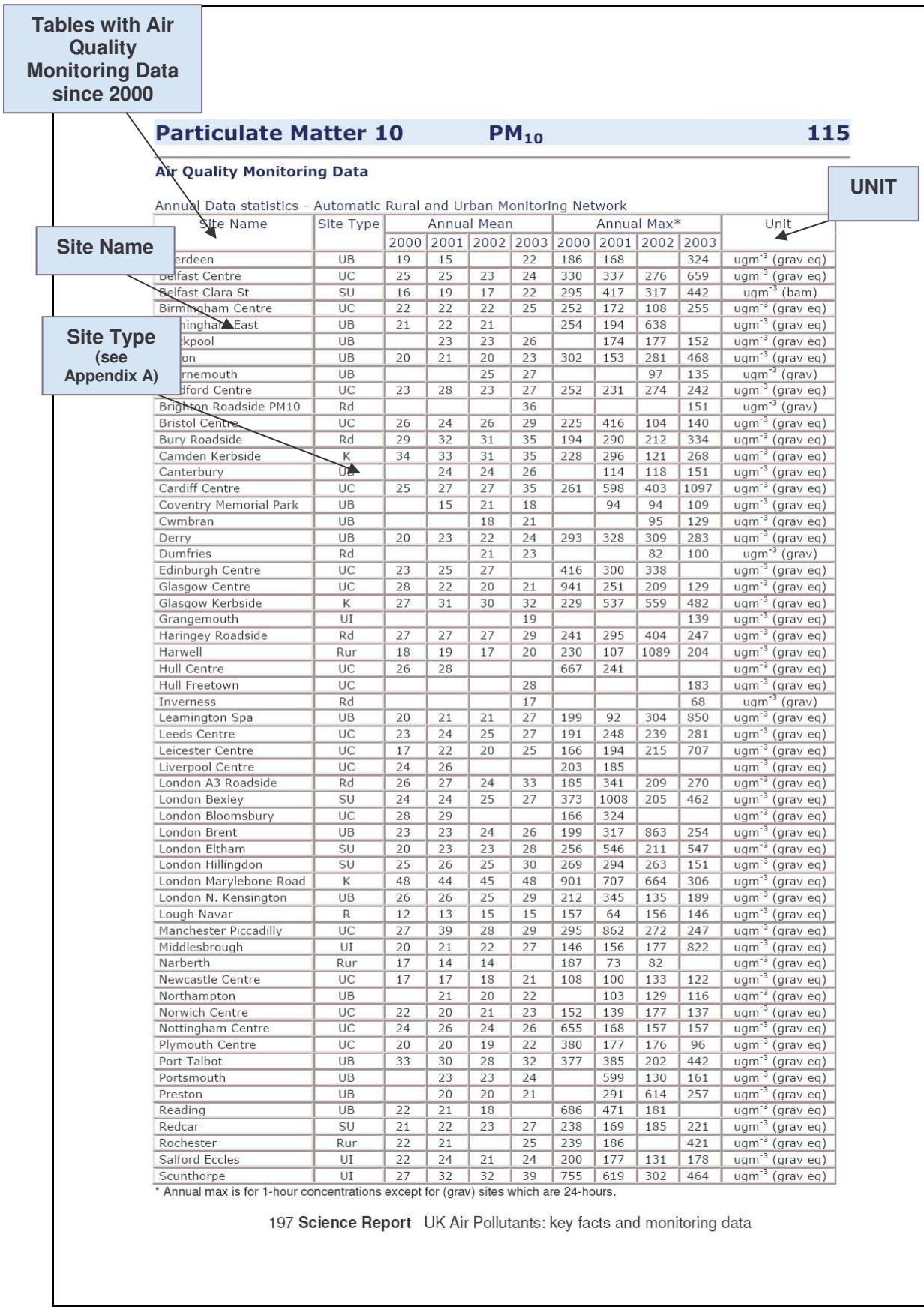
Automatic Monitoring Annual Max (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	3	352	268	482	272	464
Rd	8	193	68	334	79	312
Rur	2	313	204	421	215	410
SU	5	365	151	547	165	530
UB	20	274	109	850	116	727
UC	18	309	96	1097	118	766
UI	4	401	139	822	145	768
R	1	146	146	146	146	146



PM_{10} Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003



Particulate Matter 10 PM_{10} 115

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max*				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
erdeen	UB	19	15		22	186	168		324	ugm^{-3} (grav eq)
Belfast Centre	UC	25	25	23	24	330	337	276	659	ugm^{-3} (grav eq)
Belfast Clara St	SU	16	19	17	22	295	417	317	442	ugm^{-3} (bam)
Birmingham Centre	UC	22	22	22	25	252	172	108	255	ugm^{-3} (grav eq)
hinghan East	UB	21	22	21		254	194	638		ugm^{-3} (grav eq)
kpool	UB		23	23	26		174	177	152	ugm^{-3} (grav eq)
on	UB	20	21	20	23	302	153	281	468	ugm^{-3} (grav eq)
rnemouth	UB			25	27			97	135	ugm^{-3} (grav)
dford Centre	UC	23	28	23	27	252	231	274	242	ugm^{-3} (grav eq)
Brighton Roadside PM10	Rd				36				151	ugm^{-3} (grav)
Bristol Centre	UC	26	24	26	29	225	416	104	140	ugm^{-3} (grav eq)
Bury Roadside	Rd	29	32	31	35	194	290	212	334	ugm^{-3} (grav eq)
Camden Kerbside	K	34	33	31	35	228	296	121	268	ugm^{-3} (grav eq)
Canterbury	UB		24	24	26		114	118	151	ugm^{-3} (grav eq)
Cardiff Centre	UC	25	27	27	35	261	598	403	1097	ugm^{-3} (grav eq)
Coventry Memorial Park	UB		15	21	18		94	94	109	ugm^{-3} (grav eq)
Cwmbran	UB			18	21			95	129	ugm^{-3} (grav eq)
Derry	UB	20	23	22	24	293	328	309	283	ugm^{-3} (grav eq)
Dumfries	Rd			21	23			82	100	ugm^{-3} (grav)
Edinburgh Centre	UC	23	25	27		416	300	338		ugm^{-3} (grav eq)
Glasgow Centre	UC	28	22	20	21	941	251	209	129	ugm^{-3} (grav eq)
Glasgow Kerbside	K	27	31	30	32	229	537	559	482	ugm^{-3} (grav eq)
Grangemouth	UI				19				139	ugm^{-3} (grav eq)
Haringey Roadside	Rd	27	27	27	29	241	295	404	247	ugm^{-3} (grav eq)
Harwell	Rur	18	19	17	20	230	107	1089	204	ugm^{-3} (grav eq)
Hull Centre	UC	26	28			667	241			ugm^{-3} (grav eq)
Hull Freetown	UC				28				183	ugm^{-3} (grav eq)
Inverness	Rd				17				68	ugm^{-3} (grav)
Leamington Spa	UB	20	21	21	27	199	92	304	850	ugm^{-3} (grav eq)
Leeds Centre	UC	23	24	25	27	191	248	239	281	ugm^{-3} (grav eq)
Leicester Centre	UC	17	22	20	25	166	194	215	707	ugm^{-3} (grav eq)
Liverpool Centre	UC	24	26			203	185			ugm^{-3} (grav eq)
London A3 Roadside	Rd	26	27	24	33	185	341	209	270	ugm^{-3} (grav eq)
London Bexley	SU	24	24	25	27	373	1008	205	462	ugm^{-3} (grav eq)
London Bloomsbury	UC	28	29			166	324			ugm^{-3} (grav eq)
London Brent	UB	23	23	24	26	199	317	863	254	ugm^{-3} (grav eq)
London Eltham	SU	20	23	23	28	256	546	211	547	ugm^{-3} (grav eq)
London Hillingdon	SU	25	26	25	30	269	294	263	151	ugm^{-3} (grav eq)
London Marylebone Road	K	48	44	45	48	901	707	664	306	ugm^{-3} (grav eq)
London N. Kensington	UB	26	26	25	29	212	345	135	189	ugm^{-3} (grav eq)
Lough Navar	R	12	13	15	15	157	64	156	146	ugm^{-3} (grav eq)
Manchester Piccadilly	UC	27	39	28	29	295	862	272	247	ugm^{-3} (grav eq)
Middlesbrough	UI	20	21	22	27	146	156	177	822	ugm^{-3} (grav eq)
Narberth	Rur	17	14	14		187	73	82		ugm^{-3} (grav eq)
Newcastle Centre	UC	17	17	18	21	108	100	133	122	ugm^{-3} (grav eq)
Northampton	UB		21	20	22		103	129	116	ugm^{-3} (grav eq)
Norwich Centre	UC	22	20	21	23	152	139	177	137	ugm^{-3} (grav eq)
Nottingham Centre	UC	24	26	24	26	655	168	157	157	ugm^{-3} (grav eq)
Plymouth Centre	UC	20	20	19	22	380	177	176	96	ugm^{-3} (grav eq)
Port Talbot	UB	33	30	28	32	377	385	202	442	ugm^{-3} (grav eq)
Portsmouth	UB		23	23	24		599	130	161	ugm^{-3} (grav eq)
Preston	UB		20	20	21		291	614	257	ugm^{-3} (grav eq)
Reading	UB	22	21	18		686	471	181		ugm^{-3} (grav eq)
Redcar	SU	21	22	23	27	238	169	185	221	ugm^{-3} (grav eq)
Rochester	Rur	22	21		25	239	186		421	ugm^{-3} (grav eq)
Salford Eccles	UI	22	24	21	24	200	177	131	178	ugm^{-3} (grav eq)
Scunthorpe	UI	27	32	32	39	755	619	302	464	ugm^{-3} (grav eq)

* Annual max is for 1-hour concentrations except for (grav) sites which are 24-hours.

2.2.2 One-page pollutants with data summaries

Pollutant Name

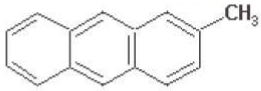
Pollutant ID

Chemical Structure

2-methylanthracene **92**

Alternative Name:
CAS Number: 613-12-7
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure

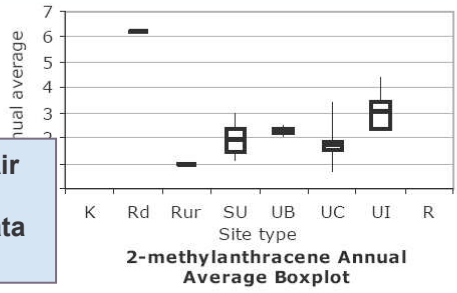


Data summary for site type

Summary of Air Quality Data in 2003

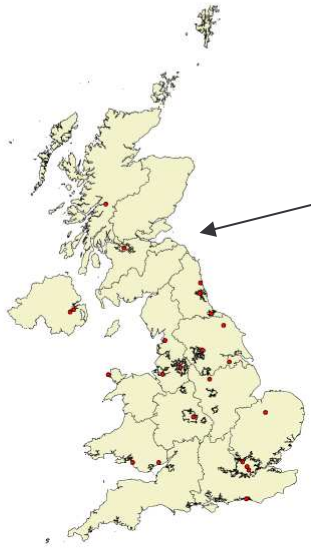
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	6.2	6.2	6.2	6.2	6.2
Rur	1	1.0	1.0	1.0	1.0	1.0
SU	6	1.9	1.1	3.0	1.2	2.9
UB	2	2.3	2.1	2.5	2.1	2.5
UC	5	1.8	0.7	3.4	0.8	3.1
UI	3	3.0	2.3	4.4	2.3	4.2
R	0					



2-methylanthracene Annual Average Boxplot

Monitoring sites in 2003



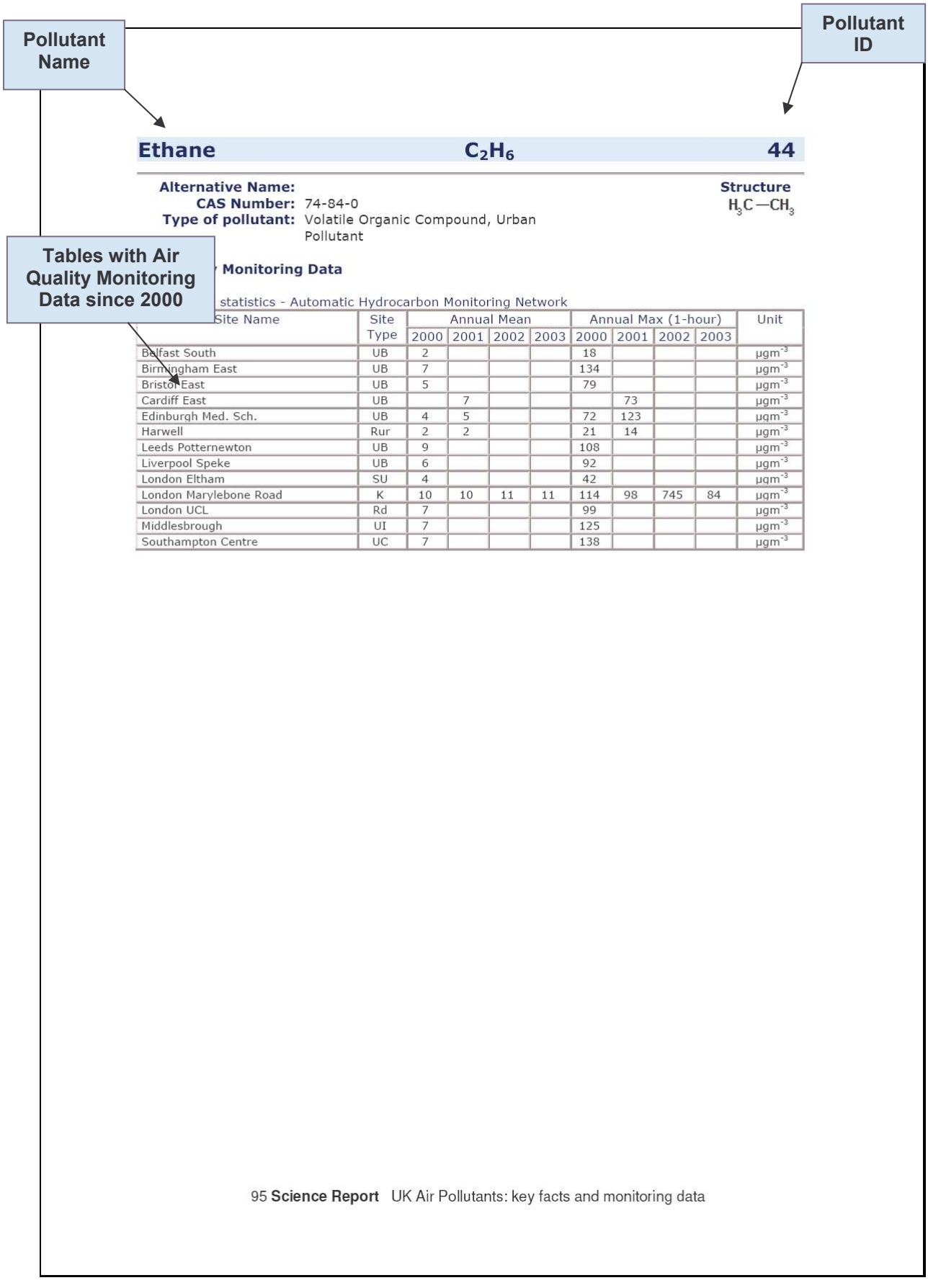
Air quality non-automatic monitoring site map in 2003

Tables with Air Quality Monitoring Data since 2000

Air Quality Monitoring Data - Annual Data statistics - PAH

Site Name	Site Type	Annual Mean 2000	2001	2002	2003	Unit
Ashington	UI	0.23	0.18		2.40	µgm^{-3}
Belfast	SU		0.27	2.80	1.40	µgm^{-3}
Birmingham 1	UB		0.11	3.10	2.50	µgm^{-3}
Bolsover	SU	0.39	0.72	3.30	3.00	µgm^{-3}
Brent	UB				2.10	µgm^{-3}
Bromley	Rd			6.20	6.20	µgm^{-3}
Glasgow	UC	0.14	0.08	2.00	0.65	µgm^{-3}
Holyhead	UI	0.22	0.19		2.50	µgm^{-3}
Hove	UC				1.50	µgm^{-3}
Kinlochleven	SU	0.66	0.27	1.90	1.10	µgm^{-3}
Leeds 1	UC		0.14	2.50	1.60	µgm^{-3}
Lisburn	SU	0.88	0.57	3.00	2.50	µgm^{-3}
London 2a	UC	0.14	0.15	2.80	3.40	µgm^{-3}
Newcastle	UC		0.10	2.60	1.80	µgm^{-3}
Newport	SU	0.15	0.12	2.30	1.70	µgm^{-3}
Port Talbot	UI	0.23	0.11	2.90	2.30	µgm^{-3}
Scunthorpe	UI	0.31	0.30	5.40	4.40	µgm^{-3}
Speke	SU			2.50	1.90	µgm^{-3}
Stoke Ferry	Rur		<0.03	0.73	0.99	µgm^{-3}

2.2.3 One-page pollutants with no summary data



Ethane C_2H_6 **44**

Alternative Name:
CAS Number: 74-84-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure $H_3C—CH_3$

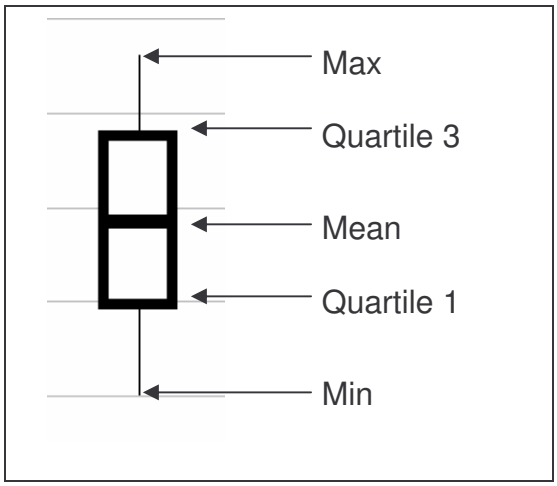
Monitoring Data

statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	2				18				μgm^{-3}
Birmingham East	UB	7				134				μgm^{-3}
Bristol East	UB	5				79				μgm^{-3}
Cardiff East	UB		7				73			μgm^{-3}
Edinburgh Med. Sch.	UB	4	5			72	123			μgm^{-3}
Harwell	Rur	2	2			21	14			μgm^{-3}
Leeds Potternewton	UB	9				108				μgm^{-3}
Liverpool Speke	UB	6				92				μgm^{-3}
London Eltham	SU	4				42				μgm^{-3}
London Marylebone Road	K	10	10	11	11	114	98	745	84	μgm^{-3}
London UCL	Rd	7				99				μgm^{-3}
Middlesbrough	UI	7				125				μgm^{-3}
Southampton Centre	UC	7				138				μgm^{-3}

2.3 Boxplots

Ambient concentration data for some pollutants are summarised graphically in boxplots. Also known as box and whisker diagrams, these boxplots provide simple graphical summaries of sets of data. The boxplots in the *UKAP* show the mean, maximum, minimum and inter-quartile range of concentrations in specified data sets, as shown below.



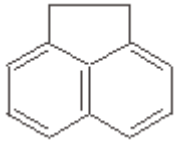
3 A-Z of Environmental Pollutants

This section of the *UKAP* includes summaries of ambient monitoring data from 2000 to 2003 for 143 atmospheric pollutants in the UK. The pollutant entries are ordered alphabetically. For 51 of these pollutants, additional information on emission trends, emission inventories, air-quality standards, ambient concentration summaries for 2003, and maps of monitoring sites is included where available, as described in Section 2.2.

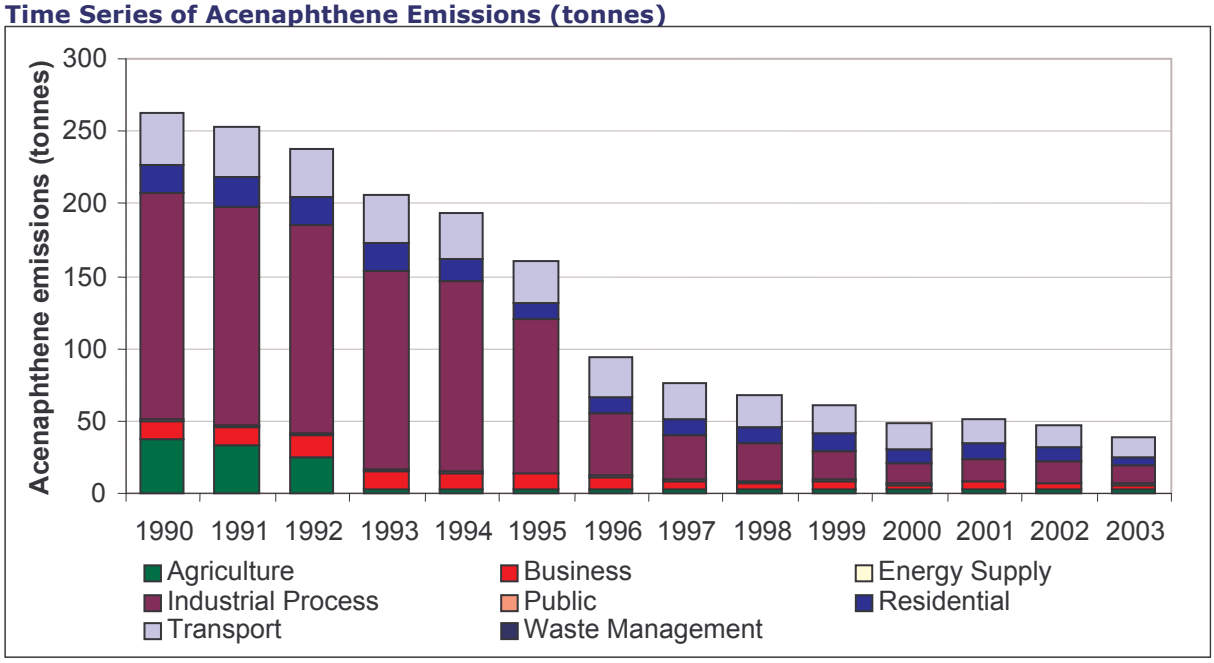
Acenaphthene 1

Alternative Name: 1,8-Ethylenenaphthalene
CAS Number: 83-32-9
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Acenaphthene Emissions (tonnes)



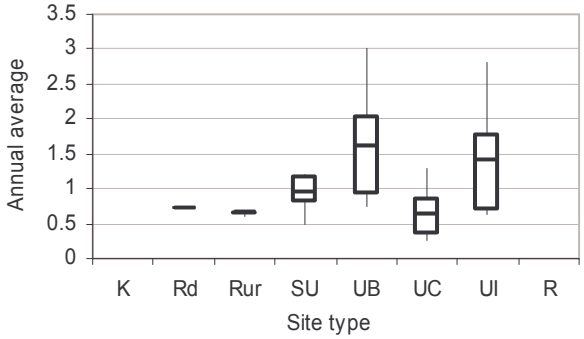
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

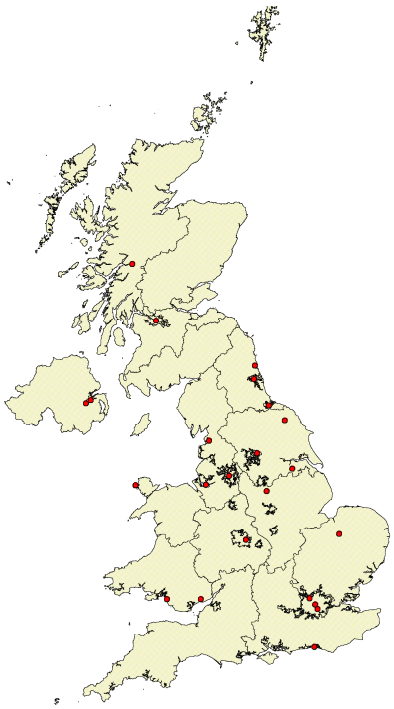
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.7	0.7	0.7	0.7	0.7
Rur	3	0.7	0.6	0.7	0.6	0.7
SU	6	1.0	0.5	1.2	0.6	1.2
UB	3	1.6	0.8	3.0	0.8	2.8
UC	6	0.6	0.3	1.3	0.3	1.2
UI	3	1.4	0.6	2.8	0.6	2.6
R	0					



Acenaphthene Annual Average Boxplot

Acenaphthene 1



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

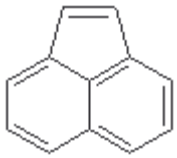
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	1.0	<0.3		0.8	μgm^{-3}
Belfast	SU		0.8	1.0	0.9	μgm^{-3}
Birmingham 1	UB		<0.4	0.8	1.1	μgm^{-3}
Bolsover	SU	0.8	<0.4	1.4	1.2	μgm^{-3}
Brent	UB				0.8	μgm^{-3}
Bromley	Rd			0.7	0.7	μgm^{-3}
Glasgow	UC	0.8	0.3	0.6	0.3	μgm^{-3}
Hazelrigg	Rur	1.0	0.9	0.6	0.7	μgm^{-3}
High Muffles	Rur	0.7	0.6	0.5	0.6	μgm^{-3}
Holyhead	UI	0.3	0.1		0.3	μgm^{-3}
Hove	UC				0.3	μgm^{-3}
Kinlochleven	SU	0.8	0.9	1.7	0.8	μgm^{-3}
Leeds 1	UC		0.5	0.9	0.5	μgm^{-3}
Lisburn	SU	0.9	0.4	0.7	1.1	μgm^{-3}
London 2a	UC	1.0	0.4	0.7	1.0	μgm^{-3}
Manchester	UC	1.9	1.7	1.3	1.3	μgm^{-3}
Middlesbrough	UB	4.8	7.5	3.8	3.0	μgm^{-3}
Newcastle	UC		0.2	0.5	0.6	μgm^{-3}
Newport	SU	2.5	1.2	1.2	1.2	μgm^{-3}
Port Talbot	UI	1.3	0.4	0.5	0.6	μgm^{-3}
Scunthorpe	UI	19.0	1.8	2.9	2.8	μgm^{-3}
Speke	SU			0.4	0.5	μgm^{-3}
Stoke Ferry	Rur	<0.5	0.3	0.4	0.6	μgm^{-3}

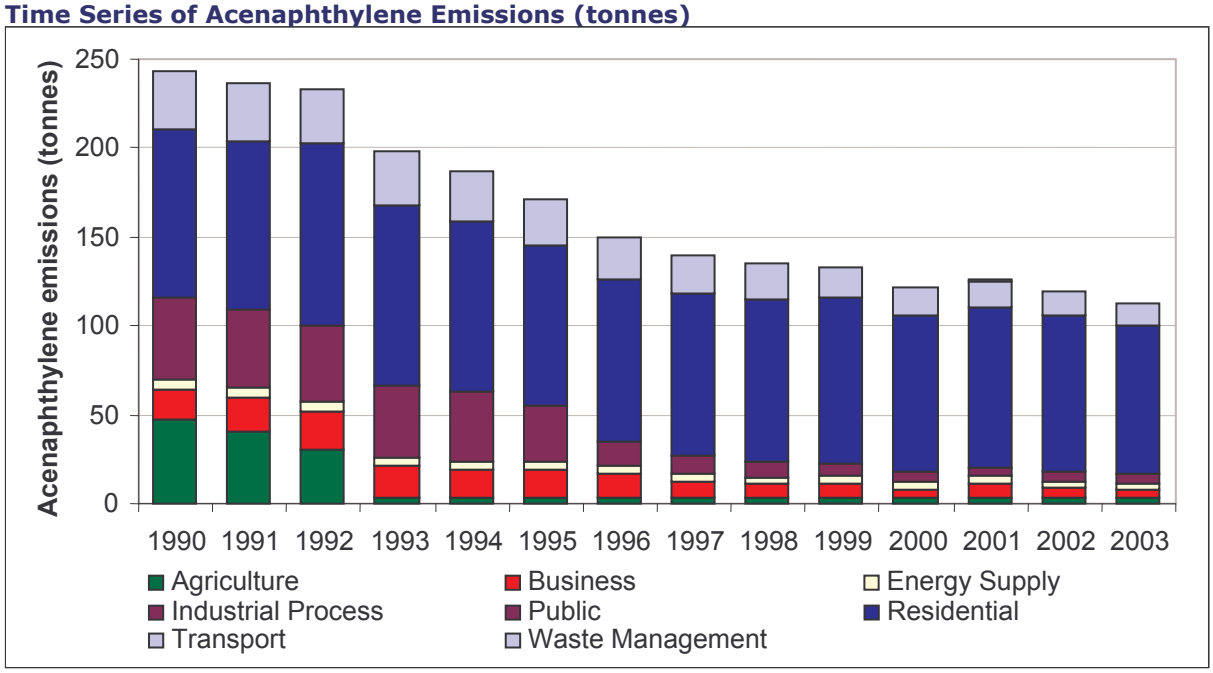
Acenaphthylene 2

Alternative Name:
CAS Number: 208-96-8
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Acenaphthylene Emissions (tonnes)



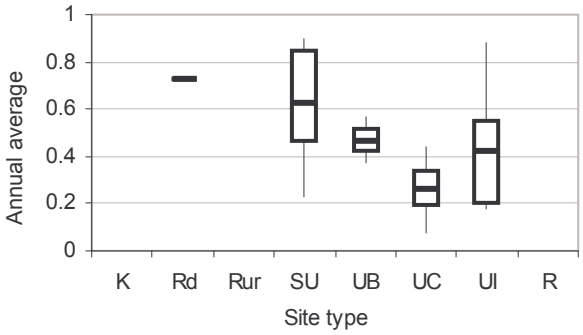
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

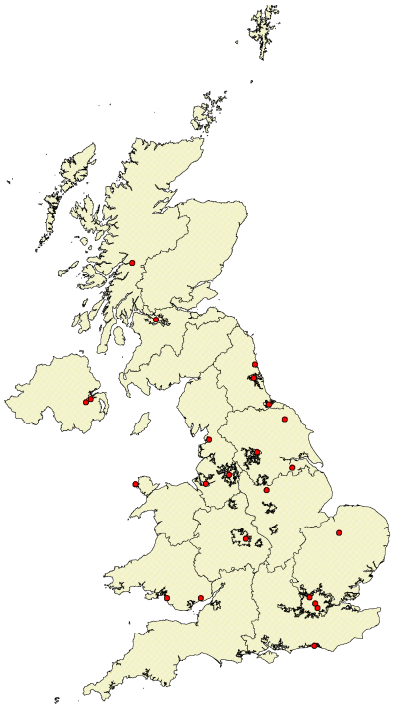
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.7	0.7	0.7	0.7	0.7
Rur	0					
SU	4	0.6	0.2	0.9	0.3	0.9
UB	2	0.5	0.4	0.6	0.4	0.6
UC	4	0.3	0.1	0.4	0.1	0.4
UI	3	0.4	0.2	0.9	0.2	0.8
R	0					



Acenaphthylene Annual Average Boxplot

Acenaphthylene 2



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.59	<0.18		0.22	μgm^{-3}
Belfast	SU		0.31	0.08	0.83	μgm^{-3}
Birmingham 1	UB		<0.88	0.22	0.57	μgm^{-3}
Bolsover	SU	0.39	<0.19	0.43	0.54	μgm^{-3}
Brent	UB				0.37	μgm^{-3}
Bromley	Rd			1.10	0.73	μgm^{-3}
Glasgow	UC	0.62	0.72	0.32	<0.12	μgm^{-3}
Holyhead	UI	0.19	0.06		0.08	μgm^{-3}
Hove	UC				0.08	μgm^{-3}
Kinlochleven	SU	0.09	0.06	0.08	<0.02	μgm^{-3}
Leeds 1	UC		0.48	0.32	0.31	μgm^{-3}
Lisburn	SU	0.49	0.48	0.21	0.90	μgm^{-3}
London 2a	UC	1.00	0.25	0.43	0.44	μgm^{-3}
Newcastle	UC		0.20	0.15	0.23	μgm^{-3}
Newport	SU	1.10	0.41	0.09	<0.08	μgm^{-3}
Port Talbot	UI	0.75	0.22	0.20	0.18	μgm^{-3}
Scunthorpe	UI	1.60	0.57	0.58	0.88	μgm^{-3}
Speke	SU			0.15	0.23	μgm^{-3}
Stoke Ferry	Rur		0.19	0.07	<0.09	μgm^{-3}

Acetylene C_2H_2 3

Alternative Name: Ethyne
CAS Number: 74-86-2
Type of pollutant: volatile organic compound

Structure
HC≡CH

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Air Quality Monitoring Data

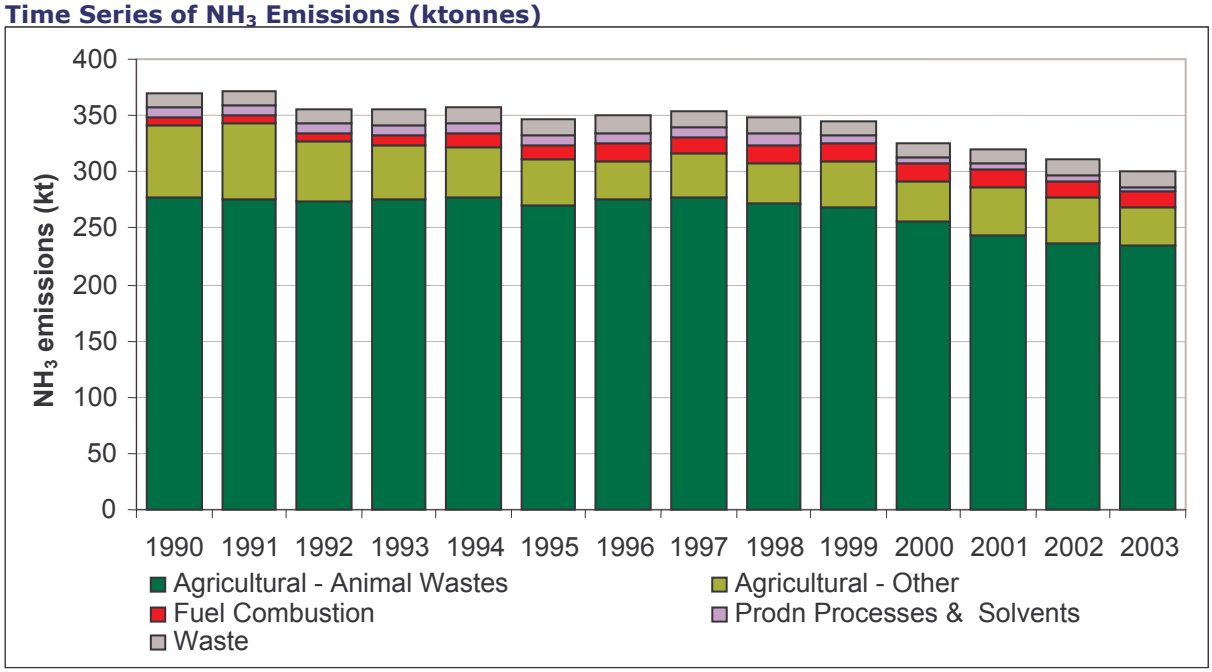
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				20				μgm^{-3}
Edinburgh Med. Sch.	UB	1				23				μgm^{-3}
Liverpool Speke	UB	2				20				μgm^{-3}
London Marylebone Road	K	7	6	5	5	48	38	25	32	μgm^{-3}
London UCL	Rd	3				66				μgm^{-3}

Ammonia NH_3 4

Alternative Name:
CAS Number: 7664-41-7
Type of pollutant: Acid Rain Component

Time Series of NH_3 Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Ammonia NH_3 4

Annual Data statistics - UK National Ammonia Network

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
5 Acres		1.1	1.1			μgm^{-3}
Alice Holt		1.2	1.0			μgm^{-3}
Alice Holt (2)		0.4	0.6			μgm^{-3}
Allt a Mharcaidh		0.1	0.3			μgm^{-3}
Aston Rowant.	Rur	2.4	2.1			μgm^{-3}
Auchencorth Moss	Rur	0.9	1.4			μgm^{-3}
Auchincruive		5.3	12.3			μgm^{-3}
Auchincruive 2		2.7	4.6			μgm^{-3}
Barcombe Mills	Rur	1.0	1.4			μgm^{-3}
Bedlingfield		9.0	7.6			μgm^{-3}
Bickerton HIll	Rur	2.3	2.9			μgm^{-3}
Brompton		3.6	3.9			μgm^{-3}
Brown Moss NR 2	Rur	3.1	4.7			μgm^{-3}
Bure Marshes	Rur	0.9	1.0			μgm^{-3}
Bush OTC	Rur	2.9	3.7			μgm^{-3}
Cardigan	Rur	0.6	0.6			μgm^{-3}
Cardoun Burn		0.2	0.2			μgm^{-3}
Carlisle	Rd	3.7	4.5			μgm^{-3}
Carradale	Rur	0.9	0.5			μgm^{-3}
Castle Cary	Rur	3.0	3.3			μgm^{-3}
Coalburn	Rur	0.2	0.2			μgm^{-3}
Coleraine	SU	2.4	3.5			μgm^{-3}
Cwmystwyth	Rur	0.8	1.2			μgm^{-3}
Dennington	Rur	3.2	2.8			μgm^{-3}
Drayton	Rur	2.2	1.9			μgm^{-3}
Dunwich Heath		0.7	0.7			μgm^{-3}
Easingwold		2.8	4.6			μgm^{-3}
Edinburgh		1.3	2.0			μgm^{-3}
Ellon Ythan		1.4	1.4			μgm^{-3}
Eskdalemuir	Rur	0.3	0.3			μgm^{-3}
Fenn's Moss 1		1.7	2.4			μgm^{-3}
Fenn's Moss 2		1.5	1.8			μgm^{-3}
Fenn's Moss 3		1.7	2.9			μgm^{-3}
Fressingfield	Rur	5.2	4.9			μgm^{-3}
Glen Shee		2.8				μgm^{-3}
Glensaugh	Rur	0.3	0.4			μgm^{-3}
Glenshee Hotel		0.3				μgm^{-3}
Gulabin Lodge	Rur	1.7	0.7			μgm^{-3}
Halladale	Rur	0.4	2.2			μgm^{-3}
High Muffles	Rur	0.7	0.6			μgm^{-3}
Hillsborough	Rur	2.4	0.7			μgm^{-3}
Holme Lacy	Rur	2.0	2.6			μgm^{-3}
Inverpolly	Rur	0.1	0.2			μgm^{-3}
Jenny Hurn		1.8	2.5			μgm^{-3}
Lagganlia		0.2	0.6			μgm^{-3}
Lakes		0.3	1.5			μgm^{-3}
Little Budworth	Rur	2.2	2.4			μgm^{-3}
Llydaw	Rur	1.1	1.0			μgm^{-3}
Llynclys Common		1.2	1.5			μgm^{-3}
Llynn Brianne		0.2	0.2			μgm^{-3}
Loch Awe	Rur	0.1	0.1			μgm^{-3}
London, Cromwell Rd		5.2	5.2			μgm^{-3}
Lough Navar	Rur	0.5	0.6			μgm^{-3}
Lullington Heath	Rur	0.5	0.5			μgm^{-3}
Lyulphs Tower		0.8	0.9			μgm^{-3}

Annual Data statistics - UK National Ammonia Network (cont)

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Mere Sands Wood	Rur	1.1	1.8			μgm^{-3}
Midge Hall		2.0				μgm^{-3}
Moor House		0.6	0.3			μgm^{-3}
Much Hoole	Rur	2.5				μgm^{-3}
Myerscough		2.7	4.0			μgm^{-3}
North Wyke		1.6	1.9			μgm^{-3}
Northallerton		3.2	3.1			μgm^{-3}
Orielton	Rur	1.5	1.2			μgm^{-3}
Penallt	Rur	1.3	1.6			μgm^{-3}
Pitmedden	Rur	2.3				μgm^{-3}
Pointon	Rur	4.3	5.8			μgm^{-3}
Pointon 2	Rur	34.8	80.9			μgm^{-3}
Porton Down		1.2	1.6			μgm^{-3}
Priddy	Rur	0.1				μgm^{-3}
Pwllpeiran		0.3	0.3			μgm^{-3}
Rannoch		0.1	0.1			μgm^{-3}
Redgrave + Lopham	Rur	2.0	2.4			μgm^{-3}
Rothamstead		2.3	1.8			μgm^{-3}
Ruabon		0.4	0.5			μgm^{-3}
Rum		0.2	0.2			μgm^{-3}
Savarnake		2.0	1.4			μgm^{-3}
Sheffield		1.9	2.9			μgm^{-3}
Sherwood	Rur	0.4	0.4			μgm^{-3}
Shetland	Rur	0.1	0.1			μgm^{-3}
Sibton	Rur	1.8	2.8			μgm^{-3}
Silsoe	Rur	1.2	1.6			μgm^{-3}
Sourhope	Rur	0.3	0.4			μgm^{-3}
Stanford		1.2	1.5			μgm^{-3}
Stoke Ferry	Rur	2.4	2.1			μgm^{-3}
Strathvaich Dam	Rur	0.1	0.1			μgm^{-3}
Sutton Bonington	Rur	4.9	3.5			μgm^{-3}
Tadcaster	Rur	2.0	3.3			μgm^{-3}
Thetford		1.5	1.7			μgm^{-3}
Thursley Common		0.3	0.4			μgm^{-3}
Tummel	Rur	0.0	0.1			μgm^{-3}
Wardlow Hay Cop	Rur	0.9	1.1			μgm^{-3}
Wem Moss		3.5	2.0			μgm^{-3}
Westhay Moor		1.1	1.3			μgm^{-3}
Wytham Woods	Rur	0.8	0.7			μgm^{-3}
Yarner Wood	Rur	0.5	0.5			μgm^{-3}

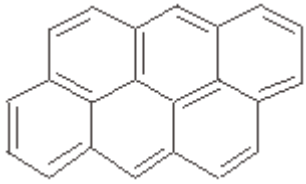
Ammonium aerosol - Annual Data statistics - UK National Ammonia Network

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
5 Acres		1.1				μgm^{-3}
Alice Holt		1.1				μgm^{-3}
Aston Rowant.	Rur	1.5				μgm^{-3}
Auchencorth Moss	Rur	0.8	0.6			μgm^{-3}
Auchincruive		0.7	1.0			μgm^{-3}
Barcombe Mills	Rur	1.3	1.5			μgm^{-3}
Brown Moss NR 2	Rur	1.2				μgm^{-3}
Bure Marshes	Rur	1.3				μgm^{-3}
Bush OTC	Rur	0.5	0.9			μgm^{-3}
Cardigan	Rur	0.4				μgm^{-3}
Carlisle	Rd	0.9				μgm^{-3}
Carradale	Rur	0.4	0.3			μgm^{-3}
Castle Cary	Rur	1.1	1.4			μgm^{-3}
Coleraine	SU	0.8	1.3			μgm^{-3}
Cwmystwyth	Rur	0.8	0.9			μgm^{-3}
Drayton	Rur		1.5			μgm^{-3}
Easingwold		2.0	1.3			μgm^{-3}
Edinburgh		0.7	1.2			μgm^{-3}
Ellon Ythan		0.5				μgm^{-3}
Eskdalemuir	Rur	0.5	0.7			μgm^{-3}
Glen Shee		0.2				μgm^{-3}
Glensaugh	Rur	0.6	0.4			μgm^{-3}
Gulabin Lodge	Rur	0.4	0.4			μgm^{-3}
Halladale	Rur	0.2	0.3			μgm^{-3}
High Muffles	Rur	1.0	1.1			μgm^{-3}
Hillsborough	Rur	0.6	0.9			μgm^{-3}
Holme Lacy	Rur	1.2	1.3			μgm^{-3}
Inverpolly	Rur	0.1	0.2			μgm^{-3}
Jenny Hurn		2.0	1.8			μgm^{-3}
Lagganlia		0.2				μgm^{-3}
Llydaw	Rur	0.6	0.8			μgm^{-3}
Llynclys Common		1.1				μgm^{-3}
London, Cromwell Road		2.4	2.5			μgm^{-3}
Lough Navar	Rur	0.5	0.7			μgm^{-3}
Lullington Heath	Rur	1.3	1.3			μgm^{-3}
Lyulphs Tower		0.6	0.7			μgm^{-3}
Mere Sands Wood	Rur	1.6	1.4			μgm^{-3}
Moor House		0.6	0.6			μgm^{-3}
North Wyke			1.0			μgm^{-3}
Northallerton		1.7	1.5			μgm^{-3}
Orielton	Rur	0.8	1.1			μgm^{-3}
Penallt	Rur	1.2				μgm^{-3}
Pitmedden	Rur	0.6				μgm^{-3}
Pointon	Rur	1.2	1.3			μgm^{-3}
Porton Down		1.2				μgm^{-3}
Priddy	Rur	0.1				μgm^{-3}
Rothamstead		1.3	1.7			μgm^{-3}
Rum		0.1	0.2			μgm^{-3}
Sheffield		1.6	1.9			μgm^{-3}
Shetland	Rur	0.3	0.2			μgm^{-3}
Sibton	Rur	1.8				μgm^{-3}
Silsoe	Rur	1.5	1.8			μgm^{-3}
Sourhope	Rur	0.4				μgm^{-3}
Stoke Ferry	Rur	1.6	1.9			μgm^{-3}
Strathvaich Dam	Rur	0.1	0.3			μgm^{-3}
Sutton Bonington	Rur	1.6	1.9			μgm^{-3}
Tadcaster	Rur	1.3				μgm^{-3}
Wytham Woods	Rur	1.3				μgm^{-3}
Yarner Wood	Rur	0.9	1.1			μgm^{-3}

Anthanthrene 5

Alternative Name:
CAS Number: 191-26-4
Type of pollutant: Polycyclic Aromatic Hydrocarbon

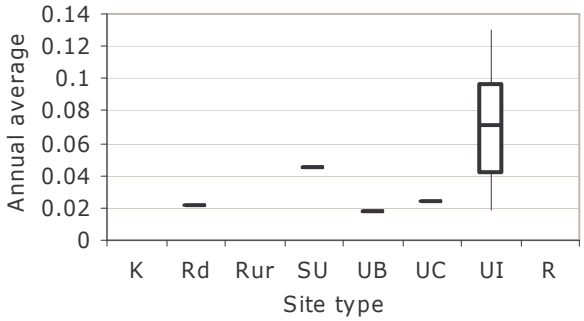
Structure



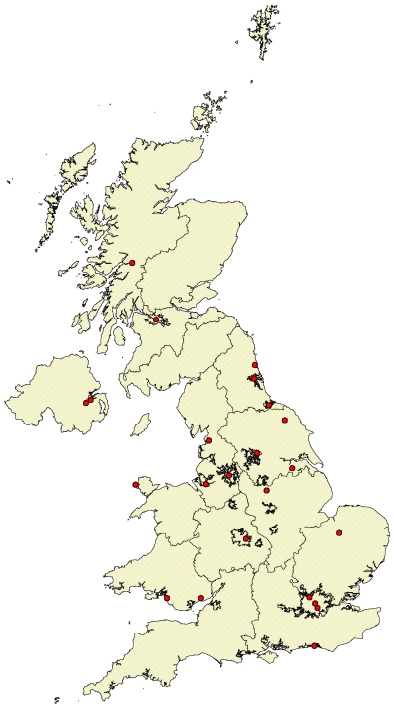
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.02	0.02	0.02	0.02	0.02
Rur	0					
SU	1	0.05	0.05	0.05	0.05	0.05
UB	2	0.02	0.02	0.02	0.02	0.02
UC	1	0.02	0.02	0.02	0.02	0.02
UI	3	0.07	0.02	0.13	0.02	0.12
R	0					



Anthanthrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

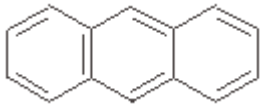
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.03	<0.03		0.02	µgm^{-3}
Belfast	SU		0.06	<0.01	<0.01	µgm^{-3}
Birmingham 1	UB		<0.04	0.01	0.02	µgm^{-3}
Bolsover	SU	0.04	<0.04	0.02	0.05	µgm^{-3}
Brent	UB				0.02	µgm^{-3}
Bromley	Rd			0.02	0.02	µgm^{-3}
Glasgow	UC	0.02	<0.02	0.01	<0.01	µgm^{-3}
Holyhead	UI	0.03	0.04		0.02	µgm^{-3}
Hove	UC				<0.01	µgm^{-3}
Kinlochleven	SU	0.28	0.07	0.06	<0.04	µgm^{-3}
Leeds 1	UC		0.03	<0.02	0.02	µgm^{-3}
Lisburn	SU	0.20	0.17	0.11	<0.15	µgm^{-3}
London 2a	UC	0.05	<0.02	0.02	<0.01	µgm^{-3}
Newcastle	UC		<0.02	0.01	<0.02	µgm^{-3}
Newport	SU	0.06	0.05	<0.02	<0.01	µgm^{-3}
Port Talbot	UI	0.13	0.07	0.04	0.06	µgm^{-3}
Scunthorpe	UI	0.25	0.06	0.16	0.13	µgm^{-3}
Speke	SU			0.01	<0.02	µgm^{-3}
Stoke Ferry	Rur		0.02	<0.01	<0.01	µgm^{-3}

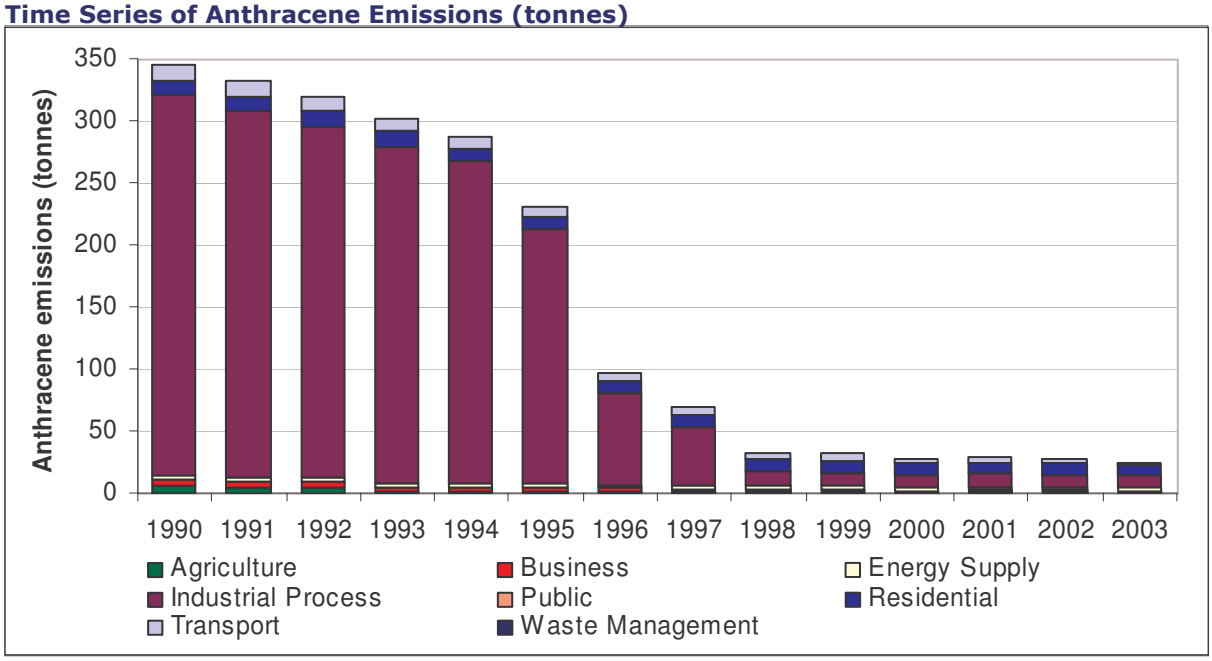
Anthracene 6

Alternative Name: Paranaphtalene
CAS Number: 120-12-7
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Anthracene Emissions (tonnes)



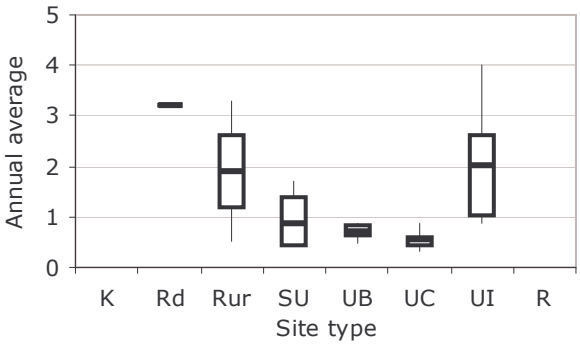
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

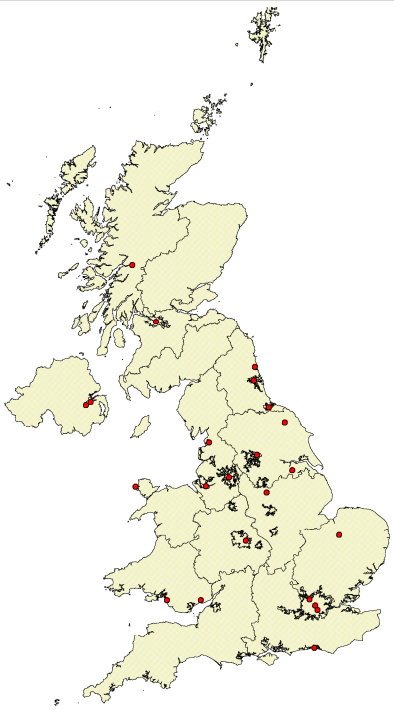
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	3.2	3.2	3.2	3.2	3.2
Rur	2	1.9	0.5	3.3	0.7	3.2
SU	6	0.9	0.4	1.7	0.4	1.7
UB	3	0.7	0.5	0.9	0.5	0.9
UC	6	0.6	0.3	0.9	0.4	0.8
UI	3	2.0	0.9	4.0	0.9	3.7
R	0					



Anthracene Annual Average Boxplot

Anthracene 6



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

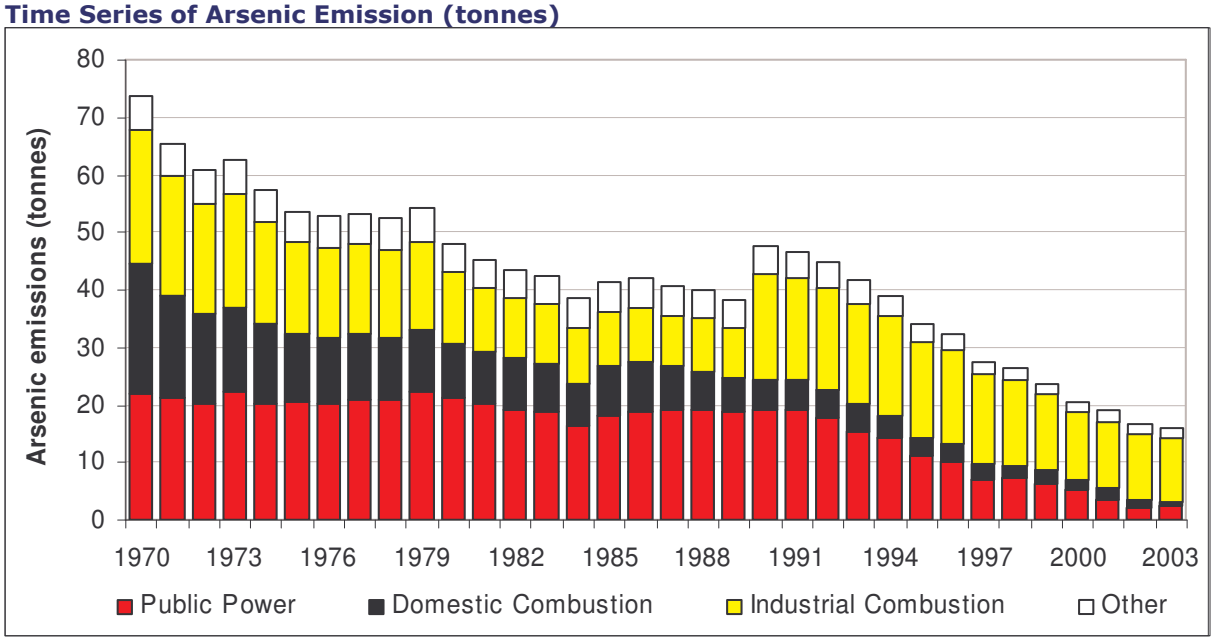
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.94	0.64		0.87	μgm^{-3}
Belfast	SU		1.20	0.35	0.47	μgm^{-3}
Birmingham 1	UB		0.58	0.70	0.88	μgm^{-3}
Bolsover	SU	1.10	0.68	1.20	1.60	μgm^{-3}
Brent	UB				0.79	μgm^{-3}
Bromley	Rd			2.70	3.20	μgm^{-3}
Glasgow	UC	0.84	0.67	0.54	0.33	μgm^{-3}
Hazelrigg	Rur	9.60	6.60	5.00	3.30	μgm^{-3}
High Muffles	Rur	0.12	0.05	0.06	<0.03	μgm^{-3}
Holyhead	UI	0.82	0.78		0.73	μgm^{-3}
Hove	UC				0.43	μgm^{-3}
Kinlochleven	SU	1.60	1.00	0.69	0.42	μgm^{-3}
Leeds 1	UC		0.78	0.61	0.62	μgm^{-3}
Lisburn	SU	2.40	1.30	1.20	1.70	μgm^{-3}
London 2a	UC	0.81	0.70	0.58	0.88	μgm^{-3}
Manchester	UC	1.00	0.64	0.60	0.55	μgm^{-3}
Middlesbrough	UB	1.10	0.98	0.84	0.48	μgm^{-3}
Newcastle	UC		0.39	0.43	0.51	μgm^{-3}
Newport	SU	1.20	1.10	3.90	0.45	μgm^{-3}
Port Talbot	UI	2.60	1.10	0.90	1.20	μgm^{-3}
Scunthorpe	UI	3.80	2.70	3.50	4.00	μgm^{-3}
Speke	SU			0.53	0.68	μgm^{-3}
Stoke Ferry	Rur	0.15	0.21	0.14	0.51	μgm^{-3}

Arsenic As 7

Alternative Name:
CAS Number: 7440-38-2
Type of pollutant: Trace Metal

Time Series of Arsenic Emission (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

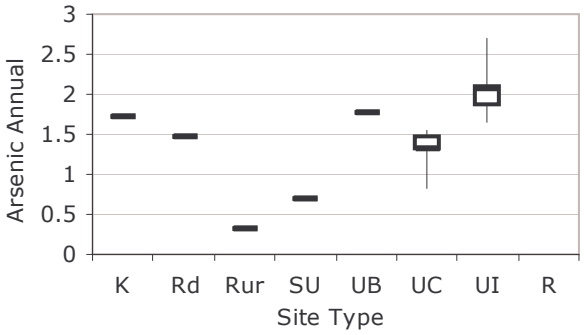
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO						
EPAQS						
AQS						
EAL	✓					
Other			✓			

Arsenic As 7

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
R	0					
UI	6	2.1	1.6	2.7	1.7	2.6
UC	5	1.3	0.8	1.6	0.9	1.5
UB	1	1.8	1.8	1.8	1.8	1.8
SU	1	0.7	0.7	0.7	0.7	0.7
Rur	1	0.3	0.3	0.3	0.3	0.3
Rd	1	1.5	1.5	1.5	1.5	1.5
K	1	1.7	1.7	1.7	1.7	1.7



Arsenic Annual Average Boxplot

Air quality monitoring site map in 2003

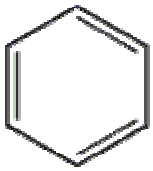
Air Quality Monitoring Data - Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Avesta Polarit, Rotherham	UI			2.4	2.1	ngm^{-3}
Brookside	UI				2.1	ngm^{-3}
Brookside, Bilston Lane	UI			1.8	2.1	ngm^{-3}
BZL, Hallen	UI			4.8	2.7	ngm^{-3}
Cardiff	UC				1.4	ngm^{-3}
Central London	UC				1.6	ngm^{-3}
Corus Steel, Rotherham	UI			2.7		ngm^{-3}
Elswick (6), Newcastle	UI			1.7		ngm^{-3}
Leeds	UC				1.3	ngm^{-3}
London Brent	UB				1.8	ngm^{-3}
London Cromwell Road	Rd				1.5	ngm^{-3}
London Marylebone Road	K	1.4	1.7	1.5	1.7	ngm^{-3}
Manchester	UC				1.5	ngm^{-3}
Pontardawe	SU				0.7	ngm^{-3}
Walkers Galvanizing, Wallsall	UI			1.6	1.8	ngm^{-3}
White Rose Environmental, Leeds	UI			1.6	1.6	ngm^{-3}

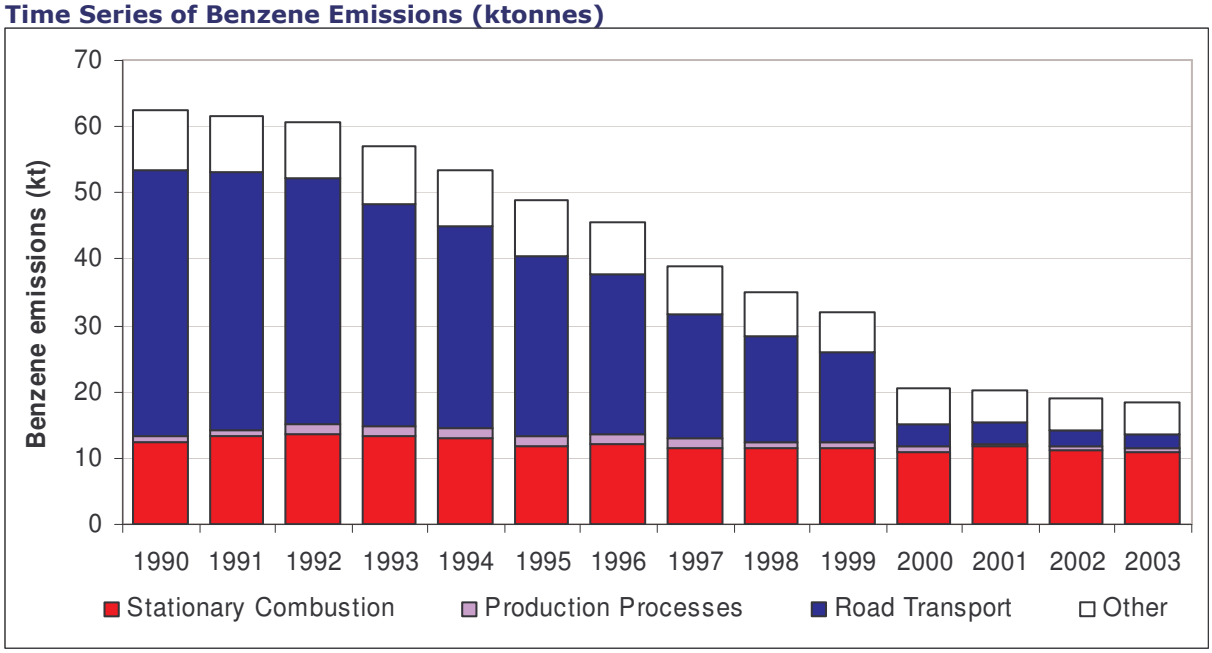
Benzene C_6H_6 8

Alternative Name: Benzol
CAS Number: 71-43-2
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Time Series of Benzene Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO						
EPAQS						
AQS	✓					
EAL	✓					
Other						

Benzene C_6H_6 8

Summary of Air Quality Data in 2003

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

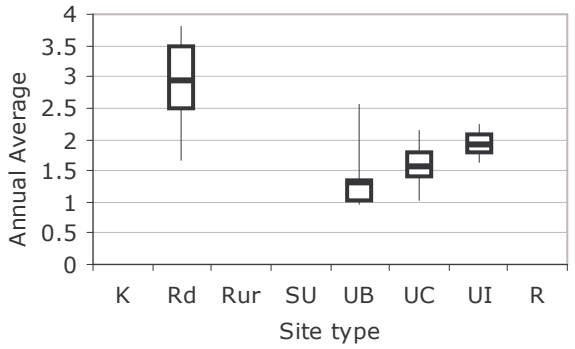
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				25				μgm^{-3}
Birmingham East	UB	1				28				μgm^{-3}
Bristol East	UB	1				25				μgm^{-3}
Cardiff Centre	UC				1				13	μgm^{-3}
Cardiff East	UB	2	2			24	21			μgm^{-3}
Edinburgh Med. Sch.	UB	1	1			13	25			μgm^{-3}
Glasgow Kerbside	K				2				17	μgm^{-3}
Harwell	Rur	1	1	1	1	5	7	9	4	μgm^{-3}
Leeds Potternewton	UB	2				19				μgm^{-3}
Liverpool Speke	UB	2				52				μgm^{-3}
London Eltham	SU	2				13				μgm^{-3}
London Marylebone Road	K	6	5	4	3	33	29	24	18	μgm^{-3}
London UCL	Rd	2				61				μgm^{-3}
Middlesbrough	UI	2				217				μgm^{-3}
Southampton Centre	UC	2				47				μgm^{-3}

Benzene C_6H_6 8

Non-automatic Monitoring Annual Mean (µgm^{-3})

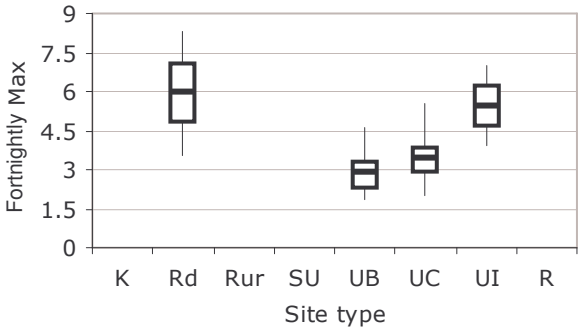
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	8	2.9	1.7	3.8	1.8	3.7
Rur	0					
SU	0					
UB	12	1.3	1.0	2.6	1.0	2.0
UC	13	1.6	1.0	2.1	1.1	2.0
UI	2	1.9	1.6	2.2	1.7	2.2
R	0					



Benzene Pump Tube Annual Average Boxplot

Non-automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	8	6.0	3.5	8.3	3.7	7.9
Rur	0					
SU	0					
UB	12	2.9	1.8	4.6	1.9	4.5
UC	13	3.4	2.0	5.5	2.2	5.0
UI	2	5.5	3.9	7.0	4.1	6.9
R	0					



Benzene Pump Tube Fortnightly Maximum Boxplot

Air quality non-automatic monitoring site map in 2003

Benzene C_6H_6 8

Air Quality Monitoring Data

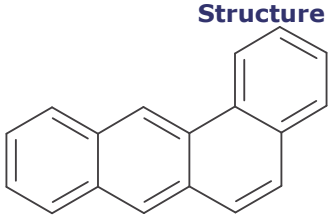
Annual Data statistics - Non-Automatic Hydrocarbon Network

Site Name	Site Type	Annual Mean				Annual Max (2-week)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Barnsley Gawber	UB			1	1			1	2	μgm^{-3}
Belfast Centre	UC			1	1			2	3	μgm^{-3}
Belfast Roadside	Rd			2	3			4	5	μgm^{-3}
Birmingham Roadside	Rd			3	4			6	7	μgm^{-3}
Bournemouth	UB			1	1			2	2	μgm^{-3}
Bristol Old Market	Rd			3	3			6	7	μgm^{-3}
Coventry Memorial Park	UB			1	1			2	3	μgm^{-3}
Cwmbran	UB			1	1			1	3	μgm^{-3}
Edinburgh Med. Sch.	UB			1	1			3	2	μgm^{-3}
Grangemouth	UI			2	2			3	4	μgm^{-3}
Haringey Roadside	Rd			3	3			4	8	μgm^{-3}
Hove Roadside	Rd			2	2			3	4	μgm^{-3}
Hull Freetown	UC			2	1			2	3	μgm^{-3}
Leamington Spa	UB			1	1			2	2	μgm^{-3}
Leeds Centre	UC			1	2			3	4	μgm^{-3}
Leeds Roadside	Rd			3	3			5	7	μgm^{-3}
Leicester Centre	UC			1	1			2	3	μgm^{-3}
Liverpool Centre	UC			1				1		μgm^{-3}
Liverpool Speke	UB				1				3	μgm^{-3}
London Bloomsbury	UC			1	2			2	3	μgm^{-3}
Manchester Piccadilly	UC			1	2			3	4	μgm^{-3}
Middlesbrough	UI			2	2			3	7	μgm^{-3}
Newcastle Centre	UC			1	1			2	2	μgm^{-3}
Northampton	UB			1	1			2	2	μgm^{-3}
Norwich Centre	UC			1	1			2	3	μgm^{-3}
Nottingham Centre	UC			2	2			3	4	μgm^{-3}
Oxford Centre Roadside	Rd			1	2			2	4	μgm^{-3}
Plymouth Centre	UC			1	1			3	2	μgm^{-3}
Portsmouth	UB			1	1			2	3	μgm^{-3}
Reading	UB			1	3			2	5	μgm^{-3}
Sheffield Centre	UC			1	2			3	3	μgm^{-3}
Southampton Centre	UC		3	2	2		3	4	6	μgm^{-3}
Southend-on-Sea	UB			1	1			2	3	μgm^{-3}
Stockton-on-Tees Yarm	Rd			4	4			9	6	μgm^{-3}
Stoke-on-Trent Centre	UC			2	2			3	5	μgm^{-3}
Wigan Leigh	UB			1	1			3	5	μgm^{-3}

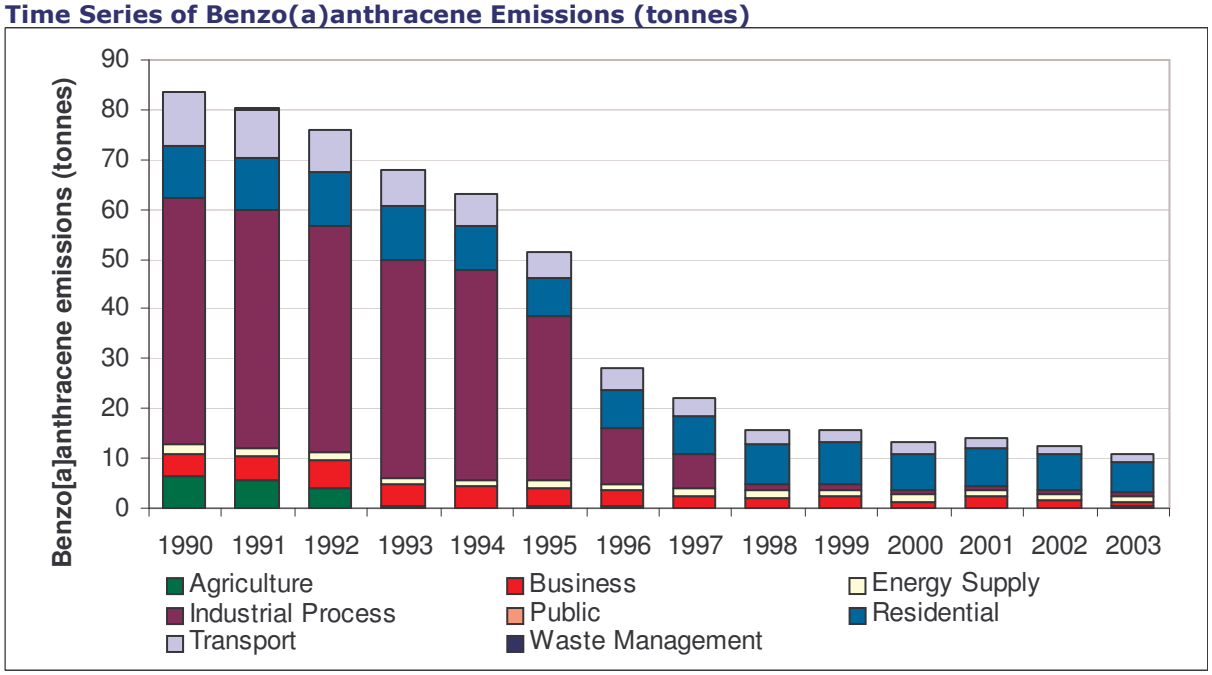
Benzo(a)anthracene 9

Alternative Name: 1,2-Benzanthracene
CAS Number: 56-55-3
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Benzo(a)anthracene Emissions (tonnes)



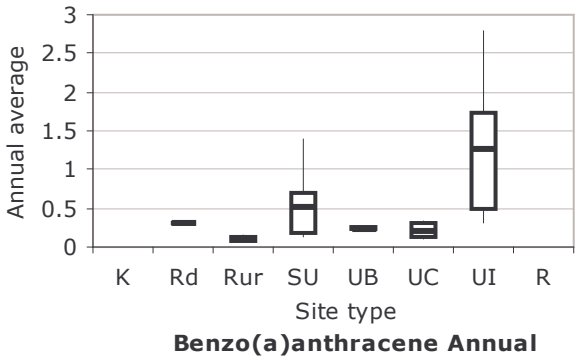
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

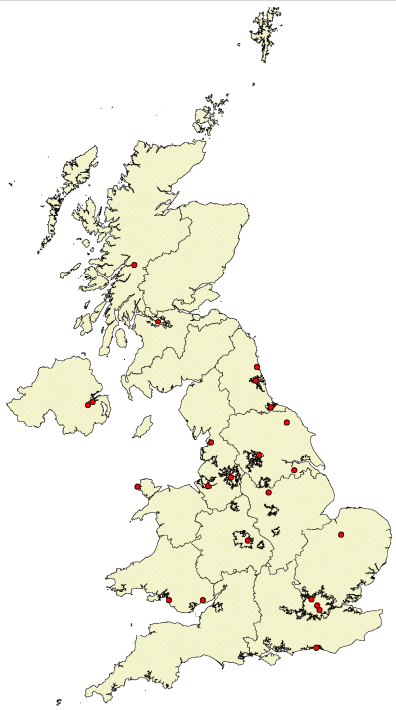
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.3	0.3	0.3	0.3	0.3
Rur	3	0.1	0.1	0.2	0.1	0.2
SU	6	0.5	0.1	1.4	0.1	1.3
UB	3	0.2	0.2	0.3	0.2	0.3
UC	6	0.2	0.1	0.3	0.1	0.3
UI	3	1.3	0.3	2.8	0.4	2.6
R	0					



Benzo(a)anthracene Annual Average Boxplot

Benzo(a)anthracene 9



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

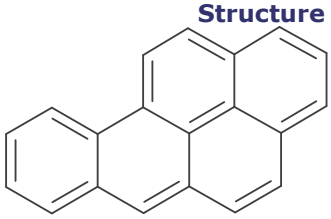
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.35	0.36		0.32	μgm^{-3}
Belfast	SU		0.74	0.25	<0.13	μgm^{-3}
Birmingham 1	UB		0.26	0.19	0.25	μgm^{-3}
Bolsover	SU	0.50	0.49	0.44	0.83	μgm^{-3}
Brent	UB				0.20	μgm^{-3}
Bromley	Rd			0.36	0.31	μgm^{-3}
Glasgow	UC	0.21	0.23	0.20	0.10	μgm^{-3}
Hazelrigg	Rur	0.57	0.59	0.39	0.08	μgm^{-3}
High Muffles	Rur	0.10	0.09	0.08	<0.16	μgm^{-3}
Holyhead	UI	0.24	0.30		0.24	μgm^{-3}
Hove	UC				0.14	μgm^{-3}
Kinlochleven	SU	2.90	0.57	0.56	0.31	μgm^{-3}
Leeds 1	UC		0.30	0.27	0.34	μgm^{-3}
Lisburn	SU	1.70	1.50	0.92	<1.40	μgm^{-3}
London 2a	UC	<0.21	0.17	0.16	0.13	μgm^{-3}
Manchester	UC	0.54	0.58	0.35	0.32	μgm^{-3}
Middlesbrough	UB	0.43	0.62	0.30	0.25	μgm^{-3}
Newcastle	UC		0.21	0.19	0.23	μgm^{-3}
Newport	SU	0.68	0.63	0.27	0.15	μgm^{-3}
Port Talbot	UI	1.20	0.69	0.56	0.67	μgm^{-3}
Scunthorpe	UI	2.60	0.84	2.50	2.80	μgm^{-3}
Speke	SU			0.21	0.23	μgm^{-3}
Stoke Ferry	Rur		0.11	0.08	0.09	μgm^{-3}

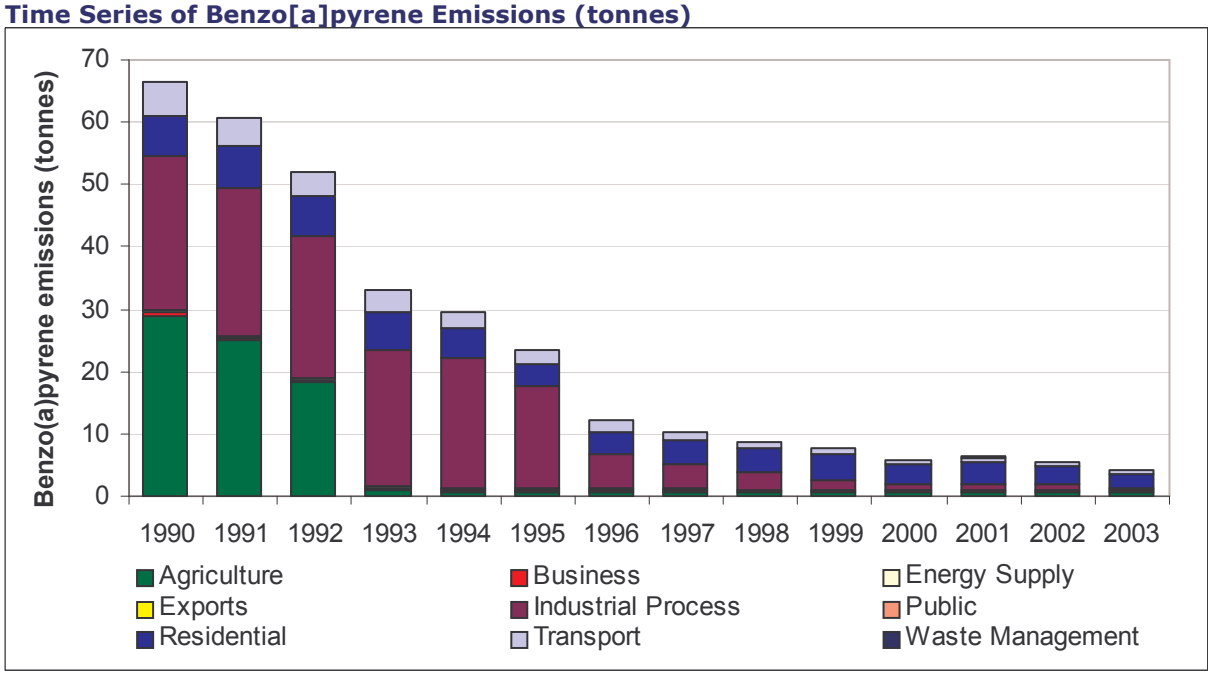
Benzo(a)pyrene 10

Alternative Name: 3,4-Benzopyrene
CAS Number: 50-32-8
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Benzo[a]pyrene Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

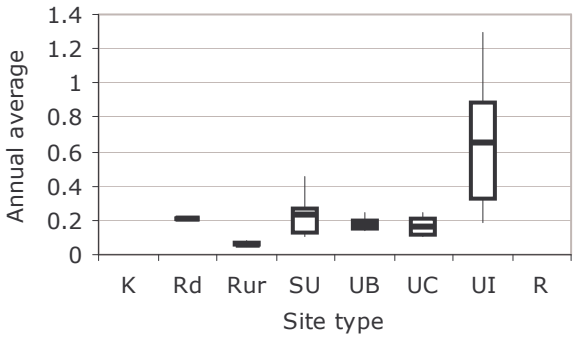
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO						
EPAQS						
AQS	✓					
EAL	✓					
Other	✓					

Benzo(a)pyrene 10

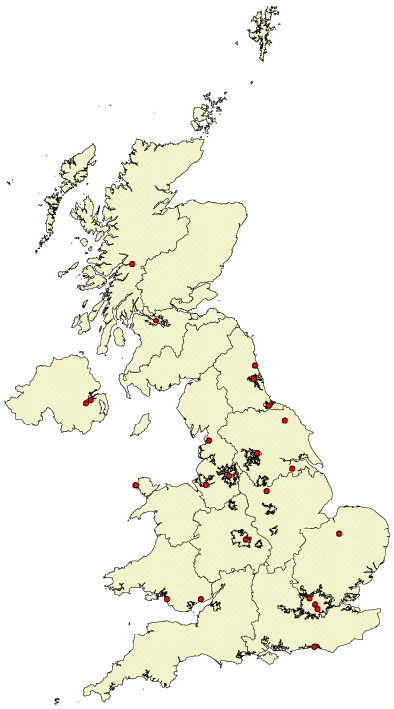
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.2	0.2	0.2	0.2	0.2
Rur	2	0.1	0.1	0.1	0.1	0.1
SU	4	0.2	0.1	0.5	0.1	0.4
UB	3	0.2	0.1	0.2	0.1	0.2
UC	5	0.2	0.1	0.2	0.1	0.2
UI	3	0.7	0.2	1.3	0.2	1.2
R	0					



Benzo(a)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Benzo(a)pyrene 10

Air Quality Monitoring Data

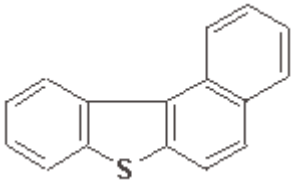
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.2	0.2		0.2	μgm^{-3}
Belfast	SU		0.4	0.1	<0.1	μgm^{-3}
Birmingham 1	UB		0.2	0.1	0.2	μgm^{-3}
Bolsover	SU	0.3	0.3	0.2	0.5	μgm^{-3}
Brent	UB				0.1	μgm^{-3}
Bromley	Rd			0.3	0.2	μgm^{-3}
Glasgow	UC	0.1	0.1	0.1	<0.1	μgm^{-3}
Hazelrigg	Rur	0.1	0.1	0.0	<0.0	μgm^{-3}
High Muffles	Rur	0.0	0.1	0.0	0.0	μgm^{-3}
Holyhead	UI	0.1	0.2		0.1	μgm^{-3}
Hove	UC				0.1	μgm^{-3}
Kinlochleven	SU	2.3	0.3	0.4	0.2	μgm^{-3}
Leeds 1	UC		0.2	0.2	0.2	μgm^{-3}
Lisburn	SU	0.9	1.0	0.7	<1.0	μgm^{-3}
London 2a	UC	<0.1	0.1	0.1	0.1	μgm^{-3}
Manchester	UC	0.2	0.3	0.2	0.2	μgm^{-3}
Middlesbrough	UB	0.3	0.4	0.2	0.2	μgm^{-3}
Newcastle	UC		0.1	0.1	0.2	μgm^{-3}
Newport	SU	0.4	0.4	0.2	0.1	μgm^{-3}
Port Talbot	UI	0.6	0.4	0.3	0.5	μgm^{-3}
Scunthorpe	UI	1.2	0.3	1.4	1.3	μgm^{-3}
Speke	SU			0.1	0.1	μgm^{-3}
Stoke Ferry	Rur	<0.1	0.1	0.1	0.1	μgm^{-3}

Benzo(b)naphtho(2,1,d)thiophene 11

Alternative Name:
CAS Number: 205-43-6
Type of pollutant: Polycyclic Aromatic Hydrocarbon

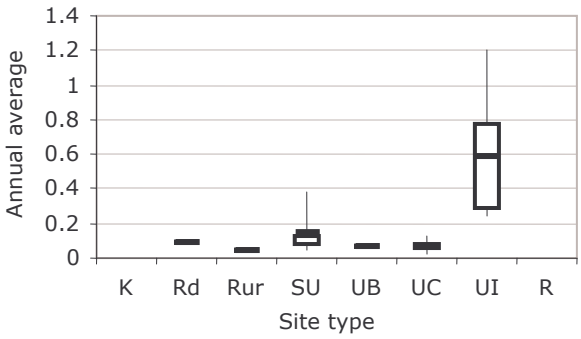
Structure



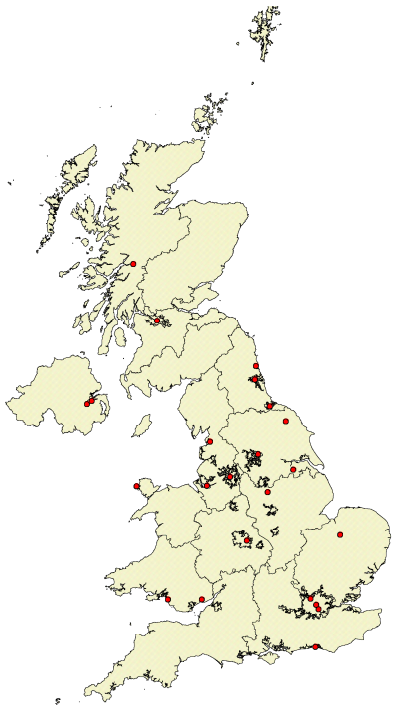
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.1	0.1	0.1	0.1	0.1
Rur	1	0.0	0.0	0.0	0.0	0.0
SU	5	0.2	0.1	0.4	0.1	0.3
UB	2	0.1	0.1	0.1	0.1	0.1
UC	4	0.1	0.0	0.1	0.0	0.1
UI	3	0.6	0.2	1.2	0.3	1.1
R	0					



Benzo(b)naphtho(2,1,d)thiophene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Benzo(b)naphtho(2,1,d)thiophene 11

Air Quality Monitoring Data

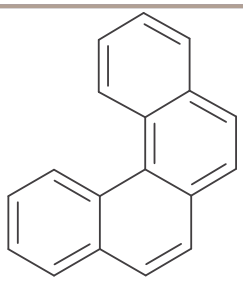
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.3	0.3		0.2	μgm^{-3}
Belfast	SU		1.3	0.6	0.1	μgm^{-3}
Birmingham 1	UB		0.1	0.1	0.1	μgm^{-3}
Bolsover	SU	0.3	0.2	0.3	0.4	μgm^{-3}
Brent	UB				0.1	μgm^{-3}
Bromley	Rd			0.1	0.1	μgm^{-3}
Glasgow	UC	0.1	0.1	0.0	0.0	μgm^{-3}
Holyhead	UI	0.1	0.1		0.1	μgm^{-3}
Hove	UC				0.1	μgm^{-3}
Kinlochleven	SU	1.4	0.1	0.1	0.1	μgm^{-3}
Leeds 1	UC		0.1	0.1	0.1	μgm^{-3}
Lisburn	SU	0.6	0.7	0.4	<0.5	μgm^{-3}
London 2a	UC	0.1	0.1	0.1	0.1	μgm^{-3}
Newcastle	UC		0.1	0.1	<0.1	μgm^{-3}
Newport	SU	0.3	0.3	0.2	0.1	μgm^{-3}
Port Talbot	UI	0.6	0.4	0.3	0.3	μgm^{-3}
Scunthorpe	UI	1.0	0.4	1.1	1.2	μgm^{-3}
Speke	SU			0.1	0.1	μgm^{-3}
Stoke Ferry	Rur		0.0	0.0	0.0	μgm^{-3}

Benzo(c)phenanthrene 12

Alternative Name:
CAS Number: 195-19-7
Type of pollutant: Polycyclic Aromatic Hydrocarbon

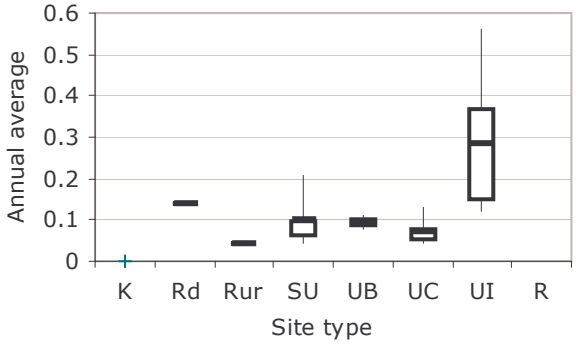
Structure



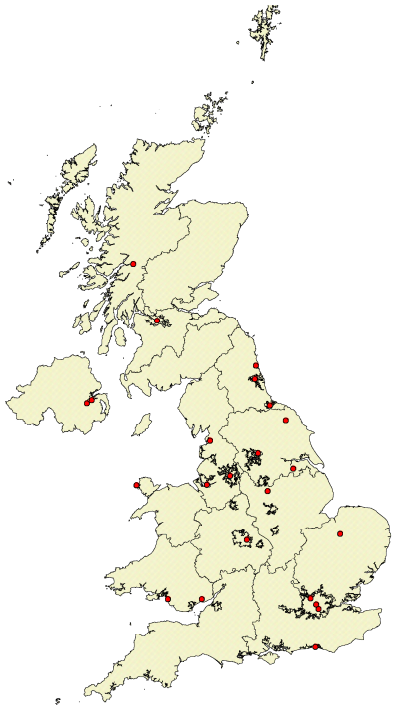
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
R	0					
UI	3	0.3	0.1	0.6	0.1	0.5
UC	4	0.1	0.0	0.1	0.1	0.1
UB	2	0.1	0.1	0.1	0.1	0.1
SU	5	0.1	0.0	0.2	0.1	0.2
Rur	1	0.1	0.1	0.1	0.1	0.1
Rd	1	0.1	0.1	0.1	0.1	0.1
K	0					



Benzo(c)phenanthrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

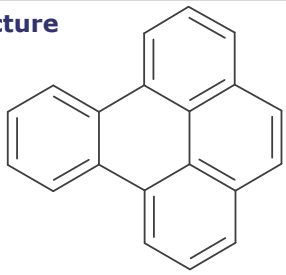
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.1	0.1		0.1	µgm^{-3}
Belfast	SU		0.3	0.1	0.0	µgm^{-3}
Birmingham 1	UB		0.1	0.1	0.1	µgm^{-3}
Bolsover	SU	0.2	0.2	0.2	0.2	µgm^{-3}
Brent	UB				0.1	µgm^{-3}
Bromley	Rd			0.2	0.1	µgm^{-3}
Glasgow	UC	0.1	0.1	0.1	0.0	µgm^{-3}
Holyhead	UI	0.1	0.2		0.1	µgm^{-3}
Hove	UC				0.1	µgm^{-3}
Kinlochleven	SU	0.8	0.2	0.2	0.1	µgm^{-3}
Leeds 1	UC		0.1	0.1	0.1	µgm^{-3}
Lisburn	SU	0.5	0.4	0.3	<0.4	µgm^{-3}
London 2a	UC	0.1	0.1	0.1	0.1	µgm^{-3}
Newcastle	UC		0.1	0.1	<0.1	µgm^{-3}
Newport	SU	0.2	0.3	0.1	0.1	µgm^{-3}
Port Talbot	UI	0.3	0.2	0.2	0.2	µgm^{-3}
Scunthorpe	UI	0.5	0.3	0.5	0.6	µgm^{-3}
Speke	SU			0.1	0.1	µgm^{-3}
Stoke Ferry	Rur		0.1	0.0	0.0	µgm^{-3}

Benzo(e)pyrene 13

Alternative Name: 5,6-benzopyrene
CAS Number: 192-97-2
Type of pollutant: Polycyclic Aromatic Hydrocarbon

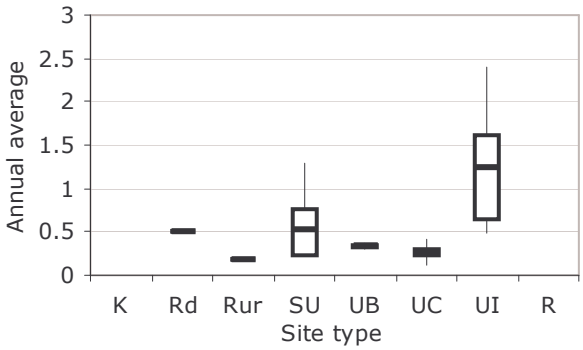
Structure



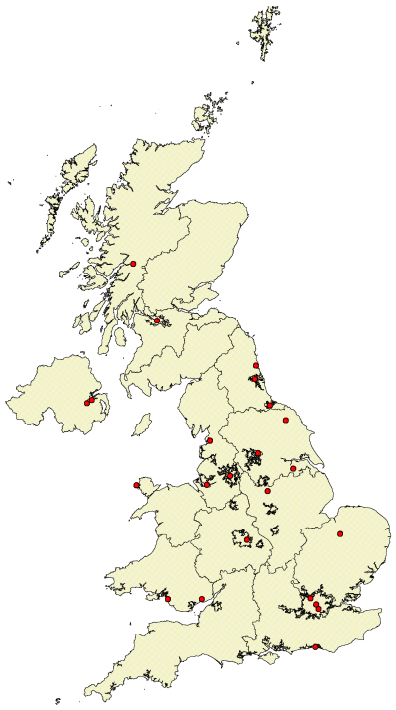
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.5	0.5	0.5	0.5	0.5
Rur	1	0.2	0.2	0.2	0.2	0.2
SU	6	0.5	0.2	1.3	0.2	1.2
UB	2	0.3	0.3	0.4	0.3	0.4
UC	5	0.3	0.1	0.4	0.1	0.4
UI	3	1.2	0.5	2.4	0.5	2.2
R	0					



Benzo(e)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

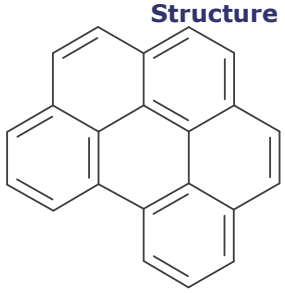
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.45	0.62		0.49	µgm^{-3}
Belfast	SU		1.30	0.52	0.22	µgm^{-3}
Birmingham 1	UB		0.34	0.29	0.36	µgm^{-3}
Bolsover	SU	0.59	0.67	0.58	0.92	µgm^{-3}
Brent	UB				0.31	µgm^{-3}
Bromley	Rd			0.51	0.50	µgm^{-3}
Glasgow	UC	0.23	0.20	0.24	0.11	µgm^{-3}
Holyhead	UI	0.20	0.27		0.26	µgm^{-3}
Hove	UC				0.22	µgm^{-3}
Kinlochleven	SU	5.00	0.37	0.36	0.23	µgm^{-3}
Leeds 1	UC		0.37	0.38	0.42	µgm^{-3}
Lisburn	SU	1.40	1.50	0.95	1.30	µgm^{-3}
London 2a	UC	0.28	0.27	0.27	0.26	µgm^{-3}
Newcastle	UC		0.28	0.28	0.30	µgm^{-3}
Newport	SU	0.54	0.66	0.32	0.24	µgm^{-3}
Port Talbot	UI	1.00	0.76	0.55	0.82	µgm^{-3}
Scunthorpe	UI	1.50	0.70	2.00	2.40	µgm^{-3}
Speke	SU			0.29	0.29	µgm^{-3}
Stoke Ferry	Rur		0.18	0.15	0.18	µgm^{-3}

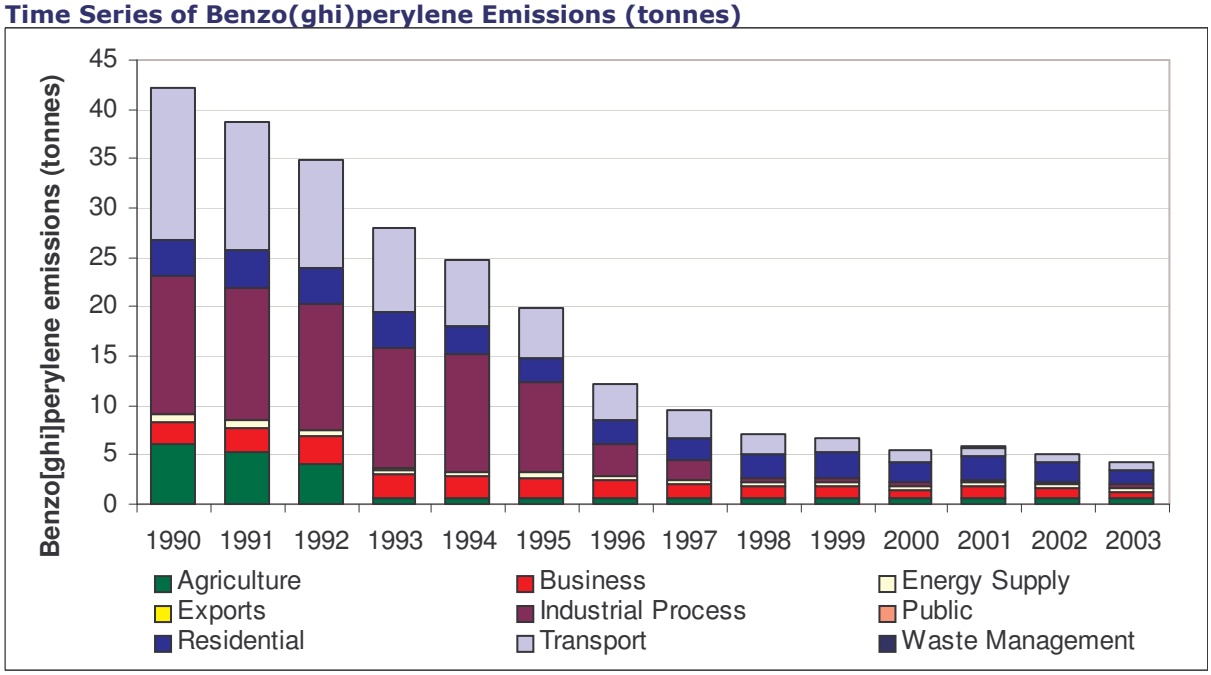
Benzo(ghi)perylene 14

Alternative Name: 1,12-Benzoperylene
CAS Number: 191-24-2
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Benzo(ghi)perylene Emissions (tonnes)



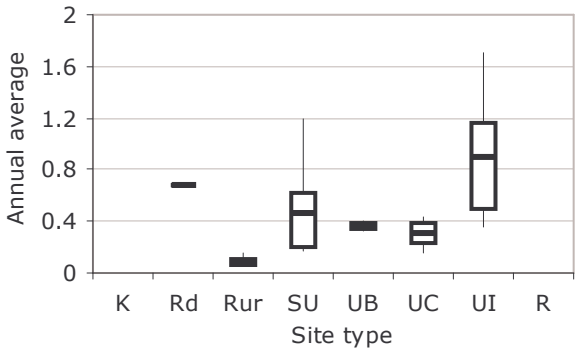
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

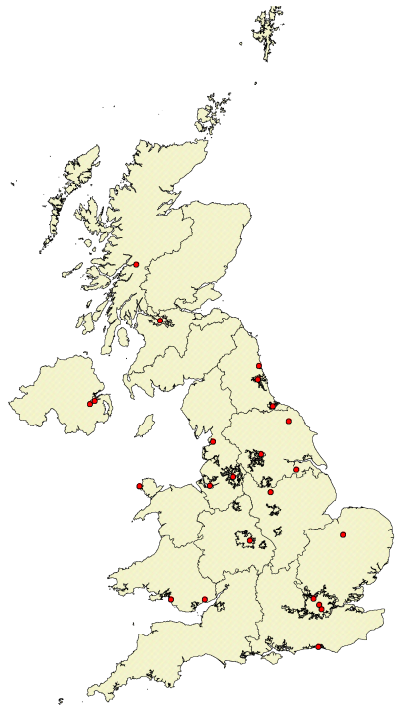
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.7	0.7	0.7	0.7	0.7
Rur	3	0.1	0.1	0.2	0.1	0.1
SU	6	0.5	0.2	1.2	0.2	1.1
UB	3	0.4	0.3	0.4	0.3	0.4
UC	6	0.3	0.2	0.4	0.2	0.4
UI	3	0.9	0.4	1.7	0.4	1.6
R	0					



Benzo(ghi)perylene Annual Average Boxplot

Benzo(ghi)perylene 14



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

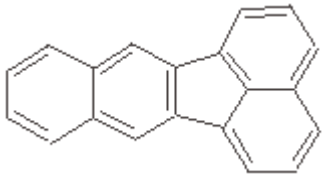
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.41	0.42		0.36	μgm^{-3}
Belfast	SU		0.89	0.38	0.17	μgm^{-3}
Birmingham 1	UB		0.47	0.35	0.41	μgm^{-3}
Bolsover	SU	0.53	0.54	0.46	0.72	μgm^{-3}
Brent	UB				0.36	μgm^{-3}
Bromley	Rd			0.86	0.68	μgm^{-3}
Glasgow	UC	0.37	0.35	0.32	0.15	μgm^{-3}
Hazelrigg	Rur	<0.10	0.11	0.07	0.07	μgm^{-3}
High Muffles	Rur	<0.07	0.07	0.06	0.06	μgm^{-3}
Holyhead	UI	0.20	0.29		0.23	μgm^{-3}
Hove	UC				0.22	μgm^{-3}
Kinlochleven	SU	3.30	0.40	0.35	0.20	μgm^{-3}
Leeds 1	UC		0.48	0.42	0.43	μgm^{-3}
Lisburn	SU	1.40	0.62	0.85	1.20	μgm^{-3}
London 2a	UC	0.53	0.35	0.33	0.29	μgm^{-3}
Manchester	UC	0.50	0.58	0.30	0.41	μgm^{-3}
Middlesbrough	UB	0.40	0.53	0.27	0.33	μgm^{-3}
Newcastle	UC		0.28	0.31	0.33	μgm^{-3}
Newport	SU	0.54	0.62	0.29	0.20	μgm^{-3}
Port Talbot	UI	0.86	0.67	0.46	0.62	μgm^{-3}
Scunthorpe	UI	1.50	0.68	1.60	1.70	μgm^{-3}
Speke	SU			0.31	0.29	μgm^{-3}
Stoke Ferry	Rur	0.12	0.15	0.13	0.15	μgm^{-3}

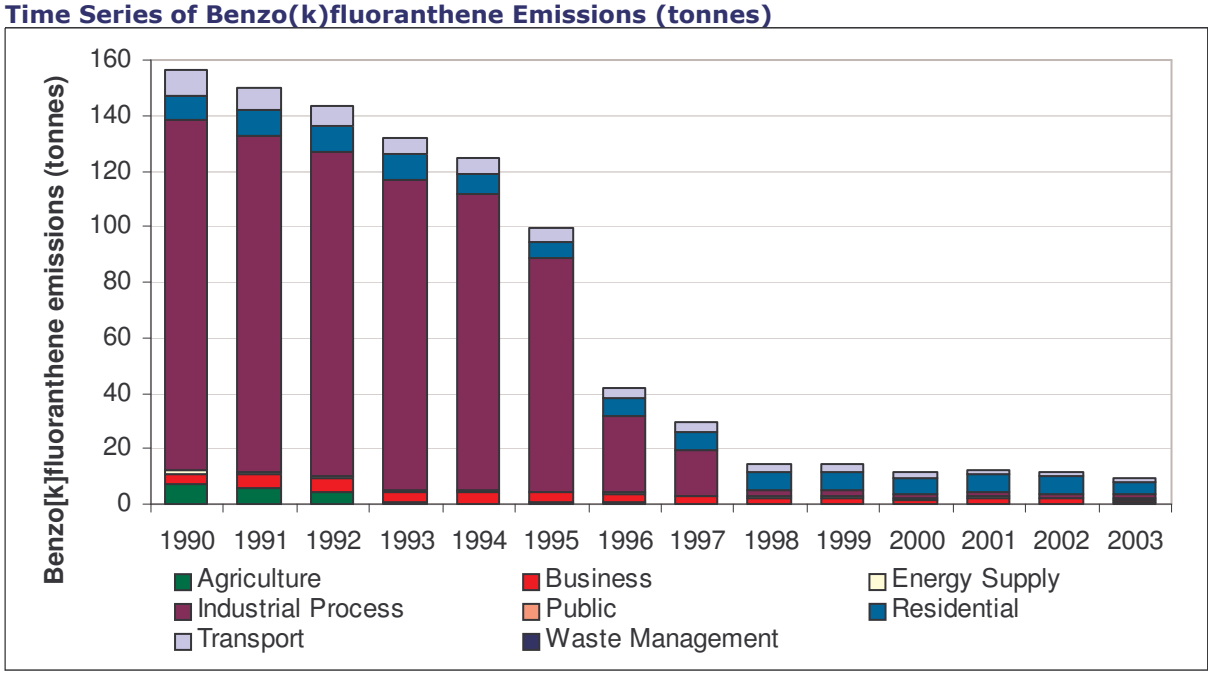
Benzo(k)fluoranthene 15

Alternative Name:
CAS Number: 207-08-9
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Benzo(k)fluoranthene Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

No data between 2000-2003. Monitoring re-started in 2004

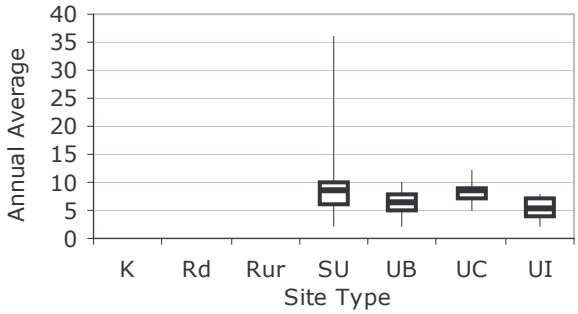
Black Smoke 16

Alternative Name: Smoke, Smoke stain reflectance
CAS Number:
Type of pollutant: Particulate Matter

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

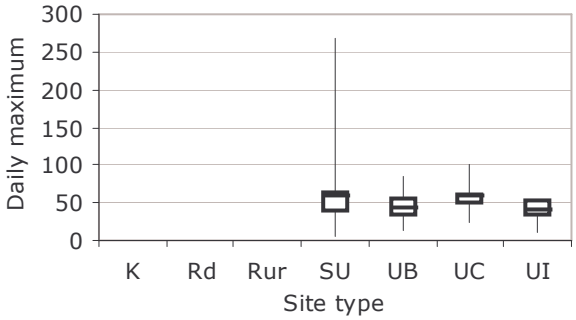
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	0					
Rur	0					
SU	57	8.5	2.0	36.0	3.6	16.6
UB	30	6.5	2.0	10.0	3.0	9.6
UC	9	8.4	5.0	12.0	5.8	11.2
UI	3	5.3	2.0	8.0	2.4	7.8



Black Smoke annual Average Boxplot

Non-automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	0					
Rur	0					
SU	57	58.0	6.0	268.0	16.4	128.4
UB	30	43.1	12.0	86.0	16.9	68.7
UC	9	57.3	25.0	102.0	26.2	100.4
UI	3	38.7	11.0	53.0	15.1	52.9



Black Smoke Daily Maximum Boxplot

Black Smoke 16

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Smoke and SO_2 Network

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
ABERDEEN 3	SU	4	4	3	4	38	78	21	25	μgm^{-3}
ACCRINGTON 5	UB	9	10	7		34	63	40		μgm^{-3}
ACKWORTH 1	SU	7	9	8	9	37	49	67	74	μgm^{-3}
ALFRETON 4	SU	8	9	8	12	63	85	56	67	μgm^{-3}
ANTRIM 1	SU				13				124	μgm^{-3}
ARMADALE 2	UI	2	2	2	2	5	17	15	11	μgm^{-3}
ARMAGH 1	UB	7		13		67		57		μgm^{-3}
ASHTON-IN-MAKERFIELD 1			3	2			7	5		μgm^{-3}
ASHTON-UNDER-LYNE 8	UB	9	9	7	5	59	91	26	21	μgm^{-3}
BACUP 5	UB	9	8	5		59	33	22		μgm^{-3}
BALLINGRY 2		1				5				μgm^{-3}
BALLYMENA 3		7				118				μgm^{-3}
BALLYMENA 5	SU				11				25	μgm^{-3}
BALLYMENA 6	SU			10	11			39	28	μgm^{-3}
BALLYMONEY 4	SU		17	14	13		303	347	204	μgm^{-3}
BANGOR (CO DOWN) 5	SU		16	17	16		158	110	90	μgm^{-3}
BARNSLEY 12	UB	6	6	7	7	31	43	62	41	μgm^{-3}
BARNSLEY 13		7				38				μgm^{-3}
BARNSLEY 8	SU	11	12	12		63	68	91		μgm^{-3}
BATH 6	SU		8	6	10		34	34	44	μgm^{-3}
BELFAST 12	UB	9	10	8	9	50	113	90	70	μgm^{-3}
BELFAST 13	UB	9	10	7	7	48	112	61	43	μgm^{-3}
BELFAST 33	UI	12	13	9	8	68	124	51	52	μgm^{-3}
BELFAST 42	SU	10	10	7	8	88	92	40	64	μgm^{-3}
BELFAST 44	UC	9	6	6	5	68	55	43	25	μgm^{-3}
BELFAST 45	UB	8	9	6	7	51	113	51	38	μgm^{-3}
BELFAST 46	SU	6	6	5	4	79	43	31	25	μgm^{-3}
BIRCOTES 1	SU	7	8	7	7	38	85	108	55	μgm^{-3}
BLACKPOOL 6	SU	7	7	5	6	54	47	43	34	μgm^{-3}
BLETCHLEY 2		4	5			20	43			μgm^{-3}

Annual Data statistics - Smoke and SO_2 Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
BOLSOVER 5		7				37				µgm^{-3}
BOLTON 24	UC	8	9	6	7	52	98	27	52	µgm^{-3}
BRADFORD 6	UC	14	13	9		43	71	53		µgm^{-3}
BRAMPTON 1	SU	8	10	8	8	119	86	87	55	µgm^{-3}
BRIDGWATER 3	UB	4	4		3	48	36		16	µgm^{-3}
BRISTOL 26	SU	6	4	3	5	52	38	12	29	µgm^{-3}
BURNLEY 12	UB	7	8			40	51			µgm^{-3}
BURTON-UPON-TRENT 13		8				42				µgm^{-3}
BUSHMILLS 1	SU				36				268	µgm^{-3}
CARDIFF 12	SU	8	9	6	8	55	40	28	37	µgm^{-3}
CARLISLE 13		10				68				µgm^{-3}
CARLISLE 14		7				30				µgm^{-3}
CASTLE DONINGTON 1			9				46			µgm^{-3}
CASTLEFORD 11	SU	10	12	9	11	54	84	84	64	µgm^{-3}
CHEADLE & GATLEY 6	UB	4	5	5	7	13	33	28	61	µgm^{-3}
CHORLEY 6	UB	10	12	8		79	122	34		µgm^{-3}
COALVILLE 5	SU				2				10	µgm^{-3}
COATBRIDGE 11	UC			7	8			82	60	µgm^{-3}
COATBRIDGE 12	SU			5	6			50	48	µgm^{-3}
COLERAINE 3	SU				10				55	µgm^{-3}
COOKSTOWN 1	SU				19				98	µgm^{-3}
COWDENBEATH 1	SU	2	2	2	2	7	4	4	6	µgm^{-3}
CROSBY 3	SU	4	5	5		24	44	29		µgm^{-3}
CUDWORTH 2	UB	10	10	9	9	37	70	69	44	µgm^{-3}
DARLINGTON 13	UB	9	5	3	5	29	36	15	52	µgm^{-3}
DERBY 24	UB	8	10	9	8	34	60	39	31	µgm^{-3}
DEWSBURY 12	SU	6	7	7	7	46	52	49	41	µgm^{-3}
DINNINGTON 4		6	7	6		30	61	31		µgm^{-3}
DUDLEY 2	SU		6	6	6		36	41	41	µgm^{-3}
DUNGANNON 1	SU			9	5			50	24	µgm^{-3}
DUNMURRY 2		8				76				µgm^{-3}
DUNMURRY 3	SU	11	11		8	81	185		82	µgm^{-3}
EASTBOURNE 5		2				16				µgm^{-3}
ELLAND 2	UB	9	10		10	43	59		42	µgm^{-3}
ELLESMERE PORT 12	UB	5	7	6	8	32	61	26	57	µgm^{-3}
ENFIELD 14	SU	8	8	4	4	54	70	23	9	µgm^{-3}
FARNWORTH 8	SU	9	9	16	9	56	50	42	56	µgm^{-3}
FEATHERSTONE 1	SU	8	10	8		37	50	67		µgm^{-3}
GLASGOW 20		5				21				µgm^{-3}
GLASGOW 51	SU	4	8	7	8	42	177	63	60	µgm^{-3}
GLASGOW 69	UB		8	7			191	130		µgm^{-3}
GLASGOW 73	UI	5	9	6		53	557	44		µgm^{-3}
GLASGOW 95	UB	5	8	7	7	46	178	114	62	µgm^{-3}
GLASGOW 98	SU	6			10	47			55	µgm^{-3}
GLOUCESTER 4	UB	5	7	5	6	55	53	42	34	µgm^{-3}
GOLDTHORPE 1	UB	8	9	8		46	76	73		µgm^{-3}
GREENWICH 9	UB	6	7	7	7	22	38	24	37	µgm^{-3}
GRIMETHORPE 2		9				48				µgm^{-3}
HALIFAX 16	UC		19				90			µgm^{-3}
HATTON 1		3				14				µgm^{-3}
HEMSWORTH 3	UB	7	8	8	10	31	49	58	45	µgm^{-3}
HOLMFIRTH 5	UB		7	6	6		84	34	32	µgm^{-3}
HOLYWOOD 1	SU		6	6			30	35		µgm^{-3}
HORWICH 1	UB	7	7	14		37	36	38		µgm^{-3}
HUDDERSFIELD 19	UC	9	8	8	9	43	49	52	98	µgm^{-3}
ILFORD 6	UC	10	11	8	10	63	58	41	56	µgm^{-3}
KEADY 1			8	16			71	43		µgm^{-3}
KEIGHLEY 11	UB			8				59		µgm^{-3}
KIRKCALDY 6	SU		4	4	4		30	28	18	µgm^{-3}

Annual Data statistics - Smoke and SO2 Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
KIRKINTILLOCH 10	SU	4		5	5	47		56	50	µgm^{-3}
KIRKINTILLOCH 8	SU	6	6	5	6	55	102	62	62	µgm^{-3}
KIRKINTILLOCH 9	SU	6	7	6	6	66	106	71	64	µgm^{-3}
KNOTTINGLEY 3	SU	8	10	8	11	34	63	66	47	µgm^{-3}
LARNE 3		11	9			59	79			µgm^{-3}
LARNE 4	SU				6				51	µgm^{-3}
LARNE 5	SU				7				43	µgm^{-3}
LEICESTER 19	UC	7	16			40	52			µgm^{-3}
LEIGH 4			3	2			11	5		µgm^{-3}
LINCOLN 5	UB	6	7	5	5	34	62	33	25	µgm^{-3}
LISBURN 3	SU	11	16	10	9	118	221	138	109	µgm^{-3}
LIVERPOOL 16		8				30				µgm^{-3}
LONDON CITY 16	UC	9	11	8	7	56	40	28	28	µgm^{-3}
LONDONDERRY 14	SU			6				25		µgm^{-3}
LONGSIDE 1		5				12				µgm^{-3}
LUNDWOOD (BARNSLEY) 1		10				42				µgm^{-3}
LUNDWOOD (BARNSLEY) 2	SU		11	12	12		48	110	71	µgm^{-3}
MAGHERAFELT 1	SU	11	9	7	9	62	76	55	61	µgm^{-3}
MALTBY 2		10	7	6		34	31	33		µgm^{-3}
MANCHESTER 11	UC	7	15	13	12	49	102	49	102	µgm^{-3}
MANCHESTER 15	UI	9	10	7	6	45	99	41	53	µgm^{-3}
MANCHESTER 21	SU	9	9	7	7	51	79	45	55	µgm^{-3}
MANSFIELD 10	UB	8	8			35	75			µgm^{-3}
MANSFIELD WOODHOUSE 2	SU	8	7	6	5	38	32	37	37	µgm^{-3}
MIDDLETON 3	SU	9	9			55	95			µgm^{-3}
MOIRA (LEICS) 1			10				70			µgm^{-3}
NEW OLLERTON 2	SU	8	8	6	7	48	37	39	39	µgm^{-3}
NEWBURN 2		4				22				µgm^{-3}
NEWBURN 3	SU			11	11			50	60	µgm^{-3}
NEWCASTLE UPON TYNE 24	SU		5	5	5		48	60	63	µgm^{-3}
NEWCASTLE UPON TYNE 27	UC	8	8	7	9	29	76	46	47	µgm^{-3}
NEWPORT (MON) 26	UB	7	8	6	7	40	48	27	38	µgm^{-3}
NEWRY 3	UB	10	11	8	3	142	164	68	60	µgm^{-3}
NEWTOWNABBEY 1		14	9			70	68			µgm^{-3}
NEWTOWNABBEY 2		15	10			96	91			µgm^{-3}
NEWTOWNABBEY 3	SU			6				44		µgm^{-3}
NEWTOWNABBEY 4	SU			7	8			54	59	µgm^{-3}
NEYLAND 1		3	5			20	20			µgm^{-3}
NORMANTON 4	SU	5	7	8	10	26	53	66	50	µgm^{-3}
NORWICH 7	UB	5	6		4	46	51		27	µgm^{-3}
NOTTINGHAM 20		8	9			36	45			µgm^{-3}
OLDHAM 13	SU	11		13		25		27		µgm^{-3}
PETERHEAD 1		5				14				µgm^{-3}
PETERHEAD 2		2				6				µgm^{-3}
PETERHEAD 3		2				5				µgm^{-3}
PONTEFRACT 10	SU	5	7	6	8	27	39	51	45	µgm^{-3}
PORTADOWN 4			8				67			µgm^{-3}
PORTSMOUTH 10		5	5			55	36			µgm^{-3}
RAWTENSTALL 7	UB	12	14	5	8	72	74	49	86	µgm^{-3}
RETFORD 3	UB	5	8	6	7	34	81	41	47	µgm^{-3}
ROWLEY REGIS 3	SU	5	8	7		38	57	36		µgm^{-3}
RUNCORN 10		9	12	10		66	80	43		µgm^{-3}
SCARBOROUGH 1	UB		9	7			53	53		µgm^{-3}
SEDGLEY 5		13	19			40	71			µgm^{-3}
SELBY 5	UB	4	7	3	4	28	52	39	18	µgm^{-3}
SLOUGH 16	SU	8	7	7		36	28	23		µgm^{-3}
SOUTH KIRKBY 1	SU	9	13	12	12	62	104	81	58	µgm^{-3}
SOUTH NORMANTON 2		7	8			42	52			µgm^{-3}
ST HELENS 36	UB	6	8	7	9	31	71	44	64	µgm^{-3}

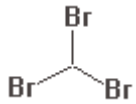
Annual Data statistics - Smoke and SO2 Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
ST HELENS 43	UB	8	8	6	7	78	79	36	49	μgm^{-3}
STIRLING (BURGH) 5		4				35				μgm^{-3}
STOKE-ON-TRENT 20	UB	10	11			57	61			μgm^{-3}
STRABANE 2	SU	27	34	27	21	129	249	172	146	μgm^{-3}
SWINDON 2	SU	5	6	5	6	39	40	28	46	μgm^{-3}
THURROCK 13	SU	6	7	6	6	51	51	26	26	μgm^{-3}
TRAFFORD 1	SU	4	5	4	5	39	47	30	51	μgm^{-3}
TWINBROOK 1	SU		11	7			209	46		μgm^{-3}
WAKEFIELD 26		12	15			59	90			μgm^{-3}
WALSALL 18	UB	7	8	8		33	51	27		μgm^{-3}
WARRINGTON 17	UB	9	10	8	9	67	67	48	67	μgm^{-3}
WATH-UPON-DEARNE 6	UB	7	8	7	7	34	80	76	50	μgm^{-3}
WEDNESFIELD 2	SU	5	6	4	5	30	56	20	46	μgm^{-3}
WEST KIRBY 2	SU	3	3	2	2	12	30	14	25	μgm^{-3}
WESTMINSTER 17	UC			8				36		μgm^{-3}
WHITBURN 3	UB	2		3	2	14		30	12	μgm^{-3}
WHITEHAVEN 5		2	2			17	28			μgm^{-3}
WIGAN 8			3	2			9	5		μgm^{-3}
WOMBWELL 2		9				40				μgm^{-3}
WOOLWICH 9	SU	5	6	6	6	25	45	28	28	μgm^{-3}
WORKINGTON 3	UB	4			3	28			23	μgm^{-3}
WORKSOP 12	UC			7	9			44	48	μgm^{-3}
WORSBROUGH BRIDGE 2		6				35				μgm^{-3}
WREXHAM 10	SU	6	5	4		26	32	26		μgm^{-3}

Bromoform $CHBr_3$ 17

Alternative Name: Tribromomethane
CAS Number: 75-25-2
Type of pollutant: Trace Gas

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Background and Average

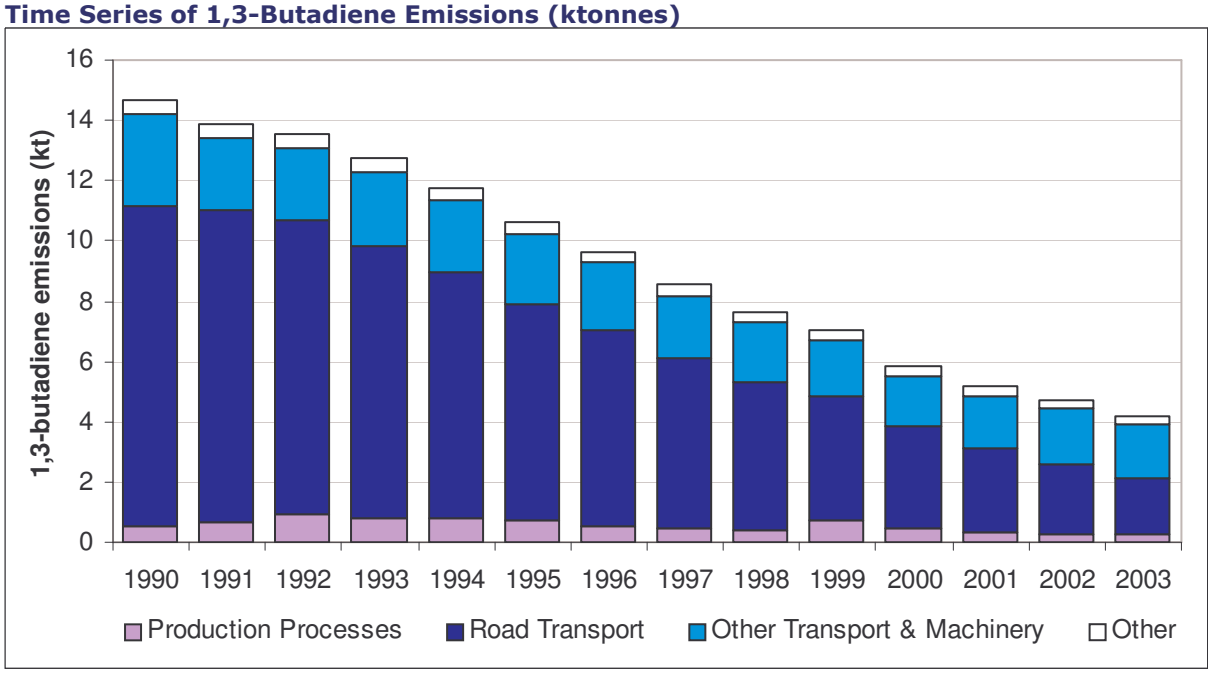
Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	05/2001	12	13	ngm^{-3}
Mace Head	R	06/2001	15	18	ngm^{-3}
Mace Head	R	07/2001	14	15	ngm^{-3}
Mace Head	R	08/2001	13	14	ngm^{-3}
Mace Head	R	09/2001	17	20	ngm^{-3}
Mace Head	R	10/2001	13	15	ngm^{-3}
Mace Head	R	11/2001	7	8	ngm^{-3}
Mace Head	R	12/2001	4	5	ngm^{-3}
Mace Head	R	01/2002	4	5	ngm^{-3}
Mace Head	R	02/2002	5	6	ngm^{-3}
Mace Head	R	03/2002	7	10	ngm^{-3}
Mace Head	R	04/2002	10	12	ngm^{-3}
Mace Head	R	05/2002	10	13	ngm^{-3}
Mace Head	R	06/2002	10	12	ngm^{-3}
Mace Head	R	07/2002	12	14	ngm^{-3}
Mace Head	R	08/2002	13	21	ngm^{-3}
Mace Head	R	09/2002	11	16	ngm^{-3}
Mace Head	R	10/2002	10	13	ngm^{-3}
Mace Head	R	11/2002	8	10	ngm^{-3}
Mace Head	R	12/2002	5	7	ngm^{-3}
Mace Head	R	01/2003	5	6	ngm^{-3}
Mace Head	R	02/2003	5	10	ngm^{-3}
Mace Head	R	03/2003	8	10	ngm^{-3}
Mace Head	R	04/2003	9	15	ngm^{-3}
Mace Head	R	05/2003	11	17	ngm^{-3}
Mace Head	R	06/2003	8	9	ngm^{-3}
Mace Head	R	07/2003	9	13	ngm^{-3}
Mace Head	R	08/2003	10	15	ngm^{-3}
Mace Head	R	09/2003	11	15	ngm^{-3}
Mace Head	R	10/2003	10	11	ngm^{-3}
Mace Head	R	11/2003	10	11	ngm^{-3}
Mace Head	R	12/2003	8	10	ngm^{-3}

1,3-butadiene C_4H_6 18

Alternative Name: Buta-1,3-diene
CAS Number: 106-99-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Time Series of 1,3-Butadiene Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS	✓					
EAL	✓					
Other						

1,3-butadiene C_4H_6 18

Summary of Air Quality Data in 2003

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

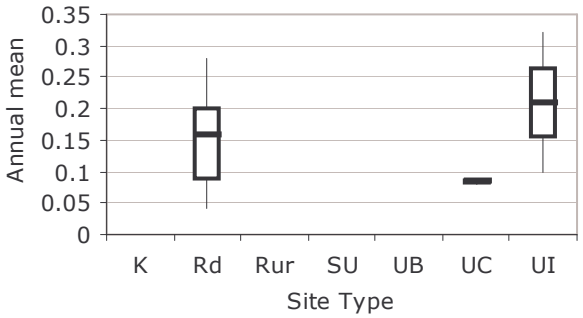
Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0.2				4.6				μgm^{-3}
Birmingham East	UB	0.3				10.9				μgm^{-3}
Bristol East	UB	0.3				5.2				μgm^{-3}
Cardiff Centre	UC				0.2				5.5	μgm^{-3}
Cardiff East	UB	0.3	0.3			5.6	4.7			μgm^{-3}
Edinburgh Med. Sch.	UB	0.1	0.2			3.8	6.3			μgm^{-3}
Glasgow Kerbside	K				0.4				12.7	μgm^{-3}
Harwell	Rur	0.1	0.1	0.0	0.0	2.0	2.2	1.3	0.6	μgm^{-3}
Leeds Potternewton	UB	0.3				4.1				μgm^{-3}
Liverpool Speke	UB	0.3				18.1				μgm^{-3}
London Eltham	SU	0.3				3.4				μgm^{-3}
London Marylebone Road	K	1.6	1.1	1.0	0.6	7.7	7.7	3.9	2.8	μgm^{-3}
London UCL	Rd	0.4				6.5				μgm^{-3}
Middlesbrough	UI	0.2				17.6				μgm^{-3}
Southampton Centre	UC	0.5				19.9				μgm^{-3}

1,3-butadiene C_4H_6 18

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

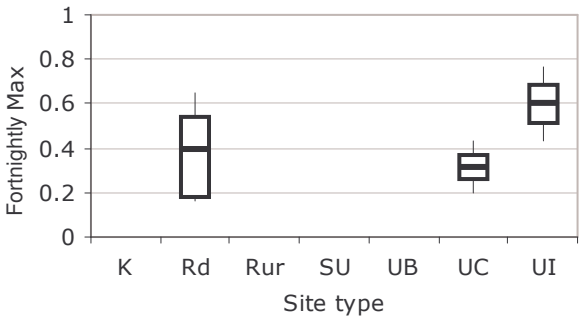
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	5	0.2	0.0	0.3	0.1	0.3
Rur	0					
SU	0					
UB	0					
UC	2	0.1	0.1	0.1	0.1	0.1
UI	2	0.2	0.1	0.3	0.1	0.3



1,3-butadiene Diffusion Tubes Annual Average Boxplot

Non-automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	5	0.4	0.2	0.7	0.2	0.6
Rur	0					
SU	0					
UB	0					
UC	2	0.3	0.2	0.4	0.2	0.4
UI	2	0.6	0.4	0.8	0.5	0.8



1,3-butadiene Diffusion Tubes Fortnightly Maximum Boxplot

Air quality non-automatic monitoring site map in 2003

1,3-butadiene C_4H_6 18

Air Quality Monitoring Data

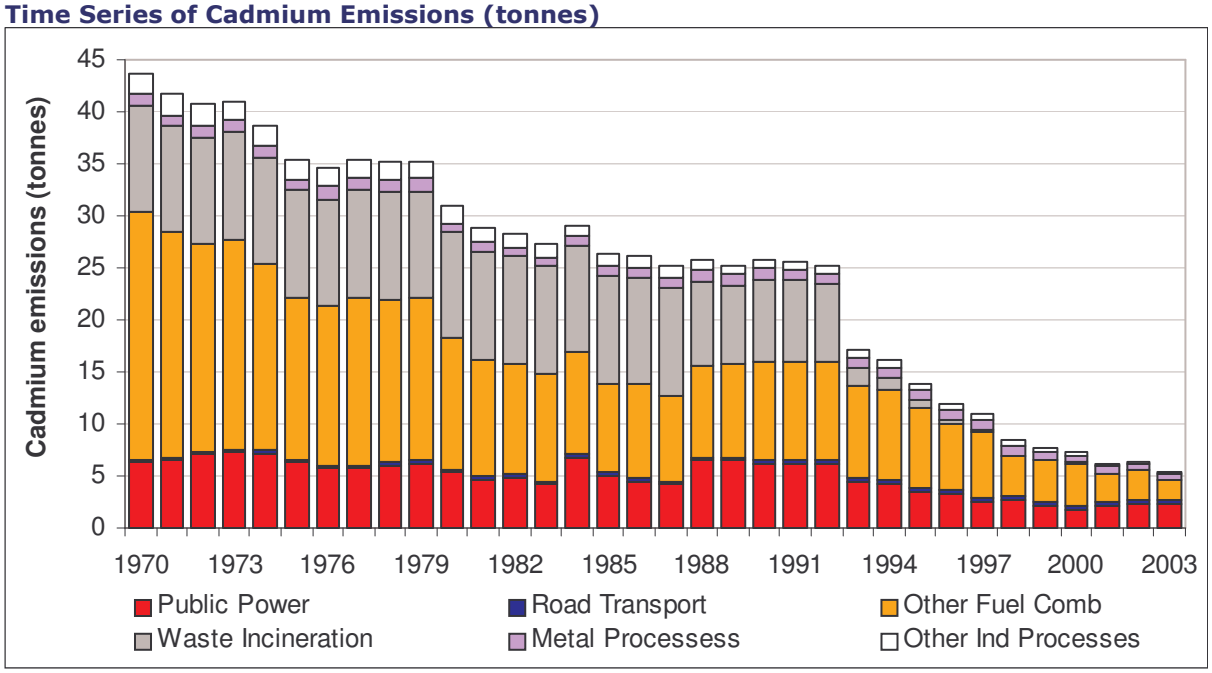
Annual Data statistics - Non-Automatic Hydrocarbon Network

Site Name	Site Type	Annual Mean				Annual Max (2-week)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast Centre	UC				0.1				0.4	μgm^{-3}
Belfast Roadside	Rd				0.1				0.2	μgm^{-3}
Birmingham Roadside	Rd				0.3				0.7	μgm^{-3}
Bristol Old Market	Rd				0.2				0.5	μgm^{-3}
Grangemouth	UI				0.3				0.8	μgm^{-3}
Haringey Roadside	Rd				0.0				0.2	μgm^{-3}
Leeds Centre	UC				0.1				0.2	μgm^{-3}
Leeds Roadside	Rd				0.2				0.5	μgm^{-3}
Middlesbrough	UI				0.1				0.4	μgm^{-3}

Cadmium Cd 19

Alternative Name:
CAS Number: 7440-43-9
Type of pollutant: Trace Metal

Time Series of Cadmium Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

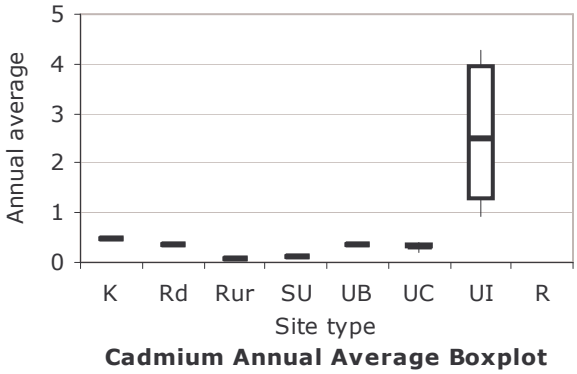
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO	✓					
EPAQS						
AQS						
EAL	✓					
Other			✓			

Cadmium Cd 19

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	0.5	0.5	0.5	0.5	0.5
Rd	1	0.4	0.4	0.4	0.4	0.4
Rur	1	0.1	0.1	0.1	0.1	0.1
SU	1	0.1	0.1	0.1	0.1	0.1
UB	1	0.4	0.4	0.4	0.4	0.4
UC	5	0.3	0.2	0.4	0.2	0.4
UI	7	2.5	0.9	4.3	1.0	4.3
R	0					



Cadmium Annual Average Boxplot

Air quality monitoring site map in 2003

Cadmium Cd 19

Air Quality Monitoring Data

Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Avesta Polarit, Rotherham	UI			0.9	0.9	ngm^{-3}
Brookside	UI				4.3	ngm^{-3}
Brookside, Bilston Lane	UI			5.1	4.3	ngm^{-3}
BZL, Avonmouth	UI			8.3	1.8	ngm^{-3}
BZL, Hallen	UI			13.1	3.6	ngm^{-3}
Cardiff	UC				0.4	ngm^{-3}
Central London	UC			0.4	0.4	ngm^{-3}
Elswick (6), Newcastle	UI			3.7		ngm^{-3}
Eskdalemuir	Rur	0.3	0.1	0.1	0.1	ngm^{-3}
Glasgow	UC		0.4	0.2		ngm^{-3}
IMI (2) Refiners, Walsall	UI				1.4	ngm^{-3}
Leeds	UC	0.5	0.5	0.5	0.3	ngm^{-3}
London Brent	UB	0.3	0.5	0.9	0.4	ngm^{-3}
London Cromwell Road	Rd	0.5	0.6	0.3	0.4	ngm^{-3}
London Marylebone Road	K	0.4	0.6	0.4	0.5	ngm^{-3}
Manchester	UC				0.3	ngm^{-3}
Motherwell	UC	0.3	0.5	0.4	0.2	ngm^{-3}
Pontardawe	SU				0.1	ngm^{-3}
Sidney Smith, Ambelcote, Stourbridge	UI				1.2	ngm^{-3}

Carbon C 20

Alternative Name: Particulate elemental carbon, black carbon, EC
CAS Number: 7440-44-0
Type of pollutant: Particulate Component

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Bush Estate, Midlothian	Rur	01/2002	0.7		μgm^{-3}
Bush Estate, Midlothian	Rur	02/2002	0.71		μgm^{-3}
Bush Estate, Midlothian	Rur	03/2002	0.71		μgm^{-3}
Bush Estate, Midlothian	Rur	04/2002	0.68		μgm^{-3}
Bush Estate, Midlothian	Rur	05/2002	0.15		μgm^{-3}
Bush Estate, Midlothian	Rur	06/2002	0.15		μgm^{-3}
Bush Estate, Midlothian	Rur	07/2002	0.27		μgm^{-3}
Bush Estate, Midlothian	Rur	08/2002	0.45		μgm^{-3}
Bush Estate, Midlothian	Rur	09/2002	0.48		μgm^{-3}
Bush Estate, Midlothian	Rur	10/2002	0.71		μgm^{-3}
Bush Estate, Midlothian	Rur	11/2002	0.44		μgm^{-3}
Bush Estate, Midlothian	Rur	12/2002	0.52		μgm^{-3}

Carbon Dioxide CO_2 21

Alternative Name:
CAS Number: 124-38-9
Type of pollutant: Greenhouse Gas

Structure
O=C=O

Background and Average

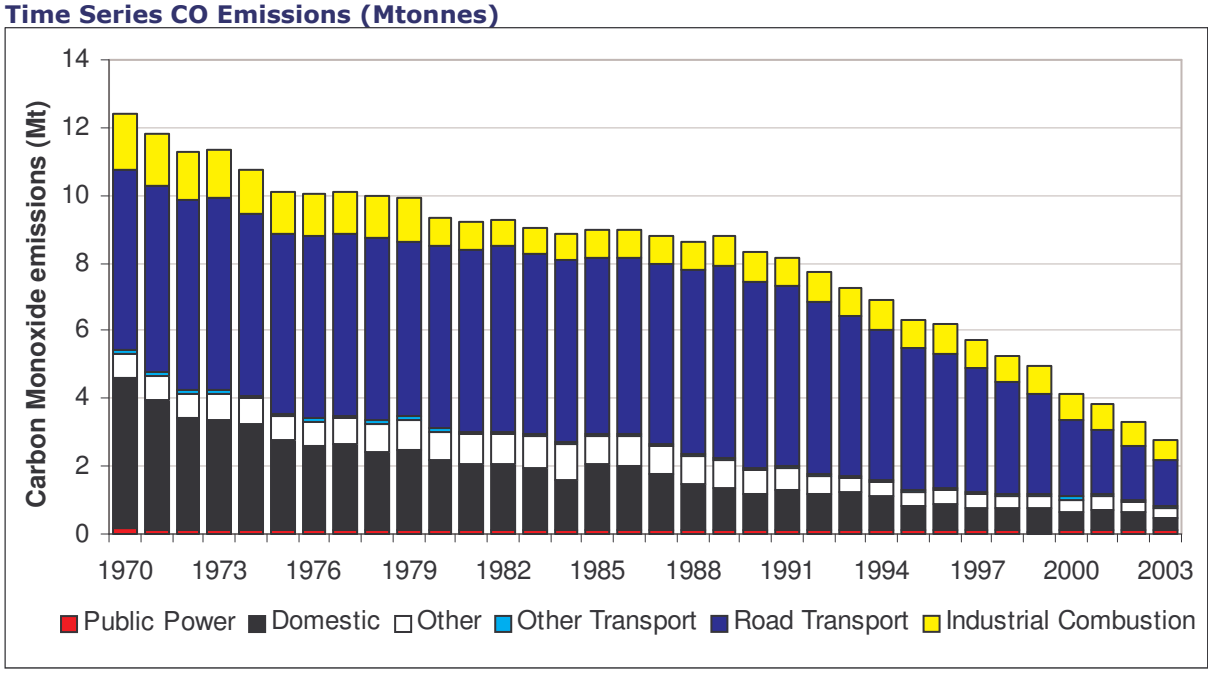
Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2004	695.75	697.05	mgm^{-3}
Mace Head	R	02/2004	697.42	700.17	mgm^{-3}
Mace Head	R	03/2004	700.12	703.39	mgm^{-3}
Mace Head	R	04/2004	702.65	703.43	mgm^{-3}
Mace Head	R	05/2004	699.17	700.46	mgm^{-3}
Mace Head	R	06/2004	693.25	694.11	mgm^{-3}
Mace Head	R	07/2004	685.34	687.09	mgm^{-3}
Mace Head	R	08/2004	674.92	682.34	mgm^{-3}
Mace Head	R	09/2004	677.92	682.85	mgm^{-3}
Mace Head	R	10/2004	685.54	688.24	mgm^{-3}
Mace Head	R	11/2004	691.34	694.2	mgm^{-3}
Mace Head	R	12/2004	697.49	699.45	mgm^{-3}

Carbon monoxide CO 22

Alternative Name:
CAS Number: 630-08-0
Type of pollutant: Trace Gas, indirect Greenhouse Gas, Urban Pollutant

Structure

Time Series CO Emissions (Mtonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1985	2001	1996

Air Quality Standards

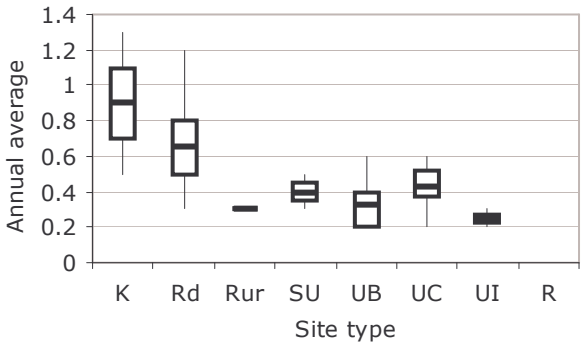
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive				✓		
WHO				✓	✓	✓
EPAQS				✓	✓	
AQS				✓		
EAL						
Other			✓			

Carbon monoxide CO 22

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (µgm^{-3})

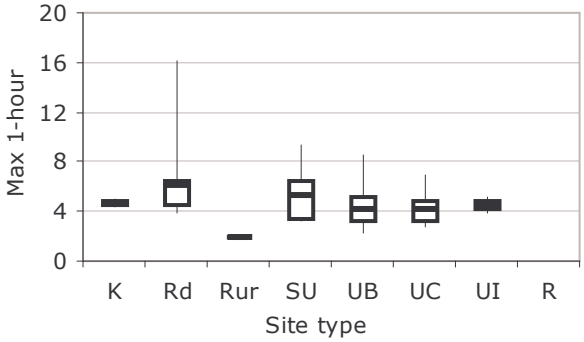
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	0.9	0.5	1.3	0.5	1.3
Rd	15	0.7	0.3	1.2	0.4	1.1
Rur	1	0.3	0.3	0.3	0.3	0.3
SU	3	0.4	0.3	0.5	0.3	0.5
UB	22	0.3	0.2	0.6	0.2	0.6
UC	20	0.4	0.2	0.6	0.2	0.6
UI	2	0.3	0.2	0.3	0.2	0.3
R	0					



CO Annual Average Boxplot

Automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	4.7	4.4	5.0	4.4	5.0
Rd	15	6.0	3.9	16.2	4.0	10.3
Rur	1	1.9	1.9	1.9	1.9	1.9
SU	3	5.4	3.2	9.3	3.2	8.7
UB	22	4.1	2.3	8.6	2.4	5.6
UC	20	4.2	2.8	7.0	2.9	6.0
UI	2	4.5	3.9	5.2	4.0	5.1
R	0					



CO Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Carbon monoxide CO 22

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB	0	0	0	0	4	8	4	3	mgm^{-3}
Barnsley Gawber	UB				0				3	mgm^{-3}
Bath Roadside	Rd	1	1	1	1	9	8	9	6	mgm^{-3}
Belfast Centre	UC	0		0	0	5		5	4	mgm^{-3}
Birmingham Centre	UC	1	0	0	0	3	7	4	3	mgm^{-3}
Birmingham East	UB	0	0	0		6	6	3		mgm^{-3}
Blackpool	UB		0	0	0		12	3	4	mgm^{-3}
Bolton	UB	1	1	0	0	10	12	5	5	mgm^{-3}
Bournemouth	UB				0				4	mgm^{-3}
Bradford Centre	UC	1	1	1	1	5	10	7	5	mgm^{-3}
Brighton Roadside	Rd		1	1	1		8	7	7	mgm^{-3}
Bristol Centre	UC	1	1	1	1	8	5	4	7	mgm^{-3}
Bristol Old Market	Rd	1	1	1	1	9	13	7	8	mgm^{-3}
Bury Roadside	Rd	1	0	0	0	6	6	4	5	mgm^{-3}
Cardiff Centre	UC	0	1	1	0	5	3	2	3	mgm^{-3}
Coventry Centre	UC	0				3				mgm^{-3}
Coventry Memorial Park	UB		0		0		3		3	mgm^{-3}
Cwmbran	UB				0				3	mgm^{-3}
Derry	UB	0	0	0	0	4	5	3	2	mgm^{-3}
Dumfries	Rd			1	1			6	5	mgm^{-3}
Edinburgh Centre	UC	1	1	0		5	7	4		mgm^{-3}
Exeter Roadside	Rd	1	1	1	1	9	8	12	6	mgm^{-3}
Glasgow Centre	UC	0	1	0	0	6	11	6	5	mgm^{-3}
Glasgow City Chambers	UB	1	1	1	1	5	9	6	4	mgm^{-3}
Glasgow Kerbside	K	1	1	1	1	7	8	6	4	mgm^{-3}
Hounslow Roadside	Rd	1	1	1		8	7	6		mgm^{-3}
Hove Roadside	Rd	1	1	1	1	9	11	6	7	mgm^{-3}
Hull Centre	UC	1	1			4	4			mgm^{-3}
Hull Freetown	UC				0				3	mgm^{-3}
Inverness	Rd			0	1			4	4	mgm^{-3}
Leamington Spa	UB	0	1	0	0	7	4	3	5	mgm^{-3}
Leeds Centre	UC	1	1		1	4	10		3	mgm^{-3}
Leicester Centre	UC	1	1	1	1	7	4	3	3	mgm^{-3}
Liverpool Centre	UC	1	1			3	6			mgm^{-3}
London A3 Roadside	Rd	1	1	1	1	7	9	5	5	mgm^{-3}
London Bexley	SU	0	0	0	0	5	5	3	4	mgm^{-3}
London Bloomsbury	UC	1	1	0	1	7	5	3	4	mgm^{-3}
London Brent	UB	0	0	0	0	11	7	7	9	mgm^{-3}
London Bromley	Rd	1	1	0	0	7	10	6	6	mgm^{-3}
London Cromwell Road 2	Rd	1	1	1	1	6	6	4	4	mgm^{-3}
London Hackney	UC	1	1	1	1	11	7	8	6	mgm^{-3}
London Hillingdon	SU	1	1	1	1	9	7	4	9	mgm^{-3}
London Marylebone Road	K	2	2	1	1	10	23	5	5	mgm^{-3}
London N. Kensington	UB	0	0	0	0	7	4	6	3	mgm^{-3}
London Southwark	UC	1	1	0	0	6	5	3	4	mgm^{-3}
London Westminster	UB			1	1			3	6	mgm^{-3}
Manchester Piccadilly	UC	0	1	0	0	4	8	4	6	mgm^{-3}
Manchester Town Hall	UB	1	1	0	1	4	7	4	5	mgm^{-3}
Middlesbrough	UI	0	0	0	0	3	8	3	4	mgm^{-3}
Newcastle Centre	UC	1	1	1	0	2	5	2	3	mgm^{-3}
Northampton	UB				0				2	mgm^{-3}
Norwich Centre	UC	0	1	0		5	8	4		mgm^{-3}
Nottingham Centre	UC	0	1	0	0	7	8	3	4	mgm^{-3}
Oxford Centre Roadside	Rd	0	0	0	0	4	5	7	5	mgm^{-3}
Plymouth Centre	UC	0	0	0	0	6	4	5	3	mgm^{-3}
Portsmouth	UB			0	0			6	5	mgm^{-3}
Preston	UB		0	0	0		4	4	4	mgm^{-3}

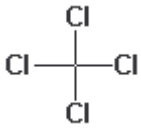
Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Reading	UB	1	0			5	5			mgm^{-3}
Redcar	SU	0	0	0	0	3	6	3	3	mgm^{-3}
Salford Eccles	UI	0	0	0	0	6	8	4	5	mgm^{-3}
Sandwell West Bromwich	UB	0		1		3		2		mgm^{-3}
Sheffield Centre	UC	0	1	0	0	6	7	3	4	mgm^{-3}
Sheffield Tinsley	UI	0	1	0		4	6	4		mgm^{-3}
Southampton Centre	UC	1	1	0		10	7	5		mgm^{-3}
Southend-on-Sea	UB		0	0	0		5	3	5	mgm^{-3}
Southwark Roadside	Rd	1	1	1		7	7	5		mgm^{-3}
St Osyth	Rur				0				2	mgm^{-3}
Stockport	UB	0	0			5	6			mgm^{-3}
Stockton-on-Tees Yarm	Rd				1				16	mgm^{-3}
Stoke-on-Trent Centre	UC	1	1	1	1	9	15	5	5	mgm^{-3}
Sutton Roadside	Rd	1	1			6	10			mgm^{-3}
Swansea	UC	0	0	0	0	7	4	3	4	mgm^{-3}
Thurrock	UB	0	0	0	0	7	9	5	5	mgm^{-3}
Tower Hamlets Roadside	Rd	1	1	1	1	7	5	4	4	mgm^{-3}
West London	UB	0	0	0	0	5	5	3	3	mgm^{-3}
Wigan Leigh	UB				1				6	mgm^{-3}
Wirral Tranmere	UB		0		0		7		4	mgm^{-3}
Wolverhampton Centre	UC	1	1		1	6	6		5	mgm^{-3}
Wrexham	Rd			1	1			4	5	mgm^{-3}

Carbon tetrachloride CCl_4 23

Alternative Name: Tetrachloromethane
CAS Number: 56-23-5
Type of pollutant: Ozone-depleting Substance

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓		✓			

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	623	623	ngm^{-3}
Mace Head	R	02/2000	623	623	ngm^{-3}
Mace Head	R	03/2000	622	622	ngm^{-3}
Mace Head	R	04/2000	622	622	ngm^{-3}
Mace Head	R	05/2000	623	624	ngm^{-3}
Mace Head	R	06/2000	624	624	ngm^{-3}
Mace Head	R	07/2000	623	623	ngm^{-3}
Mace Head	R	08/2000	622	623	ngm^{-3}
Mace Head	R	09/2000	621	621	ngm^{-3}
Mace Head	R	10/2000	622	622	ngm^{-3}
Mace Head	R	11/2000	622	622	ngm^{-3}
Mace Head	R	12/2000	622	622	ngm^{-3}
Mace Head	R	01/2001	621	623	ngm^{-3}
Mace Head	R	02/2001	618	618	ngm^{-3}
Mace Head	R	03/2001	618	619	ngm^{-3}
Mace Head	R	04/2001	617	617	ngm^{-3}
Mace Head	R	05/2001	617	618	ngm^{-3}
Mace Head	R	06/2001	617	617	ngm^{-3}
Mace Head	R	07/2001	615	615	ngm^{-3}
Mace Head	R	08/2001	614	614	ngm^{-3}
Mace Head	R	09/2001	614	614	ngm^{-3}
Mace Head	R	10/2001	614	615	ngm^{-3}
Mace Head	R	11/2001	615	615	ngm^{-3}
Mace Head	R	12/2001	615	615	ngm^{-3}
Mace Head	R	01/2002	613	614	ngm^{-3}
Mace Head	R	02/2002	612	612	ngm^{-3}
Mace Head	R	03/2002	612	612	ngm^{-3}
Mace Head	R	04/2002	611	612	ngm^{-3}
Mace Head	R	05/2002	610	611	ngm^{-3}
Mace Head	R	06/2002	609	609	ngm^{-3}
Mace Head	R	07/2002	607	607	ngm^{-3}
Mace Head	R	08/2002	607	607	ngm^{-3}
Mace Head	R	09/2002	608	608	ngm^{-3}
Mace Head	R	10/2002	608	608	ngm^{-3}
Mace Head	R	11/2002	608	608	ngm^{-3}
Mace Head	R	12/2002	609	610	ngm^{-3}

Background and Average (cont)

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2003	608	608	ngm^{-3}
Mace Head	R	02/2003	607	608	ngm^{-3}
Mace Head	R	03/2003	606	607	ngm^{-3}
Mace Head	R	04/2003	607	607	ngm^{-3}
Mace Head	R	05/2003	605	605	ngm^{-3}
Mace Head	R	06/2003	605	605	ngm^{-3}
Mace Head	R	07/2003	603	603	ngm^{-3}
Mace Head	R	08/2003	602	602	ngm^{-3}
Mace Head	R	09/2003	602	602	ngm^{-3}
Mace Head	R	10/2003	603	603	ngm^{-3}
Mace Head	R	11/2003	603	603	ngm^{-3}
Mace Head	R	12/2003	603	603	ngm^{-3}

c-but-2-ene C_4H_8 24

Alternative Name: cis-2-butene
CAS Number: 590-18-1
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

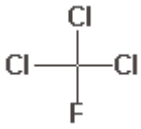
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				8				μgm^{-3}
Birmingham East	UB	0				30				μgm^{-3}
Bristol East	UB	0				4				μgm^{-3}
Cardiff East	UB	0	0			4	3			μgm^{-3}
Edinburgh Med. Sch.	UB	0	0			2	4			μgm^{-3}
Harwell	Rur	0				1				μgm^{-3}
Leeds Potternewton	UB	0				12				μgm^{-3}
Liverpool Speke	UB	0				36				μgm^{-3}
London Eltham	SU	0				3				μgm^{-3}
London Marylebone Road	K	1	1	1	1	9	8	6	6	μgm^{-3}
London UCL	Rd	0				5				μgm^{-3}
Southampton Centre	UC	0				9				μgm^{-3}

CFC-11 CCl_3F 25

Alternative Name: Trichlorofluoromethane
CAS Number: 75-69-4
Type of pollutant: Ozone-depleting Substance

Structure



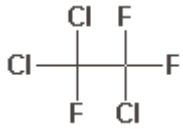
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	1502	1503	ngm^{-3}
Mace Head	R	02/2000	1501	1501	ngm^{-3}
Mace Head	R	03/2000	1500	1501	ngm^{-3}
Mace Head	R	04/2000	1501	1502	ngm^{-3}
Mace Head	R	05/2000	1499	1504	ngm^{-3}
Mace Head	R	06/2000	1499	1501	ngm^{-3}
Mace Head	R	07/2000	1497	1499	ngm^{-3}
Mace Head	R	08/2000	1495	1497	ngm^{-3}
Mace Head	R	09/2000	1495	1496	ngm^{-3}
Mace Head	R	10/2000	1496	1496	ngm^{-3}
Mace Head	R	11/2000	1498	1498	ngm^{-3}
Mace Head	R	12/2000	1498	1501	ngm^{-3}
Mace Head	R	01/2001	1499	1509	ngm^{-3}
Mace Head	R	02/2001	1497	1497	ngm^{-3}
Mace Head	R	03/2001	1495	1501	ngm^{-3}
Mace Head	R	04/2001	1492	1493	ngm^{-3}
Mace Head	R	05/2001	1490	1496	ngm^{-3}
Mace Head	R	06/2001	1487	1488	ngm^{-3}
Mace Head	R	07/2001	1484	1485	ngm^{-3}
Mace Head	R	08/2001	1482	1483	ngm^{-3}
Mace Head	R	09/2001	1483	1485	ngm^{-3}
Mace Head	R	10/2001	1485	1486	ngm^{-3}
Mace Head	R	11/2001	1487	1487	ngm^{-3}
Mace Head	R	12/2001	1487	1491	ngm^{-3}
Mace Head	R	01/2002	1485	1486	ngm^{-3}
Mace Head	R	02/2002	1484	1484	ngm^{-3}
Mace Head	R	03/2002	1483	1484	ngm^{-3}
Mace Head	R	04/2002	1480	1482	ngm^{-3}
Mace Head	R	05/2002	1479	1480	ngm^{-3}
Mace Head	R	06/2002	1474	1475	ngm^{-3}
Mace Head	R	07/2002	1472	1472	ngm^{-3}
Mace Head	R	08/2002	1470	1470	ngm^{-3}
Mace Head	R	09/2002	1470	1476	ngm^{-3}
Mace Head	R	10/2002	1470	1473	ngm^{-3}
Mace Head	R	11/2002	1472	1472	ngm^{-3}
Mace Head	R	12/2002	1474	1478	ngm^{-3}
Mace Head	R	01/2003	1471	1472	ngm^{-3}
Mace Head	R	02/2003	1470	1477	ngm^{-3}
Mace Head	R	03/2003	1470	1479	ngm^{-3}
Mace Head	R	04/2003	1471	1476	ngm^{-3}
Mace Head	R	05/2003	1468	1469	ngm^{-3}
Mace Head	R	06/2003	1464	1465	ngm^{-3}
Mace Head	R	07/2003	1462	1463	ngm^{-3}
Mace Head	R	08/2003	1458	1461	ngm^{-3}
Mace Head	R	09/2003	1459	1460	ngm^{-3}
Mace Head	R	10/2003	1462	1467	ngm^{-3}
Mace Head	R	11/2003	1464	1465	ngm^{-3}
Mace Head	R	12/2003	1464	1465	ngm^{-3}

CFC-113 CCl_2FCClF_2 26

Alternative Name: 1,1,2trichloro-1,2,2-trifluoroethane
CAS Number: 76-13-1
Type of pollutant: Ozone-depleting Substance

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	641	641	ngm^{-3}
Mace Head	R	02/2000	641	641	ngm^{-3}
Mace Head	R	03/2000	640	640	ngm^{-3}
Mace Head	R	04/2000	639	639	ngm^{-3}
Mace Head	R	05/2000	640	640	ngm^{-3}
Mace Head	R	06/2000	639	639	ngm^{-3}
Mace Head	R	07/2000	638	638	ngm^{-3}
Mace Head	R	08/2000	637	637	ngm^{-3}
Mace Head	R	09/2000	637	637	ngm^{-3}
Mace Head	R	10/2000	638	638	ngm^{-3}
Mace Head	R	11/2000	638	638	ngm^{-3}
Mace Head	R	12/2000	638	638	ngm^{-3}
Mace Head	R	01/2001	639	639	ngm^{-3}
Mace Head	R	02/2001	637	637	ngm^{-3}
Mace Head	R	03/2001	637	637	ngm^{-3}
Mace Head	R	04/2001	634	634	ngm^{-3}
Mace Head	R	05/2001	633	633	ngm^{-3}
Mace Head	R	06/2001	632	632	ngm^{-3}
Mace Head	R	07/2001	631	631	ngm^{-3}
Mace Head	R	08/2001	630	630	ngm^{-3}
Mace Head	R	09/2001	630	630	ngm^{-3}
Mace Head	R	10/2001	631	631	ngm^{-3}
Mace Head	R	11/2001	632	632	ngm^{-3}
Mace Head	R	12/2001	632	632	ngm^{-3}
Mace Head	R	01/2002	632	632	ngm^{-3}
Mace Head	R	02/2002	632	632	ngm^{-3}
Mace Head	R	03/2002	631	631	ngm^{-3}
Mace Head	R	04/2002	630	630	ngm^{-3}
Mace Head	R	05/2002	630	630	ngm^{-3}
Mace Head	R	06/2002	626	626	ngm^{-3}
Mace Head	R	07/2002	625	625	ngm^{-3}
Mace Head	R	08/2002	625	625	ngm^{-3}
Mace Head	R	09/2002	627	627	ngm^{-3}
Mace Head	R	10/2002	627	627	ngm^{-3}
Mace Head	R	11/2002	627	627	ngm^{-3}
Mace Head	R	12/2002	627	627	ngm^{-3}
Mace Head	R	01/2003	627	627	ngm^{-3}
Mace Head	R	02/2003	627	627	ngm^{-3}
Mace Head	R	03/2003	626	626	ngm^{-3}
Mace Head	R	04/2003	625	625	ngm^{-3}
Mace Head	R	05/2003	624	624	ngm^{-3}
Mace Head	R	06/2003	621	621	ngm^{-3}
Mace Head	R	07/2003	620	620	ngm^{-3}
Mace Head	R	08/2003	621	621	ngm^{-3}
Mace Head	R	09/2003	621	621	ngm^{-3}
Mace Head	R	10/2003	619	619	ngm^{-3}
Mace Head	R	11/2003	617	617	ngm^{-3}
Mace Head	R	12/2003	618	618	ngm^{-3}

CFC-114 CCl_2FCClF_2 27

Alternative Name: 1,2-dichloro-1,1,2,2-tetrafluoroethane
CAS Number: 76-14-2
Type of pollutant: Ozone-depleting Substance

Structure

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	122	122	ngm^{-3}
Mace Head	R	02/2000	122	122	ngm^{-3}
Mace Head	R	03/2000			
Mace Head	R	04/2000			
Mace Head	R	05/2000	122	122	ngm^{-3}
Mace Head	R	06/2000	123	124	ngm^{-3}
Mace Head	R	07/2000	123	125	ngm^{-3}
Mace Head	R	08/2000	123	126	ngm^{-3}
Mace Head	R	09/2000	123	126	ngm^{-3}
Mace Head	R	10/2000			
Mace Head	R	11/2000			
Mace Head	R	12/2000	122	122	ngm^{-3}
Mace Head	R	01/2001			
Mace Head	R	02/2001			
Mace Head	R	03/2001	121	121	ngm^{-3}
Mace Head	R	04/2001	122	122	ngm^{-3}
Mace Head	R	05/2001	123	123	ngm^{-3}
Mace Head	R	06/2001	123	123	ngm^{-3}
Mace Head	R	07/2001	123	123	ngm^{-3}
Mace Head	R	08/2001	121	121	ngm^{-3}
Mace Head	R	09/2001	122	122	ngm^{-3}
Mace Head	R	10/2001	122	122	ngm^{-3}
Mace Head	R	11/2001	122	122	ngm^{-3}
Mace Head	R	12/2001	123	123	ngm^{-3}
Mace Head	R	01/2002	122	122	ngm^{-3}
Mace Head	R	02/2002	122	122	ngm^{-3}
Mace Head	R	03/2002	123	123	ngm^{-3}
Mace Head	R	04/2002	123	123	ngm^{-3}
Mace Head	R	05/2002	122	122	ngm^{-3}
Mace Head	R	06/2002	121	121	ngm^{-3}
Mace Head	R	07/2002	121	121	ngm^{-3}
Mace Head	R	08/2002	121	121	ngm^{-3}
Mace Head	R	09/2002	121	121	ngm^{-3}
Mace Head	R	10/2002	120	120	ngm^{-3}
Mace Head	R	11/2002	121	121	ngm^{-3}
Mace Head	R	12/2002	121	121	ngm^{-3}
Mace Head	R	01/2003	121	121	ngm^{-3}
Mace Head	R	02/2003	121	121	ngm^{-3}
Mace Head	R	03/2003	121	121	ngm^{-3}
Mace Head	R	04/2003	121	121	ngm^{-3}
Mace Head	R	05/2003	120	120	ngm^{-3}
Mace Head	R	06/2003	120	120	ngm^{-3}
Mace Head	R	07/2003	119	119	ngm^{-3}
Mace Head	R	08/2003	120	120	ngm^{-3}
Mace Head	R	09/2003			
Mace Head	R	10/2003			
Mace Head	R	11/2003			
Mace Head	R	12/2003	119	119	ngm^{-3}

CFC-115 $CClF_2CF_3$ 28

Alternative Name: Chloropentafluoroethane
CAS Number: 76-15-3
Type of pollutant: Ozone-depleting Substance

Structure

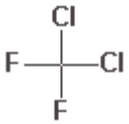
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	52	52	ngm^{-3}
Mace Head	R	02/2000	52	52	ngm^{-3}
Mace Head	R	03/2000	52	52	ngm^{-3}
Mace Head	R	04/2000	52	52	ngm^{-3}
Mace Head	R	05/2000	52	52	ngm^{-3}
Mace Head	R	06/2000	52	52	ngm^{-3}
Mace Head	R	07/2000	52	52	ngm^{-3}
Mace Head	R	08/2000	52	52	ngm^{-3}
Mace Head	R	09/2000	52	52	ngm^{-3}
Mace Head	R	10/2000	53	53	ngm^{-3}
Mace Head	R	11/2000	52	52	ngm^{-3}
Mace Head	R	12/2000	53	53	ngm^{-3}
Mace Head	R	01/2001	53	53	ngm^{-3}
Mace Head	R	02/2001	53	53	ngm^{-3}
Mace Head	R	03/2001	53	53	ngm^{-3}
Mace Head	R	04/2001	53	53	ngm^{-3}
Mace Head	R	05/2001	53	54	ngm^{-3}
Mace Head	R	06/2001	52	52	ngm^{-3}
Mace Head	R	07/2001	53	53	ngm^{-3}
Mace Head	R	08/2001	52	52	ngm^{-3}
Mace Head	R	09/2001	53	53	ngm^{-3}
Mace Head	R	10/2001	52	52	ngm^{-3}
Mace Head	R	11/2001			
Mace Head	R	12/2001	53	53	ngm^{-3}
Mace Head	R	01/2002	53	53	ngm^{-3}
Mace Head	R	02/2002	52	52	ngm^{-3}
Mace Head	R	03/2002	53	53	ngm^{-3}
Mace Head	R	04/2002	53	53	ngm^{-3}
Mace Head	R	05/2002	52	52	ngm^{-3}
Mace Head	R	06/2002	52	52	ngm^{-3}
Mace Head	R	07/2002	52	52	ngm^{-3}
Mace Head	R	08/2002	53	53	ngm^{-3}
Mace Head	R	09/2002	52	52	ngm^{-3}
Mace Head	R	10/2002	52	52	ngm^{-3}
Mace Head	R	11/2002	53	53	ngm^{-3}
Mace Head	R	12/2002	52	52	ngm^{-3}
Mace Head	R	01/2003	52	52	ngm^{-3}
Mace Head	R	02/2003	52	52	ngm^{-3}
Mace Head	R	03/2003	52	52	ngm^{-3}
Mace Head	R	04/2003	53	53	ngm^{-3}
Mace Head	R	05/2003	52	52	ngm^{-3}
Mace Head	R	06/2003	53	53	ngm^{-3}
Mace Head	R	07/2003	53	53	ngm^{-3}
Mace Head	R	08/2003	52	52	ngm^{-3}
Mace Head	R	09/2003	53	53	ngm^{-3}
Mace Head	R	10/2003	53	53	ngm^{-3}
Mace Head	R	11/2003	54	54	ngm^{-3}
Mace Head	R	12/2003	54	54	ngm^{-3}

CFC-12 CCl_2F_2 29

Alternative Name: Dichlorodifluoromethane
CAS Number: 75-71-8
Type of pollutant: Ozone-depleting Substance

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	2748	2748	ngm^{-3}
Mace Head	R	02/2000	2747	2747	ngm^{-3}
Mace Head	R	03/2000	2746	2747	ngm^{-3}
Mace Head	R	04/2000	2750	2751	ngm^{-3}
Mace Head	R	05/2000	2749	2753	ngm^{-3}
Mace Head	R	06/2000	2748	2751	ngm^{-3}
Mace Head	R	07/2000	2749	2751	ngm^{-3}
Mace Head	R	08/2000	2749	2751	ngm^{-3}
Mace Head	R	09/2000	2751	2752	ngm^{-3}
Mace Head	R	10/2000	2754	2754	ngm^{-3}
Mace Head	R	11/2000	2756	2757	ngm^{-3}
Mace Head	R	12/2000	2757	2760	ngm^{-3}
Mace Head	R	01/2001	2759	2768	ngm^{-3}
Mace Head	R	02/2001	2757	2757	ngm^{-3}
Mace Head	R	03/2001	2756	2761	ngm^{-3}
Mace Head	R	04/2001	2753	2754	ngm^{-3}
Mace Head	R	05/2001	2752	2757	ngm^{-3}
Mace Head	R	06/2001	2751	2752	ngm^{-3}
Mace Head	R	07/2001	2749	2750	ngm^{-3}
Mace Head	R	08/2001	2748	2749	ngm^{-3}
Mace Head	R	09/2001	2750	2753	ngm^{-3}
Mace Head	R	10/2001	2754	2754	ngm^{-3}
Mace Head	R	11/2001	2756	2756	ngm^{-3}
Mace Head	R	12/2001	2757	2761	ngm^{-3}
Mace Head	R	01/2002	2756	2758	ngm^{-3}
Mace Head	R	02/2002	2755	2755	ngm^{-3}
Mace Head	R	03/2002	2755	2757	ngm^{-3}
Mace Head	R	04/2002	2754	2755	ngm^{-3}
Mace Head	R	05/2002	2753	2754	ngm^{-3}
Mace Head	R	06/2002	2751	2751	ngm^{-3}
Mace Head	R	07/2002	2749	2749	ngm^{-3}
Mace Head	R	08/2002	2748	2749	ngm^{-3}
Mace Head	R	09/2002	2750	2755	ngm^{-3}
Mace Head	R	10/2002	2752	2754	ngm^{-3}
Mace Head	R	11/2002	2755	2755	ngm^{-3}
Mace Head	R	12/2002	2756	2762	ngm^{-3}
Mace Head	R	01/2003	2756	2756	ngm^{-3}
Mace Head	R	02/2003	2756	2761	ngm^{-3}
Mace Head	R	03/2003	2755	2763	ngm^{-3}
Mace Head	R	04/2003	2756	2760	ngm^{-3}
Mace Head	R	05/2003	2754	2754	ngm^{-3}
Mace Head	R	06/2003	2751	2751	ngm^{-3}
Mace Head	R	07/2003	2750	2750	ngm^{-3}
Mace Head	R	08/2003	2747	2749	ngm^{-3}
Mace Head	R	09/2003	2748	2749	ngm^{-3}
Mace Head	R	10/2003	2751	2753	ngm^{-3}
Mace Head	R	11/2003	2752	2753	ngm^{-3}
Mace Head	R	12/2003	2753	2754	ngm^{-3}

Chloride Cl^- 30

Alternative Name: Particulate chloride, chloride aerosol
CAS Number: 16887-00-6
Type of pollutant: Particulate Component

Chloride in precipitation - Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	8.0		9.7		mgl^{-1}
Beaghs Burn	Rur	5.4	5.0	4.8	8.4	mgl^{-1}
Bottesford	Rur	1.8	1.8	3.0	2.9	mgl^{-1}
Compton	Rur	2.2	2.0	3.0	2.4	mgl^{-1}
Driby	Rur		3.7	5.0		mgl^{-1}
Eskdalemuir 5002	Rur	2.6	3.0	2.7	2.8	mgl^{-1}
Eskdalemuir 5162	Rur			2.3	3.2	mgl^{-1}
Flatford Mill	Rur	2.9	2.9	3.2	2.6	mgl^{-1}
Glen Dye	Rur	3.0	3.0	3.3	4.3	mgl^{-1}
High Muffles	Rur	3.2	3.6	4.0	4.6	mgl^{-1}
Hillsborough Forest	Rur	4.0	3.4	4.2	4.0	mgl^{-1}
Jenny Hurn	Rur	2.4				mgl^{-1}
Loch Dee	Rur		5.2	3.8		mgl^{-1}
Preston Montford	Rur	2.1		3.2		mgl^{-1}
Stoke Ferry	Rur	4.2		3.4	3.9	mgl^{-1}
Thorganby	Rur	3.2	3.8	3.5	2.6	mgl^{-1}
Wardlow Hay Cop	Rur	2.3	2.7	2.5	3.1	mgl^{-1}
Woburn	Rur	2.1	1.8	2.4	3.5	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	11.1	7.8	9.0	12.8	mgl^{-1}
Balquhidder 2	Rur	2.9	2.3	2.8	2.7	mgl^{-1}
Bannisdale	Rur	2.9	2.5	2.9	3.0	mgl^{-1}
Cow Green Reservoir	Rur	2.7		3.0	3.5	mgl^{-1}
Crai Reservoir	Rur	2.9	3.0	4.3	3.4	mgl^{-1}
Goonhilly	Rur	12.5	14.0	10.9	13.4	mgl^{-1}
Llyn Brianne	Rur	3.3		4.8	4.4	mgl^{-1}
Llyn Llagi	Rur	3.6	3.2	4.4	4.1	mgl^{-1}
Llyn Llydaw	Rur	2.5	2.7	4.2	2.7	mgl^{-1}
Loch Chon	Rur	3.2	2.5	4.8	2.6	mgl^{-1}
Lochnagar	Rur	2.1	2.0	2.7	2.7	mgl^{-1}
Lough Navar 5006	Rur	5.1	4.5	5.0	5.5	mgl^{-1}
Lough Navar 5161	Rur			3.7		mgl^{-1}
Polloch	Rur	5.2	5.0	5.3	5.2	mgl^{-1}
Pumlumon	Rur	3.5		5.4	3.7	mgl^{-1}
Redesdale	Rur	3.0	2.5	3.1	4.1	mgl^{-1}
River Etherow	Rur	2.1	2.2	3.4	3.3	mgl^{-1}
River Mharcaidh	Rur	2.7	1.9	1.9	2.7	mgl^{-1}
Scoat Tarn	Rur	2.7		2.9	2.9	mgl^{-1}
Strathvaich Dam	Rur	5.3	4.1	3.2	8.1	mgl^{-1}
Tycanol Wood	Rur	5.1		6.7	5.1	mgl^{-1}
Whiteadder	Rur		3.3	3.3		mgl^{-1}
Yarner Wood	Rur	4.0	4.5	5.9		mgl^{-1}

Chloride Cl^- 30

Chloride wet deposited - Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	240.1				mgm^{-2}
Beaghs Burn	Rur	471.4				mgm^{-2}
Bottesford	Rur	18.3				mgm^{-2}
Compton	Rur	36.8				mgm^{-2}
Eskdalemuir 5002	Rur	90.7				mgm^{-2}
Flatford Mill	Rur	38.5				mgm^{-2}
Glen Dye	Rur	80.0				mgm^{-2}
High Muffles	Rur	62.1				mgm^{-2}
Hillsborough Forest	Rur	74.3				mgm^{-2}
Jenny Hurn	Rur	23.8				mgm^{-2}
Preston Montford	Rur	33.0				mgm^{-2}
Stoke Ferry	Rur	24.7				mgm^{-2}
Thorganby	Rur	34.1				mgm^{-2}
Wardlow Hay Cop	Rur	43.8				mgm^{-2}
Woburn	Rur	22.3				mgm^{-2}

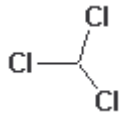
Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	157.6				mgm^{-2}
Balquhidder 2	Rur	143.4				mgm^{-2}
Bannisdale	Rur	209.5				mgm^{-2}
Cow Green Reservoir	Rur	141.7				mgm^{-2}
Crai Reservoir	Rur	413.3				mgm^{-2}
Goonhilly	Rur	346.5				mgm^{-2}
Llyn Brianne	Rur	194.8				mgm^{-2}
Llyn Llagi	Rur	482.9				mgm^{-2}
Llyn Llydaw	Rur	197.1				mgm^{-2}
Loch Chon	Rur	290.0				mgm^{-2}
Lochnagar	Rur	79.5				mgm^{-2}
Lough Navar 5006	Rur	186.8				mgm^{-2}
Polloch	Rur	326.8				mgm^{-2}
Pumlumon	Rur	258.3				mgm^{-2}
Redesdale	Rur	46.7				mgm^{-2}
River Etherow	Rur	104.6				mgm^{-2}
River Mharcaidh	Rur	64.0				mgm^{-2}
Scoat Tarn	Rur	344.0				mgm^{-2}
Strathvaich Dam	Rur	194.5				mgm^{-2}
Tycanol Wood	Rur	229.8				mgm^{-2}
Yarner Wood	Rur	128.6				mgm^{-2}

Chloroform $CHCl_3$ 31

Alternative Name: Trichloromethane
CAS Number: 67-66-3
Type of pollutant: Ozone-depleting Substance

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other	✓		✓			

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	57	67	ngm^{-3}
Mace Head	R	02/2000	56	56	ngm^{-3}
Mace Head	R	03/2000	52	63	ngm^{-3}
Mace Head	R	04/2000	60	67	ngm^{-3}
Mace Head	R	05/2000	53	86	ngm^{-3}
Mace Head	R	06/2000	50	66	ngm^{-3}
Mace Head	R	07/2000	49	67	ngm^{-3}
Mace Head	R	08/2000	51	67	ngm^{-3}
Mace Head	R	09/2000	55	63	ngm^{-3}
Mace Head	R	10/2000	56	57	ngm^{-3}
Mace Head	R	11/2000	57	61	ngm^{-3}
Mace Head	R	12/2000	57	66	ngm^{-3}
Mace Head	R	01/2001	57	75	ngm^{-3}
Mace Head	R	02/2001	55	64	ngm^{-3}
Mace Head	R	03/2001	57	67	ngm^{-3}
Mace Head	R	04/2001	53	57	ngm^{-3}
Mace Head	R	05/2001	51	69	ngm^{-3}
Mace Head	R	06/2001	49	59	ngm^{-3}
Mace Head	R	07/2001	51	57	ngm^{-3}
Mace Head	R	08/2001	52	57	ngm^{-3}
Mace Head	R	09/2001	55	75	ngm^{-3}
Mace Head	R	10/2001	57	66	ngm^{-3}
Mace Head	R	11/2001	55	62	ngm^{-3}
Mace Head	R	12/2001	56	68	ngm^{-3}
Mace Head	R	01/2002	56	60	ngm^{-3}
Mace Head	R	02/2002	53	55	ngm^{-3}
Mace Head	R	03/2002	55	62	ngm^{-3}
Mace Head	R	04/2002	53	68	ngm^{-3}
Mace Head	R	05/2002	52	65	ngm^{-3}
Mace Head	R	06/2002	50	53	ngm^{-3}
Mace Head	R	07/2002	53	59	ngm^{-3}
Mace Head	R	08/2002	51	66	ngm^{-3}
Mace Head	R	09/2002	60	95	ngm^{-3}
Mace Head	R	10/2002	60	76	ngm^{-3}
Mace Head	R	11/2002	60	64	ngm^{-3}
Mace Head	R	12/2002	59	81	ngm^{-3}
Mace Head	R	01/2003	57	64	ngm^{-3}

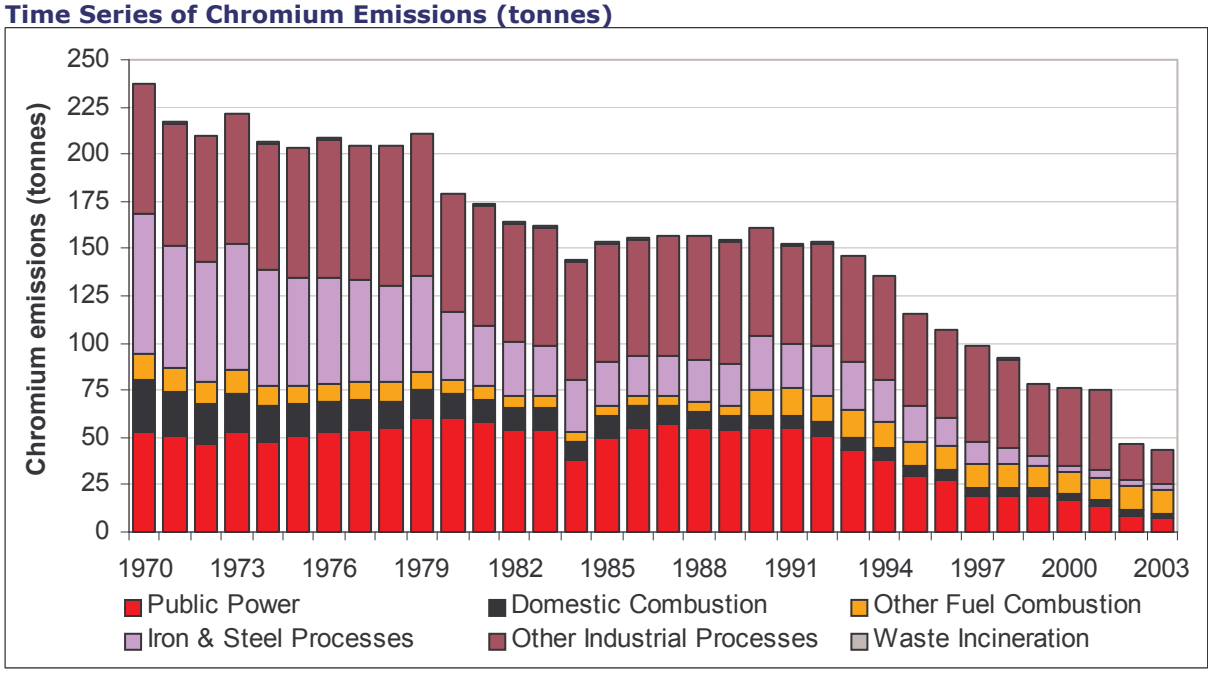
Background and Average (cont)

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	02/2003	58	67	ngm^{-3}
Mace Head	R	03/2003	57	74	ngm^{-3}
Mace Head	R	04/2003	56	74	ngm^{-3}
Mace Head	R	05/2003	52	57	ngm^{-3}
Mace Head	R	06/2003	51	56	ngm^{-3}
Mace Head	R	07/2003	53	65	ngm^{-3}
Mace Head	R	08/2003	54	75	ngm^{-3}
Mace Head	R	09/2003	56	66	ngm^{-3}
Mace Head	R	10/2003	60	74	ngm^{-3}
Mace Head	R	11/2003	59	63	ngm^{-3}
Mace Head	R	12/2003	58	74	ngm^{-3}

Chromium Cr 32

Alternative Name:
CAS Number: 7440-47-3
Type of pollutant: Trace Metal

Time Series of Chromium Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

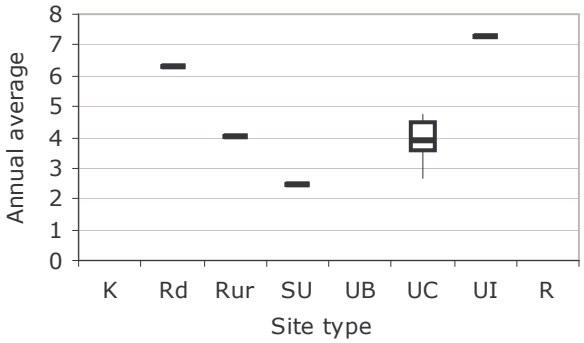
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Chromium Cr 32

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	6.3	6.3	6.3	6.3	6.3
Rur	1	4.0	4.0	4.0	4.0	4.0
SU	1	2.5	2.5	2.5	2.5	2.5
UB	0					
UC	5	3.9	2.6	4.7	2.8	4.7
UI	1	7.3	7.3	7.3	7.3	7.3
R	0					



Chromium Annual Average Boxplot

Air quality monitoring site map in 2003

Air Quality Monitoring Data

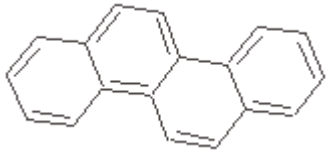
Annual Data statistics -Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				7.3	ngm^{-3}
Cardiff	UC				4.5	ngm^{-3}
Central London	UC			4.7	4.1	ngm^{-3}
Eskdalemuir	Rur	6.7	15.9	4.6	4.0	ngm^{-3}
Glasgow	UC	8.9	14.0	5.3		ngm^{-3}
Leeds	UC	8.9	18.8	7.8	3.6	ngm^{-3}
London Brent	UB	7.0	17.0	5.2	2.6	ngm^{-3}
London Cromwell Road	Rd	11.0	18.7	11.8	6.3	ngm^{-3}
Manchester	UC				4.7	ngm^{-3}
Pontardawe	SU				2.5	ngm^{-3}

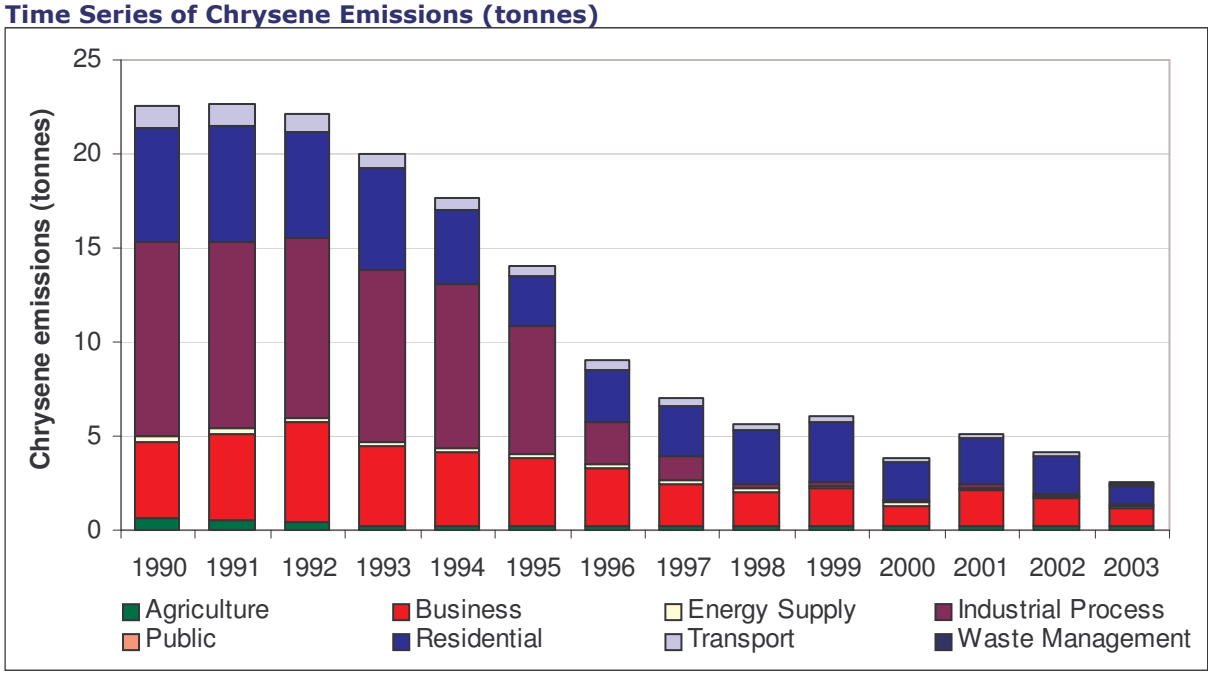
Chrysene 33

Alternative Name:
CAS Number: 218-01-9
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Chrysene Emissions (tonnes)



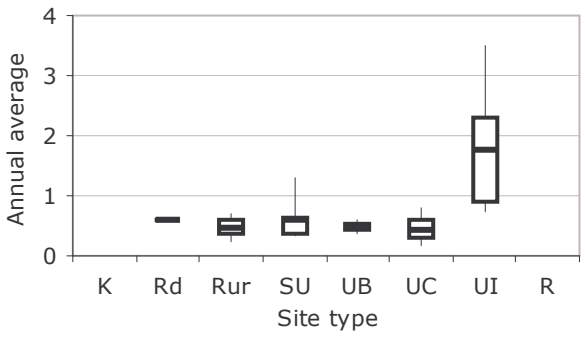
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

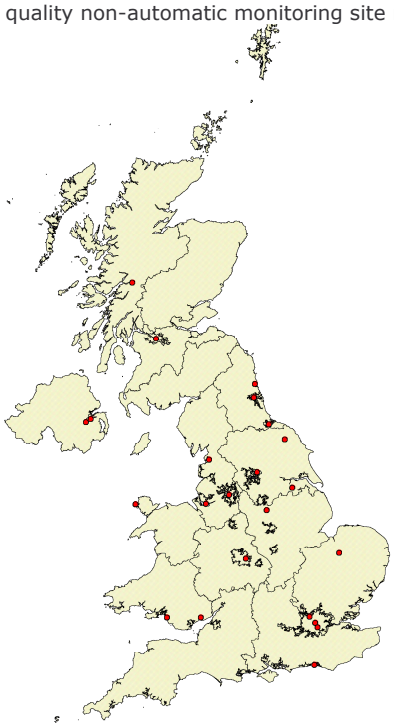
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.6	0.6	0.6	0.6	0.6
Rur	2	0.5	0.2	0.7	0.3	0.7
SU	4	0.6	0.3	1.3	0.3	1.2
UB	3	0.5	0.4	0.6	0.4	0.6
UC	5	0.4	0.2	0.8	0.2	0.8
UI	3	1.8	0.7	3.5	0.8	3.3
R	0					



Chrysene Annual Average Boxplot

Chrysene 33

Air quality non-automatic monitoring site map in 2003



Air Quality Monitoring Data

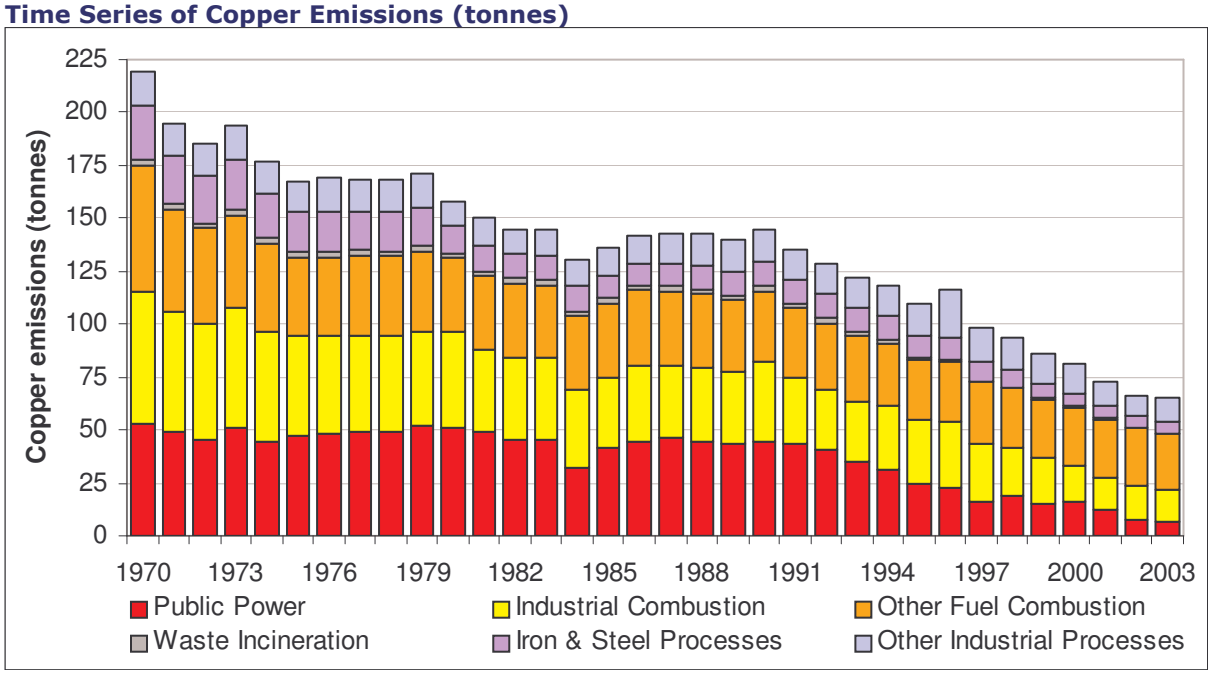
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.93	1.10		0.72	µgm^{-3}
Belfast	SU		2.40	1.10	0.28	µgm^{-3}
Birmingham 1	UB		0.63	0.53	0.46	µgm^{-3}
Bolsover	SU	0.98	1.20	1.00	1.30	µgm^{-3}
Brent	UB				0.38	µgm^{-3}
Bromley	Rd			0.76	0.59	µgm^{-3}
Glasgow	UC	0.44	0.50	0.42	0.18	µgm^{-3}
Hazelrigg	Rur	0.41	0.69	0.74	0.71	µgm^{-3}
High Muffles	Rur	0.25	0.35	0.22	0.13	µgm^{-3}
Holyhead	UI	0.46	0.62		0.42	µgm^{-3}
Hove	UC				0.30	µgm^{-3}
Kinlochleven	SU	6.10	0.86	0.76	0.38	µgm^{-3}
Leeds 1	UC		0.72	0.63	0.60	µgm^{-3}
Lisburn	SU	2.60	2.40	1.60	1.90	µgm^{-3}
London 2a	UC	0.44	0.46	0.47	0.31	µgm^{-3}
Manchester	UC	0.87	0.91	0.57	0.80	µgm^{-3}
Middlesbrough	UB	0.80	1.20	0.66	0.60	µgm^{-3}
Newcastle	UC		0.48	0.46	<0.40	µgm^{-3}
Newport	SU	1.20	1.40	0.70	0.32	µgm^{-3}
Port Talbot	UI	1.90	1.60	1.20	1.10	µgm^{-3}
Scunthorpe	UI	3.20	1.70	3.60	3.50	µgm^{-3}
Speke	SU			0.51	0.40	µgm^{-3}
Stoke Ferry	Rur	0.30	0.32	0.30	0.24	µgm^{-3}

Copper Cu 34

Alternative Name:
CAS Number: 7440-50-8
Type of pollutant: Trace Metal

Time Series of Copper Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

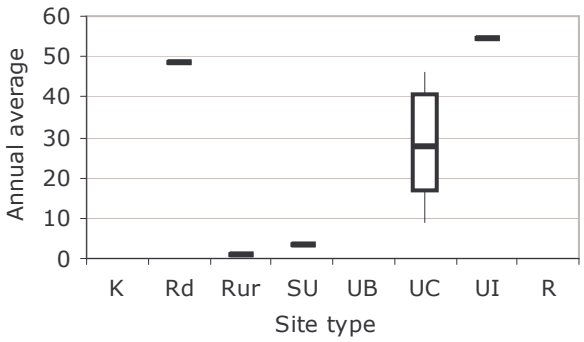
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Copper Cu 34

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
R	0					
UI	1	54.7	54.7	54.7	54.7	54.7
UC	6	27.6	8.8	46.0	10.4	45.7
UB	0					
SU	1	3.6	3.6	3.6	3.6	3.6
Rur	1	1.2	1.2	1.2	1.2	1.2
Rd	1	48.5	48.5	48.5	48.5	48.5
K	0					



Copper Annual Average Boxplot

Air quality monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				54.7	ngm^{-3}
Cardiff	UC				46.0	ngm^{-3}
Central London	UC			21.6	21.8	ngm^{-3}
Eskdalemuir	Rur	2.0	2.0	1.7	1.2	ngm^{-3}
Glasgow	UC	12.0	12.0	12.7		ngm^{-3}
Leeds	UC	12.0	14.0	14.3	15.2	ngm^{-3}
London Brent	UB	21.0	24.0	24.3	29.2	ngm^{-3}
Manchester	UC				44.8	ngm^{-3}
Motherwell	UC	6.8	16.0	7.0	8.8	ngm^{-3}
Pontardawe	SU				3.6	ngm^{-3}

c-pent-2-ene C_5H_{10} 35

Alternative Name: cis-2-pentene
CAS Number: 627-20-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Air Quality Monitoring Data

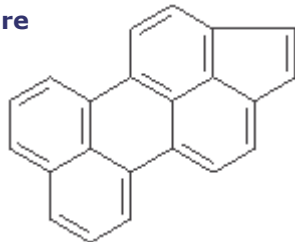
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				4				μgm^{-3}
Birmingham East	UB	0				10				μgm^{-3}
Bristol East	UB	0				3				μgm^{-3}
Cardiff East	UB	0	0			3	2			μgm^{-3}
Edinburgh Med. Sch.	UB	0				2				μgm^{-3}
Harwell	Rur	0				0				μgm^{-3}
Leeds Potternewton	UB	0				5				μgm^{-3}
Liverpool Speke	UB	0				19				μgm^{-3}
London Eltham	SU	0				3				μgm^{-3}
London Marylebone Road	K	1	1	1	0	5	5	5	4	μgm^{-3}
London UCL	Rd	0				3				μgm^{-3}
Middlesbrough	UI	0				1				μgm^{-3}
Southampton Centre	UC	0				12				μgm^{-3}

Cyclopenta(c,d)pyrene 36

Alternative Name:
CAS Number: 27208-37-3
Type of pollutant: Polycyclic Aromatic Hydrocarbon

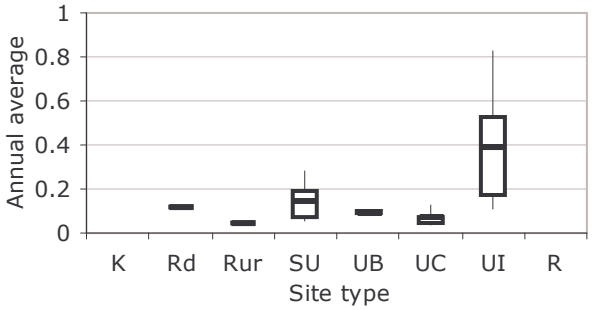
Structure



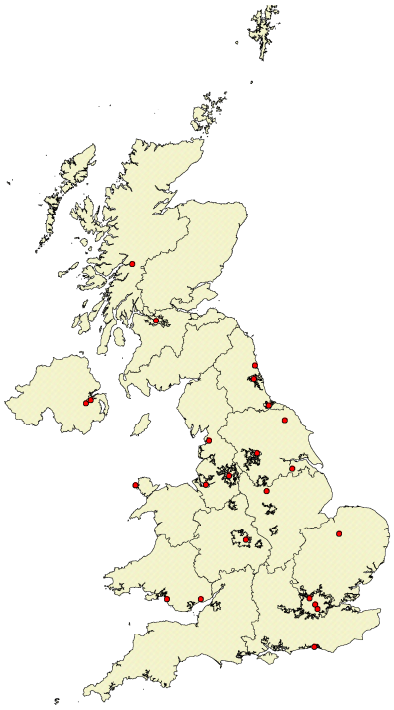
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.12	0.12	0.12	0.12	0.12
Rur	1	0.04	0.04	0.04	0.04	0.04
SU	4	0.14	0.06	0.28	0.06	0.26
UB	2	0.09	0.09	0.10	0.09	0.10
UC	4	0.07	0.04	0.13	0.04	0.12
UI	3	0.39	0.11	0.83	0.12	0.77
R	0					



Cyclopenta(c,d)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

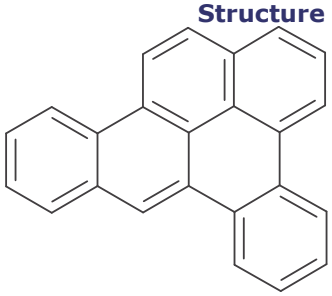
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.13	0.12		0.11	µgm^{-3}
Belfast	SU		0.26	0.06	<0.05	µgm^{-3}
Birmingham 1	UB		0.13	0.07	0.10	µgm^{-3}
Bolsover	SU	0.18	0.19	0.14	0.28	µgm^{-3}
Brent	UB				0.09	µgm^{-3}
Bromley	Rd			0.13	0.12	µgm^{-3}
Glasgow	UC	0.09	0.11	0.08	0.04	µgm^{-3}
Holyhead	UI	0.11	0.14		0.10	µgm^{-3}
Hove	UC				0.05	µgm^{-3}
Kinlochleven	SU	1.10	0.29	0.29	0.16	µgm^{-3}
Leeds 1	UC		0.13	0.11	0.13	µgm^{-3}
Lisburn	SU	0.70	0.65	0.39	<0.56	µgm^{-3}
London 2a	UC	<0.12	0.08	0.07	0.06	µgm^{-3}
Newcastle	UC		0.07	0.07	<0.08	µgm^{-3}
Newport	SU	0.23	0.24	0.09	0.06	µgm^{-3}
Port Talbot	UI	0.39	0.24	0.18	0.23	µgm^{-3}
Scunthorpe	UI	0.97	0.27	0.74	0.83	µgm^{-3}
Speke	SU			0.08	0.08	µgm^{-3}
Stoke Ferry	Rur		0.06	0.04	0.04	µgm^{-3}

Dibenz(ae)pyrene 37

Alternative Name: 1,2,4,5-dibenzopyrene
CAS Number: 192-65-4
Type of pollutant: Polycyclic Aromatic Hydrocarbon

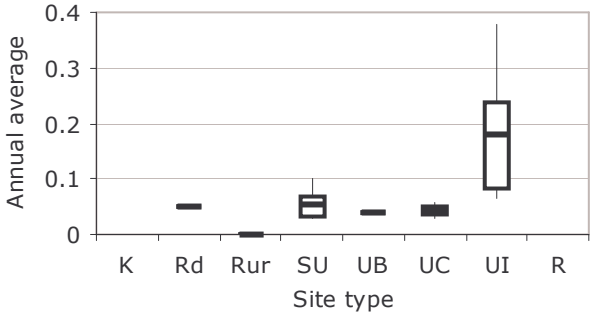
Structure



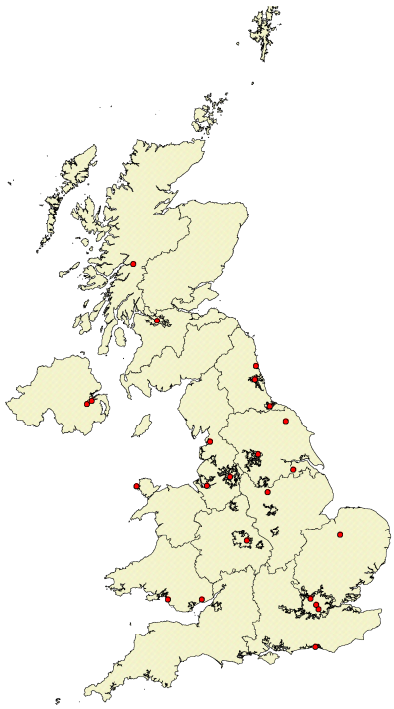
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.05	0.05	0.05	0.05	0.05
Rur	0					
SU	3	0.05	0.03	0.10	0.03	0.09
UB	2	0.04	0.04	0.04	0.04	0.04
UC	2	0.04	0.03	0.06	0.03	0.06
UI	3	0.18	0.06	0.38	0.07	0.35
R	0					



Dibenz(ae)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

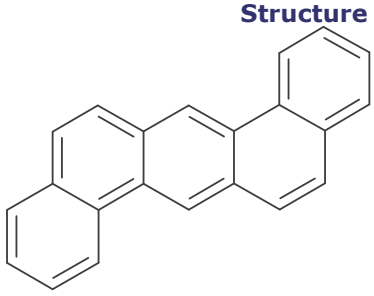
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	<0.05	0.06		0.06	µgm^{-3}
Belfast	SU		0.14	<0.05	<0.02	µgm^{-3}
Birmingham 1	UB		0.04	<0.02	0.04	µgm^{-3}
Bolsover	SU	0.09	0.08	0.06	0.10	µgm^{-3}
Brent	UB				0.04	µgm^{-3}
Bromley	Rd			0.04	0.05	µgm^{-3}
Glasgow	UC	<0.03	0.03	<0.02	<0.01	µgm^{-3}
Holyhead	UI	0.03	0.04		0.04	µgm^{-3}
Hove	UC				0.03	µgm^{-3}
Kinlochleven	SU	0.60	0.06	0.05	<0.04	µgm^{-3}
Leeds 1	UC		0.05	<0.03	0.06	µgm^{-3}
Lisburn	SU	0.21	0.22	0.12	<0.21	µgm^{-3}
London 2a	UC	<0.04	0.03	0.02	<0.01	µgm^{-3}
Newcastle	UC		0.02	0.03	<0.04	µgm^{-3}
Newport	SU	0.09	0.09	<0.04	0.03	µgm^{-3}
Port Talbot	UI	<0.15	0.10	0.06	0.10	µgm^{-3}
Scunthorpe	UI	0.39	0.09	0.28	0.38	µgm^{-3}
Speke	SU			0.03	0.03	µgm^{-3}
Stoke Ferry	Rur		0.02	<0.01	<0.01	µgm^{-3}

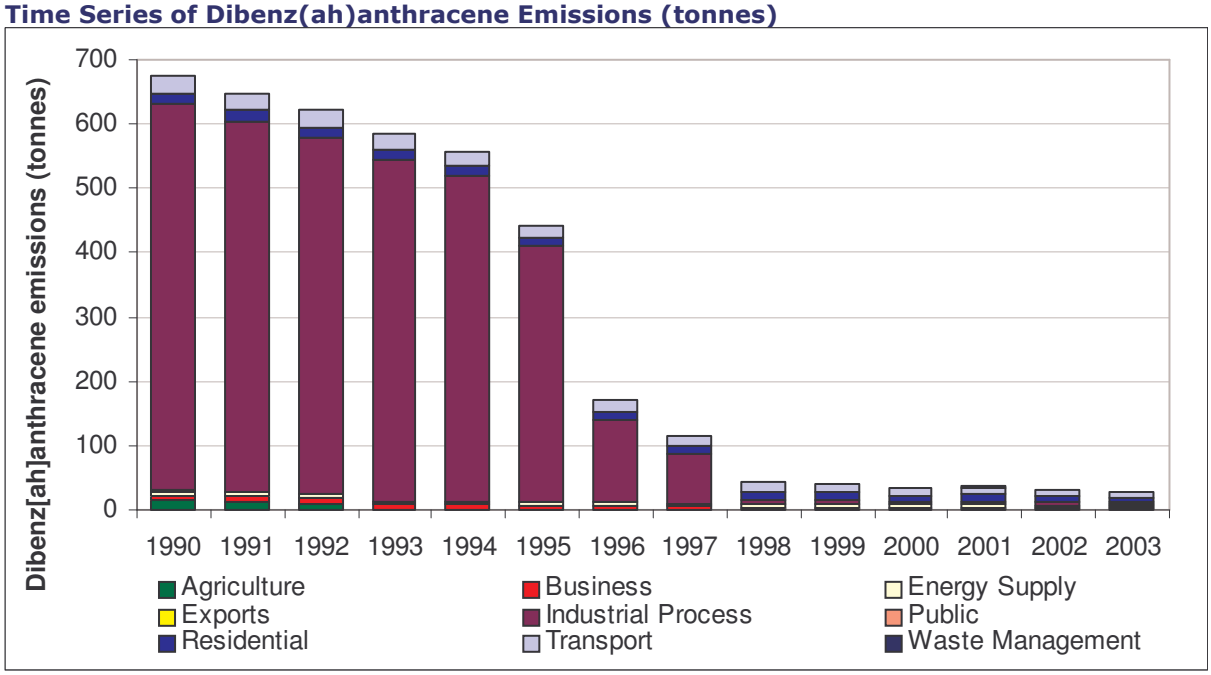
Dibenz(ah)anthracene 38

Alternative Name:
CAS Number: 53-70-3
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Dibenz(ah)anthracene Emissions (tonnes)



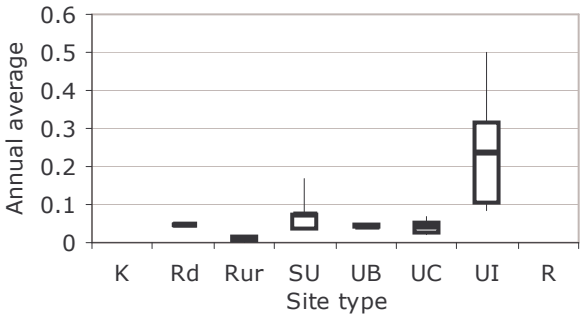
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003*

Non-automatic Monitoring Annual Mean* (µgm^{-3})

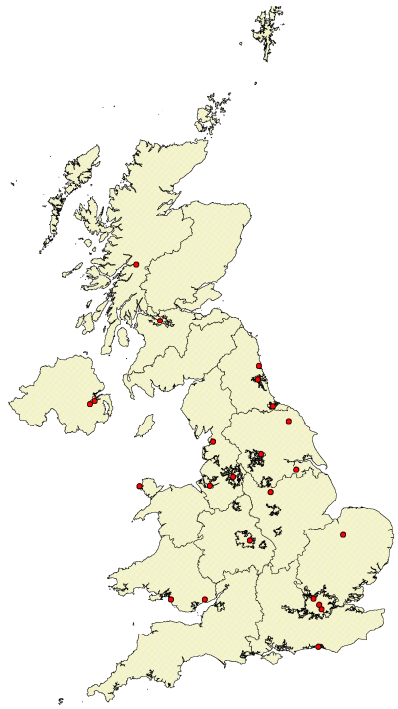
Site type	No. of Sites	Mean*	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.1	0.1	0.1	0.1	0.1
Rur	2	0.0	0.0	0.0	0.0	0.0
SU	4	0.1	0.0	0.2	0.0	0.2
UB	2	0.0	0.0	0.1	0.0	0.1
UC	4	0.0	0.0	0.1	0.0	0.1
UI	3	0.2	0.1	0.5	0.1	0.5
R	0					



Dibenz(ah/ac)anthracene Annual Average Boxplot

** Dibenz(ah+ac)anthracene*

Dibenz(ah)anthracene 38



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - PAH

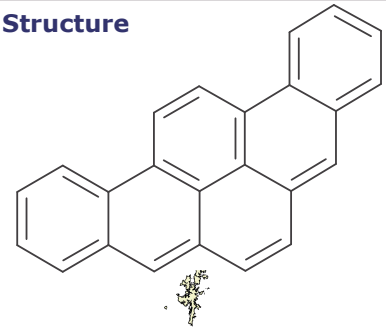
Site Name	Site Type	Annual Mean					Unit
		2000*	2001*	2002*	2003*	2004	
Ashington	UI	0.09	0.10		0.08	0.06	μgm^{-3}
Belfast	SU		0.23	0.09	0.04	0.09	μgm^{-3}
Birmingham 1	UB		0.05	0.04	0.05		μgm^{-3}
Bolsover	SU	0.10	0.12	0.10	0.17	0.08	μgm^{-3}
Brent	UB				0.04	0.03	μgm^{-3}
Bromley	Rd			0.05	0.05	0.04	μgm^{-3}
Glasgow	UC	0.11	0.04	0.03	0.02	0.02	μgm^{-3}
High Muffles	Rur						μgm^{-3}
Holyhead		0.03	0.05		0.04		μgm^{-3}
Hove	UC				0.03	0.03	μgm^{-3}
Kinlochleven	SU	0.74	0.08	0.08	0.04	0.07	μgm^{-3}
Leeds 1	UB		0.07	0.06	0.07		μgm^{-3}
Lisburn	SU	0.30	0.29	0.20	0.26	0.18	μgm^{-3}
London 2a	UC	0.11	0.03	0.03	0.02	0.02	μgm^{-3}
Manchester	UC						μgm^{-3}
Middlesbrough	UB						μgm^{-3}
Newcastle	UC		0.04	0.04	0.05	0.02	μgm^{-3}
Newport	SU	0.11	0.12	0.06	0.04	0.03	μgm^{-3}
Port Talbot	UI	0.19	0.13	0.09	0.13	0.07	μgm^{-3}
Scunthorpe	UI	0.36	0.13	0.44	0.50		μgm^{-3}
Speke	SU			0.04	0.04	0.03	μgm^{-3}
Stoke Ferry	Rur		0.02	0.04	0.02	0.03	μgm^{-3}

** Dibenz(ah+ac)anthracene data, Dibenz(ah)anthracene data starts in 2004*

Dibenz(ai)pyrene 39

Alternative Name:
CAS Number: 189-55-9
Type of pollutant: Polycyclic Aromatic Hydrocarbon

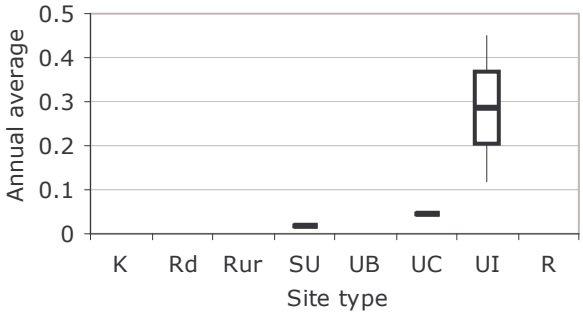
Structure



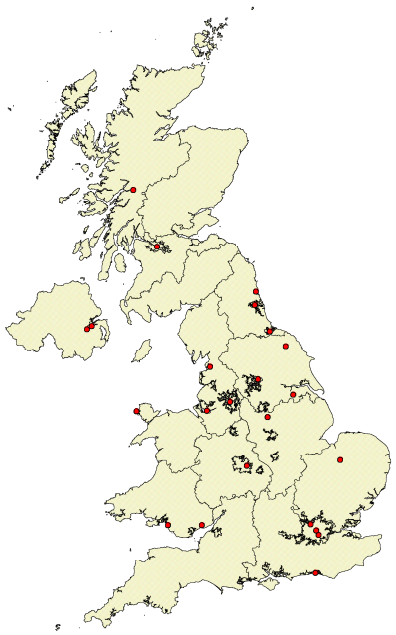
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	0					
Rur	0					
SU	1	0.02	0.02	0.02	0.02	0.02
UB	0					
UC	1	0.04	0.04	0.04	0.04	0.04
UI	2	0.29	0.12	0.45	0.14	0.43
R	0					



Dibenz(ai)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

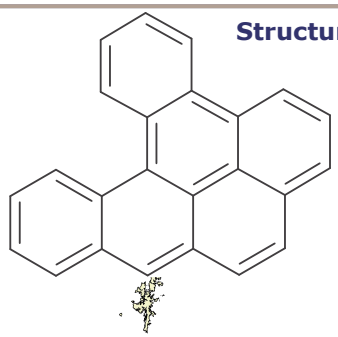
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	<0.01	<0.02		<0.03	µgm^{-3}
Belfast	SU		<0.03	<0.02	<0.01	µgm^{-3}
Birmingham 1	UB		<0.00	<0.01	<0.02	µgm^{-3}
Bolsover	SU	<0.02	<0.01	<0.02	<0.10	µgm^{-3}
Brent	UB				<0.01	µgm^{-3}
Bromley	Rd			<0.01	<0.01	µgm^{-3}
Glasgow	UC	<0.01	<0.01	<0.01	<0.01	µgm^{-3}
Holyhead	UI	0.01	0.01		0.03	µgm^{-3}
Hove	UC				<0.02	µgm^{-3}
Kinlochleven	SU	0.18	<0.02	0.03	<0.05	µgm^{-3}
Leeds 1	UC		<0.01	<0.01	0.04	µgm^{-3}
Lisburn	SU	0.10	<0.06	0.07	<0.29	µgm^{-3}
London 2a	UC	<0.01	0.01	<0.00	<0.01	µgm^{-3}
Newcastle	UC		<0.01	<0.01	<0.03	µgm^{-3}
Newport	SU	<0.03	<0.03	<0.02	0.02	µgm^{-3}
Port Talbot	UI	<0.07	0.02	<0.04	0.12	µgm^{-3}
Scunthorpe	UI	<0.12	0.02	0.14	0.45	µgm^{-3}
Speke	SU			<0.01	<0.02	µgm^{-3}
Stoke Ferry	Rur		<0.01	<0.00	<0.01	µgm^{-3}

Dibenzo(al)pyrene 40

Alternative Name: 1,2,3,4-dibenzopyrene
CAS Number: 191-30-0
Type of pollutant: Polycyclic Aromatic Hydrocarbon

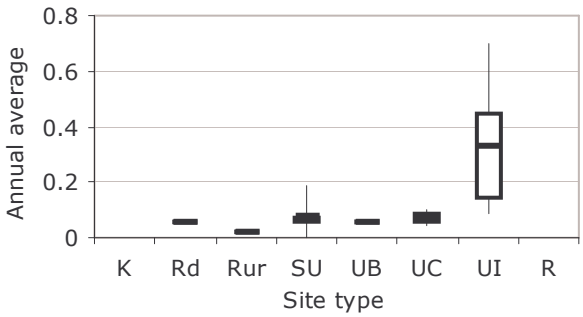
Structure



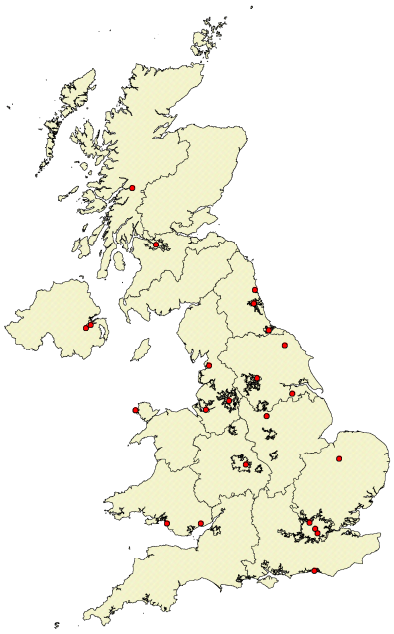
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.06	0.06	0.06	0.06	0.06
Rur	1	0.02	0.02	0.02	0.02	0.02
SU	5	0.08	0.00	0.19	0.01	0.17
UB	2	0.06	0.06	0.06	0.06	0.06
UC	2	0.07	0.05	0.10	0.05	0.10
UI	3	0.33	0.08	0.70	0.10	0.65
R	0					



Dibenzo(al)pyrene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

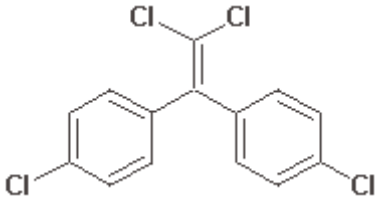
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.09	0.12		0.08	µgm^{-3}
Belfast	SU		0.31	<0.10	<0.04	µgm^{-3}
Birmingham 1	UB		0.07	0.05	0.06	µgm^{-3}
Bolsover	SU	<0.11	0.16	0.08	0.19	µgm^{-3}
Brent	UB				0.06	µgm^{-3}
Bromley	Rd			0.06	0.06	µgm^{-3}
Glasgow	UC	0.06	0.06	0.04	<0.03	µgm^{-3}
Holyhead	UI	0.08	0.10		0.06	µgm^{-3}
Hove	UC				0.05	µgm^{-3}
Kinlochleven	SU	1.40	0.14	0.10	0.07	µgm^{-3}
Leeds 1	UC		0.11	0.07	0.10	µgm^{-3}
Lisburn	SU	0.44	0.49	0.21	<0.42	µgm^{-3}
London 2a	UC	<0.08	0.05	0.04	<0.03	µgm^{-3}
Newcastle	UC		0.05	0.05	<0.06	µgm^{-3}
Newport	SU	0.20	0.21	0.07	0.06	µgm^{-3}
Port Talbot	UI	0.30	0.24	0.12	0.20	µgm^{-3}
Scunthorpe	UI	0.29	0.19	0.59	0.70	µgm^{-3}
Speke	SU			0.06	0.07	µgm^{-3}
Stoke Ferry	Rur		0.05	0.03	0.02	µgm^{-3}

Dichlorodiphenyldichloroethylene 41

Alternative Name: p,p`-DDE
CAS Number: 72-55-9
Type of pollutant: Persistant Organic Pollutant

Structure



Monitoring data

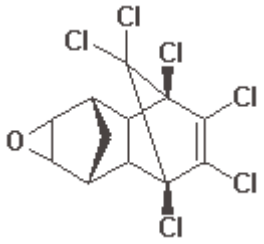
Site Name	Start Period	End Period	Value	Unit
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		8.28	pgm^{-3}

* Lee et al (2000)

Dieldrin $C_{12}H_8Cl_6$ 42

Alternative Name:
CAS Number: 60-57-1
Type of pollutant: Persistant Organic Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Monitoring data

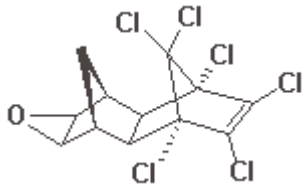
Site Name	Start Period	End Period	Value	Unit
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		63	pgm^{-3}

* Lee et al (2000)

Endrin $C_{12}H_8Cl_6O$ 43

Alternative Name:
CAS Number: 72-20-8
Type of pollutant: Persistant Organic Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Monitoring data

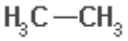
Site Name	Start Period	End Period	Value	Unit
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		22.3	pgm^{-3}

* Lee et al (2000)

Ethane C_2H_6 44

Alternative Name:
CAS Number: 74-84-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

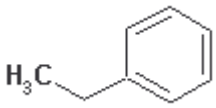
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	2				18				μgm^{-3}
Birmingham East	UB	7				134				μgm^{-3}
Bristol East	UB	5				79				μgm^{-3}
Cardiff East	UB		7				73			μgm^{-3}
Edinburgh Med. Sch.	UB	4	5			72	123			μgm^{-3}
Harwell	Rur	2	2			21	14			μgm^{-3}
Leeds Potternewton	UB	9				108				μgm^{-3}
Liverpool Speke	UB	6				92				μgm^{-3}
London Eltham	SU	4				42				μgm^{-3}
London Marylebone Road	K	10	10	11	11	114	98	745	84	μgm^{-3}
London UCL	Rd	7				99				μgm^{-3}
Middlesbrough	UI	7				125				μgm^{-3}
Southampton Centre	UC	7				138				μgm^{-3}

Ethylbenzene C_8H_{10} 45

Alternative Name: Phenylethane, Styrene, Ethenyl benzene
CAS Number: 100-41-4
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			✓

Air Quality Monitoring Data

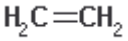
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				35				μgm^{-3}
Birmingham East	UB	1				44				μgm^{-3}
Edinburgh Med. Sch.	UB		1				25			μgm^{-3}
Glasgow Kerbside	K				1				33	μgm^{-3}
Harwell	Rur	0				4				μgm^{-3}
London Marylebone Road	K	5	4	3	2	93	29	31	16	μgm^{-3}
London UCL	Rd	1				26				μgm^{-3}

Ethylene C_2H_4 46

Alternative Name: Ethene
CAS Number: 74-85-1
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Air Quality Monitoring Data

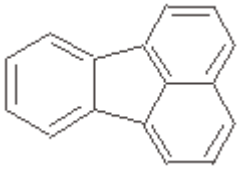
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				27				μgm^{-3}
Birmingham East	UB	2				57				μgm^{-3}
Bristol East	UB	2				49				μgm^{-3}
Cardiff East	UB	3	4			48	54			μgm^{-3}
Edinburgh Med. Sch.	UB	1	2			123	56			μgm^{-3}
Harwell	Rur	1	1			6	9			μgm^{-3}
Leeds Potternewton	UB	3				40				μgm^{-3}
Liverpool Speke	UB	2				47				μgm^{-3}
London Eltham	SU	2				25				μgm^{-3}
London Marylebone Road	K	15	10	7	6	71	78	36	31	μgm^{-3}
London UCL	Rd	4				69				μgm^{-3}
Middlesbrough	UI	4				600				μgm^{-3}
Southampton Centre	UC	4				67				μgm^{-3}

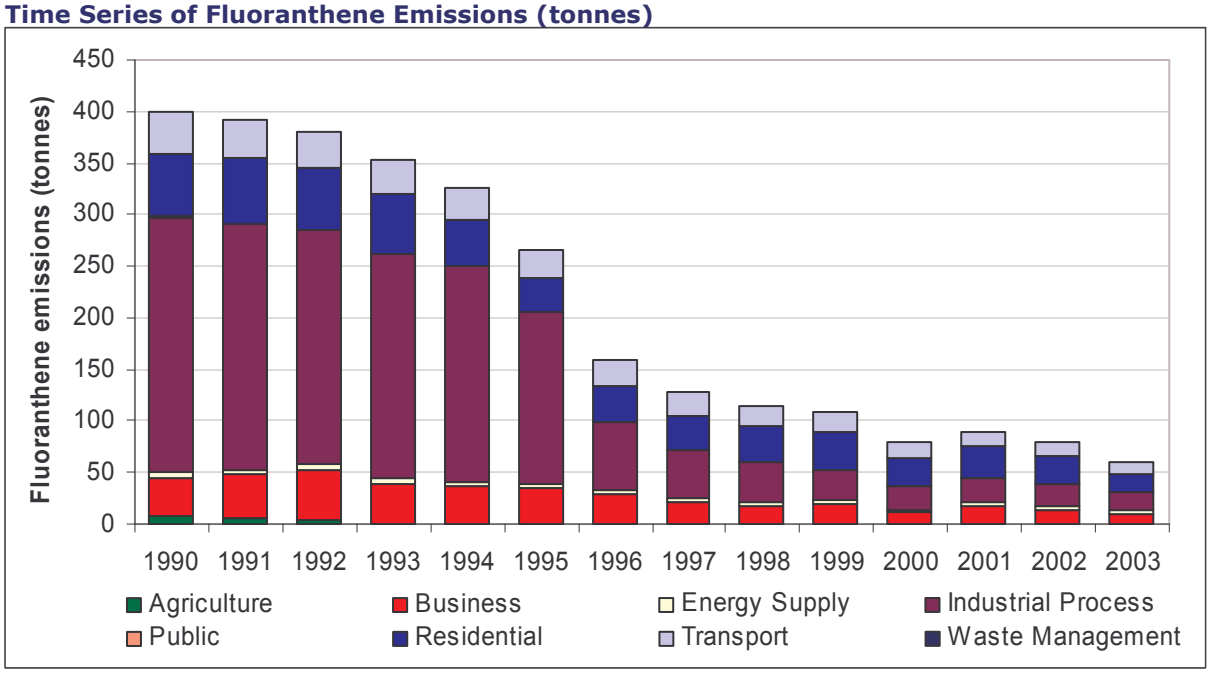
Fluoranthene 47

Alternative Name: 1,2-benzacenaphthene, fluoranthrene
CAS Number: 206-44-0
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Fluoranthene Emissions (tonnes)



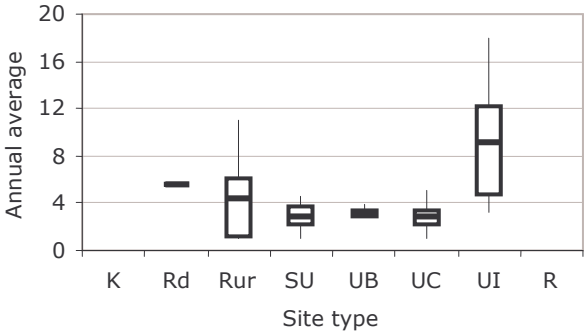
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

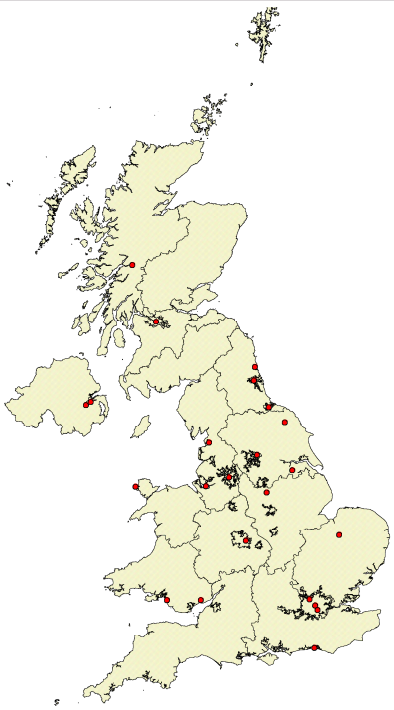
Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
UI	3	9.2	3.2	18.0	3.5	16.8
UC	6	2.9	1.0	5.1	1.3	4.7
UB	3	3.2	2.8	3.9	2.8	3.8
SU	6	2.8	1.1	4.6	1.4	4.5
Rur	3	4.4	1.1	11.0	1.1	10.0
Rd	1	5.6	5.6	5.6	5.6	5.6
K	0					
R	0					



Fluoranthene Annual Average Boxplot

Fluoranthene 47



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

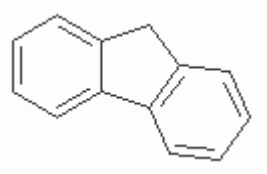
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	3.5	3.5		3.2	μgm^{-3}
Belfast	SU		4.4	2.2	1.1	μgm^{-3}
Birmingham 1	UB		2.8	3.0	2.9	μgm^{-3}
Bolsover	SU	3.1	2.7	3.7	4.1	μgm^{-3}
Brent	UB				2.8	μgm^{-3}
Bromley	Rd			6.2	5.6	μgm^{-3}
Glasgow	UC	2.6	2.1	2.2	1.0	μgm^{-3}
Hazelrigg	Rur	13.0	14.0		11.0	μgm^{-3}
High Muffles	Rur	1.4	1.3	1.2	1.1	μgm^{-3}
Holyhead	UI	2.3	2.5		2.1	μgm^{-3}
Hove	UC				2.2	μgm^{-3}
Kinlochleven	SU	15.0	3.8	3.2	2.3	μgm^{-3}
Leeds 1	UC		3.5	3.6	3.6	μgm^{-3}
Lisburn	SU	6.4	4.0	3.4	4.6	μgm^{-3}
London 2a	UC	3.0	2.7	3.1	2.9	μgm^{-3}
Manchester	UC	6.2	6.1	5.1	5.1	μgm^{-3}
Middlesbrough	UB	5.0	6.3	4.1	3.9	μgm^{-3}
Newcastle	UC		1.8	2.4	2.4	μgm^{-3}
Newport	SU	5.2	6.2	3.8	2.2	μgm^{-3}
Port Talbot	UI	9.5	7.3	5.6	6.3	μgm^{-3}
Scunthorpe	UI	12.0	10.0	15.0	18.0	μgm^{-3}
Speke	SU			2.7	2.6	μgm^{-3}
Stoke Ferry	Rur	1.2	1.1	1.2	1.2	μgm^{-3}

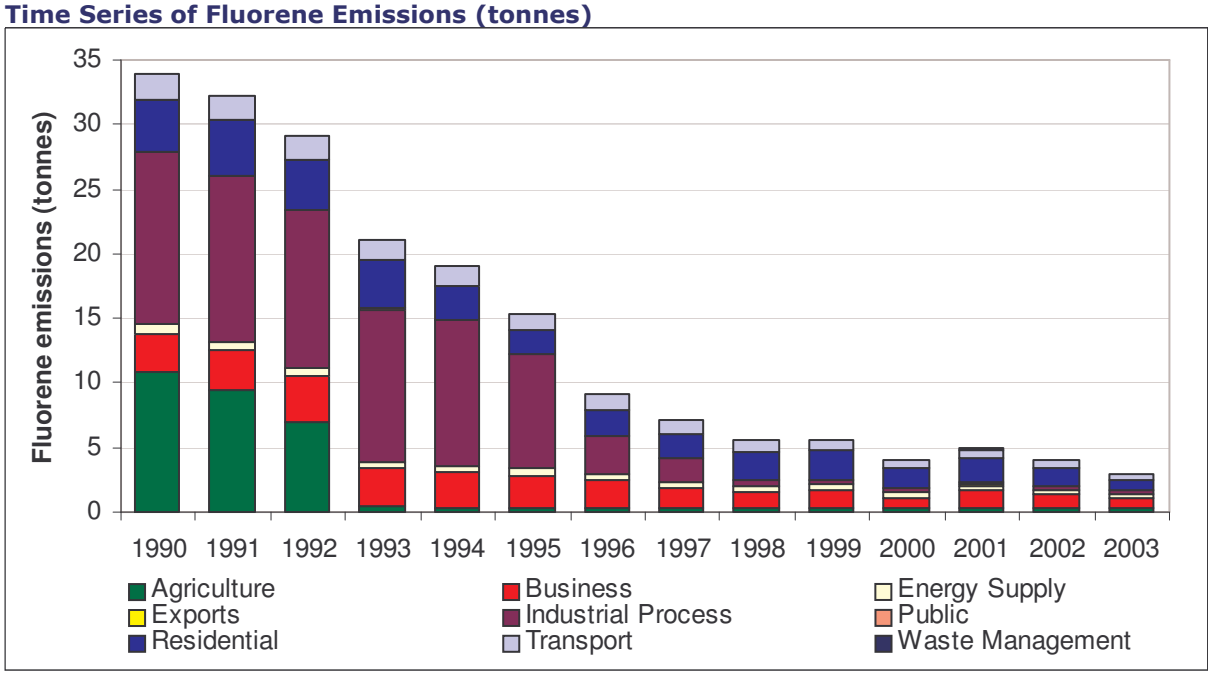
Fluorene 48

Alternative Name: Diphenylenemethane
CAS Number: 7782-41-4
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Fluorene Emissions (tonnes)



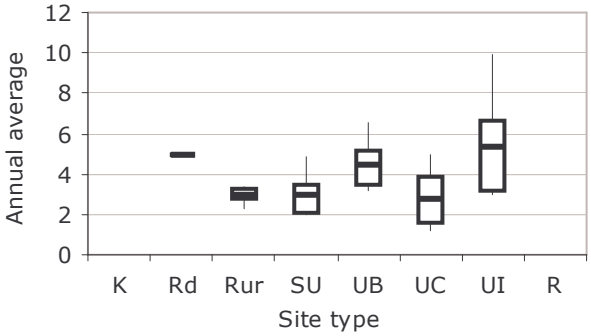
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

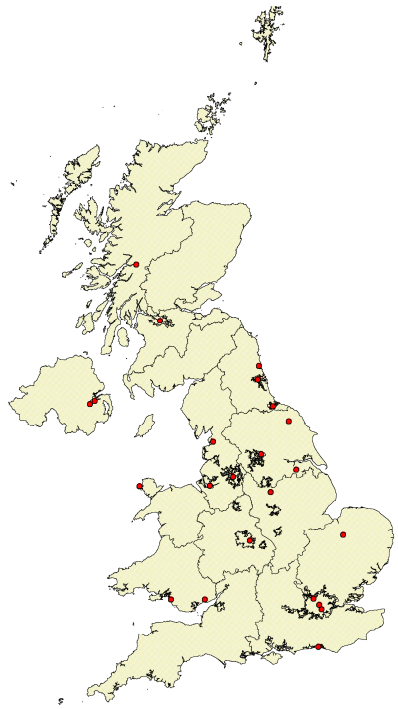
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	5.0	5.0	5.0	5.0	5.0
Rur	3	3.0	2.3	3.4	2.4	3.4
SU	6	2.9	2.0	4.9	2.0	4.6
UB	3	4.5	3.2	6.5	3.3	6.2
UC	6	2.7	1.2	5.0	1.3	4.8
UI	3	5.4	3.0	9.9	3.0	9.2
R	0					



Fluorene Annual Average Boxplot

Fluorene 48



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

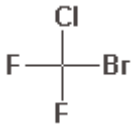
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	3.4	2.1		3.0	μgm^{-3}
Belfast	SU		4.7	2.2	2.1	μgm^{-3}
Birmingham 1	UB		2.5	3.1	3.8	μgm^{-3}
Bolsover	SU	3.3	<1.9	4.3	4.9	μgm^{-3}
Brent	UB				3.2	μgm^{-3}
Bromley	Rd			4.8	5.0	μgm^{-3}
Glasgow	UC	3.3	2.7	2.3	1.2	μgm^{-3}
Hazelrigg	Rur	6.6	6.0	3.7	3.4	μgm^{-3}
High Muffles	Rur	2.8	2.1	2.2	2.3	μgm^{-3}
Holyhead	UI	1.8	1.3		1.5	μgm^{-3}
Hove	UC				1.5	μgm^{-3}
Kinlochleven	SU	3.6	3.8	3.7	2.1	μgm^{-3}
Leeds 1	UC		3.0	2.9	2.5	μgm^{-3}
Lisburn	SU	6.0	3.8	3.5	3.6	μgm^{-3}
London 2a	UC	4.3	3.5	3.4	4.3	μgm^{-3}
Manchester	UC	6.8	6.9	4.9	5.0	μgm^{-3}
Middlesbrough	UB	10.0	14.0	8.0	6.5	μgm^{-3}
Newcastle	UC		1.1	1.6	1.9	μgm^{-3}
Newport	SU	5.1	4.6	3.1	2.9	μgm^{-3}
Port Talbot	UI	5.7	2.7	2.4	3.3	μgm^{-3}
Scunthorpe	UI	7.4	5.9	9.0	9.9	μgm^{-3}
Speke	SU			1.9	2.0	μgm^{-3}
Stoke Ferry	Rur	2.1	1.9	2.2	3.2	μgm^{-3}

Halon-1211 $CBrClF_2$ 49

Alternative Name: Bromochlorodifluoromethane
CAS Number: 353-59-3
Type of pollutant: Ozone-depleting Substance

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	29	29	ngm^{-3}
Mace Head	R	02/2000	29	29	ngm^{-3}
Mace Head	R	03/2000	29	30	ngm^{-3}
Mace Head	R	04/2000	30	30	ngm^{-3}
Mace Head	R	05/2000	30	31	ngm^{-3}
Mace Head	R	06/2000	30	30	ngm^{-3}
Mace Head	R	07/2000	30	30	ngm^{-3}
Mace Head	R	08/2000	30	30	ngm^{-3}
Mace Head	R	09/2000	30	30	ngm^{-3}
Mace Head	R	10/2000	30	30	ngm^{-3}
Mace Head	R	11/2000	30	30	ngm^{-3}
Mace Head	R	12/2000	30	31	ngm^{-3}
Mace Head	R	01/2001	30	31	ngm^{-3}
Mace Head	R	02/2001	30	31	ngm^{-3}
Mace Head	R	03/2001	30	31	ngm^{-3}
Mace Head	R	04/2001	30	30	ngm^{-3}
Mace Head	R	05/2001	30	31	ngm^{-3}
Mace Head	R	06/2001	30	31	ngm^{-3}
Mace Head	R	07/2001	30	30	ngm^{-3}
Mace Head	R	08/2001	30	30	ngm^{-3}
Mace Head	R	09/2001	30	30	ngm^{-3}
Mace Head	R	10/2001	30	30	ngm^{-3}
Mace Head	R	11/2001	30	31	ngm^{-3}
Mace Head	R	12/2001	31	31	ngm^{-3}
Mace Head	R	01/2002	30	30	ngm^{-3}
Mace Head	R	02/2002	30	30	ngm^{-3}
Mace Head	R	03/2002	30	31	ngm^{-3}
Mace Head	R	04/2002	30	31	ngm^{-3}
Mace Head	R	05/2002	30	31	ngm^{-3}
Mace Head	R	06/2002	30	30	ngm^{-3}
Mace Head	R	07/2002	30	30	ngm^{-3}
Mace Head	R	08/2002	30	30	ngm^{-3}
Mace Head	R	09/2002	30	31	ngm^{-3}
Mace Head	R	10/2002	30	30	ngm^{-3}
Mace Head	R	11/2002	30	30	ngm^{-3}
Mace Head	R	12/2002	30	31	ngm^{-3}
Mace Head	R	01/2003	30	30	ngm^{-3}
Mace Head	R	02/2003	30	31	ngm^{-3}
Mace Head	R	03/2003	30	31	ngm^{-3}
Mace Head	R	04/2003	31	31	ngm^{-3}
Mace Head	R	05/2003	30	30	ngm^{-3}
Mace Head	R	06/2003	30	30	ngm^{-3}
Mace Head	R	07/2003	30	30	ngm^{-3}
Mace Head	R	08/2003	30	30	ngm^{-3}
Mace Head	R	09/2003	30	30	ngm^{-3}
Mace Head	R	10/2003	30	31	ngm^{-3}
Mace Head	R	11/2003	30	31	ngm^{-3}
Mace Head	R	12/2003	31	31	ngm^{-3}

Halon-1301 $CBrF_3$ 50

Alternative Name: Bromotrifluoromethane
CAS Number: 75-63-8
Type of pollutant: Ozone-depleting Substance

Structure

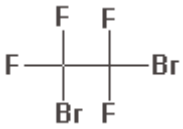
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	18	18	ngm^{-3}
Mace Head	R	02/2000	19	19	ngm^{-3}
Mace Head	R	03/2000	18	18	ngm^{-3}
Mace Head	R	04/2000	18	18	ngm^{-3}
Mace Head	R	05/2000	19	19	ngm^{-3}
Mace Head	R	06/2000	18	19	ngm^{-3}
Mace Head	R	07/2000	19	19	ngm^{-3}
Mace Head	R	08/2000	19	19	ngm^{-3}
Mace Head	R	09/2000	19	19	ngm^{-3}
Mace Head	R	10/2000	19	19	ngm^{-3}
Mace Head	R	11/2000	19	19	ngm^{-3}
Mace Head	R	12/2000	19	19	ngm^{-3}
Mace Head	R	01/2001	19	19	ngm^{-3}
Mace Head	R	02/2001	19	19	ngm^{-3}
Mace Head	R	03/2001	19	19	ngm^{-3}
Mace Head	R	04/2001	19	19	ngm^{-3}
Mace Head	R	05/2001	19	19	ngm^{-3}
Mace Head	R	06/2001	19	19	ngm^{-3}
Mace Head	R	07/2001	19	19	ngm^{-3}
Mace Head	R	08/2001	19	19	ngm^{-3}
Mace Head	R	09/2001	19	19	ngm^{-3}
Mace Head	R	10/2001	19	19	ngm^{-3}
Mace Head	R	11/2001	19	19	ngm^{-3}
Mace Head	R	12/2001	19	19	ngm^{-3}
Mace Head	R	01/2002	19	19	ngm^{-3}
Mace Head	R	02/2002	19	19	ngm^{-3}
Mace Head	R	03/2002	19	19	ngm^{-3}
Mace Head	R	04/2002	19	19	ngm^{-3}
Mace Head	R	05/2002	19	19	ngm^{-3}
Mace Head	R	06/2002	19	19	ngm^{-3}
Mace Head	R	07/2002	19	19	ngm^{-3}
Mace Head	R	08/2002	19	19	ngm^{-3}
Mace Head	R	09/2002	19	19	ngm^{-3}
Mace Head	R	10/2002	19	19	ngm^{-3}
Mace Head	R	11/2002	19	19	ngm^{-3}
Mace Head	R	12/2002	19	19	ngm^{-3}
Mace Head	R	01/2003	19	19	ngm^{-3}
Mace Head	R	02/2003	19	19	ngm^{-3}
Mace Head	R	03/2003	19	20	ngm^{-3}
Mace Head	R	04/2003	19	19	ngm^{-3}
Mace Head	R	05/2003	19	21	ngm^{-3}
Mace Head	R	06/2003	19	19	ngm^{-3}
Mace Head	R	07/2003	19	19	ngm^{-3}
Mace Head	R	08/2003	19	19	ngm^{-3}
Mace Head	R	09/2003	19	19	ngm^{-3}
Mace Head	R	10/2003	19	19	ngm^{-3}
Mace Head	R	11/2003	19	19	ngm^{-3}
Mace Head	R	12/2003	21	21	ngm^{-3}

Halon-2402 $CBrF_2CBrF_2$ 51

Alternative Name: 1,2-dibromo-1,1,2,2-tetrafluoroethane
CAS Number: 124-73-2
Type of pollutant: Ozone-depleting Substance

Structure



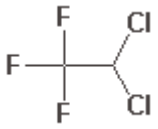
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	07/2000	10	10	ngm^{-3}
Mace Head	R	08/2000	10	10	ngm^{-3}
Mace Head	R	09/2000	11	11	ngm^{-3}
Mace Head	R	10/2000	11	11	ngm^{-3}
Mace Head	R	11/2000	11	12	ngm^{-3}
Mace Head	R	12/2000	11	11	ngm^{-3}
Mace Head	R	01/2001	11	11	ngm^{-3}
Mace Head	R	02/2001	11	11	ngm^{-3}
Mace Head	R	03/2001	11	11	ngm^{-3}
Mace Head	R	04/2001	11	11	ngm^{-3}
Mace Head	R	05/2001	11	11	ngm^{-3}
Mace Head	R	06/2001	11	11	ngm^{-3}
Mace Head	R	07/2001	11	11	ngm^{-3}
Mace Head	R	08/2001	11	11	ngm^{-3}
Mace Head	R	09/2001	11	11	ngm^{-3}
Mace Head	R	10/2001	11	11	ngm^{-3}
Mace Head	R	11/2001	11	11	ngm^{-3}
Mace Head	R	12/2001	11	11	ngm^{-3}
Mace Head	R	01/2002	11	11	ngm^{-3}
Mace Head	R	02/2002	10	10	ngm^{-3}
Mace Head	R	03/2002	10	10	ngm^{-3}
Mace Head	R	04/2002	10	10	ngm^{-3}
Mace Head	R	05/2002	10	10	ngm^{-3}
Mace Head	R	06/2002	11	11	ngm^{-3}
Mace Head	R	07/2002	11	11	ngm^{-3}
Mace Head	R	08/2002	11	11	ngm^{-3}
Mace Head	R	09/2002	11	11	ngm^{-3}
Mace Head	R	10/2002	11	11	ngm^{-3}
Mace Head	R	11/2002	11	11	ngm^{-3}
Mace Head	R	12/2002	11	11	ngm^{-3}
Mace Head	R	01/2003	11	11	ngm^{-3}
Mace Head	R	02/2003	11	11	ngm^{-3}
Mace Head	R	03/2003	11	0	ngm^{-3}
Mace Head	R	04/2003	11	11	ngm^{-3}
Mace Head	R	05/2003	11	11	ngm^{-3}
Mace Head	R	06/2003	11	11	ngm^{-3}
Mace Head	R	07/2003	11	11	ngm^{-3}
Mace Head	R	08/2003	11	11	ngm^{-3}
Mace Head	R	09/2003	10	10	ngm^{-3}
Mace Head	R	10/2003	11	11	ngm^{-3}
Mace Head	R	11/2003	10	11	ngm^{-3}
Mace Head	R	12/2003	11	11	ngm^{-3}

HCFC-123 $CHCl_2CF_3$ 52

Alternative Name: 1,1-dichloro-2,2,2-trifluoroethane
CAS Number: 306-83-2
Type of pollutant: Ozone-depleting Substance

Structure



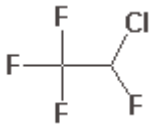
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	1	1	ngm^{-3}
Mace Head	R	02/2000	1	1	ngm^{-3}
Mace Head	R	03/2000	0	1	ngm^{-3}
Mace Head	R	04/2000	1	1	ngm^{-3}
Mace Head	R	05/2000	1	1	ngm^{-3}
Mace Head	R	06/2000	1	1	ngm^{-3}
Mace Head	R	07/2000	1	1	ngm^{-3}
Mace Head	R	08/2000	1	1	ngm^{-3}
Mace Head	R	09/2000	1	1	ngm^{-3}
Mace Head	R	10/2000	1	1	ngm^{-3}
Mace Head	R	11/2000	1	1	ngm^{-3}
Mace Head	R	12/2000	1	1	ngm^{-3}
Mace Head	R	01/2001	1	1	ngm^{-3}
Mace Head	R	02/2001	1	1	ngm^{-3}
Mace Head	R	03/2001	1	1	ngm^{-3}
Mace Head	R	04/2001	1	1	ngm^{-3}
Mace Head	R	05/2001	1	1	ngm^{-3}
Mace Head	R	06/2001	1	1	ngm^{-3}
Mace Head	R	07/2001	1	1	ngm^{-3}
Mace Head	R	08/2001	1	1	ngm^{-3}
Mace Head	R	09/2001	1	1	ngm^{-3}
Mace Head	R	10/2001	1	1	ngm^{-3}
Mace Head	R	11/2001	1	1	ngm^{-3}
Mace Head	R	12/2001	1	1	ngm^{-3}
Mace Head	R	01/2002	1	1	ngm^{-3}
Mace Head	R	02/2002	1	1	ngm^{-3}
Mace Head	R	03/2002	1	1	ngm^{-3}
Mace Head	R	04/2002	1	1	ngm^{-3}
Mace Head	R	05/2002	1	1	ngm^{-3}
Mace Head	R	06/2002			
Mace Head	R	07/2002			
Mace Head	R	08/2002	1	1	ngm^{-3}
Mace Head	R	09/2002	1	1	ngm^{-3}
Mace Head	R	10/2002	1	1	ngm^{-3}
Mace Head	R	11/2002	1	1	ngm^{-3}
Mace Head	R	12/2002	1	1	ngm^{-3}
Mace Head	R	01/2003	1	1	ngm^{-3}
Mace Head	R	02/2003	1	1	ngm^{-3}
Mace Head	R	03/2003	1	1	ngm^{-3}
Mace Head	R	04/2003	1	1	ngm^{-3}
Mace Head	R	05/2003	1	1	ngm^{-3}
Mace Head	R	06/2003	1	1	ngm^{-3}
Mace Head	R	07/2003	1	1	ngm^{-3}
Mace Head	R	08/2003	1	1	ngm^{-3}
Mace Head	R	09/2003	1	1	ngm^{-3}
Mace Head	R	10/2003	1	1	ngm^{-3}
Mace Head	R	11/2003	1	1	ngm^{-3}
Mace Head	R	12/2003	6	6	ngm^{-3}

HCFC-124 $CHClFCF_3$ 53

Alternative Name: 1-chloro-1,2,2,2-trifluoroethane
CAS Number: 2837-89-0
Type of pollutant: Ozone-depleting Substance

Structure



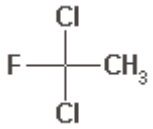
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	8	8	ngm^{-3}
Mace Head	R	02/2000	8	8	ngm^{-3}
Mace Head	R	03/2000	8	8	ngm^{-3}
Mace Head	R	04/2000	8	8	ngm^{-3}
Mace Head	R	05/2000	8	8	ngm^{-3}
Mace Head	R	06/2000	8	8	ngm^{-3}
Mace Head	R	07/2000	8	8	ngm^{-3}
Mace Head	R	08/2000	8	8	ngm^{-3}
Mace Head	R	09/2000	9	9	ngm^{-3}
Mace Head	R	10/2000	9	9	ngm^{-3}
Mace Head	R	11/2000	9	9	ngm^{-3}
Mace Head	R	12/2000	9	10	ngm^{-3}
Mace Head	R	01/2001	9	10	ngm^{-3}
Mace Head	R	02/2001	9	9	ngm^{-3}
Mace Head	R	03/2001	9	10	ngm^{-3}
Mace Head	R	04/2001	9	9	ngm^{-3}
Mace Head	R	05/2001	9	9	ngm^{-3}
Mace Head	R	06/2001	9	9	ngm^{-3}
Mace Head	R	07/2001	9	9	ngm^{-3}
Mace Head	R	08/2001	9	9	ngm^{-3}
Mace Head	R	09/2001	9	9	ngm^{-3}
Mace Head	R	10/2001	9	9	ngm^{-3}
Mace Head	R	11/2001	9	9	ngm^{-3}
Mace Head	R	12/2001	9	9	ngm^{-3}
Mace Head	R	01/2002	9	9	ngm^{-3}
Mace Head	R	02/2002	9	9	ngm^{-3}
Mace Head	R	03/2002	9	9	ngm^{-3}
Mace Head	R	04/2002	9	9	ngm^{-3}
Mace Head	R	05/2002	9	9	ngm^{-3}
Mace Head	R	06/2002	9	9	ngm^{-3}
Mace Head	R	07/2002	9	9	ngm^{-3}
Mace Head	R	08/2002	9	9	ngm^{-3}
Mace Head	R	09/2002	9	9	ngm^{-3}
Mace Head	R	10/2002	9	9	ngm^{-3}
Mace Head	R	11/2002	9	9	ngm^{-3}
Mace Head	R	12/2002	9	10	ngm^{-3}
Mace Head	R	01/2003	9	9	ngm^{-3}
Mace Head	R	02/2003	10	10	ngm^{-3}
Mace Head	R	03/2003	10	10	ngm^{-3}
Mace Head	R	04/2003	10	10	ngm^{-3}
Mace Head	R	05/2003	9	9	ngm^{-3}
Mace Head	R	06/2003	9	9	ngm^{-3}
Mace Head	R	07/2003	9	9	ngm^{-3}
Mace Head	R	08/2003	9	9	ngm^{-3}
Mace Head	R	09/2003	9	9	ngm^{-3}
Mace Head	R	10/2003	9	9	ngm^{-3}
Mace Head	R	11/2003	9	10	ngm^{-3}
Mace Head	R	12/2003	9	9	ngm^{-3}

HCFC-141b CH_3CCl_2F 54

Alternative Name: 1,1-dichloro-1-fluoroethane
CAS Number: 1717-00-6
Type of pollutant: Ozone-depleting Substance

Structure



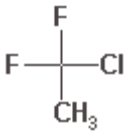
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	69	70	ngm^{-3}
Mace Head	R	02/2000	69	70	ngm^{-3}
Mace Head	R	03/2000	69	72	ngm^{-3}
Mace Head	R	04/2000	73	75	ngm^{-3}
Mace Head	R	05/2000	73	80	ngm^{-3}
Mace Head	R	06/2000	74	78	ngm^{-3}
Mace Head	R	07/2000	73	80	ngm^{-3}
Mace Head	R	08/2000	74	78	ngm^{-3}
Mace Head	R	09/2000	75	77	ngm^{-3}
Mace Head	R	10/2000	76	77	ngm^{-3}
Mace Head	R	11/2000	77	80	ngm^{-3}
Mace Head	R	12/2000	79	93	ngm^{-3}
Mace Head	R	01/2001	78	89	ngm^{-3}
Mace Head	R	02/2001	78	82	ngm^{-3}
Mace Head	R	03/2001	78	90	ngm^{-3}
Mace Head	R	04/2001	78	79	ngm^{-3}
Mace Head	R	05/2001	79	85	ngm^{-3}
Mace Head	R	06/2001	79	82	ngm^{-3}
Mace Head	R	07/2001	79	80	ngm^{-3}
Mace Head	R	08/2001	78	79	ngm^{-3}
Mace Head	R	09/2001	79	82	ngm^{-3}
Mace Head	R	10/2001	80	84	ngm^{-3}
Mace Head	R	11/2001	82	84	ngm^{-3}
Mace Head	R	12/2001	82	91	ngm^{-3}
Mace Head	R	01/2002	81	83	ngm^{-3}
Mace Head	R	02/2002	83	83	ngm^{-3}
Mace Head	R	03/2002	84	88	ngm^{-3}
Mace Head	R	04/2002	84	87	ngm^{-3}
Mace Head	R	05/2002	84	87	ngm^{-3}
Mace Head	R	06/2002	84	84	ngm^{-3}
Mace Head	R	07/2002	84	84	ngm^{-3}
Mace Head	R	08/2002	85	86	ngm^{-3}
Mace Head	R	09/2002	85	96	ngm^{-3}
Mace Head	R	10/2002	86	91	ngm^{-3}
Mace Head	R	11/2002	88	89	ngm^{-3}
Mace Head	R	12/2002	89	99	ngm^{-3}
Mace Head	R	01/2003	88	89	ngm^{-3}
Mace Head	R	02/2003	88	96	ngm^{-3}
Mace Head	R	03/2003	88	99	ngm^{-3}
Mace Head	R	04/2003	88	97	ngm^{-3}
Mace Head	R	05/2003	89	90	ngm^{-3}
Mace Head	R	06/2003	89	90	ngm^{-3}
Mace Head	R	07/2003	88	90	ngm^{-3}
Mace Head	R	08/2003	88	91	ngm^{-3}
Mace Head	R	09/2003	89	91	ngm^{-3}
Mace Head	R	10/2003	91	97	ngm^{-3}
Mace Head	R	11/2003	91	96	ngm^{-3}
Mace Head	R	12/2003	93	94	ngm^{-3}

HCFC-142b CH_3CClF_2 55

Alternative Name: 1-chloro-1,1-difluoroethane
CAS Number: 75-68-3
Type of pollutant: Ozone-depleting Substance

Structure



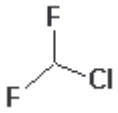
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	56	56	ngm^{-3}
Mace Head	R	02/2000	56	56	ngm^{-3}
Mace Head	R	03/2000	56	56	ngm^{-3}
Mace Head	R	04/2000	58	59	ngm^{-3}
Mace Head	R	05/2000	58	62	ngm^{-3}
Mace Head	R	06/2000	59	61	ngm^{-3}
Mace Head	R	07/2000	58	61	ngm^{-3}
Mace Head	R	08/2000	58	60	ngm^{-3}
Mace Head	R	09/2000	59	60	ngm^{-3}
Mace Head	R	10/2000	59	60	ngm^{-3}
Mace Head	R	11/2000	60	61	ngm^{-3}
Mace Head	R	12/2000	61	67	ngm^{-3}
Mace Head	R	01/2001	61	66	ngm^{-3}
Mace Head	R	02/2001	62	64	ngm^{-3}
Mace Head	R	03/2001	62	68	ngm^{-3}
Mace Head	R	04/2001	61	61	ngm^{-3}
Mace Head	R	05/2001	62	66	ngm^{-3}
Mace Head	R	06/2001	62	63	ngm^{-3}
Mace Head	R	07/2001	63	63	ngm^{-3}
Mace Head	R	08/2001	62	62	ngm^{-3}
Mace Head	R	09/2001	62	63	ngm^{-3}
Mace Head	R	10/2001	63	64	ngm^{-3}
Mace Head	R	11/2001	63	64	ngm^{-3}
Mace Head	R	12/2001	64	66	ngm^{-3}
Mace Head	R	01/2002	63	64	ngm^{-3}
Mace Head	R	02/2002	63	64	ngm^{-3}
Mace Head	R	03/2002	64	65	ngm^{-3}
Mace Head	R	04/2002	64	64	ngm^{-3}
Mace Head	R	05/2002	64	65	ngm^{-3}
Mace Head	R	06/2002	64	64	ngm^{-3}
Mace Head	R	07/2002	64	64	ngm^{-3}
Mace Head	R	08/2002	64	64	ngm^{-3}
Mace Head	R	09/2002	64	66	ngm^{-3}
Mace Head	R	10/2002	65	66	ngm^{-3}
Mace Head	R	11/2002	65	66	ngm^{-3}
Mace Head	R	12/2002	66	68	ngm^{-3}
Mace Head	R	01/2003	65	65	ngm^{-3}
Mace Head	R	02/2003	65	67	ngm^{-3}
Mace Head	R	03/2003	65	68	ngm^{-3}
Mace Head	R	04/2003	66	67	ngm^{-3}
Mace Head	R	05/2003	66	66	ngm^{-3}
Mace Head	R	06/2003	67	67	ngm^{-3}
Mace Head	R	07/2003	67	68	ngm^{-3}
Mace Head	R	08/2003	66	66	ngm^{-3}
Mace Head	R	09/2003	66	66	ngm^{-3}
Mace Head	R	10/2003	67	68	ngm^{-3}
Mace Head	R	11/2003	67	68	ngm^{-3}
Mace Head	R	12/2003	68	68	ngm^{-3}

HCFC-22 $CHClF_2$ 56

Alternative Name: chlorodifluoromethane
CAS Number: 75-45-6
Type of pollutant: Ozone-depleting Substance

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	535	536	ngm^{-3}
Mace Head	R	02/2000	535	535	ngm^{-3}
Mace Head	R	03/2000	534	541	ngm^{-3}
Mace Head	R	04/2000	545	550	ngm^{-3}
Mace Head	R	05/2000	545	560	ngm^{-3}
Mace Head	R	06/2000	546	556	ngm^{-3}
Mace Head	R	07/2000	549	563	ngm^{-3}
Mace Head	R	08/2000	552	560	ngm^{-3}
Mace Head	R	09/2000	556	559	ngm^{-3}
Mace Head	R	10/2000	560	560	ngm^{-3}
Mace Head	R	11/2000	563	568	ngm^{-3}
Mace Head	R	12/2000	567	598	ngm^{-3}
Mace Head	R	01/2001	563	587	ngm^{-3}
Mace Head	R	02/2001	565	573	ngm^{-3}
Mace Head	R	03/2001	567	587	ngm^{-3}
Mace Head	R	04/2001	569	572	ngm^{-3}
Mace Head	R	05/2001	574	581	ngm^{-3}
Mace Head	R	06/2001			
Mace Head	R	07/2001	582	585	ngm^{-3}
Mace Head	R	08/2001	570	573	ngm^{-3}
Mace Head	R	09/2001	576	584	ngm^{-3}
Mace Head	R	10/2001			
Mace Head	R	11/2001	584	587	ngm^{-3}
Mace Head	R	12/2001	585	598	ngm^{-3}
Mace Head	R	01/2002	582	589	ngm^{-3}
Mace Head	R	02/2002	580	581	ngm^{-3}
Mace Head	R	03/2002	585	590	ngm^{-3}
Mace Head	R	04/2002	586	591	ngm^{-3}
Mace Head	R	05/2002	582	588	ngm^{-3}
Mace Head	R	06/2002	581	582	ngm^{-3}
Mace Head	R	07/2002	580	581	ngm^{-3}
Mace Head	R	08/2002	581	586	ngm^{-3}
Mace Head	R	09/2002	582	606	ngm^{-3}
Mace Head	R	10/2002	588	597	ngm^{-3}
Mace Head	R	11/2002	592	594	ngm^{-3}
Mace Head	R	12/2002	594	612	ngm^{-3}
Mace Head	R	01/2003	592	595	ngm^{-3}
Mace Head	R	02/2003	592	612	ngm^{-3}
Mace Head	R	03/2003	592	619	ngm^{-3}
Mace Head	R	04/2003	595	613	ngm^{-3}
Mace Head	R	05/2003	593	598	ngm^{-3}
Mace Head	R	06/2003	593	596	ngm^{-3}
Mace Head	R	07/2003	594	599	ngm^{-3}
Mace Head	R	08/2003	592	595	ngm^{-3}
Mace Head	R	09/2003	593	594	ngm^{-3}
Mace Head	R	10/2003	600	612	ngm^{-3}
Mace Head	R	11/2003	601	613	ngm^{-3}
Mace Head	R	12/2003	609	612	ngm^{-3}

1,2,3,4,6,7,8-Heptachlorodibenzodioxin 57

Alternative Name: 1234678 HpCDD
CAS Number: 35822-46-9
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other			✓			

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	48.3	85.8	64.4	61.3	fgm^{-3}
High Muffles	Rur	41.3	34.8	48.8		fgm^{-3}
London 2a	UB		182.5	198.3	137.5	fgm^{-3}
Manchester	UB	225.0	380.0	202.3	277.5	fgm^{-3}
Middlesbrough	UB	179.8	255.0	181.3	224.0	fgm^{-3}
Stoke Ferry	Rur		106.8	109.0	135.3	fgm^{-3}

1,2,3,4,7,8,9-Heptachlorodibenzofuran 58

Alternative Name: 1234789 HpCDF
CAS Number: 55673-89-7
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	3.5	3.8	3.4	4.3	fgm^{-3}
High Muffles	Rur	2.4	2.3	3.1		fgm^{-3}
London 2a	UB		8.4	8.5	7.4	fgm^{-3}
Manchester	UB	46.5	45.5	25.8	48.5	fgm^{-3}
Middlesbrough	UB	12.5	15.2	11.8	19.3	fgm^{-3}
Stoke Ferry	Rur		7.1	8.2	8.5	fgm^{-3}

Heptane C_7H_{16} 59

Alternative Name: n-heptane
CAS Number: 142-82-5
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

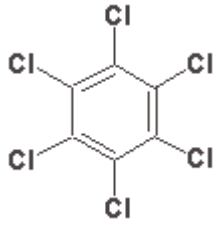
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				9				μgm^{-3}
Birmingham East	UB	1				11				μgm^{-3}
Bristol East	UB	0				24				μgm^{-3}
Cardiff East	UB		0				35			μgm^{-3}
Edinburgh Med. Sch.	UB	0	0			10	13			μgm^{-3}
Leeds Potternewton	UB	1				14				μgm^{-3}
Liverpool Speke	UB	1				24				μgm^{-3}
London Eltham	SU	1				13				μgm^{-3}
London Marylebone Road	K	1	1	1	1	11	10	17	10	μgm^{-3}
Middlesbrough	UI	1				33				μgm^{-3}
Southampton Centre	UC	1				20				μgm^{-3}

Hexachlorobenzene C_6Cl_6 60

Alternative Name:
CAS Number: 118-74-1
Type of pollutant: Persistant Organic Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Monitoring data

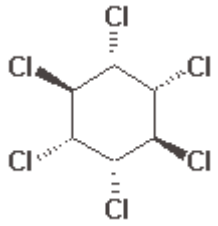
Site Name	Start Period	End Period	Value	Unit
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		39.3	pgm^{-3}

** Lee et al (2000)*

Hexachlorocyclohexane $C_6H_6Cl_6$ 61

Alternative Name: HCH, lindane
CAS Number: 58-89-9
Type of pollutant: Persistant Organic Pollutant

Structure



Time Series of g-HCH Emissions (tonnes)

Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Monitoring data

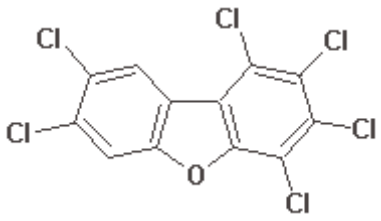
Site Name	Start Period	End Period	Value	Unit
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		90.1	pgm^{-3}
Hazelrigg	mean of four 6-hourly air samples taken for each of 7 days		500	pgm^{-3}

* Lee et al (2000)

1,2,3,4,7,8-Hexachlorodibenzofuran 62

Alternative Name: 123478 HxCDF
CAS Number: 70648-26-9
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	8.8	7.3	8.1	8.2	fgm^{-3}
High Muffles	Rur	5.5	5.2	7.8		fgm^{-3}
London 2a	UB		17.8	32.3	21.5	fgm^{-3}
Manchester	UB	102.3	92.3	62.3	120.5	fgm^{-3}
Middlesbrough	UB	30.0	32.8	28.6	43.8	fgm^{-3}
Stoke Ferry	Rur		14.7	16.4	16.3	fgm^{-3}

1,2,3,6,7,8-Hexachlorodibenzofuran 63

Alternative Name: 123678 HxCDF
CAS Number: 57117-44-9
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	4.8	6.5	6.1	6.5	fgm^{-3}
High Muffles	Rur	4.6	4.2	5.3		fgm^{-3}
London 2a	UB		13.7	14.5	11.8	fgm^{-3}
Manchester	UB	50.8	72.5	58.8	92.3	fgm^{-3}
Middlesbrough	UB	15.4	22.2	19.3	30.8	fgm^{-3}
Stoke Ferry	Rur		11.3	11.5	12.8	fgm^{-3}

1,2,3,7,8,9-Hexachlorodibenzofuran 64

Alternative Name: 123789 HxCDF
CAS Number: 72918-21-9
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	1.0	6.0	4.3	5.2	fgm^{-3}
High Muffles	Rur	0.9	3.5	5.0		fgm^{-3}
London 2a	UB		9.6	14.7	11.8	fgm^{-3}
Manchester	UB	16.7	70.8	39.8	68.0	fgm^{-3}
Middlesbrough	UB	4.1	16.8	13.5	26.4	fgm^{-3}
Stoke Ferry	Rur		7.5	8.5	8.6	fgm^{-3}

2,3,4,6,7,8-Hexachlorodibenzofuran 65

Alternative Name: 234678 HxCDF
CAS Number: 60851-34-5
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

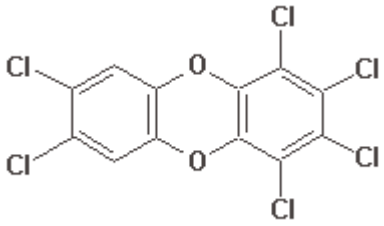
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	4.5	3.4	2.7	1.0	fgm^{-3}
High Muffles	Rur	5.5	2.6	1.1		fgm^{-3}
London 2a	UB		8.6	2.4	1.3	fgm^{-3}
Manchester	UB	46.8	43.5	5.5	8.2	fgm^{-3}
Middlesbrough	UB	20.5	14.3	3.2	2.8	fgm^{-3}
Stoke Ferry	Rur		7.2	2.2	1.7	fgm^{-3}

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin 66

Alternative Name: 123478 HxCDD
CAS Number: 39227-28-6
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

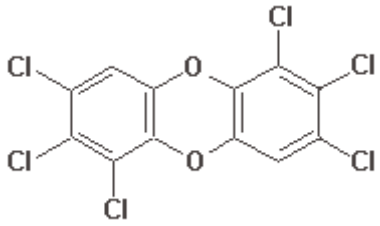
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	2.5	4.0	3.6	3.2	fgm^{-3}
High Muffles	Rur	2.1	1.8	2.4		fgm^{-3}
London 2a	UB		7.7	7.8	5.3	fgm^{-3}
Manchester	UB	13.9	22.0	12.8	17.6	fgm^{-3}
Middlesbrough	UB	8.4	10.3	9.2	11.1	fgm^{-3}
Stoke Ferry	Rur		4.8	4.7	7.0	fgm^{-3}

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin 67

Alternative Name: 123678 HxCDD
CAS Number: 57653-85-7
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	8.1	9.5	6.2	6.6	fgm^{-3}
High Muffles	Rur	4.1	3.6	5.7		fgm^{-3}
London 2a	UB		16.8	17.0	12.3	fgm^{-3}
Manchester	UB	45.8	51.0	24.3	34.5	fgm^{-3}
Middlesbrough	UB	26.3	29.5	19.8	24.8	fgm^{-3}
Stoke Ferry	Rur		11.9	11.7	12.7	fgm^{-3}

Hexane C_6H_{14} 68

Alternative Name: n-hexane
CAS Number: 110-54-3
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Air Quality Monitoring Data

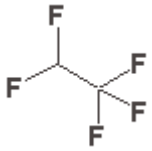
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				10				μgm^{-3}
Cardiff East	UB		1				393			μgm^{-3}
Edinburgh Med. Sch.	UB	0	1			51	52			μgm^{-3}
Harwell	Rur	0				2				μgm^{-3}
London Marylebone Road	K	2	2	2	1	14	10	14	12	μgm^{-3}
London UCL	Rd	1				11				μgm^{-3}
Southampton Centre	UC	1				40				μgm^{-3}

HFC-125 CHF_2CF_3 69

Alternative Name: Pentafluoroethane
CAS Number: 354-33-6
Type of pollutant: Greenhouse Gas

Structure



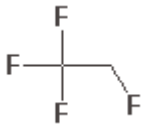
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	7	8	ngm^{-3}
Mace Head	R	02/2000	7	7	ngm^{-3}
Mace Head	R	03/2000	8	8	ngm^{-3}
Mace Head	R	04/2000		9	ngm^{-3}
Mace Head	R	05/2000	8	9	ngm^{-3}
Mace Head	R	06/2000	8	9	ngm^{-3}
Mace Head	R	07/2000	8	9	ngm^{-3}
Mace Head	R	08/2000	8	9	ngm^{-3}
Mace Head	R	09/2000	9	9	ngm^{-3}
Mace Head	R	10/2000	9	9	ngm^{-3}
Mace Head	R	11/2000	9	10	ngm^{-3}
Mace Head	R	12/2000	10	12	ngm^{-3}
Mace Head	R	01/2001			
Mace Head	R	02/2001			
Mace Head	R	03/2001			
Mace Head	R	04/2001			
Mace Head	R	05/2001	10	11	ngm^{-3}
Mace Head	R	06/2001	10	10	ngm^{-3}
Mace Head	R	07/2001	11	11	ngm^{-3}
Mace Head	R	08/2001	11	12	ngm^{-3}
Mace Head	R	09/2001	12	12	ngm^{-3}
Mace Head	R	10/2001	11	11	ngm^{-3}
Mace Head	R	11/2001	11	11	ngm^{-3}
Mace Head	R	12/2001	11	13	ngm^{-3}
Mace Head	R	01/2002	11	12	ngm^{-3}
Mace Head	R	02/2002	11	11	ngm^{-3}
Mace Head	R	03/2002	12	13	ngm^{-3}
Mace Head	R	04/2002	12	13	ngm^{-3}
Mace Head	R	05/2002	12	13	ngm^{-3}
Mace Head	R	06/2002	12	12	ngm^{-3}
Mace Head	R	07/2002	12	12	ngm^{-3}
Mace Head	R	08/2002	12	12	ngm^{-3}
Mace Head	R	09/2002	12	15	ngm^{-3}
Mace Head	R	10/2002	13	14	ngm^{-3}
Mace Head	R	11/2002	13	14	ngm^{-3}
Mace Head	R	12/2002	13	18	ngm^{-3}
Mace Head	R	01/2003	14	14	ngm^{-3}
Mace Head	R	02/2003	14	17	ngm^{-3}
Mace Head	R	03/2003	14	18	ngm^{-3}
Mace Head	R	04/2003	15	17	ngm^{-3}
Mace Head	R	05/2003	15	15	ngm^{-3}
Mace Head	R	06/2003	15	15	ngm^{-3}
Mace Head	R	07/2003	15	15	ngm^{-3}
Mace Head	R	08/2003	16	16	ngm^{-3}
Mace Head	R	09/2003	16	16	ngm^{-3}
Mace Head	R	10/2003	17	19	ngm^{-3}
Mace Head	R	11/2003	18	19	ngm^{-3}
Mace Head	R	12/2003	17	18	ngm^{-3}

HFC-134a CH_2FCF_3 70

Alternative Name: 1,2,2,2-tetrafluoroethane
CAS Number: 811-97-2
Type of pollutant: Greenhouse Gas

Structure



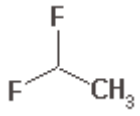
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	66	67	ngm^{-3}
Mace Head	R	02/2000	66	66	ngm^{-3}
Mace Head	R	03/2000	66	68	ngm^{-3}
Mace Head	R	04/2000	70	72	ngm^{-3}
Mace Head	R	05/2000	70	78	ngm^{-3}
Mace Head	R	06/2000	71	76	ngm^{-3}
Mace Head	R	07/2000	73	80	ngm^{-3}
Mace Head	R	08/2000	75	78	ngm^{-3}
Mace Head	R	09/2000	77	79	ngm^{-3}
Mace Head	R	10/2000	80	80	ngm^{-3}
Mace Head	R	11/2000	81	84	ngm^{-3}
Mace Head	R	12/2000	82	99	ngm^{-3}
Mace Head	R	01/2001	82	95	ngm^{-3}
Mace Head	R	02/2001	83	87	ngm^{-3}
Mace Head	R	03/2001	84	95	ngm^{-3}
Mace Head	R	04/2001	83	84	ngm^{-3}
Mace Head	R	05/2001	86	96	ngm^{-3}
Mace Head	R	06/2001	87	88	ngm^{-3}
Mace Head	R	07/2001	88	90	ngm^{-3}
Mace Head	R	08/2001	90	91	ngm^{-3}
Mace Head	R	09/2001	93	94	ngm^{-3}
Mace Head	R	10/2001	95	99	ngm^{-3}
Mace Head	R	11/2001	98	100	ngm^{-3}
Mace Head	R	12/2001	99	108	ngm^{-3}
Mace Head	R	01/2002	98	102	ngm^{-3}
Mace Head	R	02/2002	98	99	ngm^{-3}
Mace Head	R	03/2002	101	106	ngm^{-3}
Mace Head	R	04/2002	100	105	ngm^{-3}
Mace Head	R	05/2002	102	106	ngm^{-3}
Mace Head	R	06/2002	104	106	ngm^{-3}
Mace Head	R	07/2002	106	107	ngm^{-3}
Mace Head	R	08/2002	108	112	ngm^{-3}
Mace Head	R	09/2002	109	128	ngm^{-3}
Mace Head	R	10/2002	114	122	ngm^{-3}
Mace Head	R	11/2002	117	119	ngm^{-3}
Mace Head	R	12/2002	119	137	ngm^{-3}
Mace Head	R	01/2003	119	122	ngm^{-3}
Mace Head	R	02/2003	118	137	ngm^{-3}
Mace Head	R	03/2003	118	140	ngm^{-3}
Mace Head	R	04/2003	120	136	ngm^{-3}
Mace Head	R	05/2003	122	126	ngm^{-3}
Mace Head	R	06/2003	124	126	ngm^{-3}
Mace Head	R	07/2003	126	131	ngm^{-3}
Mace Head	R	08/2003	127	129	ngm^{-3}
Mace Head	R	09/2003	128	133	ngm^{-3}
Mace Head	R	10/2003	134	147	ngm^{-3}
Mace Head	R	11/2003	134	147	ngm^{-3}
Mace Head	R	12/2003	140	144	ngm^{-3}

HFC-152a CHF_2CH_3 71

Alternative Name: 1,1-difluoroethane
CAS Number: 75-37-6
Type of pollutant: Greenhouse Gas

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	7	7	ngm^{-3}
Mace Head	R	02/2000	7	7	ngm^{-3}
Mace Head	R	03/2000	7	7	ngm^{-3}
Mace Head	R	04/2000	7	7	ngm^{-3}
Mace Head	R	05/2000	7	8	ngm^{-3}
Mace Head	R	06/2000	7	7	ngm^{-3}
Mace Head	R	07/2000	7	7	ngm^{-3}
Mace Head	R	08/2000	6	6	ngm^{-3}
Mace Head	R	09/2000	6	7	ngm^{-3}
Mace Head	R	10/2000	7	7	ngm^{-3}
Mace Head	R	11/2000	7	8	ngm^{-3}
Mace Head	R	12/2000	8	9	ngm^{-3}
Mace Head	R	01/2001	8	9	ngm^{-3}
Mace Head	R	02/2001	8	8	ngm^{-3}
Mace Head	R	03/2001	8	10	ngm^{-3}
Mace Head	R	04/2001	8	8	ngm^{-3}
Mace Head	R	05/2001	8	9	ngm^{-3}
Mace Head	R	06/2001	8	8	ngm^{-3}
Mace Head	R	07/2001	8	8	ngm^{-3}
Mace Head	R	08/2001	7	7	ngm^{-3}
Mace Head	R	09/2001	7	8	ngm^{-3}
Mace Head	R	10/2001	7	8	ngm^{-3}
Mace Head	R	11/2001	8	8	ngm^{-3}
Mace Head	R	12/2001	9	9	ngm^{-3}
Mace Head	R	01/2002	9	9	ngm^{-3}
Mace Head	R	02/2002	9	9	ngm^{-3}
Mace Head	R	03/2002	9	10	ngm^{-3}
Mace Head	R	04/2002	9	10	ngm^{-3}
Mace Head	R	05/2002	9	10	ngm^{-3}
Mace Head	R	06/2002	9	9	ngm^{-3}
Mace Head	R	07/2002	9	9	ngm^{-3}
Mace Head	R	08/2002	8	9	ngm^{-3}
Mace Head	R	09/2002	8	10	ngm^{-3}
Mace Head	R	10/2002	9	10	ngm^{-3}
Mace Head	R	11/2002	10	10	ngm^{-3}
Mace Head	R	12/2002	11	13	ngm^{-3}
Mace Head	R	01/2003	11	11	ngm^{-3}
Mace Head	R	02/2003	10	13	ngm^{-3}
Mace Head	R	03/2003	11	14	ngm^{-3}
Mace Head	R	04/2003	12	13	ngm^{-3}
Mace Head	R	05/2003	11	12	ngm^{-3}
Mace Head	R	06/2003	11	11	ngm^{-3}
Mace Head	R	07/2003	11	12	ngm^{-3}
Mace Head	R	08/2003	10	10	ngm^{-3}
Mace Head	R	09/2003	10	11	ngm^{-3}
Mace Head	R	10/2003	11	13	ngm^{-3}
Mace Head	R	11/2003	11	14	ngm^{-3}
Mace Head	R	12/2003	12	13	ngm^{-3}

123789 HpCDD 72

Alternative Name:
CAS Number:
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other			✓			

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur		8.6	10.6	9.1	fgm^{-3}
High Muffles	Rur			7.0		fgm^{-3}
London 2a	UB		19.6	19.7	16.3	fgm^{-3}
Manchester	UB			39.3	56.0	fgm^{-3}
Middlesbrough	UB			30.6	39.3	fgm^{-3}
Stoke Ferry	Rur		13.0	13.8	19.8	fgm^{-3}

1234678 HpCDF $C_{12}HCl_7O$ 73

Alternative Name:
CAS Number: 67562-39-4
Type of pollutant: Dioxins & Furans

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	16.1	19.3	23.4	25.8	fgm^{-3}
High Muffles	Rur	18.1	14.7	23.6		fgm^{-3}
London 2a	UB		53.3	59.3	59.5	fgm^{-3}
Manchester	UB	151.5	272.5	192.5	355.0	fgm^{-3}
Middlesbrough	UB	71.0	86.8	78.5	138.0	fgm^{-3}
Stoke Ferry	Rur		40.8	43.0	48.5	fgm^{-3}

Hydrogen H_2 74

Alternative Name:
CAS Number: 1333-74-0
Type of pollutant: Trace Gas, indirect Greenhouse Gas

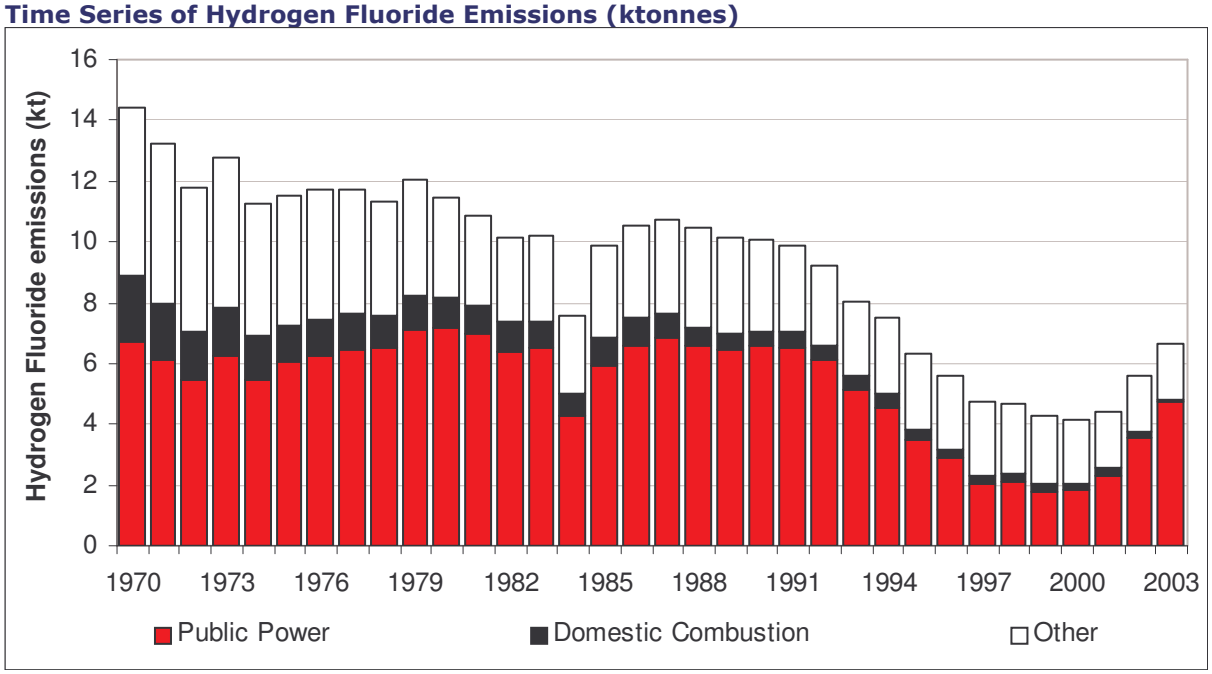
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	42	42	μgm^{-3}
Mace Head	R	02/2000	43	43	μgm^{-3}
Mace Head	R	03/2000	43	43	μgm^{-3}
Mace Head	R	04/2000	43	43	μgm^{-3}
Mace Head	R	05/2000	43	43	μgm^{-3}
Mace Head	R	06/2000	43	43	μgm^{-3}
Mace Head	R	07/2000	43	43	μgm^{-3}
Mace Head	R	08/2000	42	42	μgm^{-3}
Mace Head	R	09/2000	40	41	μgm^{-3}
Mace Head	R	10/2000	40	40	μgm^{-3}
Mace Head	R	11/2000	40	41	μgm^{-3}
Mace Head	R	12/2000	41	41	μgm^{-3}
Mace Head	R	01/2001	42	43	μgm^{-3}
Mace Head	R	02/2001	43	43	μgm^{-3}
Mace Head	R	03/2001	43	43	μgm^{-3}
Mace Head	R	04/2001	43	43	μgm^{-3}
Mace Head	R	05/2001	43	44	μgm^{-3}
Mace Head	R	06/2001	43	43	μgm^{-3}
Mace Head	R	07/2001	42	42	μgm^{-3}
Mace Head	R	08/2001	41	41	μgm^{-3}
Mace Head	R	09/2001	40	40	μgm^{-3}
Mace Head	R	10/2001	40	40	μgm^{-3}
Mace Head	R	11/2001	41	41	μgm^{-3}
Mace Head	R	12/2001	41	42	μgm^{-3}
Mace Head	R	01/2002	42	42	μgm^{-3}
Mace Head	R	02/2002	42	42	μgm^{-3}
Mace Head	R	03/2002	42	42	μgm^{-3}
Mace Head	R	04/2002	43	43	μgm^{-3}
Mace Head	R	05/2002	43	43	μgm^{-3}
Mace Head	R	06/2002	43	43	μgm^{-3}
Mace Head	R	07/2002	42	43	μgm^{-3}
Mace Head	R	08/2002	42	43	μgm^{-3}
Mace Head	R	09/2002	41	41	μgm^{-3}
Mace Head	R	10/2002	40	40	μgm^{-3}
Mace Head	R	11/2002	41	41	μgm^{-3}
Mace Head	R	12/2002	42	42	μgm^{-3}
Mace Head	R	01/2003	42	42	μgm^{-3}
Mace Head	R	02/2003	43	43	μgm^{-3}
Mace Head	R	03/2003	43	44	μgm^{-3}
Mace Head	R	04/2003	43	43	μgm^{-3}
Mace Head	R	05/2003	44	44	μgm^{-3}
Mace Head	R	06/2003	43	43	μgm^{-3}
Mace Head	R	07/2003	43	43	μgm^{-3}
Mace Head	R	08/2003	42	42	μgm^{-3}
Mace Head	R	09/2003	41	41	μgm^{-3}
Mace Head	R	10/2003	40	40	μgm^{-3}
Mace Head	R	11/2003	41	41	μgm^{-3}
Mace Head	R	12/2003	41	41	μgm^{-3}

Hydrogen fluoride HF 75

Alternative Name: Hydrofluoric acid
CAS Number: 7664-39-3
Type of pollutant:

Time Series of Hydrogen Fluoride Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

No data

i-butane C_4H_{10} 76

Alternative Name: 2-methylpropane
CAS Number: 75-28-5
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

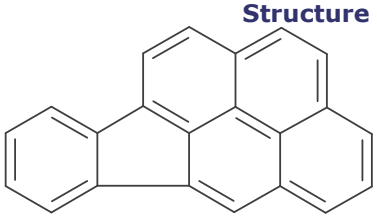
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				86				μgm^{-3}
Edinburgh Med. Sch.	UB	2				110				μgm^{-3}
Liverpool Speke	UB	3				143				μgm^{-3}
London Marylebone Road	K	10	9	8	6	134	130	90	103	μgm^{-3}
London UCL	Rd	4				57				μgm^{-3}

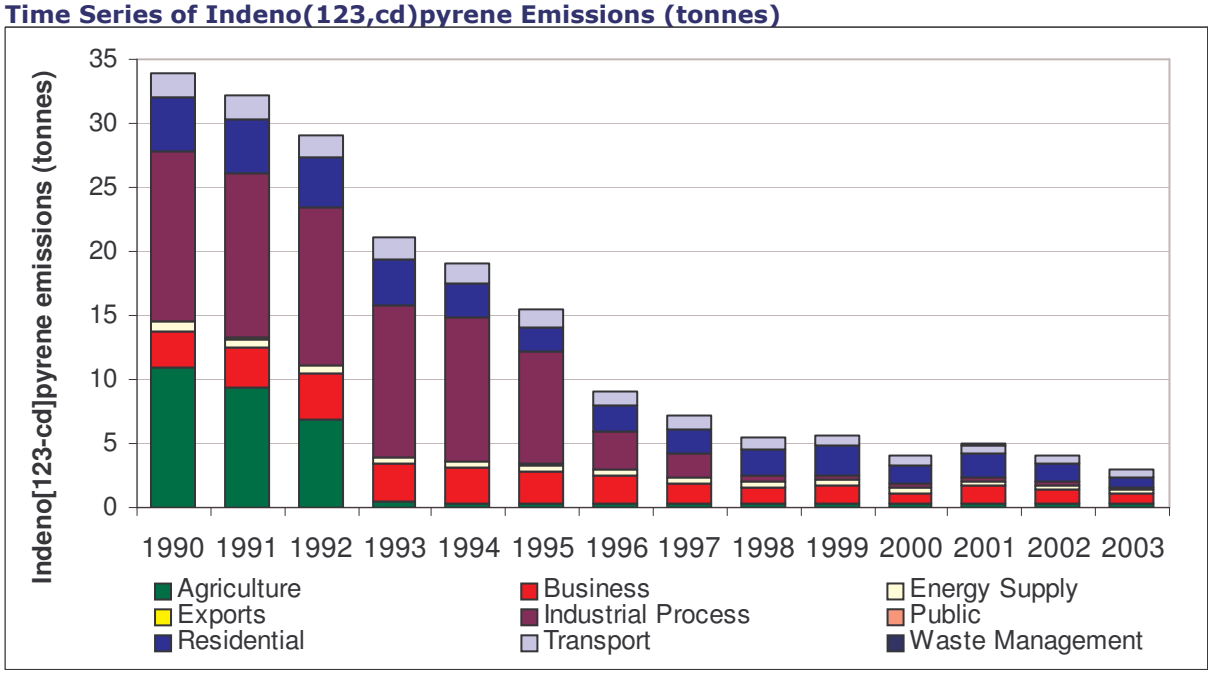
Indeno(123,cd)pyrene 77

Alternative Name: Indenopyrene
CAS Number: 193-39-5
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Indeno(123,cd)pyrene Emissions (tonnes)



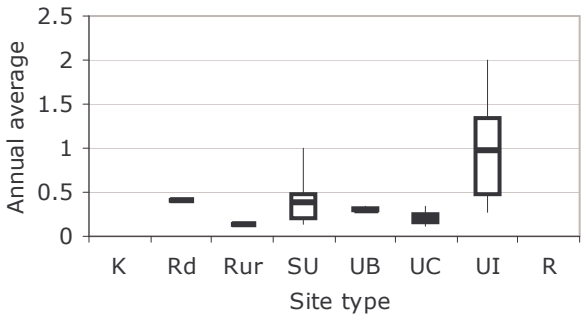
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

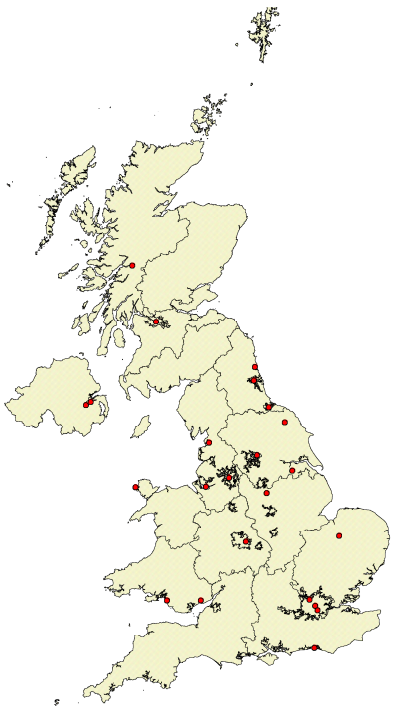
Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.4	0.4	0.4	0.4	0.4
Rur	1	0.1	0.1	0.1	0.1	0.1
SU	6	0.4	0.1	1.0	0.2	0.9
UB	2	0.3	0.3	0.3	0.3	0.3
UC	4	0.2	0.1	0.4	0.1	0.3
UI	3	1.0	0.3	2.0	0.3	1.9
R	0					



Indenopyrene Annual Average Boxplot

Indeno(123,cd)pyrene 77



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

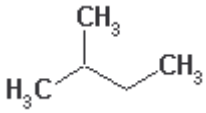
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.26	0.27		0.28	μgm^{-3}
Belfast	SU		0.61	0.28	0.13	μgm^{-3}
Birmingham 1	UB		0.32	0.26	0.33	μgm^{-3}
Bolsover	SU	0.35	0.35	0.35	0.54	μgm^{-3}
Brent	UB				0.27	μgm^{-3}
Bromley	Rd			0.48	0.42	μgm^{-3}
Glasgow	UC	0.25	0.22	0.23	0.12	μgm^{-3}
Holyhead	UI	0.21	0.25		0.21	μgm^{-3}
Hove	UC				0.18	μgm^{-3}
Kinlochleven	SU	2.80	0.35	0.34	0.22	μgm^{-3}
Leeds 1	UC		0.33	0.32	0.35	μgm^{-3}
Lisburn	SU	1.10	0.93	0.72	1.00	μgm^{-3}
London 2a	UC	0.35	0.21	0.23	0.21	μgm^{-3}
Newcastle	UC		0.19	0.23	<0.25	μgm^{-3}
Newport	SU	0.53	0.57	0.28	0.20	μgm^{-3}
Port Talbot	UI		0.61	0.48	0.66	μgm^{-3}
Scunthorpe	UI	1.70	0.43	1.80	2.00	μgm^{-3}
Speke	SU			0.26	0.26	μgm^{-3}
Stoke Ferry	Rur		0.12	0.12	0.14	μgm^{-3}

i-pentane C_5H_{12} 78

Alternative Name: 2-methylbutane
CAS Number: 78-78-4
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	2				138				μgm^{-3}
Birmingham East	UB	4				527				μgm^{-3}
Bristol East	UB	4				80				μgm^{-3}
Cardiff East	UB	5	5			67	71			μgm^{-3}
Edinburgh Med. Sch.	UB	2	3			89	164			μgm^{-3}
Harwell	Rur	1	1			18	21			μgm^{-3}
Leeds Potternewton	UB	5				216				μgm^{-3}
Liverpool Speke	UB	5				426				μgm^{-3}
London Eltham	SU	5				49				μgm^{-3}
London Marylebone Road	K	24	19	16	13	200	181	108	169	μgm^{-3}
London UCL	Rd	6				107				μgm^{-3}
Middlesbrough	UI	3				380				μgm^{-3}
Southampton Centre	UC	7				126				μgm^{-3}

Iron Fe 79

Alternative Name:
CAS Number: 7439-89-6
Type of pollutant: Trace Metal

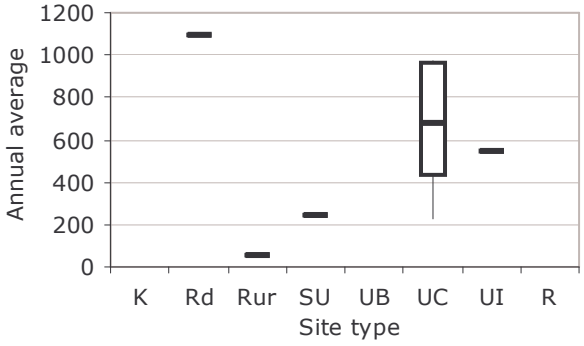
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	1091.8	1091.8	1091.8	1091.8	1091.8
Rur	1	56.6	56.6	56.6	56.6	56.6
SU	1	249.0	249.0	249.0	249.0	249.0
UB	0					
UC	6	684.1	229.8	968.5	268.2	967.2
UI	1	551.6	551.6	551.6	551.6	551.6
R	0					



Iron Annual Average Boxplot

Air quality monitoring site map in 2003

Air Quality Monitoring Data

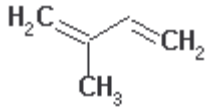
Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				551.6	ngm^{-3}
Cardiff	UC				958.1	ngm^{-3}
Central London	UC			598.0	601.5	ngm^{-3}
Eskdalemuir	Rur	36.0	46.0	27.8	56.6	ngm^{-3}
Glasgow	UC	399.0	426.0	313.6		ngm^{-3}
Leeds	UC	490.0	540.0	448.1	383.2	ngm^{-3}
London Brent	UB	772.0	909.0	810.3	963.3	ngm^{-3}
Manchester	UC				968.5	ngm^{-3}
Motherwell	UC	304.0	533.0	223.6	229.8	ngm^{-3}
Pontardawe	SU				249.0	ngm^{-3}

Isoprene C_5H_8 80

Alternative Name: 2-methylbuta-1,3-diene
CAS Number: 78-79-5
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

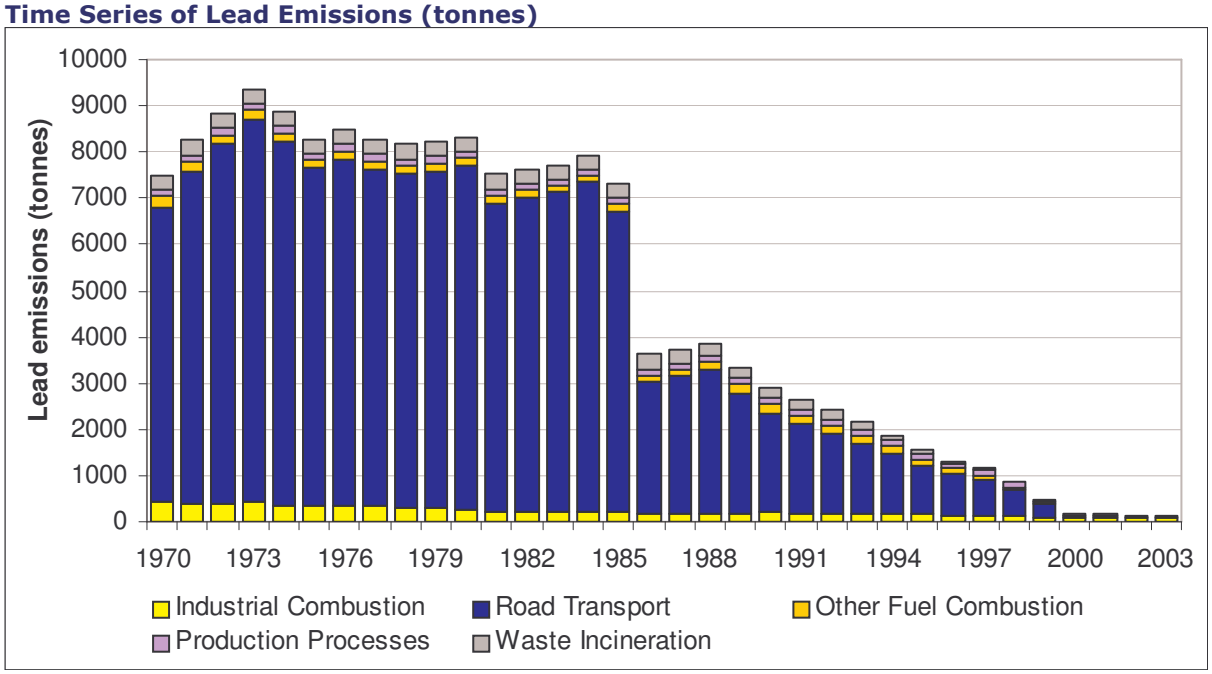
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				4				μgm^{-3}
Cardiff East	UB		0				16			μgm^{-3}
Edinburgh Med. Sch.	UB	0				3				μgm^{-3}
Harwell	Rur	0				1				μgm^{-3}
London Marylebone Road	K	1	1	1	0	5	5	6	5	μgm^{-3}
London UCL	Rd	0				6				μgm^{-3}
Southampton Centre	UC	0				18				μgm^{-3}

Lead Pb 81

Alternative Name:
CAS Number: 7493-92-1
Type of pollutant: Trace Metal

Time Series of Lead Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1990	2001	1996

Air Quality Standards

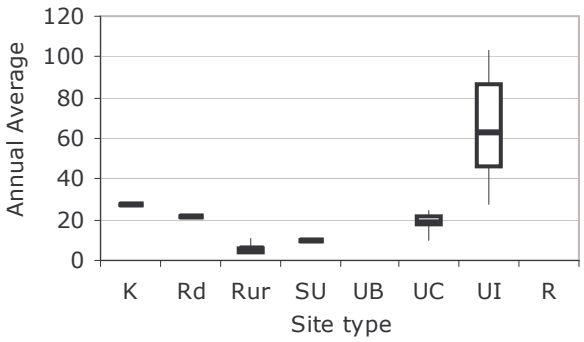
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO	✓					
EPAQS		✓				
AQS	✓					
EAL	✓					
Other	✓					

Lead Pb 81

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	28.0	28.0	28.0	28.0	28.0
Rd	1	21.8	21.8	21.8	21.8	21.8
Rur	7	5.5	3.5	10.9	3.6	9.6
SU	2	9.9	9.9	9.9	9.9	9.9
UB	0					
UC	7	19.0	10.3	24.7	11.8	23.7
UI	7	63.3	27.1	102.9	32.9	102.9
R	0					



Lead Annual Average Boxplot

Air quality monitoring site map in 2003

Lead Pb 81

Air Quality Monitoring Data

Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Auchencorth	Rur				4.1	ngm^{-3}
Avesta Polarit, Rotherham	UI			50.7	46.1	ngm^{-3}
Banchory	Rur				3.9	ngm^{-3}
Brittania Recycling, Wakefield	UI				27.1	ngm^{-3}
Brookside 1	UI	33.8	44.7			ngm^{-3}
Brookside 2	UI		419.5	188.3	102.9	ngm^{-3}
Brookside, Bilston Lane	UI			188.3	102.9	ngm^{-3}
BZL, Hallen	UI			245.5	71.0	ngm^{-3}
Cardiff	UC	29.1	27.8	25.1	20.5	ngm^{-3}
Central London	UC			22.3	21.1	ngm^{-3}
Chilton / Wytham Wood	Rur	11.0	11.0	7.9		ngm^{-3}
Cottered	Rur	9.2	16.9			ngm^{-3}
Cwmystwyth	Rur				4.3	ngm^{-3}
Elswick (6), Newcastle	UI			162.8		ngm^{-3}
Elswick 1	UI		41.8			ngm^{-3}
Elswick 2	UI	46.0	80.0			ngm^{-3}
Elswick 6	UI	110.0	168.2	162.8		ngm^{-3}
Eskdalemuir	Rur	2.5	2.3	2.7	3.5	ngm^{-3}
Glasgow	UC	16.7	25.4	15.3	15.3	ngm^{-3}
IMI (2) Refiners, Walsall	UI				46.7	ngm^{-3}
IMI 1	UI	54.6	42.9			ngm^{-3}
IMI 2	UI	74.7	47.8	43.5	46.7	ngm^{-3}
IMI 5	UI		47.2			ngm^{-3}
Leeds	UC	27.1	31.1	42.6	21.4	ngm^{-3}
London Brent	UB	23.8	29.6	21.6	24.7	ngm^{-3}
London Cromwell Road	Rd	31.9	31.4	27.0	21.8	ngm^{-3}
London Marylebone Road	K	38.0	36.0	28.0	28.0	ngm^{-3}
Manchester	UC	22.1	22.7	20.2	19.6	ngm^{-3}
Monkswood	Rur				10.9	ngm^{-3}
Motherwell	UC	9.5	16.4	12.5	10.3	ngm^{-3}
Newcastle	UC	8.0	31.9			ngm^{-3}
Pontardawe	SU				9.9	ngm^{-3}
Styrrup / Beacon Hill	Rur	23.0	20.0	16.0		ngm^{-3}
Trebanos / Pontardawe	SU	12.0	12.0	7.7	9.9	ngm^{-3}
Windermere / Cockley Beck	Rur	5.0	4.9	3.9	5.3	ngm^{-3}
Yarner Wood	Rur				6.6	ngm^{-3}

Magnesium Mg^{2+} 82

Alternative Name:
CAS Number: 7439-95-4
Type of pollutant: Acid Rain Component

Magnesium in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.6		0.7		mgl^{-1}
Beaghs Burn	Rur	0.4	0.3	0.3	0.5	mgl^{-1}
Bottesford	Rur	0.1	0.1	0.2	0.3	mgl^{-1}
Compton	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Driby	Rur		0.3	0.4		mgl^{-1}
Eskdalemuir 5002	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Eskdalemuir 5162	Rur			0.2	0.2	mgl^{-1}
Flatford Mill	Rur	0.3	0.2	0.2	0.2	mgl^{-1}
Glen Dye	Rur	0.2	0.2	0.2	0.4	mgl^{-1}
High Muffles	Rur	0.3	0.3	0.3	0.4	mgl^{-1}
Hillsborough Forest	Rur	0.3	0.2	0.3	0.2	mgl^{-1}
Jenny Hurn	Rur	0.2				mgl^{-1}
Loch Dee	Rur		0.5	0.4		mgl^{-1}
Preston Montford	Rur	0.2		0.2		mgl^{-1}
Stoke Ferry	Rur	0.3		0.2	0.4	mgl^{-1}
Thorganby	Rur	0.3	0.3	0.3	0.2	mgl^{-1}
Wardlow Hay Cop	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Woburn	Rur	0.2	0.1	0.2	0.3	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	0.7	0.5	0.6	0.8	mgl^{-1}
Balquhidder 2	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Bannisdale	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Cow Green Reservoir	Rur	0.2		0.2	0.3	mgl^{-1}
Crai Reservoir	Rur	0.2	0.2	0.3	0.3	mgl^{-1}
Goonhilly	Rur	1.0	0.8	0.8	0.9	mgl^{-1}
Llyn Brianne	Rur	0.2		0.3	0.3	mgl^{-1}
Llyn Llagi	Rur	0.2	0.2	0.3	0.3	mgl^{-1}
Llyn Llydaw	Rur	0.2	0.2	0.3	0.2	mgl^{-1}
Loch Chon	Rur	0.3	0.3	0.3	0.2	mgl^{-1}
Lochnagar	Rur	0.1	0.1	0.2	0.2	mgl^{-1}
Lough Navar 5006	Rur	0.4	0.3	0.3	0.4	mgl^{-1}
Lough Navar 5161	Rur			0.2		mgl^{-1}
Polloch	Rur	0.3	0.3	0.3	0.4	mgl^{-1}
Pumlumon	Rur	0.2		0.4	0.3	mgl^{-1}
Redesdale	Rur	0.2	0.2	0.2	0.3	mgl^{-1}
River Etherow	Rur	0.1	0.2	0.3	0.2	mgl^{-1}
River Mharcaidh	Rur	0.2	0.1	0.1	0.2	mgl^{-1}
Scoat Tarn	Rur	0.2		0.2	0.2	mgl^{-1}
Strathvaich Dam	Rur	0.4	0.3	0.2	0.4	mgl^{-1}
Tycanol Wood	Rur	0.3		0.5	0.3	mgl^{-1}
Whiteadder	Rur		0.2	0.2		mgl^{-1}
Yarner Wood	Rur	0.3	0.3	0.4		mgl^{-1}

Magnesium Mg^{2+} 82

Magnesium wet deposited

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	16.3				mgm^{-2}
Beaghs Burn	Rur	40.6				mgm^{-2}
Bottesford	Rur	1.3				mgm^{-2}
Compton	Rur	2.4				mgm^{-2}
Eskdalemuir 5002	Rur	6.7				mgm^{-2}
Flatford Mill	Rur	2.8				mgm^{-2}
Glen Dye	Rur	5.3				mgm^{-2}
High Muffles	Rur	4.5				mgm^{-2}
Hillsborough Forest	Rur	5.1				mgm^{-2}
Jenny Hurn	Rur	1.8				mgm^{-2}
Preston Montford	Rur	2.4				mgm^{-2}
Stoke Ferry	Rur	1.8				mgm^{-2}
Thorganby	Rur	2.5				mgm^{-2}
Wardlow Hay Cop	Rur	2.9				mgm^{-2}
Woburn	Rur	1.8				mgm^{-2}

Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	10.1				mgm^{-2}
Balquhidder 2	Rur	9.1				mgm^{-2}
Bannisdale	Rur	14.1				mgm^{-2}
Cow Green Reservoir	Rur	9.4				mgm^{-2}
Crai Reservoir	Rur	26.8				mgm^{-2}
Goonhilly	Rur	24.7				mgm^{-2}
Llyn Brianne	Rur	12.6				mgm^{-2}
Llyn Llagi	Rur	32.0				mgm^{-2}
Llyn Llydaw	Rur	12.6				mgm^{-2}
Loch Chon	Rur	23.3				mgm^{-2}
Lochnagar	Rur	5.3				mgm^{-2}
Lough Navar 5006	Rur	15.3				mgm^{-2}
Polloch	Rur	21.5				mgm^{-2}
Pumlumon	Rur	16.5				mgm^{-2}
Redesdale	Rur	3.7				mgm^{-2}
River Etherow	Rur	7.0				mgm^{-2}
River Mharcaidh	Rur	4.8				mgm^{-2}
Scoat Tarn	Rur	23.4				mgm^{-2}
Strathvaich Dam	Rur	14.8				mgm^{-2}
Tycanol Wood	Rur	14.8				mgm^{-2}
Yarner Wood	Rur	8.4				mgm^{-2}

Manganese Mn 83

Alternative Name:
CAS Number: 7439-96-5
Type of pollutant: Trace Metal

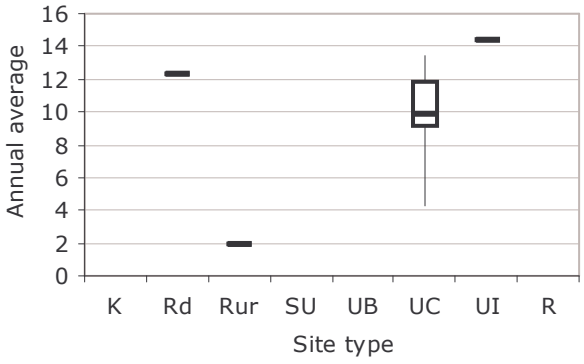
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO	✓					
EPAQS						
AQS						
EAL						
Other						

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	12.3	12.3	12.3	12.3	12.3
Rur	1	1.9	1.9	1.9	1.9	1.9
SU	0					
UB	0					
UC	6	9.8	4.3	13.5	5.5	13.2
UI	1	14.4	14.4	14.4	14.4	14.4
R	0					



Manganese Annual Average Boxplot

Air quality monitoring site map in 2003

Manganese Mn 83

Air Quality Monitoring Data

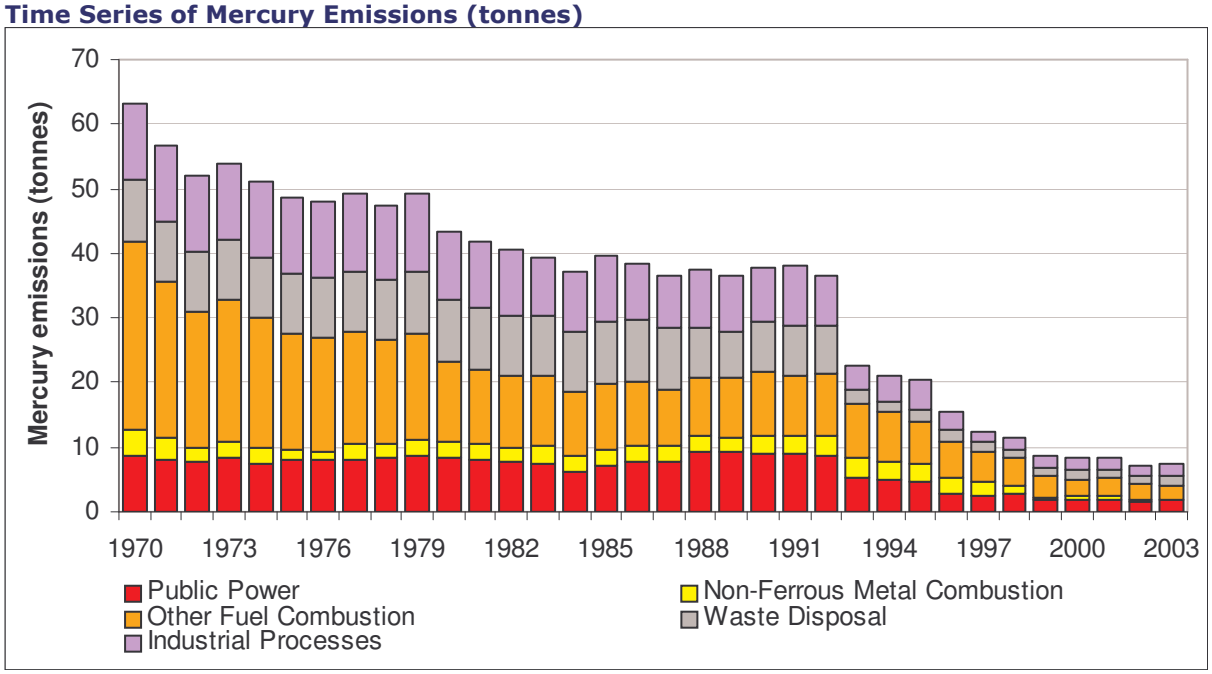
Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				14.4	ngm^{-3}
Cardiff	UC				13.5	ngm^{-3}
Central London	UC			9.2	9.1	ngm^{-3}
Eskdalemuir	Rur	1.0	0.9	0.9	1.9	ngm^{-3}
Glasgow	UC	6.9	7.4	5.0		ngm^{-3}
Leeds	UC	14.0	14.5	11.8	9.3	ngm^{-3}
London Brent	UB	9.3	12.2	10.7	12.2	ngm^{-3}
Manchester	UC				10.6	ngm^{-3}
Motherwell	UC	6.1	9.7	4.1	4.3	ngm^{-3}

Mercury Hg 84

Alternative Name:
CAS Number: 7439-97-6
Type of pollutant: Trace Metal

Time Series of Mercury Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1990	2001	1996

Air Quality Standards

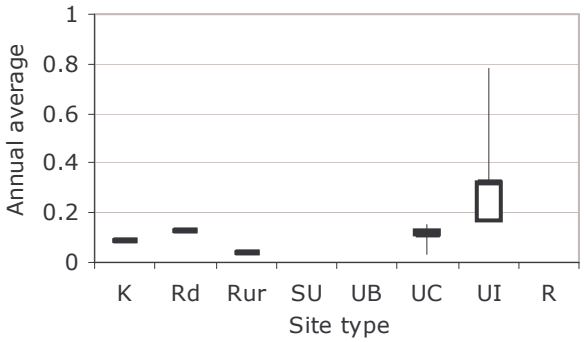
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO	✓					
EPAQS						
AQS						
EAL	✓					
Other	✓		✓			

Mercury Hg 84

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

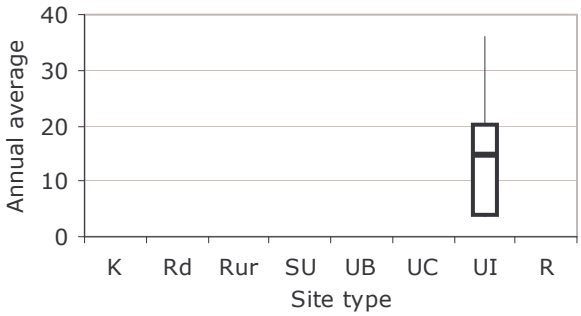
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	0.1	0.1	0.1	0.1	0.1
Rd	1	0.1	0.1	0.1	0.1	0.1
Rur	1	0.0	0.0	0.0	0.0	0.0
SU	0					
UB	0					
UC	6	0.1	0.0	0.2	0.1	0.2
UI	4	0.3	0.2	0.8	0.2	0.7
R	0					



Mercury Annual Average Boxplot

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
UI	3	15.0	4.0	36.0	4.0	33.0



Mercury Vapour Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Mercury Hg 84

Air Quality Monitoring Data

Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				0.2	ngm^{-3}
Brookside, Bilston Lane	UI			0.1	0.2	ngm^{-3}
Cardiff	UC				0.1	ngm^{-3}
Central London	UC				0.1	ngm^{-3}
Elswick (6), Newcastle	UI			0.1		ngm^{-3}
Eskdalemuir	Rur				0.0	ngm^{-3}
ICI Runcorn	UI			1.0	0.8	ngm^{-3}
IMI (2) Refiners, Walsall	UI				0.2	ngm^{-3}
Leeds	UC				0.1	ngm^{-3}
London Brent	UB				0.1	ngm^{-3}
London Cromwell Road	Rd				0.1	ngm^{-3}
London Marylebone Road	K	0.1	0.1	0.1		ngm^{-3}
Manchester	UC				0.2	ngm^{-3}
Motherwell	UC				0.0	ngm^{-3}

Mercury Vapour

Air Quality Monitoring Data

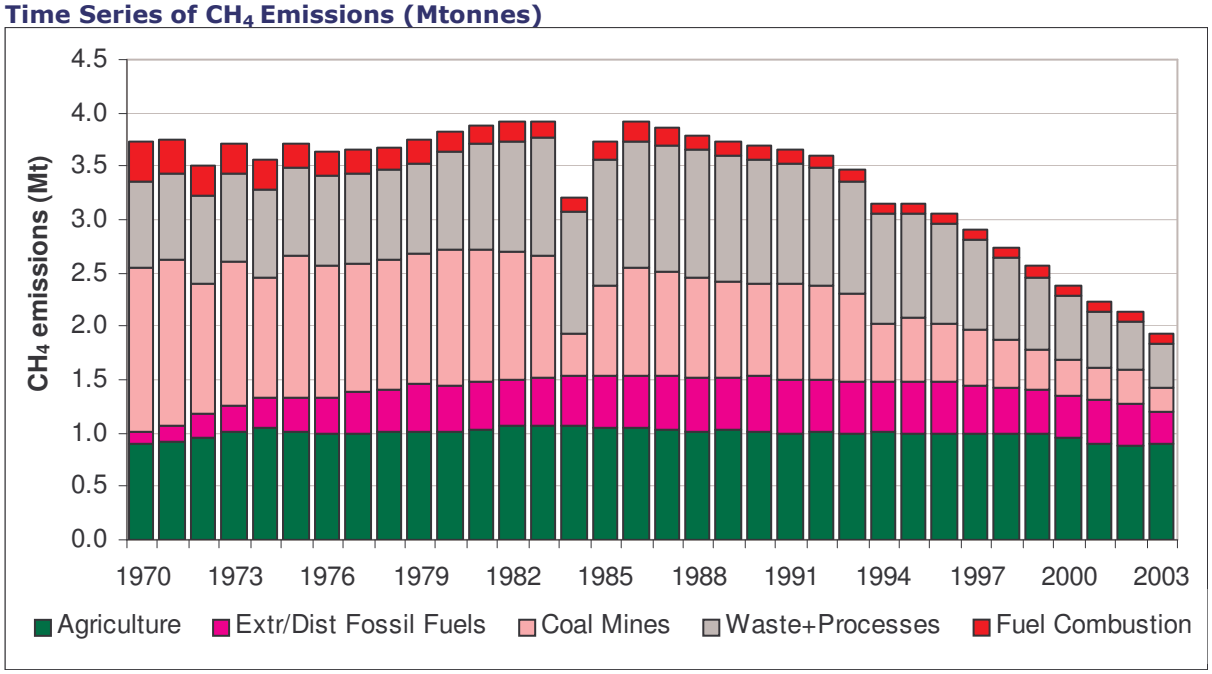
Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside, Bilston Lane	UI			4.1	4.4	ngm^{-3}
Elswick (6), Newcastle	UI			3.8		ngm^{-3}
ICI Runcorn	UI			20.2	36.1	ngm^{-3}
IMI (2) Refiners, Walsall	UI				3.5	ngm^{-3}

Methane CH_4 85

Alternative Name: Marsh gas
CAS Number: 74-82-8
Type of pollutant: Greenhouse Gas

Time Series of CH_4 Emissions (Mtonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	1234	1237	μgm^{-3}
Mace Head	R	02/2000	1235	1235	μgm^{-3}
Mace Head	R	03/2000	1228	1238	μgm^{-3}
Mace Head	R	04/2000	1243	1251	μgm^{-3}
Mace Head	R	05/2000	1236	1257	μgm^{-3}
Mace Head	R	06/2000	1228	1241	μgm^{-3}
Mace Head	R	07/2000	1216	1228	μgm^{-3}
Mace Head	R	08/2000	1218	1236	μgm^{-3}
Mace Head	R	09/2000	1230	1237	μgm^{-3}
Mace Head	R	10/2000	1231	1231	μgm^{-3}
Mace Head	R	11/2000	1235	1239	μgm^{-3}
Mace Head	R	12/2000	1240	1250	μgm^{-3}
Mace Head	R	01/2001	1240	1289	μgm^{-3}
Mace Head	R	02/2001	1240	1244	μgm^{-3}
Mace Head	R	03/2001	1244	1267	μgm^{-3}
Mace Head	R	04/2001	1235	1239	μgm^{-3}
Mace Head	R	05/2001	1231	1253	μgm^{-3}
Mace Head	R	06/2001	1225	1234	μgm^{-3}
Mace Head	R	07/2001	1219	1225	μgm^{-3}
Mace Head	R	08/2001	1221	1227	μgm^{-3}
Mace Head	R	09/2001	1226	1247	μgm^{-3}

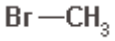
Background and Average (cont)

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	10/2001	1232	1241	μgm^{-3}
Mace Head	R	11/2001	1231	1234	μgm^{-3}
Mace Head	R	12/2001	1234	1258	μgm^{-3}
Mace Head	R	01/2002	1234	1243	μgm^{-3}
Mace Head	R	02/2002	1234	1236	μgm^{-3}
Mace Head	R	03/2002	1238	1250	μgm^{-3}
Mace Head	R	04/2002	1234	1248	μgm^{-3}
Mace Head	R	05/2002	1231	1243	μgm^{-3}
Mace Head	R	06/2002	1223	1226	μgm^{-3}
Mace Head	R	07/2002	1218	1224	μgm^{-3}
Mace Head	R	08/2002	1216	1233	μgm^{-3}
Mace Head	R	09/2002	1234	1276	μgm^{-3}
Mace Head	R	10/2002	1239	1259	μgm^{-3}
Mace Head	R	11/2002	1239	1244	μgm^{-3}
Mace Head	R	12/2002	1242	1278	μgm^{-3}
Mace Head	R	01/2003	1239	1252	μgm^{-3}
Mace Head	R	02/2003	1243	1268	μgm^{-3}
Mace Head	R	03/2003	1245	1278	μgm^{-3}
Mace Head	R	04/2003	1244	1272	μgm^{-3}
Mace Head	R	05/2003	1236	1243	μgm^{-3}
Mace Head	R	06/2003	1231	1242	μgm^{-3}
Mace Head	R	07/2003	1228	1236	μgm^{-3}
Mace Head	R	08/2003	1229	1252	μgm^{-3}
Mace Head	R	09/2003	1235	1242	μgm^{-3}
Mace Head	R	10/2003	1241	1259	μgm^{-3}
Mace Head	R	11/2003	1241	1246	μgm^{-3}
Mace Head	R	12/2003	1246	1256	μgm^{-3}

Methyl bromide CH_3Br 86

Alternative Name: Bromomethane
CAS Number: 74-83-9
Type of pollutant: Ozone-depleting Substance

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	42	45	ngm^{-3}
Mace Head	R	02/2000	43	43	ngm^{-3}
Mace Head	R	03/2000	43	46	ngm^{-3}
Mace Head	R	04/2000	43	46	ngm^{-3}
Mace Head	R	05/2000	43	48	ngm^{-3}
Mace Head	R	06/2000	43	45	ngm^{-3}
Mace Head	R	07/2000	38	42	ngm^{-3}
Mace Head	R	08/2000	38	39	ngm^{-3}
Mace Head	R	09/2000	38	39	ngm^{-3}
Mace Head	R	10/2000	38	38	ngm^{-3}
Mace Head	R	11/2000	39	40	ngm^{-3}
Mace Head	R	12/2000	40	44	ngm^{-3}
Mace Head	R	01/2001	40	43	ngm^{-3}
Mace Head	R	02/2001	41	42	ngm^{-3}
Mace Head	R	03/2001	41	44	ngm^{-3}
Mace Head	R	04/2001	41	42	ngm^{-3}
Mace Head	R	05/2001	41	44	ngm^{-3}
Mace Head	R	06/2001	42	43	ngm^{-3}
Mace Head	R	07/2001	40	40	ngm^{-3}
Mace Head	R	08/2001	35	36	ngm^{-3}
Mace Head	R	09/2001	34	36	ngm^{-3}
Mace Head	R	10/2001	37	39	ngm^{-3}
Mace Head	R	11/2001	38	40	ngm^{-3}
Mace Head	R	12/2001	39	40	ngm^{-3}
Mace Head	R	01/2002	37	39	ngm^{-3}
Mace Head	R	02/2002	37	38	ngm^{-3}
Mace Head	R	03/2002	38	40	ngm^{-3}
Mace Head	R	04/2002	38	41	ngm^{-3}
Mace Head	R	05/2002	38	40	ngm^{-3}
Mace Head	R	06/2002	37	38	ngm^{-3}
Mace Head	R	07/2002	36	37	ngm^{-3}
Mace Head	R	08/2002	33	35	ngm^{-3}
Mace Head	R	09/2002	31	37	ngm^{-3}
Mace Head	R	10/2002	33	34	ngm^{-3}
Mace Head	R	11/2002	34	35	ngm^{-3}
Mace Head	R	12/2002	34	37	ngm^{-3}
Mace Head	R	01/2003	34	36	ngm^{-3}
Mace Head	R	02/2003	34	36	ngm^{-3}
Mace Head	R	03/2003	33	6	ngm^{-3}

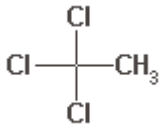
Background and Average (cont)

Mace Head	R	04/2003	34	39	ngm^{-3}
Mace Head	R	05/2003	34	35	ngm^{-3}
Mace Head	R	06/2003	35	36	ngm^{-3}
Mace Head	R	07/2003	34	35	ngm^{-3}
Mace Head	R	08/2003	32	33	ngm^{-3}
Mace Head	R	09/2003	29	30	ngm^{-3}
Mace Head	R	10/2003	29	31	ngm^{-3}
Mace Head	R	11/2003	30	31	ngm^{-3}
Mace Head	R	12/2003	32	33	ngm^{-3}

Methyl chloroform CH_3CCl_3 87

Alternative Name: 1,1,1-trichloroethane
CAS Number: 71-55-6
Type of pollutant: Ozone-depleting Substance

Structure



Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	282	282	ngm^{-3}
Mace Head	R	02/2000	279	279	ngm^{-3}
Mace Head	R	03/2000	275	275	ngm^{-3}
Mace Head	R	04/2000	275	275	ngm^{-3}
Mace Head	R	05/2000	270	270	ngm^{-3}
Mace Head	R	06/2000	265	265	ngm^{-3}
Mace Head	R	07/2000	255	255	ngm^{-3}
Mace Head	R	08/2000	251	251	ngm^{-3}
Mace Head	R	09/2000	246	246	ngm^{-3}
Mace Head	R	10/2000	243	243	ngm^{-3}
Mace Head	R	11/2000	241	241	ngm^{-3}
Mace Head	R	12/2000	239	239	ngm^{-3}
Mace Head	R	01/2001	238	238	ngm^{-3}
Mace Head	R	02/2001	233	233	ngm^{-3}
Mace Head	R	03/2001	233	233	ngm^{-3}
Mace Head	R	04/2001	229	229	ngm^{-3}
Mace Head	R	05/2001	225	225	ngm^{-3}
Mace Head	R	06/2001	220	220	ngm^{-3}
Mace Head	R	07/2001	215	215	ngm^{-3}
Mace Head	R	08/2001	209	209	ngm^{-3}
Mace Head	R	09/2001	205	205	ngm^{-3}
Mace Head	R	10/2001	202	202	ngm^{-3}
Mace Head	R	11/2001	200	200	ngm^{-3}
Mace Head	R	12/2001	199	199	ngm^{-3}
Mace Head	R	01/2002	198	198	ngm^{-3}
Mace Head	R	02/2002	196	196	ngm^{-3}
Mace Head	R	03/2002	195	195	ngm^{-3}
Mace Head	R	04/2002	192	192	ngm^{-3}
Mace Head	R	05/2002	189	189	ngm^{-3}
Mace Head	R	06/2002	183	183	ngm^{-3}
Mace Head	R	07/2002	178	178	ngm^{-3}
Mace Head	R	08/2002	173	173	ngm^{-3}
Mace Head	R	09/2002	172	172	ngm^{-3}
Mace Head	R	10/2002	169	169	ngm^{-3}
Mace Head	R	11/2002	166	166	ngm^{-3}
Mace Head	R	12/2002	166	166	ngm^{-3}
Mace Head	R	01/2003	165	165	ngm^{-3}
Mace Head	R	02/2003	165	165	ngm^{-3}
Mace Head	R	03/2003	164	164	ngm^{-3}
Mace Head	R	04/2003	162	162	ngm^{-3}
Mace Head	R	05/2003	159	159	ngm^{-3}
Mace Head	R	06/2003	156	156	ngm^{-3}
Mace Head	R	07/2003	152	152	ngm^{-3}
Mace Head	R	08/2003	147	147	ngm^{-3}
Mace Head	R	09/2003	145	145	ngm^{-3}
Mace Head	R	10/2003	142	142	ngm^{-3}
Mace Head	R	11/2003	140	140	ngm^{-3}
Mace Head	R	12/2003	139	139	ngm^{-3}

Methyl iodide CH_3I 88

Alternative Name: Iodomethane
CAS Number: 74-88-4
Type of pollutant: Trace Gas

Structure

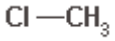
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	03/2000		16	ngm^{-3}
Mace Head	R	04/2000	11	15	ngm^{-3}
Mace Head	R	05/2000	11	20	ngm^{-3}
Mace Head	R	06/2000	11	19	ngm^{-3}
Mace Head	R	07/2000	13	22	ngm^{-3}
Mace Head	R	08/2000	14	21	ngm^{-3}
Mace Head	R	09/2000	11	16	ngm^{-3}
Mace Head	R	10/2000	11	12	ngm^{-3}
Mace Head	R	11/2000	11	12	ngm^{-3}
Mace Head	R	12/2000	8	9	ngm^{-3}
Mace Head	R	01/2001	4	6	ngm^{-3}
Mace Head	R	02/2001	4	6	ngm^{-3}
Mace Head	R	03/2001	5	6	ngm^{-3}
Mace Head	R	04/2001	6	7	ngm^{-3}
Mace Head	R	05/2001	6	13	ngm^{-3}
Mace Head	R	06/2001		18	ngm^{-3}
Mace Head	R	07/2001	10	13	ngm^{-3}
Mace Head	R	08/2001	10	13	ngm^{-3}
Mace Head	R	09/2001	10	13	ngm^{-3}
Mace Head	R	10/2001	10	12	ngm^{-3}
Mace Head	R	11/2001	9	9	ngm^{-3}
Mace Head	R	12/2001	9	10	ngm^{-3}
Mace Head	R	01/2002	9	9	ngm^{-3}
Mace Head	R	02/2002	9	9	ngm^{-3}
Mace Head	R	03/2002	9	10	ngm^{-3}
Mace Head	R	04/2002	9	11	ngm^{-3}
Mace Head	R	05/2002	10	11	ngm^{-3}
Mace Head	R	06/2002	10	12	ngm^{-3}
Mace Head	R	07/2002	10	14	ngm^{-3}
Mace Head	R	08/2002	11	16	ngm^{-3}
Mace Head	R	09/2002	11	18	ngm^{-3}
Mace Head	R	10/2002	11	14	ngm^{-3}
Mace Head	R	11/2002	10	11	ngm^{-3}
Mace Head	R	12/2002	10	12	ngm^{-3}
Mace Head	R	01/2003	9	11	ngm^{-3}
Mace Head	R	02/2003	9	10	ngm^{-3}
Mace Head	R	03/2003	9	5	ngm^{-3}
Mace Head	R	04/2003	10	14	ngm^{-3}
Mace Head	R	05/2003	11	12	ngm^{-3}
Mace Head	R	06/2003	13	15	ngm^{-3}
Mace Head	R	07/2003	13	18	ngm^{-3}
Mace Head	R	08/2003	13	17	ngm^{-3}
Mace Head	R	09/2003	12	14	ngm^{-3}
Mace Head	R	10/2003	11	12	ngm^{-3}
Mace Head	R	11/2003	12	12	ngm^{-3}
Mace Head	R	12/2003	11	12	ngm^{-3}

Methyl chloride CH_3Cl 89

Alternative Name: Chloromethane
CAS Number: 74-87-3
Type of pollutant: Ozone-depleting Substance

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	1163	1224	ngm^{-3}
Mace Head	R	02/2000	1186	1195	ngm^{-3}
Mace Head	R	03/2000	1204	1255	ngm^{-3}
Mace Head	R	04/2000	1214	1294	ngm^{-3}
Mace Head	R	05/2000	1170	1307	ngm^{-3}
Mace Head	R	06/2000	1132	1185	ngm^{-3}
Mace Head	R	07/2000	1076	1156	ngm^{-3}
Mace Head	R	08/2000	1026	1051	ngm^{-3}
Mace Head	R	09/2000	1005	1027	ngm^{-3}
Mace Head	R	10/2000	1015	1023	ngm^{-3}
Mace Head	R	11/2000	1055	1072	ngm^{-3}
Mace Head	R	12/2000	1088	1157	ngm^{-3}
Mace Head	R	01/2001	1121	1176	ngm^{-3}
Mace Head	R	02/2001	1151	1188	ngm^{-3}
Mace Head	R	03/2001	1170	1225	ngm^{-3}
Mace Head	R	04/2001	1168	1209	ngm^{-3}
Mace Head	R	05/2001	1159	1218	ngm^{-3}
Mace Head	R	06/2001	1134	1155	ngm^{-3}
Mace Head	R	07/2001	1076	1084	ngm^{-3}
Mace Head	R	08/2001	1008	1014	ngm^{-3}
Mace Head	R	09/2001	994	1060	ngm^{-3}
Mace Head	R	10/2001	1052	1112	ngm^{-3}
Mace Head	R	11/2001	1079	1110	ngm^{-3}
Mace Head	R	12/2001	1113	1151	ngm^{-3}
Mace Head	R	01/2002	1115	1148	ngm^{-3}
Mace Head	R	02/2002	1139	1140	ngm^{-3}
Mace Head	R	03/2002	1152	1236	ngm^{-3}
Mace Head	R	04/2002	1150	1278	ngm^{-3}
Mace Head	R	05/2002	1134	1226	ngm^{-3}
Mace Head	R	06/2002	1077	1099	ngm^{-3}
Mace Head	R	07/2002	1036	1055	ngm^{-3}
Mace Head	R	08/2002	1010	1064	ngm^{-3}
Mace Head	R	09/2002	1011	1183	ngm^{-3}
Mace Head	R	10/2002	1041	1061	ngm^{-3}
Mace Head	R	11/2002	1082	1093	ngm^{-3}
Mace Head	R	12/2002	1114	1184	ngm^{-3}
Mace Head	R	01/2003	1128	1148	ngm^{-3}
Mace Head	R	02/2003	1139	1211	ngm^{-3}
Mace Head	R	03/2003	1151	1330	ngm^{-3}

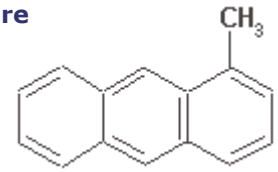
Background and Average (cont)

Mace Head	R	04/2003	1169	1314	ngm^{-3}
Mace Head	R	05/2003	1154	1177	ngm^{-3}
Mace Head	R	06/2003	1130	1145	ngm^{-3}
Mace Head	R	07/2003	1076	1106	ngm^{-3}
Mace Head	R	08/2003	1025	1076	ngm^{-3}
Mace Head	R	09/2003	1014	1029	ngm^{-3}
Mace Head	R	10/2003	1054	1090	ngm^{-3}
Mace Head	R	11/2003	1056	1078	ngm^{-3}
Mace Head	R	12/2003	1098	1109	ngm^{-3}

1-methylanthracene 90

Alternative Name:
CAS Number: 610-48-0
Type of pollutant: Polycyclic Aromatic Hydrocarbon

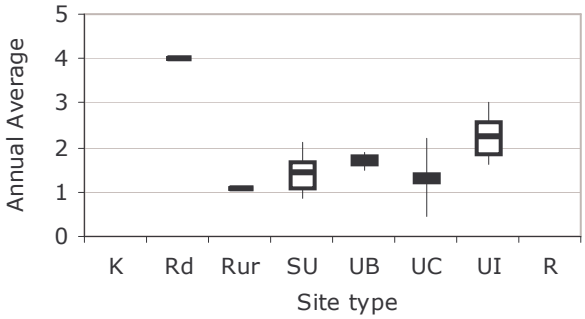
Structure



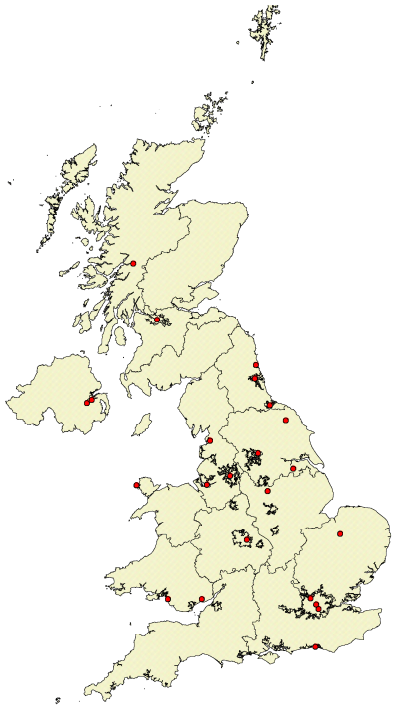
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	4.0	4.0	4.0	4.0	4.0
Rur	1	1.1	1.1	1.1	1.1	1.1
SU	6	1.4	0.8	2.1	0.9	2.0
UB	2	1.7	1.5	1.9	1.5	1.9
UC	5	1.3	0.4	2.2	0.6	2.0
UI	3	2.2	1.6	3.0	1.6	2.9
R	0					



1-methylanthracene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

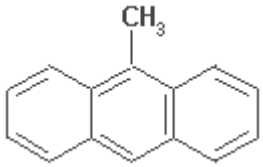
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	1.2	1.1		1.6	µgm^{-3}
Belfast	SU		3.0	1.4	1.0	µgm^{-3}
Birmingham 1	UB		1.3	2.2	1.9	µgm^{-3}
Bolsover	SU	1.5	1.5	2.5	2.1	µgm^{-3}
Brent	UB				1.5	µgm^{-3}
Bromley	Rd			3.8	4.0	µgm^{-3}
Glasgow	UC	1.3	1.1	1.3	0.4	µgm^{-3}
Holyhead	UI	1.5	1.8		2.0	µgm^{-3}
Hove	UC				1.2	µgm^{-3}
Kinlochleven	SU	2.4	1.7	1.3	0.8	µgm^{-3}
Leeds 1	UC		1.6	1.6	1.2	µgm^{-3}
Lisburn	SU	3.0	2.2	1.9	1.7	µgm^{-3}
London 2a	UC	2.0	2.1	2.2	2.2	µgm^{-3}
Newcastle	UC		1.7	1.8	1.4	µgm^{-3}
Newport	SU	1.2	2.0	1.5	1.4	µgm^{-3}
Port Talbot	UI	1.7	1.6	2.2	2.1	µgm^{-3}
Scunthorpe	UI	2.5	2.7	3.2	3.0	µgm^{-3}
Speke	SU			1.9	1.6	µgm^{-3}
Stoke Ferry	Rur		0.7	0.8	1.1	µgm^{-3}

9-methylanthracene 91

Alternative Name:
CAS Number: 779-02-2
Type of pollutant: Polycyclic Aromatic Hydrocarbon

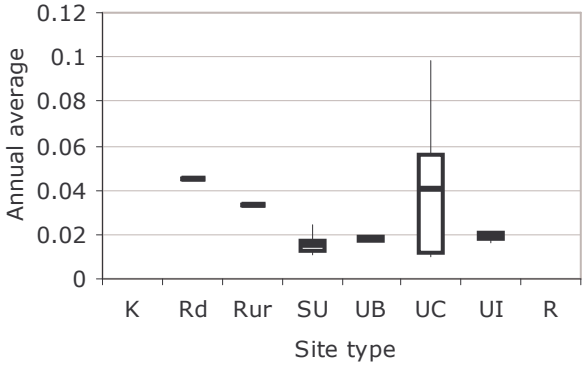
Structure



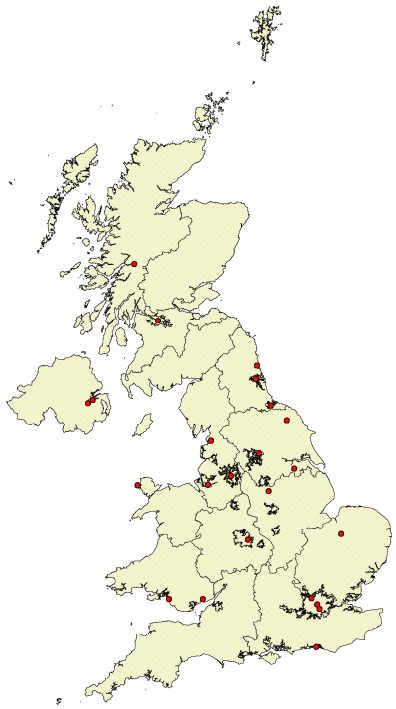
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.05	0.05	0.05	0.05	0.05
Rur	1	0.03	0.03	0.03	0.03	0.03
SU	4	0.02	0.01	0.02	0.01	0.02
UB	2	0.02	0.02	0.02	0.02	0.02
UC	3	0.04	0.01	0.10	0.01	0.09
UI	3	0.02	0.02	0.02	0.02	0.02
R	0					



9-methylanthracene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

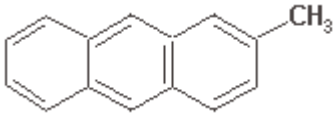
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.0	0.0		0.0	µgm^{-3}
Belfast	SU		0.0	0.0	0.0	µgm^{-3}
Birmingham 1	UB		0.0	0.0	0.0	µgm^{-3}
Bolsover	SU	0.0	0.0	0.0	0.0	µgm^{-3}
Brent	UB				0.0	µgm^{-3}
Bromley	Rd			0.0	0.0	µgm^{-3}
Glasgow	UC	0.0	0.0	0.0	0.0	µgm^{-3}
Holyhead	UI	0.0	0.0		0.0	µgm^{-3}
Hove	UC				0.0	µgm^{-3}
Kinlochleven	SU	0.1	0.0	0.0	0.0	µgm^{-3}
Leeds 1	UC		0.0	0.0	0.0	µgm^{-3}
Lisburn	SU	<0.1	0.0	0.0	0.0	µgm^{-3}
London 2a	UC	0.0	0.0	0.0	0.1	µgm^{-3}
Newcastle	UC		0.0	0.0	0.0	µgm^{-3}
Newport	SU	0.0	0.0	0.0	0.0	µgm^{-3}
Port Talbot	UI	0.0	0.0	0.0	0.0	µgm^{-3}
Scunthorpe	UI	<0.1	0.0	0.0	0.0	µgm^{-3}
Speke	SU			0.0	0.0	µgm^{-3}
Stoke Ferry	Rur		0.0	0.0	0.0	µgm^{-3}

2-methylanthracene 92

Alternative Name:
CAS Number: 613-12-7
Type of pollutant: Polycyclic Aromatic Hydrocarbon

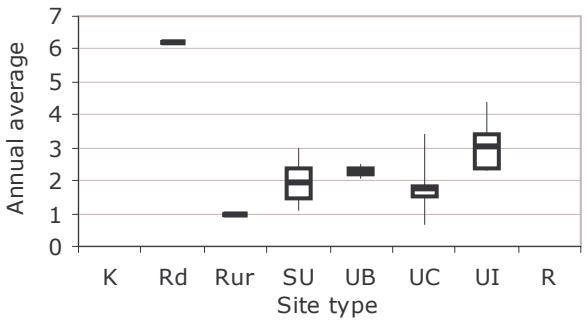
Structure



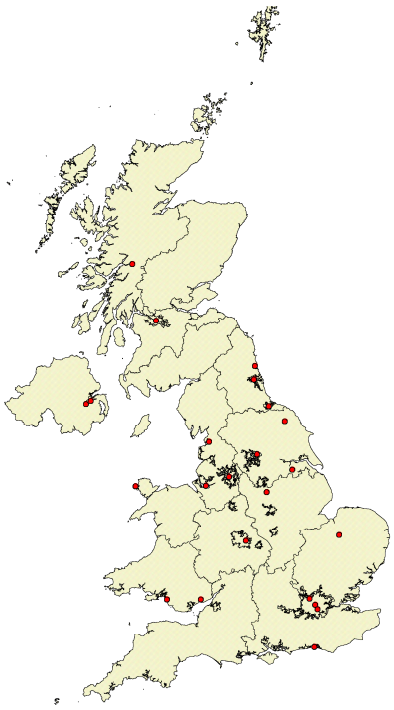
Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	6.2	6.2	6.2	6.2	6.2
Rur	1	1.0	1.0	1.0	1.0	1.0
SU	6	1.9	1.1	3.0	1.2	2.9
UB	2	2.3	2.1	2.5	2.1	2.5
UC	5	1.8	0.7	3.4	0.8	3.1
UI	3	3.0	2.3	4.4	2.3	4.2
R	0					



2-methylanthracene Annual Average Boxplot



Air quality non-automatic monitoring site map in 2003

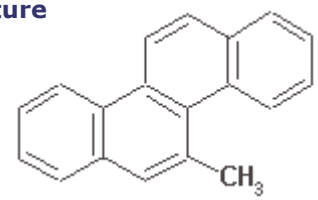
Air Quality Monitoring Data - Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.23	0.18		2.40	µgm^{-3}
Belfast	SU		0.27	2.80	1.40	µgm^{-3}
Birmingham 1	UB		0.11	3.10	2.50	µgm^{-3}
Bolsover	SU	0.39	0.72	3.30	3.00	µgm^{-3}
Brent	UB				2.10	µgm^{-3}
Bromley	Rd			6.20	6.20	µgm^{-3}
Glasgow	UC	0.14	0.08	2.00	0.65	µgm^{-3}
Holyhead	UI	0.22	0.19		2.50	µgm^{-3}
Hove	UC				1.50	µgm^{-3}
Kinlochleven	SU	0.66	0.27	1.90	1.10	µgm^{-3}
Leeds 1	UC		0.14	2.50	1.60	µgm^{-3}
Lisburn	SU	0.88	0.57	3.00	2.50	µgm^{-3}
London 2a	UC	0.14	0.15	2.80	3.40	µgm^{-3}
Newcastle	UC		0.10	2.60	1.80	µgm^{-3}
Newport	SU	0.15	0.12	2.30	1.70	µgm^{-3}
Port Talbot	UI	0.23	0.11	2.90	2.30	µgm^{-3}
Scunthorpe	UI	0.31	0.30	5.40	4.40	µgm^{-3}
Speke	SU			2.50	1.90	µgm^{-3}
Stoke Ferry	Rur		<0.03	0.73	0.99	µgm^{-3}

5-methylchrysene 93

Alternative Name:
CAS Number: 3697-24-3
Type of pollutant: Polycyclic Aromatic Hydrocarbon

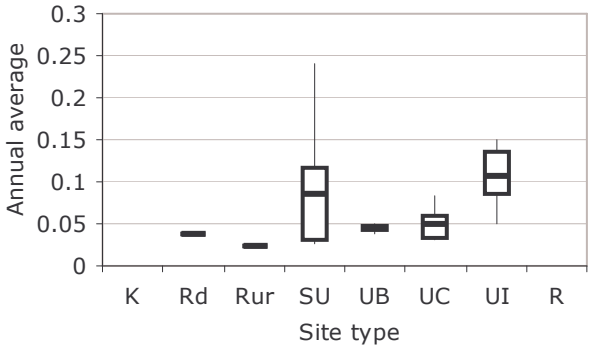
Structure



Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.04	0.04	0.04	0.04	0.04
Rur	1	0.02	0.02	0.02	0.02	0.02
SU	6	0.09	0.03	0.24	0.03	0.22
UB	2	0.05	0.04	0.05	0.04	0.05
UC	3	0.05	0.03	0.08	0.03	0.08
UI	3	0.11	0.05	0.15	0.06	0.15
R	0					



5-methylchrysene Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

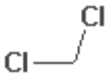
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.06	0.15		0.15	µgm^{-3}
Belfast	SU		0.29	0.05	0.03	µgm^{-3}
Birmingham 1	UB		0.08	0.03	0.05	µgm^{-3}
Bolsover	SU	0.09	0.23	0.08	0.14	µgm^{-3}
Brent	UB				0.04	µgm^{-3}
Bromley	Rd			0.03	0.04	µgm^{-3}
Glasgow	UC	0.04	0.05	0.02	<0.02	µgm^{-3}
Holyhead	UI	0.04	0.10		0.07	µgm^{-3}
Hove	UC				0.03	µgm^{-3}
Kinlochleven	SU	0.36	0.27	0.11	0.04	µgm^{-3}
Leeds 1	UC		0.08	0.04	0.08	µgm^{-3}
Lisburn	SU	0.32	0.46	0.34	0.24	µgm^{-3}
London 2a	UC	0.05	<0.03	0.03	0.04	µgm^{-3}
Newcastle	UC		0.07	0.03	<0.06	µgm^{-3}
Newport	SU	0.06	0.08	0.02	0.03	µgm^{-3}
Port Talbot	UI	0.07	0.09	0.04	0.05	µgm^{-3}
Scunthorpe	UI	0.09	0.13	0.11	0.12	µgm^{-3}
Speke	SU			0.03	0.03	µgm^{-3}
Stoke Ferry	Rur		0.02	<0.02	0.02	µgm^{-3}

Methylene dichloride CH_2Cl_2 94

Alternative Name: Dichloromethane
CAS Number: 75-09-2
Type of pollutant: Trace Gas

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO			✓			
EPAQS						
AQS						
EAL						
Other						

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	118	121	ngm^{-3}
Mace Head	R	02/2000	122	123	ngm^{-3}
Mace Head	R	03/2000	117	131	ngm^{-3}
Mace Head	R	04/2000	135	160	ngm^{-3}
Mace Head	R	05/2000	121	175	ngm^{-3}
Mace Head	R	06/2000	110	142	ngm^{-3}
Mace Head	R	07/2000	88	143	ngm^{-3}
Mace Head	R	08/2000	83	115	ngm^{-3}
Mace Head	R	09/2000	80	90	ngm^{-3}
Mace Head	R	10/2000	90	92	ngm^{-3}
Mace Head	R	11/2000	101	115	ngm^{-3}
Mace Head	R	12/2000	109	195	ngm^{-3}
Mace Head	R	01/2001	114	181	ngm^{-3}
Mace Head	R	02/2001	117	142	ngm^{-3}
Mace Head	R	03/2001	121	201	ngm^{-3}
Mace Head	R	04/2001	122	125	ngm^{-3}
Mace Head	R	05/2001	117	174	ngm^{-3}
Mace Head	R	06/2001	107	120	ngm^{-3}
Mace Head	R	07/2001	95	100	ngm^{-3}
Mace Head	R	08/2001	84	92	ngm^{-3}
Mace Head	R	09/2001	80	97	ngm^{-3}
Mace Head	R	10/2001	84	104	ngm^{-3}
Mace Head	R	11/2001	103	115	ngm^{-3}
Mace Head	R	12/2001	107	159	ngm^{-3}
Mace Head	R	01/2002	108	121	ngm^{-3}
Mace Head	R	02/2002	113	114	ngm^{-3}
Mace Head	R	03/2002	119	148	ngm^{-3}
Mace Head	R	04/2002	118	146	ngm^{-3}
Mace Head	R	05/2002	113	135	ngm^{-3}
Mace Head	R	06/2002	101	106	ngm^{-3}
Mace Head	R	07/2002	90	93	ngm^{-3}
Mace Head	R	08/2002	79	88	ngm^{-3}
Mace Head	R	09/2002	79	176	ngm^{-3}
Mace Head	R	10/2002	89	136	ngm^{-3}
Mace Head	R	11/2002	103	112	ngm^{-3}
Mace Head	R	12/2002	111	182	ngm^{-3}
Mace Head	R	01/2003	114	126	ngm^{-3}
Mace Head	R	02/2003	117	205	ngm^{-3}

Background and Average (cont)

Mace Head	R	03/2003	121	146	ngm^{-3}
Mace Head	R	04/2003	124	196	ngm^{-3}
Mace Head	R	05/2003	123	132	ngm^{-3}
Mace Head	R	06/2003	113	124	ngm^{-3}
Mace Head	R	07/2003	99	108	ngm^{-3}
Mace Head	R	08/2003	85	98	ngm^{-3}
Mace Head	R	09/2003	83	93	ngm^{-3}
Mace Head	R	10/2003	93	152	ngm^{-3}
Mace Head	R	11/2003	99	152	ngm^{-3}
Mace Head	R	12/2003	111	122	ngm^{-3}

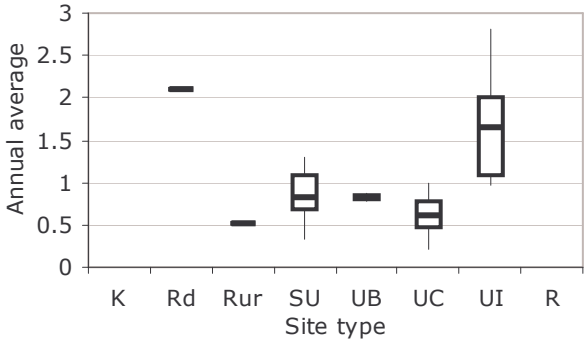
4,5-methylenephenanthrene 95

Alternative Name: Cyclopentaphenanthrene
CAS Number: 203-64-5
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	2.1	2.1	2.1	2.1	2.1
Rur	1	0.5	0.5	0.5	0.5	0.5
SU	6	0.8	0.3	1.3	0.4	1.3
UB	2	0.8	0.8	0.9	0.8	0.9
UC	5	0.6	0.2	1.0	0.3	1.0
UI	3	1.6	1.0	2.8	1.0	2.6
R	0					



4,5-methylenephenanthrene Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

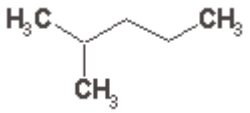
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	1.1	3.0		1.0	µgm^{-3}
Belfast	SU		6.6	0.9	0.3	µgm^{-3}
Birmingham 1	UB		3.1	1.2	0.9	µgm^{-3}
Bolsover	SU	1.0	2.9	1.4	1.2	µgm^{-3}
Brent	UB				0.8	µgm^{-3}
Bromley	Rd			2.5	2.1	µgm^{-3}
Glasgow	UC	1.0	2.9	0.8	0.2	µgm^{-3}
Holyhead	UI	1.0	3.9		0.8	µgm^{-3}
Hove	UC				0.5	µgm^{-3}
Kinlochleven	SU	2.5	7.8	1.3	0.8	µgm^{-3}
Leeds 1	UC		4.4	1.2	0.8	µgm^{-3}
Lisburn	SU	2.4	4.2	1.4	1.3	µgm^{-3}
London 2a	UC	1.2	4.1	1.0	1.0	µgm^{-3}
Newcastle	UC		2.1	0.9	0.6	µgm^{-3}
Newport	SU	1.3	5.5	1.1	0.8	µgm^{-3}
Port Talbot	UI	2.0	4.9	1.4	1.2	µgm^{-3}
Scunthorpe	UI	3.1	9.7	3.2	2.8	µgm^{-3}
Speke	SU			1.0	0.7	µgm^{-3}
Stoke Ferry	Rur		1.3	0.3	0.5	µgm^{-3}

2-methylpentane C_6H_{14} 96

Alternative Name: i-hexane
CAS Number: 107-83-5
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

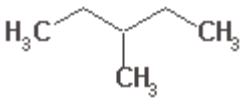
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
London Marylebone Road	K	8	6	5	4	106	100	44	30	μgm^{-3}

3-methylpentane C_6H_{14} 97

Alternative Name:
CAS Number: 96-14-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

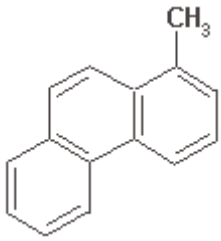
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
London Marylebone Road	K	4	3	3	2	31	22	23	20	μgm^{-3}

1-methylphenanthrene 98

Alternative Name:
CAS Number: 832-69-9
Type of pollutant: Polycyclic Aromatic Hydrocarbon

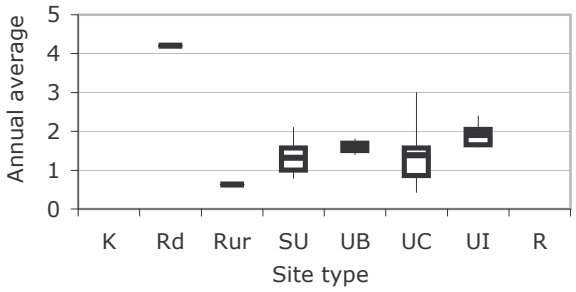
Structure



Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	4.2	4.2	4.2	4.2	4.2
Rur	1	0.6	0.6	0.6	0.6	0.6
SU	6	1.3	0.8	2.1	0.8	2.0
UB	2	1.6	1.4	1.8	1.4	1.8
UC	4	1.4	0.4	3.0	0.5	2.7
UI	3	1.9	1.6	2.4	1.6	2.3
R	0					



1-methylphenanthrene Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

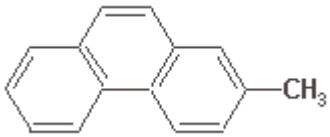
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	1.2	1.4		1.7	µgm^{-3}
Belfast	SU		3.3	1.4	0.9	µgm^{-3}
Birmingham 1	UB		1.5	2.1	1.8	µgm^{-3}
Bolsover	SU	1.6	1.9	2.2	2.1	µgm^{-3}
Brent	UB				1.4	µgm^{-3}
Bromley	Rd			3.7	4.2	µgm^{-3}
Glasgow	UC	1.2	1.5	1.3	0.4	µgm^{-3}
Holyhead	UI	1.5	2.2		1.8	µgm^{-3}
Hove	UC				1.1	µgm^{-3}
Kinlochleven	SU	2.2	2.1	1.3	0.8	µgm^{-3}
Leeds 1	UC		1.8	1.6	1.0	µgm^{-3}
Lisburn	SU	2.8	2.6	1.9	1.7	µgm^{-3}
London 2a	UC	1.8	2.6	1.6	3.0	µgm^{-3}
Newcastle	UC		1.8	1.7	<1.2	µgm^{-3}
Newport	SU	1.1	1.8	1.4	1.2	µgm^{-3}
Port Talbot	UI	1.6	1.9	1.9	1.6	µgm^{-3}
Scunthorpe	UI	2.4	3.3	3.1	2.4	µgm^{-3}
Speke	SU			1.7	1.2	µgm^{-3}
Stoke Ferry	Rur		0.7	0.5	0.6	µgm^{-3}

2-methylphenanthrene 99

Alternative Name:
CAS Number: 2531-84-2
Type of pollutant: Polycyclic Aromatic Hydrocarbon

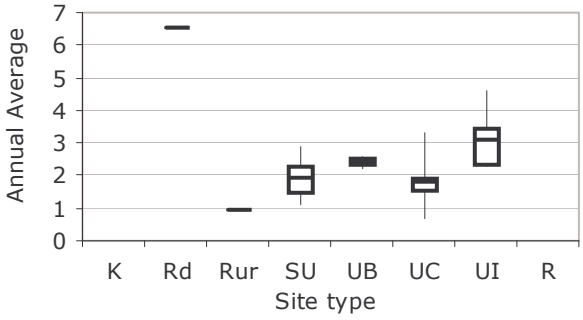
Structure



Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	6.5	6.5	6.5	6.5	6.5
Rur	1	0.9	0.9	0.9	0.9	0.9
SU	6	1.9	1.1	2.9	1.1	2.8
UB	2	2.4	2.2	2.6	2.2	2.6
UC	5	1.8	0.7	3.3	0.8	3.0
UI	3	3.1	2.3	4.6	2.3	4.4
R	0					



2-methylphenanthrene Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

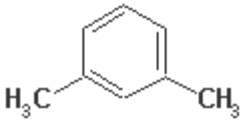
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	2.0	2.2		2.3	µgm^{-3}
Belfast	SU		6.3	2.5	1.3	µgm^{-3}
Birmingham 1	UB		2.0	3.0	2.6	µgm^{-3}
Bolsover	SU	2.2	2.3	3.0	2.9	µgm^{-3}
Brent	UB				2.2	µgm^{-3}
Bromley	Rd			6.3	6.5	µgm^{-3}
Glasgow	UC	1.9	2.0	1.9	0.7	µgm^{-3}
Holyhead	UI	2.0	2.7		2.5	µgm^{-3}
Hove	UC				1.5	µgm^{-3}
Kinlochleven	SU	3.6	2.9	1.7	1.1	µgm^{-3}
Leeds 1	UC		2.6	2.3	1.6	µgm^{-3}
Lisburn	SU	4.3	3.6	2.8	2.4	µgm^{-3}
London 2a	UC	2.5	3.0	2.6	3.3	µgm^{-3}
Newcastle	UC		2.6	2.4	1.9	µgm^{-3}
Newport	SU	1.9	2.6	2.1	1.7	µgm^{-3}
Port Talbot	UI	2.7	2.6	2.6	2.3	µgm^{-3}
Scunthorpe	UI	4.3	4.8	5.0	4.6	µgm^{-3}
Speke	SU			2.3	1.9	µgm^{-3}
Stoke Ferry	Rur		0.8	0.6	0.9	µgm^{-3}

m-xylene C_8H_{10} 100

Alternative Name: 1,3-dimethylbenzene
CAS Number: 108-38-3
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓		✓			

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Cardiff Centre	UC				2				87	μgm^{-3}
Edinburgh Med. Sch.	UB		3				90			μgm^{-3}
Glasgow Kerbside	K				4				66	μgm^{-3}
Harwell	Rur	0		1		11		19		μgm^{-3}
London Marylebone Road	K	18	14	11	9	346	107	96	63	μgm^{-3}
London UCL	Rd	4				86				μgm^{-3}

n-butane C_4H_{10} 101

Alternative Name: Butane
CAS Number: 106-97-8
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

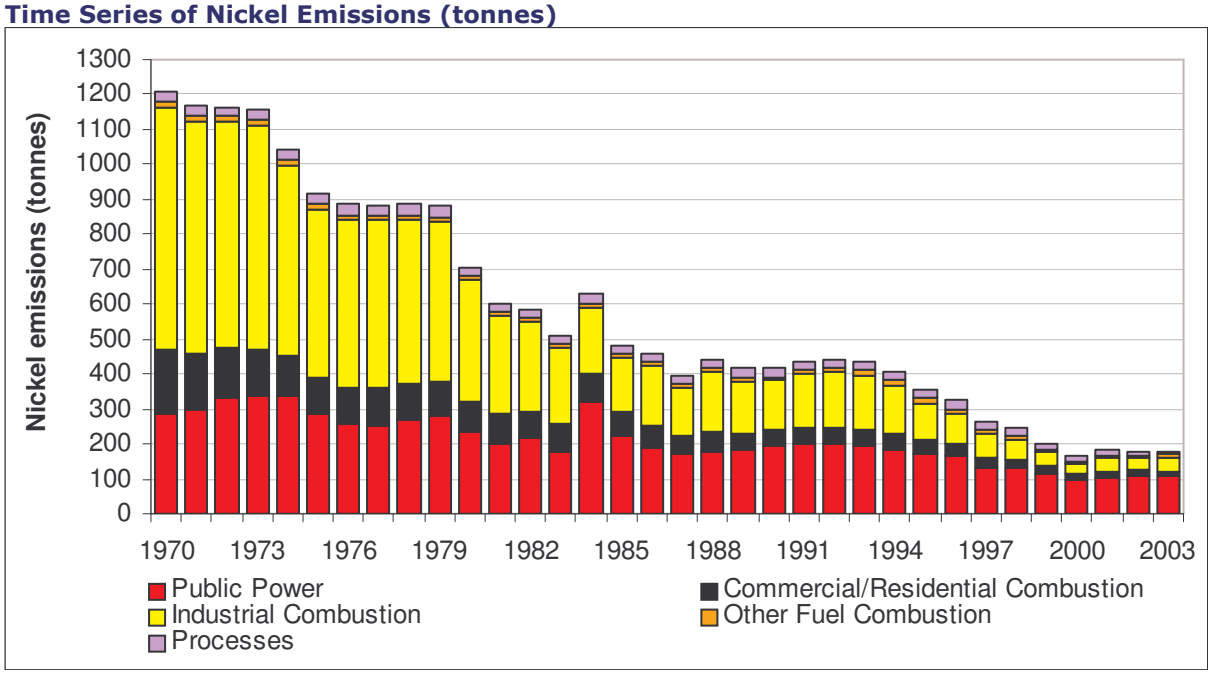
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	3				144				μgm^{-3}
Birmingham East	UB	6				488				μgm^{-3}
Bristol East	UB	4				92				μgm^{-3}
Cardiff East	UB	7	6			85	96			μgm^{-3}
Edinburgh Med. Sch.	UB	4	6			331	517			μgm^{-3}
Harwell	Rur	1	2			15	31			μgm^{-3}
Leeds Potternewton	UB	7				330				μgm^{-3}
Liverpool Speke	UB	6				201				μgm^{-3}
London Eltham	SU	5				51				μgm^{-3}
London Marylebone Road	K	20	17	13	11	254	219	128	184	μgm^{-3}
London UCL	Rd	6				114				μgm^{-3}
Middlesbrough	UI	6				921				μgm^{-3}
Southampton Centre	UC	6				193				μgm^{-3}

Nickel Ni 102

Alternative Name:
CAS Number: 7440-02-0
Type of pollutant: Trace Metal

Time Series of Nickel Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

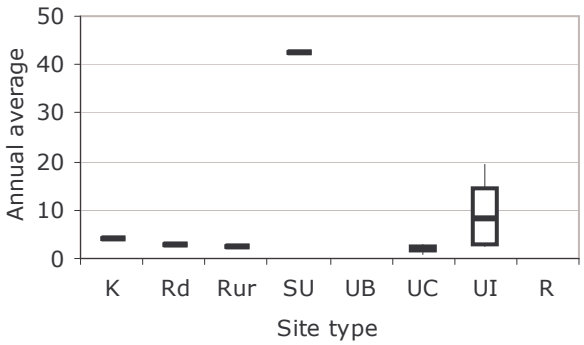
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓					
WHO						
EPAQS						
AQS						
EAL	✓					
Other	✓		✓			

Nickel Ni 102

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	4.3	4.3	4.3	4.3	4.3
Rd	1	3.1	3.1	3.1	3.1	3.1
Rur	1	2.6	2.6	2.6	2.6	2.6
SU	1	42.7	42.7	42.7	42.7	42.7
UB	0					
UC	6	2.0	0.9	2.9	1.1	2.8
UI	6	8.2	2.5	19.4	2.6	19.1
R	0					



Nickel Annual Average Boxplot

Air quality monitoring site map in 2003

Nickel Ni 102

Air Quality Monitoring Data

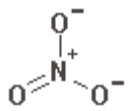
Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Avesta Polarit, Rotherham	UI			16.2	19.4	ngm^{-3}
Brookside	UI				2.8	ngm^{-3}
Brookside, Bilston Lane	UI			2.0	2.8	ngm^{-3}
BZL, Hallen	UI			2.0	2.5	ngm^{-3}
Cardiff	UC				2.2	ngm^{-3}
Central London	UC			2.2	2.9	ngm^{-3}
Eskdalemuir	Rur	2.6	0.9	0.6	2.6	ngm^{-3}
Glasgow	UC	4.8	2.3	1.6		ngm^{-3}
IMI (2) Refiners, Walsall	UI				3.6	ngm^{-3}
INCO Europe, Swansea	UI			28.9	18.1	ngm^{-3}
Leeds	UC	4.7	2.9	2.9	1.6	ngm^{-3}
London Brent	UB	5.1	3.4	2.9	2.6	ngm^{-3}
London Cromwell Road	Rd	3.4	3.3	4.4	3.1	ngm^{-3}
London Marylebone Road	K				4.3	ngm^{-3}
Manchester	UC				1.8	ngm^{-3}
Motherwell	UC	3.0	2.6	1.3	0.9	ngm^{-3}
Pontardawe	SU				42.7	ngm^{-3}

Nitrate NO_3^- 103

Alternative Name: Particulate nitrate, Nitrate aerosol
CAS Number: 14797-55-8
Type of pollutant: Acidifying Agent, Particulate Component

Structure



Nitrate as N in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.5		0.6		mgl^{-1}
Beaghs Burn	Rur	0.2	0.4	0.2	0.5	mgl^{-1}
Bottesford	Rur	0.5	0.6	0.6	0.8	mgl^{-1}
Compton	Rur	0.4	0.5	0.6	0.6	mgl^{-1}
Driby	Rur		0.7	0.6		mgl^{-1}
Eskdalemuir 5002	Rur	0.3	0.3	0.3	0.4	mgl^{-1}
Eskdalemuir 5162	Rur			0.3	0.5	mgl^{-1}
Flatford Mill	Rur	0.7	0.6	0.8	0.8	mgl^{-1}
Glen Dye	Rur	0.4	0.6	0.5	0.8	mgl^{-1}
High Muffles	Rur	0.6	0.6	0.5	0.7	mgl^{-1}
Hillsborough Forest	Rur	0.5	0.4	0.3	0.4	mgl^{-1}
Jenny Hurn	Rur	0.7				mgl^{-1}
Loch Dee	Rur		0.3	0.2		mgl^{-1}
Preston Montford	Rur	0.3		0.3		mgl^{-1}
Stoke Ferry	Rur	0.8		0.6	1.0	mgl^{-1}
Thorganby	Rur	0.7	0.7	0.5	0.7	mgl^{-1}
Wardlow Hay Cop	Rur	0.5	0.6	0.5	0.5	mgl^{-1}
Woburn	Rur	0.5	0.8	0.7	0.8	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	0.3	0.3	0.5	0.3	mgl^{-1}
Balquhidder 2	Rur	0.3	0.3	0.4	0.3	mgl^{-1}
Bannisdale	Rur	0.4	0.4	0.3	0.4	mgl^{-1}
Cow Green Reservoir	Rur	0.3		0.4	0.6	mgl^{-1}
Crai Reservoir	Rur	0.2	0.3	0.2	0.5	mgl^{-1}
Goonhilly	Rur	0.5	0.5	0.5	1.4	mgl^{-1}
Llyn Brianne	Rur	0.2		0.3	0.5	mgl^{-1}
Llyn Llagi	Rur	0.2	0.3	0.2	0.3	mgl^{-1}
Llyn Llydaw	Rur	0.3	0.2	0.3	0.3	mgl^{-1}
Loch Chon	Rur	0.4	0.3	0.4	0.3	mgl^{-1}
Lochnagar	Rur	0.3	0.4	0.4	0.6	mgl^{-1}
Lough Navar 5006	Rur	0.1	0.2	0.2	0.2	mgl^{-1}
Lough Navar 5161	Rur			0.2		mgl^{-1}
Polloch	Rur	0.1	0.1	0.2	0.2	mgl^{-1}
Pumlumon	Rur	0.2		0.2	0.4	mgl^{-1}
Redesdale	Rur	0.4	0.5	0.5	0.5	mgl^{-1}
River Etherow	Rur	0.4	0.6	0.7	0.6	mgl^{-1}
River Mharcaidh	Rur	0.2	0.2	0.2	0.2	mgl^{-1}
Scoat Tarn	Rur	0.3		0.3	0.3	mgl^{-1}
Strathvaich Dam	Rur	0.1	0.2	0.3	0.1	mgl^{-1}
Tycanol Wood	Rur	0.2		0.3	0.4	mgl^{-1}
Whiteadder	Rur		0.7	0.5		mgl^{-1}
Yarner Wood	Rur	0.3	0.4	0.5		mgl^{-1}

Annual Data statistics - Other Acid deposition measurements

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
High Muffles	Rur	0.4				μgm^{-3}
Stoke Ferry	Rur	0.6				mgl^{-1}

Nitrate as N wet deposited

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	6.5				mgm^{-2}
Beaghs Burn	Rur	10.0				mgm^{-2}
Bottesford	Rur	6.7				mgm^{-2}
Compton	Rur	6.5				mgm^{-2}
Eskdalemuir 5002	Rur	7.4				mgm^{-2}
Flatford Mill	Rur	6.9				mgm^{-2}
Glen Dye	Rur	10.2				mgm^{-2}
High Muffles	Rur	10.6				mgm^{-2}
Hillsborough Forest	Rur	5.3				mgm^{-2}
Jenny Hurn	Rur	7.2				mgm^{-2}
Preston Montford	Rur	5.4				mgm^{-2}
Stoke Ferry	Rur	7.5				mgm^{-2}
Thorganby	Rur	8.6				mgm^{-2}
Wardlow Hay Cop	Rur	9.0				mgm^{-2}
Woburn	Rur	6.1				mgm^{-2}

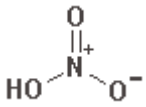
Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	2.8				mgm^{-2}
Balquhidder 2	Rur	7.0				mgm^{-2}
Bannisdale	Rur	13.1				mgm^{-2}
Cow Green Reservoir	Rur	11.5				mgm^{-2}
Crai Reservoir	Rur	10.8				mgm^{-2}
Goonhilly	Rur	6.7				mgm^{-2}
Llyn Brianne	Rur	6.7				mgm^{-2}
Llyn Llagi	Rur	16.0				mgm^{-2}
Llyn Llydaw	Rur	8.4				mgm^{-2}
Loch Chon	Rur	20.6				mgm^{-2}
Lochnagar	Rur	13.6				mgm^{-2}
Lough Navar 5006	Rur	2.9				mgm^{-2}
Polloch	Rur	3.6				mgm^{-2}
Pumlumon	Rur	6.8				mgm^{-2}
Redesdale	Rur	6.4				mgm^{-2}
River Etherow	Rur	16.8				mgm^{-2}
River Mharcaidh	Rur	2.4				mgm^{-2}
Scoat Tarn	Rur	20.1				mgm^{-2}
Strathvaich Dam	Rur	2.5				mgm^{-2}
Tycanol Wood	Rur	5.8				mgm^{-2}
Yarner Wood	Rur	5.7				mgm^{-2}

Nitric acid HNO_3 104

Alternative Name:
CAS Number: 7697-37-2
Type of pollutant: acidifying and eutrophying agent

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Air Quality Monitoring Data

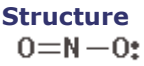
Annual Data statistics -Other Acid deposition measurements

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
High Muffles	Rur	0.0				μgm^{-3}
Stoke Ferry	Rur	0.0				μgm^{-3}

Nitrogen dioxide NO_2 105

Alternative Name:
CAS Number: 10102-44-0
Type of pollutant: Acid Gas, Urban Pollutant

Structure



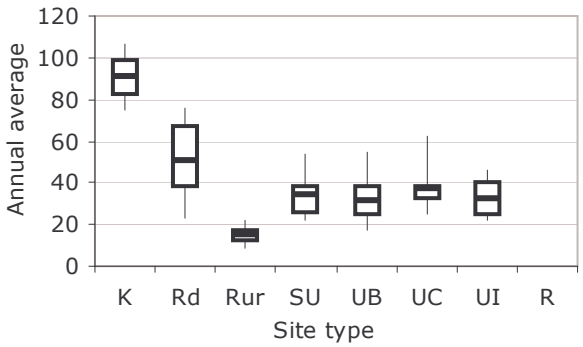
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓				✓	
WHO	✓				✓	
EPAQS					✓	
AQS					✓	
EAL						
Other						

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (μgm^{-3})

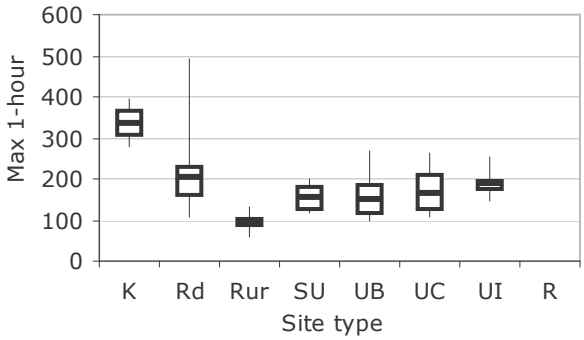
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	91	75	107	77	105
Rd	18	51	23	76	25	75
Rur	6	15	9	22	10	21
SU	6	35	22	54	23	50
UB	27	31	17	55	20	48
UC	22	38	25	62	28	55
UI	5	33	22	46	23	45
R	0					



NO_2 Annual Average Boxplot

Automatic Monitoring Annual Max (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	336	279	393	285	387
Rd	18	205	107	493	118	304
Rur	6	95	59	131	66	124
SU	6	155	117	199	117	197
UB	27	150	96	267	102	209
UC	22	168	105	262	111	244
UI	5	191	145	252	151	241
R	0					



NO_2 Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB	24	25	27	31	151	159	136	170	μgm^{-3}
Barnsley Gawber	UB	26	30	25	25	99	128	120	117	μgm^{-3}
Bath Roadside	Rd	54	57	56	60	164	181	201	180	μgm^{-3}
Belfast Centre	UC	30	32	30	32	124	334	258	170	μgm^{-3}
Billingham	UI	36	32	30	32	262	346	302	252	μgm^{-3}
Birmingham Centre	UC	33	34	34	33	115	202	134	128	μgm^{-3}
Birmingham East	UB	27	31	29	33	113	162	115	145	μgm^{-3}
Blackpool	UB		24	22	24		185	124	120	μgm^{-3}
Bolton	UB	29	35	35	36	191	267	143	181	μgm^{-3}
Bournemouth	UB			17	22			199	117	μgm^{-3}
Bradford Centre	UC	38	44	37	37	149	262	191	210	μgm^{-3}
Brighton Roadside	Rd		36	37	43		128	298	183	μgm^{-3}
Bristol Centre	UC	38	38	37	36	197	159	160	164	μgm^{-3}
Bristol Old Market	Rd	55				277				μgm^{-3}
Bury Roadside	Rd	70	68	68	76	233	311	176	202	μgm^{-3}
Cambridge Roadside	Rd	41	39	43	46	118	132	124	159	μgm^{-3}
Camden Kerbside	K	63	66			164	193			μgm^{-3}
Canterbury	UB		20	18	22		96	94	105	μgm^{-3}
Cardiff Centre	UC	30	33	33	35	99	128	397	202	μgm^{-3}
Coventry Centre	UC			21	25			141	122	μgm^{-3}
Coventry Memorial Park	UB			20	19			122	101	μgm^{-3}
Cwmbran	UB	15	16	15	17	73	74	94	96	μgm^{-3}
Derry	UB		38	38	38		170	166	271	μgm^{-3}
Dumfries	Rd	45	43	48		210	252	151		μgm^{-3}
Edinburgh Centre	UC	38	41	38	41	124	136	227	168	μgm^{-3}
Exeter Roadside	Rd		34	32			168	264		μgm^{-3}
Glasgow Centre	UC	49	46	47	50	262	239	216	193	μgm^{-3}
Glasgow City Chambers	UB	72	71	74	75	281	405	309	279	μgm^{-3}
Glasgow Kerbside	K	24	25	27	31	151	159	136	170	μgm^{-3}

Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

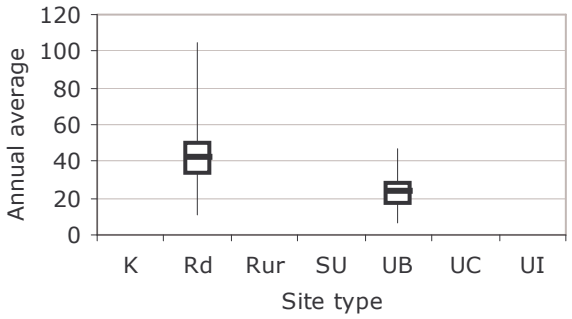
Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Grangemouth	UI		19		22		128		145	µgm^{-3}
Haringey Roadside	Rd	51	48	46	52	199	157	160	170	µgm^{-3}
Harwell	Rur	12	17	15	16	101	135	89	95	µgm^{-3}
Hounslow Roadside	Rd	52	54	58		151	174	258		µgm^{-3}
Hove Roadside	Rd	36	39	33	37	153	155	130	149	µgm^{-3}
Hull Centre	UC	36	36			126	162			µgm^{-3}
Hull Freetown	UC				33				143	µgm^{-3}
Inverness	Rd			22	23			117	130	µgm^{-3}
Ladybower	Rur	11	12	13	13	87	110	79	131	µgm^{-3}
Leamington Spa	UB	27	31	29		118	168	124		µgm^{-3}
Leeds Centre	UC	37	36	39	40	159	157	176	168	µgm^{-3}
Leicester Centre	UC	34	35	35	37	157	134	107	141	µgm^{-3}
Liverpool Centre	UC	35	38			145	212			µgm^{-3}
London A3 Roadside	Rd	55	53	58	73	139	172	367	493	µgm^{-3}
London Bexley	SU	35	36	31	38	124	172	107	151	µgm^{-3}
London Bloomsbury	UC	59	51			172	162			µgm^{-3}
London Brent	UB	36	36	29	34	168	151	151	208	µgm^{-3}
London Bromley	Rd	63	61	41	42	168	172	170	170	µgm^{-3}
London Cromwell Road 2	Rd	88	76	72	75	390	204	183	223	µgm^{-3}
London Eltham	SU	33	34	30	38	122	143	120	157	µgm^{-3}
London Hackney	UC	51	48	47	50	239	160	193	244	µgm^{-3}
London Hillingdon	SU	48	46	45	54	187	159	139	199	µgm^{-3}
London Lewisham	UC			50	55			160	233	µgm^{-3}
London Marylebone Road	K	93	84	80	107	298	273	237	393	µgm^{-3}
London N. Kensington	UB	40	41	40	44	222	220	160	195	µgm^{-3}
London Southwark	UC	52	54	46		141	187	147		µgm^{-3}
London Sutton	SU	32	35			128	172			µgm^{-3}
London Teddington	UB	28	29	25	28	136	142	99	131	µgm^{-3}
London Wandsworth	UC	49	53	52	62	180	185	164	220	µgm^{-3}
London Westminster	UB			43				134		µgm^{-3}
Lullington Heath	Rur	12	13	11	13	99	83	102	89	µgm^{-3}
Manchester Piccadilly	UC	41		39	45	138		143	262	µgm^{-3}
Manchester South	SU	18	22	21	22	99	159	90	117	µgm^{-3}
Manchester Town Hall	UB	41	47	43	44	138	308	138	159	µgm^{-3}
Middlesbrough	UI	24	25	26	25	113	260	113	195	µgm^{-3}
Narberth	Rur			7	9			46	59	µgm^{-3}
Newcastle Centre	UC	29	31	30	32	122	118	103	118	µgm^{-3}
Northampton	UB			21	24			103	124	µgm^{-3}
Norwich Centre	UC	25	28	25	25	117	149	155	111	µgm^{-3}
Norwich Roadside	Rd	29	31	30	33	113	136	176	120	µgm^{-3}
Nottingham Centre	UC	40	35	35	36	168	132	97	113	µgm^{-3}
Oxford Centre Roadside	Rd	60	60	60	71	212	185	199	260	µgm^{-3}
Plymouth Centre	UC	24	33	26	28	111	193	101	105	µgm^{-3}
Port Talbot	UB	22	22	19	22	103	96	88	111	µgm^{-3}
Portsmouth	UB		27	26	26		139	111	111	µgm^{-3}
Preston	UB		27	27	28		141	162	141	µgm^{-3}
Reading	UB	34	32	33		124	113	122		µgm^{-3}
Redcar	SU	21	25	23	25	90	132	118	117	µgm^{-3}
Rochester	Rur	21	22	21	22	122	96	84	90	µgm^{-3}
Rotherham Centre	UC	33	34	34	35	210	139	134	160	µgm^{-3}
Salford Eccles	UI	37	41	38	40	180	432	139	189	µgm^{-3}
Sandwell West Bromwich	UB	32	35	29	39	143	149	120	166	µgm^{-3}
Sheffield Centre	UC	35	37	34	39	132	195	147	149	µgm^{-3}
Sheffield Tinsley	UI	44	45	41	46	176	193	199	174	µgm^{-3}
Southampton Centre	UC	38	38	33	36	147	130	120	126	µgm^{-3}
Southend-on-Sea	UB		26	25	25		178	138	134	µgm^{-3}
Southwark Roadside	Rd	63	65	58	67	155	189	138	231	µgm^{-3}
St Osyth	Rur				18				104	µgm^{-3}
Stockport	UB	38	39			126	325			µgm^{-3}

Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Stockport Shaw Heath	UB				38				210	μgm^{-3}
Stockton-on-Tees Yarm	Rd		40	39	43		199	298	225	μgm^{-3}
Stoke-on-Trent Centre	UC	31	33	30	31	145	151	94	124	μgm^{-3}
Sutton Roadside	Rd	39	44			155	222			μgm^{-3}
Swansea	UC	34	36	31	34	136	120	105	164	μgm^{-3}
Thurrock	UB	34	36	36	38	160	124	122	267	μgm^{-3}
Tower Hamlets Roadside	Rd	65	69	61	67	210	273	244	244	μgm^{-3}
Walsall Alumwell	UB	37	42	37	42	395	183	151	189	μgm^{-3}
Walsall Willenhall	SU	25	27	27	30	120	223	113	189	μgm^{-3}
West London	UB	53	52	45	55	159	187	151	185	μgm^{-3}
Wicken Fen	Rur	14	14	12		68	79	63		μgm^{-3}
Wigan Leigh	UB		37	30	31		178	103	113	μgm^{-3}
Wirral Tranmere	UB		22	22	27		147	109	132	μgm^{-3}
Wolverhampton Centre	UC	30	32	28	34	126	180	122	235	μgm^{-3}
Wrexham	Rd			24	25			111	107	μgm^{-3}

Non-automatic Monitoring Annual Mean (μgm^{-3})

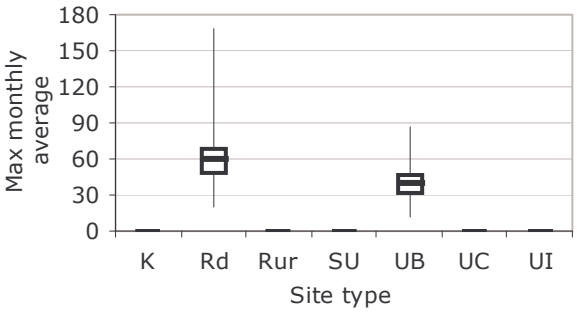
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	506	43	11	105	23	66
Rur	0					
SU	0					
UB	529	24	7	47	12	38
UC	0					
UI	0					



NO_2 Diffusion Tubes Annual Average Boxplot

Non-automatic Monitoring Annual Max (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	506	60	20	169	34	96
Rd	0					
Rur	0					
SU	529	39	11	87	20	62
UB	0					
UC	0					
UI	0	0	0	0	0	0



NO_2 Diffusion Tubes Monthly Maximum Boxplot

Air quality non-automatic monitoring site map in 2003

Full data set for the non-automatic monitoring network is available in the Air Quality Archive (www.airquality.co.uk).

Nitrogen monoxide NO 106

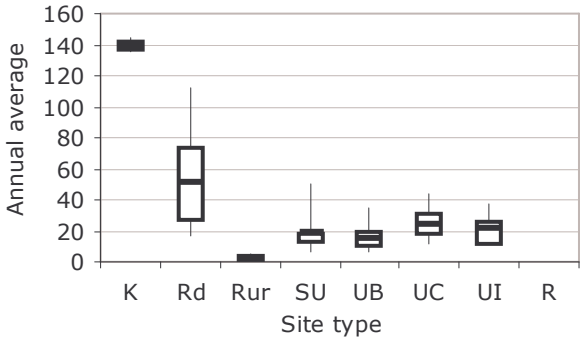
Alternative Name: Nitric oxide
CAS Number: 10102-43-9
Type of pollutant: Acid Gas, Urban Pollutant

Structure
HN=O

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (µgm^{-3})

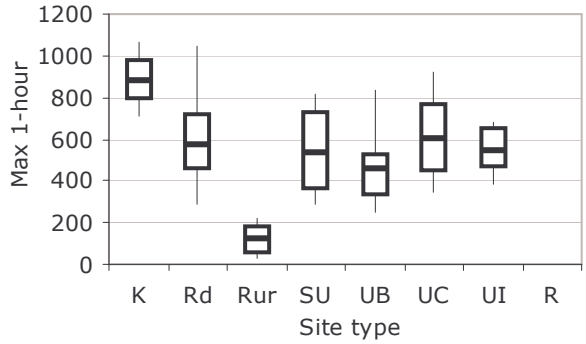
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	140	135	144	135	144
Rd	18	52	17	112	18	96
Rur	6	3	1	6	1	5
SU	6	19	6	50	8	42
UB	28	15	6	35	6	25
UC	22	25	11	44	11	41
UI	5	21	11	38	11	36
R	0					



NO Annual Average Boxplot

Automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	887	706	1068	724	1050
Rd	18	573	290	1046	295	892
Rur	6	121	25	217	34	208
SU	6	536	291	819	306	815
UB	28	459	245	839	261	762
UC	22	602	344	921	351	917
UI	5	548	385	680	403	674
R	0					



NO Maximum 1-hour Boxplot

Nitrogen monoxide NO 106

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB	12	16	13	15	573	748	490	381	μgm^{-3}
Barnsley Gawber	UB	11	15	13	13	439	524	584	443	μgm^{-3}
Bath Roadside	Rd	92	79	73	70	566	644	535	459	μgm^{-3}
Belfast Centre	UC	14	17	17	18	411	1454	1035	586	μgm^{-3}
Billingham	UI	22	23	18	21	630	620	439	553	μgm^{-3}
Birmingham Centre	UC	15	19	17	19	338	809	570	368	μgm^{-3}
Birmingham East	UB	14	18	12	19	711	784	415	715	μgm^{-3}
Blackpool	UB		12	8	10		776	194	398	μgm^{-3}
Bolton	UB	15	22	15	19	628	1223	455	651	μgm^{-3}
Bournemouth	UB			5	6			350	336	μgm^{-3}
Bradford Centre	UC	30	39	29	32	593	1038	826	919	μgm^{-3}
Brighton Roadside	Rd		36	30	31		558	910	675	μgm^{-3}
Bristol Centre	UC	32	37	36	44	753	825	531	871	μgm^{-3}
Bristol Old Market	Rd	101				1021				μgm^{-3}
Bury Roadside	Rd	124	132	110	112	704	1264	616	745	μgm^{-3}
Cambridge Roadside	Rd	45	47	46	46	475	506	455	480	μgm^{-3}
Camden Kerbside	K	93	90			749	746			μgm^{-3}
Canterbury	UB		8	7	8		346	230	281	μgm^{-3}
Cardiff Centre	UC	14	15	14	18	540	301	714	350	μgm^{-3}
Coventry Centre	UC	10				383				μgm^{-3}
Coventry Memorial Park	UB		8	7	8		289	231	354	μgm^{-3}
Cwmbran	UB			5	7			191	361	μgm^{-3}
Derry	UB	5	7	6	6	148	616	314	323	μgm^{-3}
Dumfries	Rd		42	42	41		660	484	446	μgm^{-3}
Edinburgh Centre	UC	38	34	36		536	1108	525		μgm^{-3}
Exeter Roadside	Rd	39	40	38	40	599	449	604	541	μgm^{-3}
Glasgow Centre	UC	27	33	25		924	1483	988		μgm^{-3}
Glasgow City Chambers	UB	31	40	36	35	526	979	834	519	μgm^{-3}
Glasgow Kerbside	K	126	140	139	144	1243	1650	1231	1068	μgm^{-3}

Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Grangemouth	UI		14		11		593		474	µgm^{-3}
Haringey Roadside	Rd	50	47	41	42	745	603	750	558	µgm^{-3}
Harwell	Rur	2	5	3	3	99	150	180	217	µgm^{-3}
Hounslow Roadside	Rd	64	61	48		839	745	768		µgm^{-3}
Hove Roadside	Rd	27	35	23	22	549	555	586	529	µgm^{-3}
Hull Centre	UC	25	32			443	590			µgm^{-3}
Hull Freetown	UC				17				393	µgm^{-3}
Inverness	Rd			18	18			353	296	µgm^{-3}
Ladybower	Rur	1	1	1	1	98	143	96	60	µgm^{-3}
Leamington Spa	UB	10	11	9		309	584	228		µgm^{-3}
Leeds Centre	UC	25	27	28	30	400	629	783	669	µgm^{-3}
Leicester Centre	UC	17	22	16	20	638	456	320	531	µgm^{-3}
Liverpool Centre	UC	37	36			798	764			µgm^{-3}
London A3 Roadside	Rd	103	86	74	77	839	931	695	865	µgm^{-3}
London Bexley	SU	17	21	16	19	476	605	365	524	µgm^{-3}
London Bloomsbury	UC	35	37			695	629			µgm^{-3}
London Brent	UB	17	16	15	17	811	516	673	788	µgm^{-3}
London Bromley	Rd	74	68	26	25	458	685	354	461	µgm^{-3}
London Cromwell Road 2	Rd	103	87	78	76	606	704	463	485	µgm^{-3}
London Eltham	SU	16	18	11	14	353	525	410	426	µgm^{-3}
London Hackney	UC	42	40	34	37	1071	505	789	864	µgm^{-3}
London Hillingdon	SU	61	49	44	50	786	794	503	804	µgm^{-3}
London Lewisham	UC			40	41			625	760	µgm^{-3}
London Marylebone Road	K	203	165	144	135	1058	936	766	706	µgm^{-3}
London N. Kensington	UB	21	22	17	20	803	558	391	471	µgm^{-3}
London Southwark	UC	36	38	28		519	608	359		µgm^{-3}
London Sutton	SU	15	20			485	594			µgm^{-3}
London Teddington	UB	11	16	9	10	399	529	238	354	µgm^{-3}
London Wandsworth	UC	48	54	39	38	535	640	501	534	µgm^{-3}
London Westminster	UB			24	24			398	299	µgm^{-3}
Lullington Heath	Rur	1	2	1	2	74	98	37	63	µgm^{-3}
Manchester Piccadilly	UC	27		22	27	418		454	921	µgm^{-3}
Manchester South	SU	9	16	8	12	290	740	264	349	µgm^{-3}
Manchester Town Hall	UB	21	30	19	20	451	1103	418	521	µgm^{-3}
Middlesbrough	UI	7	12	11	11	345	746	430	385	µgm^{-3}
Narberth	Rur			2	1			52	25	µgm^{-3}
Newcastle Centre	UC	22	24	16	16	438	701	368	394	µgm^{-3}
Northampton	UB			8	10			283	245	µgm^{-3}
Norwich Centre	UC	8	13	9	11	406	634	481	344	µgm^{-3}
Norwich Roadside	Rd	19	22	21	19	383	533	565	326	µgm^{-3}
Nottingham Centre	UC	22	27	21	24	536	751	286	443	µgm^{-3}
Oxford Centre Roadside	Rd	81	81	82	93	643	626	524	775	µgm^{-3}
Plymouth Centre	UC	11	9	9	11	523	374	428	483	µgm^{-3}
Port Talbot	UB	8	11	8	9	258	356	328	250	µgm^{-3}
Portsmouth	UB		12	9	10		559	505	540	µgm^{-3}
Preston	UB		15	12	15		465	293	296	µgm^{-3}
Reading	UB	25	23	17		460	411	319		µgm^{-3}
Redcar	SU	5	9	6	6	170	701	388	291	µgm^{-3}
Rochester	Rur	5	6	4	6	223	300	113	181	µgm^{-3}
Rotherham Centre	UC	24	31	23	27	803	676	605	604	µgm^{-3}
Salford Eccles	UI	24	33	20	26	555	1495	463	680	µgm^{-3}
Sandwell West Bromwich	UB	14	19	12	18	416	673	343	503	µgm^{-3}
Sheffield Centre	UC	30	33	29	31	505	746	568	808	µgm^{-3}
Sheffield Tinsley	UI	37	42	36	38	590	844	900	650	µgm^{-3}
Southampton Centre	UC	29	28	22	25	686	751	565	463	µgm^{-3}
Southend-on-Sea	UB		11	8	10		328	291	508	µgm^{-3}
Southwark Roadside	Rd	82	72	63	60	648	588	516	736	µgm^{-3}
St Osyth	Rur				3				181	µgm^{-3}
Stockport	UB	19	27			461	1066			µgm^{-3}

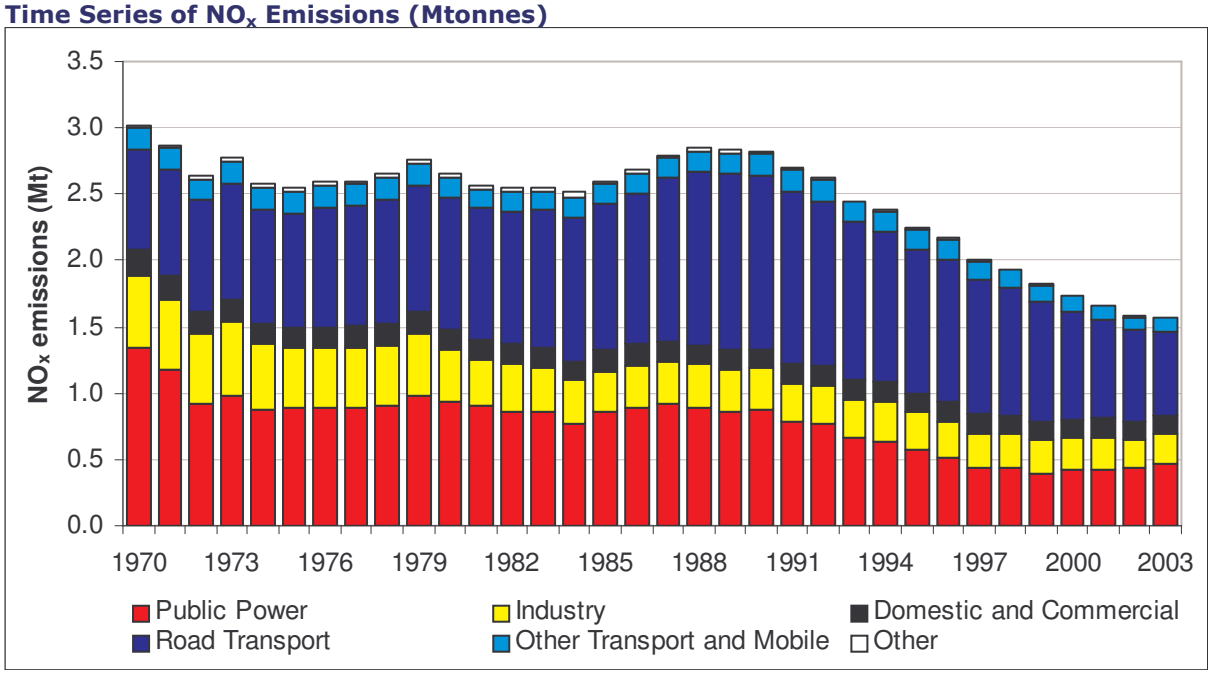
Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Stockport Shaw Heath	UB				19				593	μgm^{-3}
Stockton-on-Tees Yarm	Rd		71	59	63		601	1069	1046	μgm^{-3}
Stoke-on-Trent Centre	UC	20	23	17	18	685	1225	331	678	μgm^{-3}
Sutton Roadside	Rd	45	47			426	861			μgm^{-3}
Swansea	UC	28	31	24	26	463	436	275	484	μgm^{-3}
Thurrock	UB	22	27	20	20	774	739	581	685	μgm^{-3}
Tower Hamlets Roadside	Rd	94	104	82	75	786	708	779	598	μgm^{-3}
Walsall Alumwell	UB	29	32	21	26	738	748	645	839	μgm^{-3}
Walsall Willenhall	SU	12	16	12	15	436	1003	439	819	μgm^{-3}
West London	UB	29	29	21	24	640	556	328	434	μgm^{-3}
Wicken Fen	Rur	4	4	3		135	148	126		μgm^{-3}
Wigan Leigh	UB		27	16	23		881	318	474	μgm^{-3}
Wirral Tranmere	UB		9	6	10		415	301	290	μgm^{-3}
Wolverhampton Centre	UC	15	21	17	21	423	584	426	776	μgm^{-3}
Wrexham	Rd			17	17			264	290	μgm^{-3}

Nitrogen oxides NO_x 107

Alternative Name:
CAS Number:
Type of pollutant: Acid Gas, Urban Pollutant

Time Series of NO_x Emissions (Mtonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1985	2001	1996

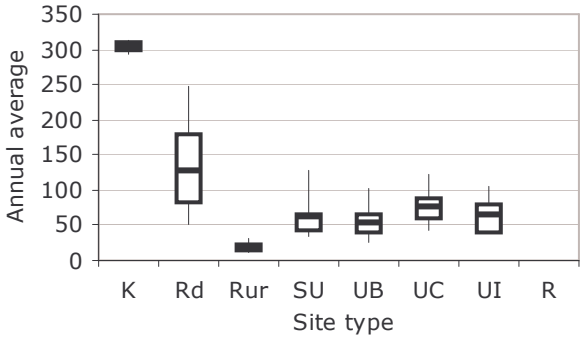
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS	✓					
EAL						
Other						

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (µgm^{-3})

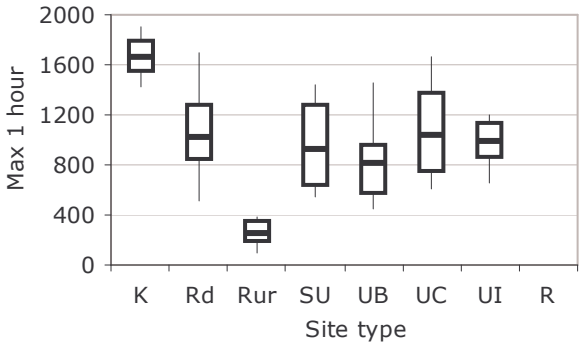
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	304	294	314	295	313
Rd	18	129	51	247	51	218
Rur	6	19	11	31	12	29
SU	6	64	35	129	36	114
UB	27	54	25	103	30	89
UC	23	77	42	121	46	116
UI	5	65	39	104	39	99
R	0					



NO_x Annual Average Boxplot

Automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	2	1668	1431	1904	1455	1880
Rd	18	1025	516	1690	555	1547
Rur	6	263	92	385	115	379
SU	6	934	544	1436	565	1427
UB	27	821	441	1450	480	1356
UC	23	1039	613	1669	635	1609
UI	5	993	659	1199	701	1188
R	0					



NO_x Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB	43	49	46	53	1026	1253	879	753	μgm^{-3}
Barnsley Gawber	UB	42	54	45	44	732	924	1008	766	μgm^{-3}
Bath Roadside	Rd	194	178	168	167	1012	1144	942	858	μgm^{-3}
Belfast Centre	UC	51	58	56	59	730	2525	1828	1066	μgm^{-3}
Billingham	UI	69	68	57	63	1182	1108	798	1096	μgm^{-3}
Birmingham Centre	UC	55	63	59	62	615	1438	951	647	μgm^{-3}
Birmingham East	UB	48	59	47	62	1199	1358	720	1228	μgm^{-3}
Blackpool	UB		42	33	39		1371	369	707	μgm^{-3}
Bolton	UB	52	69	58	64	1150	2135	838	1177	μgm^{-3}
Bournemouth	UB			25	31			707	588	μgm^{-3}
Bradford Centre	UC	83	103	81	87	1031	1803	1454	1614	μgm^{-3}
Brighton Roadside	Rd		91	83	90		942	1517	1215	μgm^{-3}
Bristol Centre	UC	87	94	91	103	1322	1379	972	1377	μgm^{-3}
Bristol Old Market	Rd	209				1771				μgm^{-3}
Bury Roadside	Rd	259	270	235	247	1255	2223	1079	1293	μgm^{-3}
Cambridge Roadside	Rd	110	111	112	116	821	886	800	861	μgm^{-3}
Camden Kerbside	K	205	203			1284	1287			μgm^{-3}
Canterbury	UB		32	29	34		617	409	499	μgm^{-3}
Cardiff Centre	UC	51	56	53	61	905	552	1488	634	μgm^{-3}
Coventry Memorial Park	UB			31	37			432	558	μgm^{-3}
Cwmbran	UB			28	29			357	607	μgm^{-3}
Derry	UB	22	26	24	25	287	982	573	573	μgm^{-3}
Dumfries	Rd		102	101	100		1144	860	844	μgm^{-3}
Edinburgh Centre	UC	103	95	103		1029	1944	942		μgm^{-3}
Exeter Roadside	Rd	97	104	95	101	1033	787	1051	995	μgm^{-3}
Glasgow Centre	UC		89	71			2349	1772		μgm^{-3}
Glasgow City Chambers	UB	97	107	102	103	1066	1562	1343	961	μgm^{-3}
Glasgow Kerbside	K	264	284	287	294	2141	2913	2191	1904	μgm^{-3}
Grangemouth	UI		40		39		1033		869	μgm^{-3}
Haringey Roadside	Rd	127	120	108	116	1335	1066	1285	1014	μgm^{-3}
Harwell	Rur	14	24	19	20	216	303	347	385	μgm^{-3}
Hounslow Roadside	Rd	150	148	132		1433	1295	1431		μgm^{-3}
Hove Roadside	Rd	77	94	69	71	974	1003	1024	953	μgm^{-3}
Hull Centre	UC	73	85			802	1051			μgm^{-3}
Hull Freetown	UC				58				642	μgm^{-3}
Inverness	Rd			49	51			649	562	μgm^{-3}
Ladybower	Rur	13	14	15	15	235	327	224	219	μgm^{-3}
Leamington Spa	UB	42	49	42		565	1060	435		μgm^{-3}
Leeds Centre	UC	74	78	82	86	699	1117	1371	1188	μgm^{-3}
Leicester Centre	UC	61	68	59	67	1117	798	579	900	μgm^{-3}
Liverpool Centre	UC	91	94			1364	1379			μgm^{-3}
London A3 Roadside	Rd	212	184	170	192	1406	1591	1232	1522	μgm^{-3}
London Bexley	SU	61	68	55	67	817	1075	638	926	μgm^{-3}
London Bloomsbury	UC	113	109	97	110	1207	1085	1282	844	μgm^{-3}
London Brent	UB	62	61	51	60	1389	923	1178	1411	μgm^{-3}
London Bromley	Rd	176	165	81	81	802	1190	711	798	μgm^{-3}
London Cromwell Road 2	Rd	245	208	191	192	1188	1261	888	873	μgm^{-3}
London Eltham	SU	57	61	47	59	632	936	737	674	μgm^{-3}
London Hackney	UC	114	109	99	107	1818	913	1398	1564	μgm^{-3}
London Hillingdon	SU	141	121	113	129	1306	1348	881	1398	μgm^{-3}
London Lewisham	UC			110	117			1110	1394	μgm^{-3}
London Marylebone Road	K	404	335	300	314	1845	1643	1327	1431	μgm^{-3}
London N. Kensington	UB	72	75	66	74	1448	1064	745	890	μgm^{-3}
London Southwark	UC	107	112	89		930	1085	653		μgm^{-3}
London Sutton	SU	56	65			816	1056			μgm^{-3}
London Teddington	UB	44	53	39	44	692	946	428	630	μgm^{-3}
London Wandsworth	UC	122	135	111	121	997	1140	915	1029	μgm^{-3}

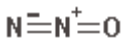
Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
London Westminster	UB			79				722		µgm^{-3}
Lullington Heath	Rur	14	15	12	15	174	219	113	182	µgm^{-3}
Manchester Piccadilly	UC	82		71	86	747		795	1669	µgm^{-3}
Manchester South	SU	29	46	33	39	518	1289	489	628	µgm^{-3}
Manchester Town Hall	UB	74	92	71	75	808	1992	753	955	µgm^{-3}
Middlesbrough	UI	34	43	41	41	596	1310	762	659	µgm^{-3}
Narberth	Rur			9	11			86	92	µgm^{-3}
Newcastle Centre	UC	63	68	54	57	754	1184	655	712	µgm^{-3}
Northampton	UB			34	39			479	441	µgm^{-3}
Norwich Centre	UC	38	48	39	42	732	1102	890	613	µgm^{-3}
Norwich Roadside	Rd	58	65	61	62	697	949	1039	592	µgm^{-3}
Nottingham Centre	UC	74	68	67	65	945	1217	529	691	µgm^{-3}
Oxford Centre Roadside	Rd	184	184	185	213	1177	1136	953	1427	µgm^{-3}
Plymouth Centre	UC	39	47	40	45	840	651	749	787	µgm^{-3}
Port Talbot	UB	35	38	32	35	474	636	563	472	µgm^{-3}
Portsmouth	UB		46	40	41		961	882	900	µgm^{-3}
Preston	UB		50	45	50		852	495	562	µgm^{-3}
Reading	UB			59				579		µgm^{-3}
Redcar	SU	28	38	32	35	340	1203	711	544	µgm^{-3}
Rochester	Rur	29	31	27	31	430	548	215	364	µgm^{-3}
Rotherham Centre	UC	69	81	69	76	1371	1157	1058	987	µgm^{-3}
Salford Eccles	UI	73	92	67	79	978	2716	846	1199	µgm^{-3}
Sandwell West Bromwich	UB	54	64	47	66	779	1177	609	930	µgm^{-3}
Sheffield Centre	UC	80	88	78	87	892	1322	1014	1383	µgm^{-3}
Sheffield Tinsley	UI	100	108	96	104	1033	1467	1574	1142	µgm^{-3}
Southampton Centre	UC	83	80	67	74	1177	1272	984	814	µgm^{-3}
Southend-on-Sea	UB		43	37	39		563	525	646	µgm^{-3}
Southwark Roadside	Rd	188	176	154	159	1121	1075	913	1356	µgm^{-3}
St Osyth	Rur				23				334	µgm^{-3}
Stockport	UB	67	80			814	1954			µgm^{-3}
Stockport Shaw Heath	UB				66				1073	µgm^{-3}
Stockton-on-Tees Yarm	Rd		148	129	139		1117	1931	1690	µgm^{-3}
Stoke-on-Trent Centre	UC	61	68	55	59	1188	2004	552	1066	µgm^{-3}
Sutton Roadside	Rd	108	115			707	1538			µgm^{-3}
Swansea	UC	76	82	68	73	842	781	500	858	µgm^{-3}
Thurrock	UB	67	78	66	68	1282	1228	976	1178	µgm^{-3}
Tower Hamlets Roadside	Rd	209	228	186	182	1385	1354	1434	1083	µgm^{-3}
Walsall Alumwell	UB	81	90	68	82	1274	1306	1106	1450	µgm^{-3}
Walsall Willenhall	SU	42	52	46	53	741	1755	732	1436	µgm^{-3}
West London	UB	97	95	77	92	1136	1026	615	823	µgm^{-3}
Wicken Fen	Rur	19	20	16		258	274	219		µgm^{-3}
Wigan Leigh	UB		77	55	66		1524	546	806	µgm^{-3}
Wirral Tranmere	UB		35	32	42		781	556	575	µgm^{-3}
Wolverhampton Centre	UC	52	64	53	65	745	1072	766	1421	µgm^{-3}
Wrexham	Rd			50	51			502	516	µgm^{-3}

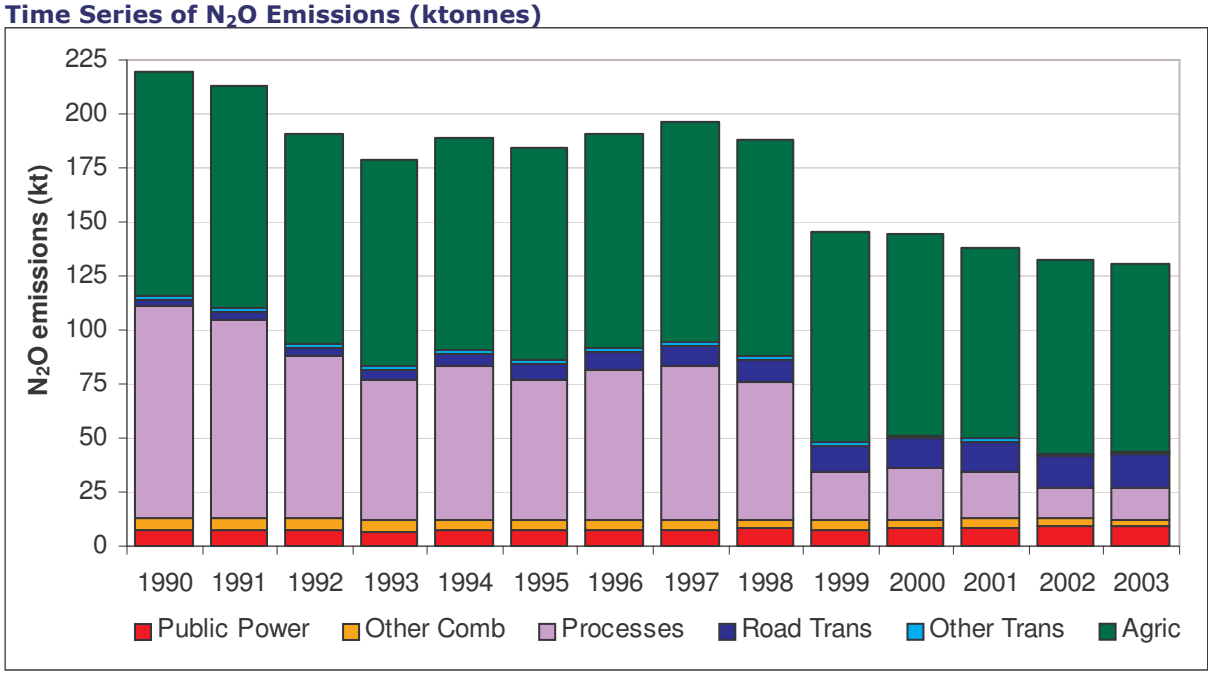
Nitrous oxide N_2O 108

Alternative Name: laughing gas
CAS Number: 10024-97-2
Type of pollutant: Greenhouse Gas

Structure



Time Series of N_2O Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Nitrous oxide N_2O 108

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	579	579	μgm^{-3}
Mace Head	R	02/2000	580	580	μgm^{-3}
Mace Head	R	03/2000	580	580	μgm^{-3}
Mace Head	R	04/2000	580	581	μgm^{-3}
Mace Head	R	05/2000	580	581	μgm^{-3}
Mace Head	R	06/2000	580	581	μgm^{-3}
Mace Head	R	07/2000	580	581	μgm^{-3}
Mace Head	R	08/2000	580	580	μgm^{-3}
Mace Head	R	09/2000	580	580	μgm^{-3}
Mace Head	R	10/2000	580	580	μgm^{-3}
Mace Head	R	11/2000	581	581	μgm^{-3}
Mace Head	R	12/2000	581	581	μgm^{-3}
Mace Head	R	01/2001	582	583	μgm^{-3}
Mace Head	R	02/2001	582	582	μgm^{-3}
Mace Head	R	03/2001	582	583	μgm^{-3}
Mace Head	R	04/2001	582	582	μgm^{-3}
Mace Head	R	05/2001	582	583	μgm^{-3}
Mace Head	R	06/2001	581	582	μgm^{-3}
Mace Head	R	07/2001	581	581	μgm^{-3}
Mace Head	R	08/2001	581	581	μgm^{-3}
Mace Head	R	09/2001	581	582	μgm^{-3}
Mace Head	R	10/2001	581	582	μgm^{-3}
Mace Head	R	11/2001	582	582	μgm^{-3}
Mace Head	R	12/2001	582	583	μgm^{-3}
Mace Head	R	01/2002	582	583	μgm^{-3}
Mace Head	R	02/2002	583	583	μgm^{-3}
Mace Head	R	03/2002	583	583	μgm^{-3}
Mace Head	R	04/2002	583	583	μgm^{-3}
Mace Head	R	05/2002	583	583	μgm^{-3}
Mace Head	R	06/2002	583	583	μgm^{-3}
Mace Head	R	07/2002	582	582	μgm^{-3}
Mace Head	R	08/2002	582	582	μgm^{-3}
Mace Head	R	09/2002	582	584	μgm^{-3}
Mace Head	R	10/2002	583	583	μgm^{-3}
Mace Head	R	11/2002	583	583	μgm^{-3}
Mace Head	R	12/2002	584	585	μgm^{-3}
Mace Head	R	01/2003	584	584	μgm^{-3}
Mace Head	R	02/2003	584	585	μgm^{-3}
Mace Head	R	03/2003	584	586	μgm^{-3}
Mace Head	R	04/2003	585	586	μgm^{-3}
Mace Head	R	05/2003	585	585	μgm^{-3}
Mace Head	R	06/2003	584	585	μgm^{-3}
Mace Head	R	07/2003	584	584	μgm^{-3}
Mace Head	R	08/2003	583	584	μgm^{-3}
Mace Head	R	09/2003	584	584	μgm^{-3}
Mace Head	R	10/2003	584	585	μgm^{-3}
Mace Head	R	11/2003	584	585	μgm^{-3}
Mace Head	R	12/2003	585	585	μgm^{-3}

n-pentane C_5H_{12} 109

Alternative Name: Pentane
CAS Number: 109-66-0
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				23				μgm^{-3}
Birmingham East	UB	1				70				μgm^{-3}
Bristol East	UB	1				25				μgm^{-3}
Cardiff East	UB	2	2			78	47			μgm^{-3}
Edinburgh Med. Sch.	UB	1	2			99	183			μgm^{-3}
Harwell	Rur	0	0			6	6			μgm^{-3}
Leeds Potternewton	UB	2				54				μgm^{-3}
Liverpool Speke	UB	2				171				μgm^{-3}
London Eltham	SU	1				13				μgm^{-3}
London Marylebone Road	K	5	5	4	3	39	34	31	33	μgm^{-3}
London UCL	Rd	2				24				μgm^{-3}
Middlesbrough	UI	2				455				μgm^{-3}
Southampton Centre	UC	2				125				μgm^{-3}

1,2,3,4,6,7,8,9-Octachlorodibenzofuran 110

Alternative Name: 12346789 OCDF
CAS Number: 39001-02-0
Type of pollutant: Dioxins & Furans

Air Quality Monitoring Data

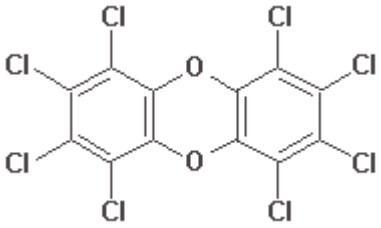
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	15.0	18.0	17.0	22.4	fgm^{-3}
High Muffles	Rur	12.1	12.9	17.7		fgm^{-3}
London 2a	UB		50.8	51.0	48.5	fgm^{-3}
Manchester	UB	145.5	210.0	123.0	237.5	fgm^{-3}
Middlesbrough	UB	57.3	76.5	57.8	112.5	fgm^{-3}
Stoke Ferry	Rur		36.3	39.8	37.3	fgm^{-3}

1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin 111

Alternative Name: 12346789 OCDD
CAS Number: 3268-87-9
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	166.0	292.3	211.3	180.3	fgm^{-3}
High Muffles	Rur	132.5	100.3	127.5		fgm^{-3}
London 2a	UB		507.5	594.3	467.5	fgm^{-3}
Manchester	UB	610.0	955.0	507.5	657.5	fgm^{-3}
Middlesbrough	UB	485.0	697.5	480.0	610.0	fgm^{-3}
Stoke Ferry	Rur		282.5	341.0	363.8	fgm^{-3}

Organic Carbon OC 112

Alternative Name: Particulate organic carbon, OC
CAS Number:
Type of pollutant: Particulate Component

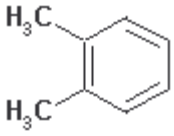
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Bush Estate, Midlothian	Rur	01/2002	1.28		μgm^{-3}
Bush Estate, Midlothian	Rur	02/2002	2.47		μgm^{-3}
Bush Estate, Midlothian	Rur	03/2002	2.35		μgm^{-3}
Bush Estate, Midlothian	Rur	04/2002	2.2		μgm^{-3}
Bush Estate, Midlothian	Rur	05/2002	0.65		μgm^{-3}
Bush Estate, Midlothian	Rur	06/2002	0.93		μgm^{-3}
Bush Estate, Midlothian	Rur	07/2002	1.06		μgm^{-3}
Bush Estate, Midlothian	Rur	08/2002	1.76		μgm^{-3}
Bush Estate, Midlothian	Rur	09/2002	1.31		μgm^{-3}
Bush Estate, Midlothian	Rur	10/2002	1.52		μgm^{-3}
Bush Estate, Midlothian	Rur	11/2002	1.14		μgm^{-3}
Bush Estate, Midlothian	Rur	12/2002	1.43		μgm^{-3}

o-xylene C_8H_{10} 113

Alternative Name: 1,2-dimethylbenzene
CAS Number: 95-47-6
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Air Quality Monitoring Data

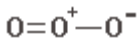
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				28				μgm^{-3}
Birmingham East	UB	1				37				μgm^{-3}
Bristol East	UB	1				20				μgm^{-3}
Edinburgh Med. Sch.	UB		1				30			μgm^{-3}
Glasgow Kerbside	K				2				32	μgm^{-3}
London Marylebone Road	K	7	5	4	3	118	37	24	19	μgm^{-3}
London UCL	Rd	2				24				μgm^{-3}

Ozone O_3 114

Alternative Name:
CAS Number: 10028-15-6
Type of pollutant: Oxidant, Photochemical Pollutant

Structure



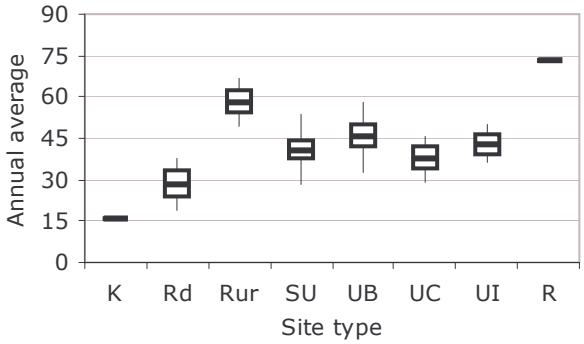
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive				✓		
WHO				✓		
EPAQS				✓		
AQS				✓		
EAL						
Other					✓	

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (µgm^{-3})

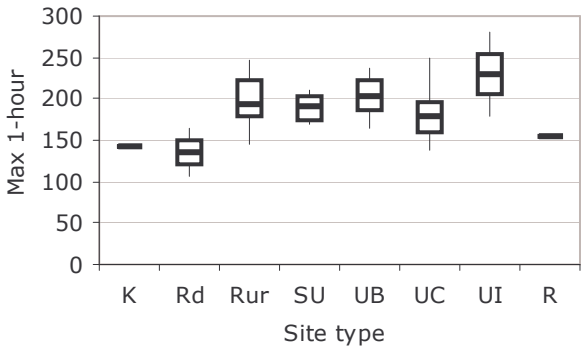
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	16	16	16	16	16
Rd	2	29	19	38	20	37
Rur	16	58	49	67	51	65
SU	7	41	28	54	31	52
UB	20	46	33	58	37	57
UC	26	38	29	46	30	45
UI	2	43	36	50	37	49
R	1	73	73	73	73	73



O_3 Annual Average Boxplot

Automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	142	142	142	142	142
Rd	2	135	106	164	109	161
Rur	16	192	144	246	144	239
SU	7	190	170	210	171	209
UB	20	204	164	238	174	236
UC	26	179	138	248	143	227
UI	2	230	180	280	185	275
R	1	154	154	154	154	154



O_3 Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aston Hill	Rur	63	63	61	62	142	192	124	188	μgm^{-3}
Barnsley Gawber	UB	47	45	41	47	206	176	144	174	μgm^{-3}
Belfast Centre	UC	42	39	37	42	138	140	106	142	μgm^{-3}
Birmingham Centre	UC	37	36	38	41	120	168	134	158	μgm^{-3}
Birmingham East	UB	35	36	40	43	126	214	126	186	μgm^{-3}
Blackpool	UB		48	52	54		148	156	212	μgm^{-3}
Bolton	UB	40	39	41	44	152	150	146	190	μgm^{-3}
Bottesford	SU	46	45	47	47	176	182	192	196	μgm^{-3}
Bournemouth	UB				57				230	μgm^{-3}
Bradford Centre	UC	31	30	31	32	128	128	122	152	μgm^{-3}
Bristol Centre	UC	39	38	38	40	126	144	122	168	μgm^{-3}
Bury Roadside	Rd	19	18	19	19	114	86	84	106	μgm^{-3}
Bush Estate	Rur	55	54	55	59	128	146	160	144	μgm^{-3}
Cardiff Centre	UC	38	36	41	41	142	186	136	188	μgm^{-3}
Coventry Centre	UC	39				138				μgm^{-3}
Coventry Memorial Park	UB		42	43	47		214	152	198	μgm^{-3}
Derry	UB	54	45	58	52	140	120	132	164	μgm^{-3}
Edinburgh Centre	UC	30	30	35		102	110	104		μgm^{-3}
Eskdalemuir	Rur	47	46	48	51	130	132	108	146	μgm^{-3}
Exeter Roadside	Rd		34	34	38		328	112	164	μgm^{-3}
Glasgow Centre	UC	33	33	33	34	116	136	106	138	μgm^{-3}
Glazebury	SU	40	36	38	37	142	150	130	174	μgm^{-3}
Great Dun Fell	Rur		64		67		160		182	μgm^{-3}
Harwell	Rur	51	49	51	60	148	210	148	246	μgm^{-3}
High Muffles	Rur	55	54	57	54	164	150	164	144	μgm^{-3}
Hull Centre	UC	37	34			170	142			μgm^{-3}
Hull Freetown	UC				44				144	μgm^{-3}
Ladybower	Rur	53		50	57	150		150	182	μgm^{-3}
Leamington Spa	UB	41	37	39	44	154	204	144	210	μgm^{-3}

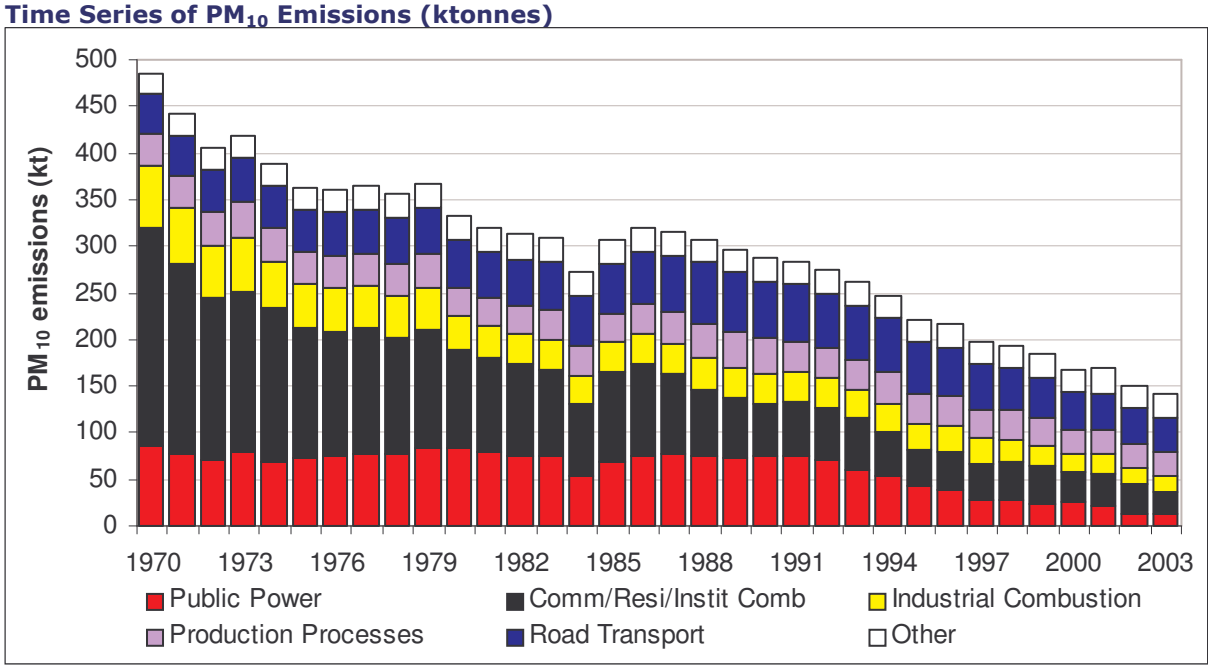
Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Leeds Centre	UC	34	33	35	37	158	132	126	150	µgm^{-3}
Leicester Centre	UC	35	35	36	41	174	200	146	206	µgm^{-3}
Liverpool Centre	UC	38	36			120	148			µgm^{-3}
London Bexley	SU	37	38	38	41	146	174	146	206	µgm^{-3}
London Bloomsbury	UC	22	23	23	30	108	150	160	178	µgm^{-3}
London Brent	UB	37	37	35	42	154	182	186	238	µgm^{-3}
London Eltham	SU	37	37	38	39	140	170	182	202	µgm^{-3}
London Hackney	UC	30		29	34	128		148	222	µgm^{-3}
London Haringey	UC	33	34	33	38	148	184	144	214	µgm^{-3}
London Hillingdon	SU	22	26	26	28	112	158	152	210	µgm^{-3}
London Lewisham	UC			27	30			180	202	µgm^{-3}
London Marylebone Road	K	14	14	15	16	96	116	104	142	µgm^{-3}
London N. Kensington	UB	33	34	33	37	134	144	160	236	µgm^{-3}
London Southwark	UC	30	29	34	37	132	158	160	200	µgm^{-3}
London Sutton	SU	35	35			126	182			µgm^{-3}
London Teddington	UB	43	44	46	49	150	204	176	222	µgm^{-3}
London Wandsworth	UC	25	27	27	29	118	158	148	172	µgm^{-3}
London Westminster	UB			30	33			182	214	µgm^{-3}
Lough Navar	R	49	46	42		144	140	110		µgm^{-3}
Lullington Heath	Rur	58	57	55	63	164	198	166	236	µgm^{-3}
Manchester Piccadilly	UC	21	23	25	30	102	126	110	172	µgm^{-3}
Manchester South	SU	34	29	37	38	110	126	106	170	µgm^{-3}
Middlesbrough	UI	46	44	47	50	176	156	142	280	µgm^{-3}
Narberth	Rur		62	60	55		172	132	170	µgm^{-3}
Newcastle Centre	UC	39	37	39	41	150	128	106	166	µgm^{-3}
Northampton	UB				53				226	µgm^{-3}
Norwich Centre	UC	45	43	44	45	194	162	196	248	µgm^{-3}
Nottingham Centre	UC	29	28	29	33	176	148	112	162	µgm^{-3}
Plymouth Centre	UC	46		45	46	142		110	188	µgm^{-3}
Port Talbot	UB	53	50	52	58	142	186	128	186	µgm^{-3}
Preston	UB		42	42	44		172	134	186	µgm^{-3}
Reading	UB	37	35	37		148	176	170		µgm^{-3}
Redcar	SU	50	48	53	54	164	176	152	172	µgm^{-3}
Rochester	Rur	47	51	49	52	152	170	196	226	µgm^{-3}
Rotherham Centre	UC	34	31	34	34	196	144	142	156	µgm^{-3}
Salford Eccles	UI	32	30	33	36	136	144	132	180	µgm^{-3}
Sandwell West Bromwich	UB	42	39	43	41	136	198	132	186	µgm^{-3}
Sheffield Centre	UC	35	33	35	37	166	140	140	170	µgm^{-3}
Sibton	Rur	48	47	48	55	154	170	218	188	µgm^{-3}
Somerton	Rur	60	55	56	60	164	206	130	192	µgm^{-3}
Southampton Centre	UC	33	34	37	40	120	144	128	228	µgm^{-3}
Southend-on-Sea	UB		45	44	47		172	198	214	µgm^{-3}
St Osyth	Rur				54				220	µgm^{-3}
Stoke-on-Trent Centre	UC	40	39	36	42	158	190	118	184	µgm^{-3}
Strath Vaich	R	66		69	73	138		134	154	µgm^{-3}
Swansea	UC	45	40	42	45	156	172	124	178	µgm^{-3}
Thurrock	UB	38	39	39	42	158	166	186	222	µgm^{-3}
Weybourne	Rur			61	64			196	184	µgm^{-3}
Wicken Fen	Rur	43	44	44	49	186	182	184	230	µgm^{-3}
Wigan Leigh	UB				37				184	µgm^{-3}
Wirral Tranmere	UB		46	48	48		188	148	198	µgm^{-3}
Wolverhampton Centre	UC	38	36	39	42	128	172	134	180	µgm^{-3}
Yarner Wood	Rur	57	59	57	64	150	174	136	200	µgm^{-3}

Particulate Matter 10 PM_{10} 115

Alternative Name:
CAS Number:
Type of pollutant: Urban Pollutant

Time Series of PM_{10} Emissions (ktonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1990	2001	1996

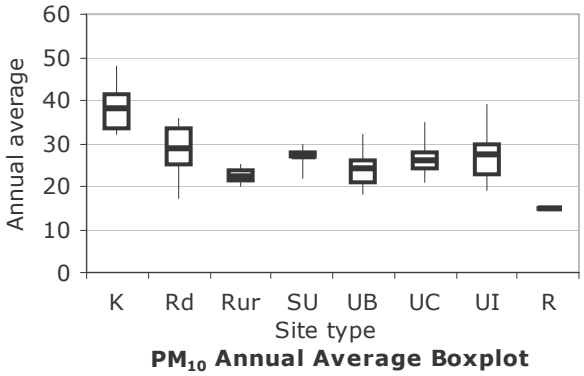
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive	✓		✓			
WHO						
EPAQS	✓		✓			
AQS	✓		✓			
EAL						
Other						

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (μgm^{-3})

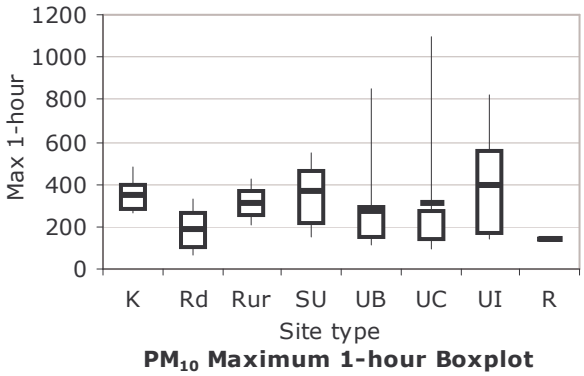
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	3	38	32	48	32	47
Rd	8	29	17	36	19	36
Rur	2	23	20	25	20	25
SU	5	27	22	30	23	30
UB	20	24	18	32	20	30
UC	18	26	21	35	21	30
UI	4	27	19	39	20	37
R	1	15	15	19	15	15



PM_{10} Annual Average Boxplot

Automatic Monitoring Annual Max (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	3	352	268	482	272	464
Rd	8	193	68	334	79	312
Rur	2	313	204	421	215	410
SU	5	365	151	547	165	530
UB	20	274	109	850	116	727
UC	18	309	96	1097	118	766
UI	4	401	139	822	145	768
R	1	146	146	146	146	146



PM_{10} Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max*				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB	19	15		22	186	168		324	ugm^{-3} (grav eq)
Belfast Centre	UC	25	25	23	24	330	337	276	659	ugm^{-3} (grav eq)
Belfast Clara St	SU	16	19	17	22	295	417	317	442	ugm^{-3} (bam)
Birmingham Centre	UC	22	22	22	25	252	172	108	255	ugm^{-3} (grav eq)
Birmingham East	UB	21	22	21		254	194	638		ugm^{-3} (grav eq)
Blackpool	UB		23	23	26		174	177	152	ugm^{-3} (grav eq)
Bolton	UB	20	21	20	23	302	153	281	468	ugm^{-3} (grav eq)
Bournemouth	UB			25	27			97	135	ugm^{-3} (grav)
Bradford Centre	UC	23	28	23	27	252	231	274	242	ugm^{-3} (grav eq)
Brighton Roadside PM10	Rd				36				151	ugm^{-3} (grav)
Bristol Centre	UC	26	24	26	29	225	416	104	140	ugm^{-3} (grav eq)
Bury Roadside	Rd	29	32	31	35	194	290	212	334	ugm^{-3} (grav eq)
Camden Kerbside	K	34	33	31	35	228	296	121	268	ugm^{-3} (grav eq)
Canterbury	UB		24	24	26		114	118	151	ugm^{-3} (grav eq)
Cardiff Centre	UC	25	27	27	35	261	598	403	1097	ugm^{-3} (grav eq)
Coventry Memorial Park	UB		15	21	18		94	94	109	ugm^{-3} (grav eq)
Cwmbran	UB			18	21			95	129	ugm^{-3} (grav eq)
Derry	UB	20	23	22	24	293	328	309	283	ugm^{-3} (grav eq)
Dumfries	Rd			21	23			82	100	ugm^{-3} (grav)
Edinburgh Centre	UC	23	25	27		416	300	338		ugm^{-3} (grav eq)
Glasgow Centre	UC	28	22	20	21	941	251	209	129	ugm^{-3} (grav eq)
Glasgow Kerbside	K	27	31	30	32	229	537	559	482	ugm^{-3} (grav eq)
Grangemouth	UI				19				139	ugm^{-3} (grav eq)
Haringey Roadside	Rd	27	27	27	29	241	295	404	247	ugm^{-3} (grav eq)
Harwell	Rur	18	19	17	20	230	107	1089	204	ugm^{-3} (grav eq)
Hull Centre	UC	26	28			667	241			ugm^{-3} (grav eq)
Hull Freetown	UC				28				183	ugm^{-3} (grav eq)
Inverness	Rd				17				68	ugm^{-3} (grav)
Leamington Spa	UB	20	21	21	27	199	92	304	850	ugm^{-3} (grav eq)
Leeds Centre	UC	23	24	25	27	191	248	239	281	ugm^{-3} (grav eq)
Leicester Centre	UC	17	22	20	25	166	194	215	707	ugm^{-3} (grav eq)
Liverpool Centre	UC	24	26			203	185			ugm^{-3} (grav eq)
London A3 Roadside	Rd	26	27	24	33	185	341	209	270	ugm^{-3} (grav eq)
London Bexley	SU	24	24	25	27	373	1008	205	462	ugm^{-3} (grav eq)
London Bloomsbury	UC	28	29			166	324			ugm^{-3} (grav eq)
London Brent	UB	23	23	24	26	199	317	863	254	ugm^{-3} (grav eq)
London Eltham	SU	20	23	23	28	256	546	211	547	ugm^{-3} (grav eq)
London Hillingdon	SU	25	26	25	30	269	294	263	151	ugm^{-3} (grav eq)
London Marylebone Road	K	48	44	45	48	901	707	664	306	ugm^{-3} (grav eq)
London N. Kensington	UB	26	26	25	29	212	345	135	189	ugm^{-3} (grav eq)
Lough Navar	R	12	13	15	15	157	64	156	146	ugm^{-3} (grav eq)
Manchester Piccadilly	UC	27	39	28	29	295	862	272	247	ugm^{-3} (grav eq)
Middlesbrough	UI	20	21	22	27	146	156	177	822	ugm^{-3} (grav eq)
Narberth	Rur	17	14	14		187	73	82		ugm^{-3} (grav eq)
Newcastle Centre	UC	17	17	18	21	108	100	133	122	ugm^{-3} (grav eq)
Northampton	UB		21	20	22		103	129	116	ugm^{-3} (grav eq)
Norwich Centre	UC	22	20	21	23	152	139	177	137	ugm^{-3} (grav eq)
Nottingham Centre	UC	24	26	24	26	655	168	157	157	ugm^{-3} (grav eq)
Plymouth Centre	UC	20	20	19	22	380	177	176	96	ugm^{-3} (grav eq)
Port Talbot	UB	33	30	28	32	377	385	202	442	ugm^{-3} (grav eq)
Portsmouth	UB		23	23	24		599	130	161	ugm^{-3} (grav eq)
Preston	UB		20	20	21		291	614	257	ugm^{-3} (grav eq)
Reading	UB	22	21	18		686	471	181		ugm^{-3} (grav eq)
Redcar	SU	21	22	23	27	238	169	185	221	ugm^{-3} (grav eq)
Rochester	Rur	22	21		25	239	186		421	ugm^{-3} (grav eq)
Salford Eccles	UI	22	24	21	24	200	177	131	178	ugm^{-3} (grav eq)
Scunthorpe	UI	27	32	32	39	755	619	302	464	ugm^{-3} (grav eq)

* Annual max is for 1-hour concentrations except for (grav) sites which are 24-hours.

Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max*				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Sheffield Centre	UC	25	24	25	27	187	272	166	222	ugm^{-3} (grav eq)
Southampton Centre	UC	23	26	26	28	265	437	291	244	ugm^{-3} (grav eq)
Southend-on-Sea	UB		19	20	21		369	586	153	ugm^{-3} (grav eq)
Stockport	UB	22	23			207	144			ugm^{-3} (grav eq)
Stockport Shaw Heath	UB				20				239	ugm^{-3} (grav eq)
Stockton-on-Tees Yarm	Rd			29	32			178	265	ugm^{-3} (grav eq)
Stoke-on-Trent Centre	UC	21	22	20		326	234	465		ugm^{-3} (grav eq)
Sutton Roadside	Rd	25	26			179	202			ugm^{-3} (grav eq)
Swansea	UC	25	26	25	25	222	135	377	465	ugm^{-3} (grav eq)
Thurrock	UB	23	25	27	30	335	441	319	720	ugm^{-3} (grav eq)
Wigan Leigh	UB		24	23	26		157	131	185	ugm^{-3} (grav eq)
Wirral Tranmere	UB		20	21	20		129	256	153	ugm^{-3} (grav eq)
Wolverhampton Centre	UC	23	23	22	24	269	151	204	170	ugm^{-3} (grav eq)
Wrexham	Rd			25	26			84	108	ugm^{-3} (grav)

* Annual max is for 1-hour concentrations except for (grav) sites which are 24-hours.

Particulate Matter 2.5 $PM_{2.5}$ 116

Alternative Name:
CAS Number:
Type of pollutant: Urban Pollutant

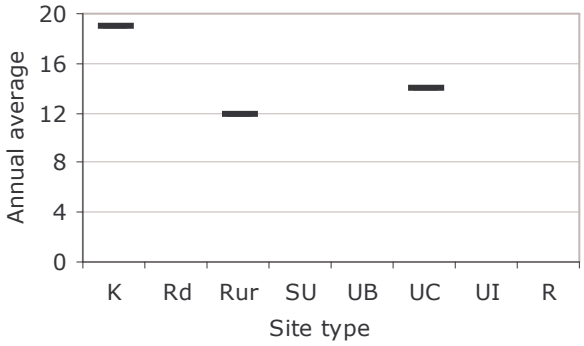
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS	✓		✓			
AQS						
EAL						
Other						

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (μgm^{-3})

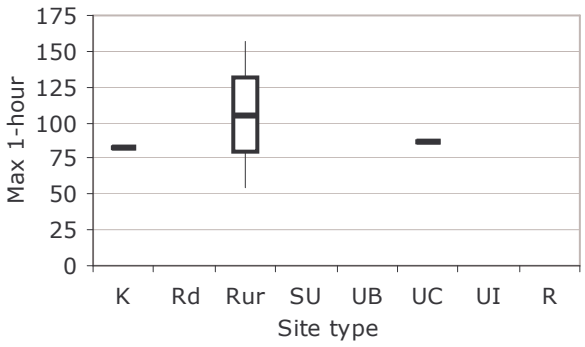
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	19.0	19.0	19.0	19.0	19.0
Rd	0					
Rur	2	12.0	12.0	12.0	12.0	12.0
SU	0					
UB	0					
UC	1	14.0	14.0	14.0	14.0	14.0
UI	0					
R	0					



$PM_{2.5}$ Annual Average Boxplot

Automatic Monitoring Annual Max (μgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	83.0	83.0	83.0	83.0	83.0
Rd	0					
Rur	2	105.5	54.0	157.0	59.1	151.8
SU	0					
UB	0					
UC	1	87.0	87.0	87.0	87.0	87.0
UI	0					
R	0					



$PM_{2.5}$ Maximum 1-hour Boxplot

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

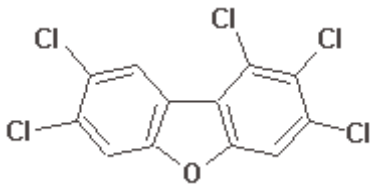
Annual Data statistics – Automatic Rural and Urban Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Harwell	Rur	10	11	10	12	65	57	77	54	ugm^{-3} (teom)
London Bloomsbury	UC	14	13	14	14	141	119	253	87	ugm^{-3} (teom)
London Marylebone Road	K	26	25	22	19	330	398	112	83	ugm^{-3} (teom)
Rochester	Rur	11	11	11	12	87	127	91	157	ugm^{-3} (teom)

1,2,3,7,8-Pentachlorodibenzofuran 117

Alternative Name: 12378 PeCDF
CAS Number: 57117-41-6
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

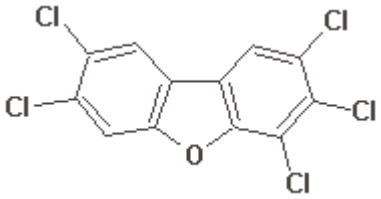
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	7.2	6.1	6.4	5.7	fgm^{-3}
High Muffles	Rur	4.2	3.3	3.6		fgm^{-3}
London 2a	UB		12.0	9.5	10.8	fgm^{-3}
Manchester	UB	77.0	53.0	27.0	65.3	fgm^{-3}
Middlesbrough	UB	33.3	25.0	13.5	26.0	fgm^{-3}
Stoke Ferry	Rur		10.4	9.9	6.5	fgm^{-3}

2,3,4,7,8-Pentachlorodibenzofuran 118

Alternative Name: 23478 PeCDF
CAS Number: 57117-31-4
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

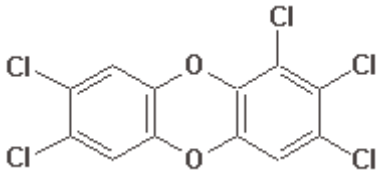
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	4.0	4.8	3.5	6.3	fgm^{-3}
High Muffles	Rur	3.3	2.8	4.7		fgm^{-3}
London 2a	UB		9.4	11.3	11.8	fgm^{-3}
Manchester	UB	39.3	49.3	37.3	70.5	fgm^{-3}
Middlesbrough	UB	13.4	17.9	14.4	27.8	fgm^{-3}
Stoke Ferry	Rur		7.8	8.9	9.1	fgm^{-3}

1,2,3,7,8-Pentachlorodibenzo-p-dioxin 119

Alternative Name: 12378 PeCDD
CAS Number: 40321-76-4
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EAL	✓					
Other						
AQS						
EPAQS						
WHO						
EC Directive						

Air Quality Monitoring Data

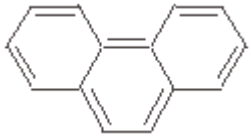
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	2.8	4.3	3.3	2.5	fgm^{-3}
High Muffles	Rur	1.0	1.6	2.1		fgm^{-3}
London 2a	UB		7.7	7.8	4.8	fgm^{-3}
Manchester	UB	17.4	22.5	11.8	17.0	fgm^{-3}
Middlesbrough	UB	8.8	12.0	9.7	12.6	fgm^{-3}
Stoke Ferry	Rur		5.3	4.5	5.2	fgm^{-3}

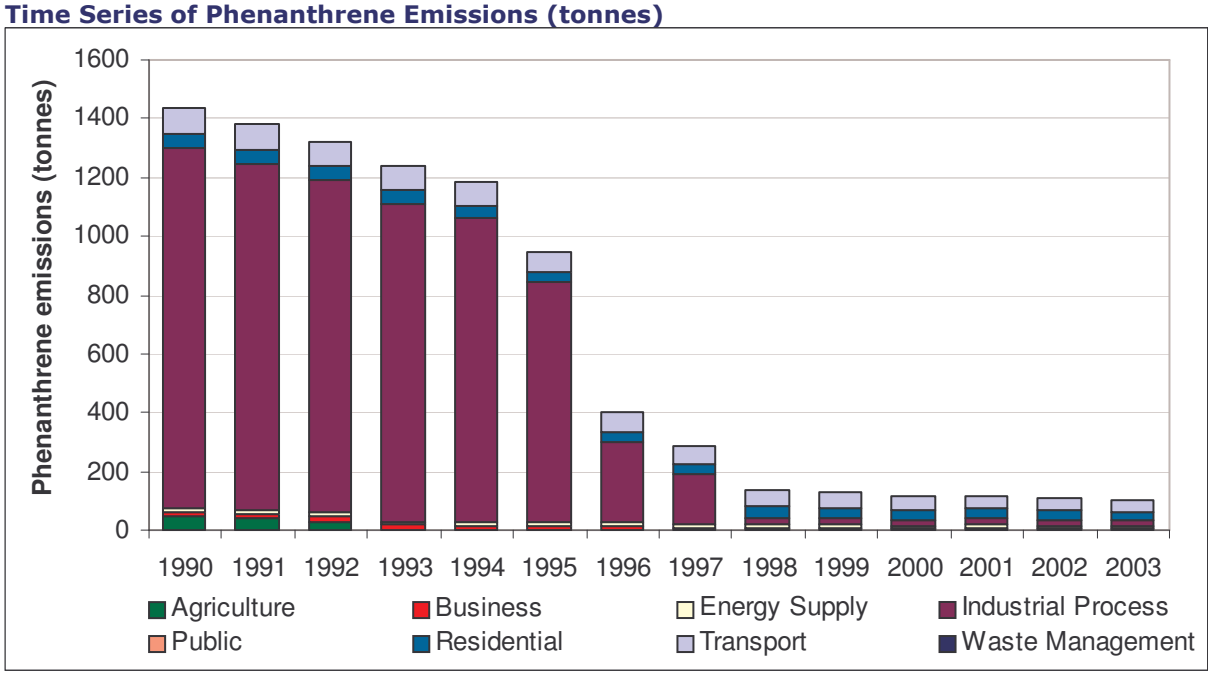
Phenanthrene 120

Alternative Name:
CAS Number: 85-01-8
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Phenanthrene Emissions (tonnes)



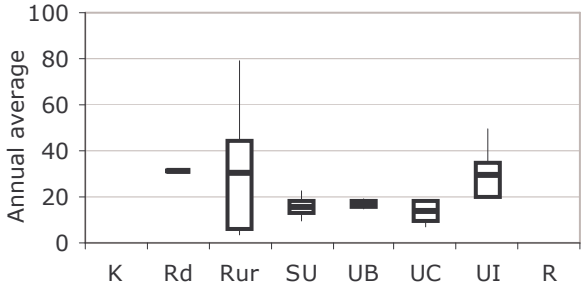
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	31.0	31.0	31.0	31.0	31.0
Rur	3	30.6	3.5	79.0	4.1	72.0
SU	6	15.8	10.0	23.0	10.5	22.0
UB	3	17.0	15.0	19.0	15.2	18.8
UC	5	13.6	7.3	18.0	7.8	18.0
UI	3	30.0	20.0	50.0	20.0	47.0
R	0					



Phenanthrene Annual Average Boxplot

Phenanthrene 120

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	15.0	13.0		20.0	μgm^{-3}
Belfast	SU		28.0	13.0	10.0	μgm^{-3}
Birmingham 1	UB		11.0	16.0	19.0	μgm^{-3}
Bolsover	SU	12.0	10.0	18.0	23.0	μgm^{-3}
Brent	UB				17.0	μgm^{-3}
Bromley	Rd			25.0	31.0	μgm^{-3}
Glasgow	UC	14.0	14.0	14.0	7.3	μgm^{-3}
Hazelrigg	Rur	110.0	96.0	93.0	79.0	μgm^{-3}
High Muffles	Rur	4.8	3.9	3.9	3.5	μgm^{-3}
Holyhead	UI	9.6	10.0		12.0	μgm^{-3}
Hove	UC				9.6	μgm^{-3}
Kinlochleven	SU	23.0	34.0	20.0	16.0	μgm^{-3}
Leeds 1	UC		17.0	17.0	15.0	μgm^{-3}
Lisburn	SU	24.0	14.0	15.0	19.0	μgm^{-3}
London 2a	UC	14.0	13.0	15.0	18.0	μgm^{-3}
Manchester	UC	23.0	22.0	19.0	18.0	μgm^{-3}
Middlesbrough	UB	26.0	31.0	20.0	15.0	μgm^{-3}
Newcastle	UC		9.0	12.0	<11.0	μgm^{-3}
Newport	SU	18.0	22.0	17.0	15.0	μgm^{-3}
Port Talbot	UI	26.0	20.0	18.0	20.0	μgm^{-3}
Scunthorpe	UI	30.0	32.0	36.0	50.0	μgm^{-3}
Speke	SU			13.0	12.0	μgm^{-3}
Stoke Ferry	Rur	5.0	5.6	5.9	9.3	μgm^{-3}

Platinum Pt 121

Alternative Name:
CAS Number: 7440-06-4
Type of pollutant: Trace Metal

Air quality monitoring site map in 2004*

Air Quality Monitoring Data

Annual Data statistics

Site Name	Site Type	Annual Mean					Unit
		2000	2001	2002	2003	2004	
Brookside	UI					<0.02	ngm^{-3}
BZL Ltd., Avonmouth	UI					0.05	ngm^{-3}
BZL, Hallen	UI					0.02	ngm^{-3}
Cardiff	UC					<0.06	ngm^{-3}
Eskdalemuir	Rur					<0.02	ngm^{-3}
Glasgow	UC					<0.04	ngm^{-3}
IMI Refiners, Walsall	UI					0.10	ngm^{-3}
Leeds	UC					<0.05	ngm^{-3}
London Brent	UB					<0.07	ngm^{-3}
London Cromwell Road	Rd					<0.06	ngm^{-3}
London Horseferry	K					<0.07	ngm^{-3}
Manchester	UC					<0.06	ngm^{-3}
Motherwell	UC					<0.03	ngm^{-3}
Newcastle	UC					<0.04	ngm^{-3}
Sheffield	UC					0.06	ngm^{-3}
Swansea	UC					0.04	ngm^{-3}
Weston Point, Runcorn	UI					0.16	ngm^{-3}

Note: *No data available prior to 2004.

Polybrominated diphenyl ethers 122

Alternative Name: PBDE
CAS Number:
Type of pollutant: Persistant Organic Pollutant

Monitoring data

Site Name	PBDE type	Start Period	End Period	Value	Unit
Hazelrigg	17	01/01/2001	01/04/2001	0.2	pgm^{-3}
Hazelrigg	28	01/01/2001	01/04/2001	0.49	pgm^{-3}
Hazelrigg	32	01/01/2001	01/04/2001	0.21	pgm^{-3}
Hazelrigg	35	01/01/2001	01/04/2001	0.29	pgm^{-3}
Hazelrigg	37	01/01/2001	01/04/2001	1	pgm^{-3}
Hazelrigg	47	01/01/2001	01/04/2001	5.2	pgm^{-3}
Hazelrigg	49	01/01/2001	01/04/2001	0.41	pgm^{-3}
Hazelrigg	66	01/01/2001	01/04/2001	0.3	pgm^{-3}
Hazelrigg	71	01/01/2001	01/04/2001	0.37	pgm^{-3}
Hazelrigg	75	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Hazelrigg	77	01/01/2001	01/04/2001	0.4	pgm^{-3}
Hazelrigg	85	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Hazelrigg	99	01/01/2001	01/04/2001	2.7	pgm^{-3}
Hazelrigg	100	01/01/2001	01/04/2001	0.74	pgm^{-3}
Hazelrigg	119	01/01/2001	01/04/2001	0.23	pgm^{-3}
Hazelrigg	138	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Hazelrigg	153	01/01/2001	01/04/2001	0.31	pgm^{-3}
Hazelrigg	154	01/01/2001	01/04/2001	0.2	pgm^{-3}
Hazelrigg	166	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Hazelrigg	181	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Hazelrigg	190	01/01/2001	01/04/2001	<0.09	pgm^{-3}
Chilton	17	01/07/2001	01/09/2001	0.37	pgm^{-3}
Chilton	28	01/07/2001	01/09/2001	0.69	pgm^{-3}
Chilton	32	01/07/2001	01/09/2001	1.02	pgm^{-3}
Chilton	35	01/07/2001	01/09/2001	0.53	pgm^{-3}
Chilton	37	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	47	01/07/2001	01/09/2001	2.6	pgm^{-3}
Chilton	49	01/07/2001	01/09/2001	0.5	pgm^{-3}
Chilton	66	01/07/2001	01/09/2001	0.32	pgm^{-3}
Chilton	71	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	75	01/07/2001	01/09/2001	0.41	pgm^{-3}
Chilton	77	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	85	01/07/2001	01/09/2001	0.31	pgm^{-3}
Chilton	99	01/07/2001	01/09/2001	3.5	pgm^{-3}
Chilton	100	01/07/2001	01/09/2001	0.61	pgm^{-3}
Chilton	119	01/07/2001	01/09/2001	0.23	pgm^{-3}
Chilton	138	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	153	01/07/2001	01/09/2001	0.38	pgm^{-3}
Chilton	154	01/07/2001	01/09/2001	0.27	pgm^{-3}
Chilton	166	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	181	01/07/2001	01/09/2001	<0.09	pgm^{-3}
Chilton	190	01/07/2001	01/09/2001	0.51	pgm^{-3}
Mace Head	17	01/07/2000	01/09/2000	0.08	pgm^{-3}
Mace Head	28	01/07/2000	01/09/2000	0.09	pgm^{-3}
Mace Head	32	01/07/2000	01/09/2000	0.08	pgm^{-3}
Mace Head	35	01/07/2000	01/09/2000	0.07	pgm^{-3}
Mace Head	37	01/07/2000	01/09/2000	0.3	pgm^{-3}
Mace Head	47	01/07/2000	01/09/2000	1.1	pgm^{-3}
Mace Head	49	01/07/2000	01/09/2000	0.1	pgm^{-3}

Monitoring data (cont)

Site Name	PBDE type	Start Period	End Period	Value	Unit
Mace Head	66	01/07/2000	01/09/2000	0.06	pgm^{-3}
Mace Head	71	01/07/2000	01/09/2000	<0.04	pgm^{-3}
Mace Head	75	01/07/2000	01/09/2000	0.12	pgm^{-3}
Mace Head	77	01/07/2000	01/09/2000	<0.04	pgm^{-3}
Mace Head	85	01/07/2000	01/09/2000	0.08	pgm^{-3}
Mace Head	99	01/07/2000	01/09/2000	0.75	pgm^{-3}
Mace Head	100	01/07/2000	01/09/2000	0.2	pgm^{-3}
Mace Head	119	01/07/2000	01/09/2000	0.07	pgm^{-3}
Mace Head	138	01/07/2000	01/09/2000	0.16	pgm^{-3}
Mace Head	153	01/07/2000	01/09/2000	0.1	pgm^{-3}
Mace Head	154	01/07/2000	01/09/2000	0.08	pgm^{-3}
Mace Head	166	01/07/2000	01/09/2000	0.08	pgm^{-3}
Mace Head	181	01/07/2000	01/09/2000	<0.04	pgm^{-3}
Mace Head	190	01/07/2000	01/09/2000	<0.04	pgm^{-3}

** Lee et al (2005)*

Polychlorinated naphthalenes 123

Alternative Name: PCN
CAS Number:
Type of pollutant: Persistant Organic Pollutant

Monitoring data

Site Name	PCN type	Start Period	End Period	Value	Unit
Hazelrigg	19	01/01/2001	01/04/2001	2.4	pgm^{-3}
Hazelrigg	23	01/01/2001	01/04/2001	15	pgm^{-3}
Hazelrigg	24	01/01/2001	01/04/2001	20	pgm^{-3}
Hazelrigg	15	01/01/2001	01/04/2001	1.7	pgm^{-3}
Hazelrigg	16	01/01/2001	01/04/2001	1.1	pgm^{-3}
Hazelrigg	17/25	01/01/2001	01/04/2001	2.9	pgm^{-3}
Hazelrigg	42	01/01/2001	01/04/2001	2.4	pgm^{-3}
Hazelrigg	28/29/43	01/01/2001	01/04/2001	9.9	pgm^{-3}
Hazelrigg	27/30	01/01/2001	01/04/2001	1	pgm^{-3}
Hazelrigg	35	01/01/2001	01/04/2001	7.5	pgm^{-3}
Hazelrigg	38/40	01/01/2001	01/04/2001	15	pgm^{-3}
Hazelrigg	46	01/01/2001	01/04/2001	5.9	pgm^{-3}
Hazelrigg	33/34/37	01/01/2001	01/04/2001	15	pgm^{-3}
Hazelrigg	47	01/01/2001	01/04/2001	4.3	pgm^{-3}
Hazelrigg	36/45	01/01/2001	01/04/2001	2.7	pgm^{-3}
Hazelrigg	52/60	01/01/2001	01/04/2001	0.6	pgm^{-3}
Hazelrigg	53	01/01/2001	01/04/2001	0.4	pgm^{-3}
Hazelrigg	59	01/01/2001	01/04/2001	0.7	pgm^{-3}
Hazelrigg	58	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	61	01/01/2001	01/04/2001	0.9	pgm^{-3}
Hazelrigg	50	01/01/2001	01/04/2001	0.2	pgm^{-3}
Hazelrigg	57	01/01/2001	01/04/2001	0.3	pgm^{-3}
Hazelrigg	62	01/01/2001	01/04/2001	0.5	pgm^{-3}
Hazelrigg	66/67	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	64/68	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	69	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	71/72	01/01/2001	01/04/2001	0.2	pgm^{-3}
Hazelrigg	63	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	65	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	73	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	74	01/01/2001	01/04/2001	0.1	pgm^{-3}
Hazelrigg	75	01/01/2001	01/04/2001	0.1	pgm^{-3}
Chilton	19	01/07/2001	01/09/2001	3.5	pgm^{-3}
Chilton	23	01/07/2001	01/09/2001	15	pgm^{-3}
Chilton	24	01/07/2001	01/09/2001	22	pgm^{-3}
Chilton	15	01/07/2001	01/09/2001	3.4	pgm^{-3}
Chilton	16	01/07/2001	01/09/2001	2.7	pgm^{-3}
Chilton	17/25	01/07/2001	01/09/2001	4.8	pgm^{-3}
Chilton	42	01/07/2001	01/09/2001	1.6	pgm^{-3}
Chilton	28/29/43	01/07/2001	01/09/2001	4.7	pgm^{-3}
Chilton	27/30	01/07/2001	01/09/2001	0.6	pgm^{-3}
Chilton	35	01/07/2001	01/09/2001	3.1	pgm^{-3}
Chilton	38/40	01/07/2001	01/09/2001	6.9	pgm^{-3}
Chilton	46	01/07/2001	01/09/2001	2.8	pgm^{-3}
Chilton	33/34/37	01/07/2001	01/09/2001	8.9	pgm^{-3}
Chilton	47	01/07/2001	01/09/2001	2.5	pgm^{-3}
Chilton	36/45	01/07/2001	01/09/2001	1.8	pgm^{-3}
Chilton	52/60	01/07/2001	01/09/2001	0.4	pgm^{-3}
Chilton	53	01/07/2001	01/09/2001	0.2	pgm^{-3}

** (Lee et al, 2005)*

Monitoring data (cont)

Site Name	PCN type	Start Period	End Period	Value	Unit
Chilton	59	01/07/2001	01/09/2001	0.4	pgm^{-3}
Chilton	58	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	61	01/07/2001	01/09/2001	0.4	pgm^{-3}
Chilton	50	01/07/2001	01/09/2001	0.2	pgm^{-3}
Chilton	57	01/07/2001	01/09/2001	0.3	pgm^{-3}
Chilton	62	01/07/2001	01/09/2001	0.3	pgm^{-3}
Chilton	66/67	01/07/2001	01/09/2001	<DL	pgm^{-3}
Chilton	64/68	01/07/2001	01/09/2001	<DL	pgm^{-3}
Chilton	69	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	71/72	01/07/2001	01/09/2001	0.2	pgm^{-3}
Chilton	63	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	65	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	73	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	74	01/07/2001	01/09/2001	0.1	pgm^{-3}
Chilton	75	01/07/2001	01/09/2001	0.1	pgm^{-3}
Mace Head	19	01/02/2000	01/04/2000	0.3	pgm^{-3}
Mace Head	23	01/02/2000	01/04/2000	2	pgm^{-3}
Mace Head	24	01/02/2000	01/04/2000	2.5	pgm^{-3}
Mace Head	15	01/02/2000	01/04/2000	0.5	pgm^{-3}
Mace Head	16	01/02/2000	01/04/2000	0.2	pgm^{-3}
Mace Head	17/25	01/02/2000	01/04/2000	0.3	pgm^{-3}
Mace Head	42	01/02/2000	01/04/2000	0.4	pgm^{-3}
Mace Head	28/29/43	01/02/2000	01/04/2000	1.7	pgm^{-3}
Mace Head	27/30	01/02/2000	01/04/2000	0.5	pgm^{-3}
Mace Head	35	01/02/2000	01/04/2000	1.1	pgm^{-3}
Mace Head	38/40	01/02/2000	01/04/2000	2.2	pgm^{-3}
Mace Head	46	01/02/2000	01/04/2000	1	pgm^{-3}
Mace Head	33/34/37	01/02/2000	01/04/2000	2.1	pgm^{-3}
Mace Head	47	01/02/2000	01/04/2000	0.6	pgm^{-3}
Mace Head	36/45	01/02/2000	01/04/2000	0.9	pgm^{-3}
Mace Head	52/60	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	53	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	59	01/02/2000	01/04/2000	0.2	pgm^{-3}
Mace Head	58	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	61	01/02/2000	01/04/2000	0.2	pgm^{-3}
Mace Head	50	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	57	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	62	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	66/67	01/02/2000	01/04/2000	0.1	pgm^{-3}
Mace Head	64/68	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	69	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	71/72	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	63	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	65	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	73	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	74	01/02/2000	01/04/2000	<DL	pgm^{-3}
Mace Head	75	01/02/2000	01/04/2000	<DL	pgm^{-3}

** (Lee et al, 2005)*

Potassium in precipitation K^+ 124

Alternative Name:
CAS Number:
Type of pollutant: Acid Rain Component

Potassium in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.3		0.6		mgl^{-1}
Beaghs Burn	Rur	0.1	0.1	0.1	0.2	mgl^{-1}
Bottesford	Rur	0.1	0.1	0.2	0.2	mgl^{-1}
Compton	Rur	0.1	0.9	0.3	0.3	mgl^{-1}
Driby	Rur		0.1	0.2		mgl^{-1}
Eskdalemuir 5002	Rur	0.1	0.4	0.2	0.3	mgl^{-1}
Eskdalemuir 5162	Rur			0.3	0.5	mgl^{-1}
Flatford Mill	Rur	0.3	0.2	0.3	0.2	mgl^{-1}
Glen Dye	Rur	0.1	0.1	0.1	0.2	mgl^{-1}
High Muffles	Rur	0.4	0.1	0.2	0.2	mgl^{-1}
Hillsborough Forest	Rur	0.6	0.5	0.4	0.8	mgl^{-1}
Jenny Hurn	Rur	0.6				mgl^{-1}
Loch Dee	Rur		6.9	3.2		mgl^{-1}
Preston Montford	Rur	0.2		0.8		mgl^{-1}
Stoke Ferry	Rur	0.2		0.1	0.2	mgl^{-1}
Thorganby	Rur	0.4	0.9	1.0	0.4	mgl^{-1}
Wardlow Hay Cop	Rur	0.2	0.2	0.1	0.2	mgl^{-1}
Woburn	Rur	0.2	0.1	0.1	0.2	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	0.4	0.2	0.6	0.8	mgl^{-1}
Balquhidder 2	Rur	0.1	0.1	0.2	0.2	mgl^{-1}
Bannisdale	Rur	0.1	0.1	0.1	0.1	mgl^{-1}
Cow Green Reservoir	Rur	0.1		0.1	0.1	mgl^{-1}
Crai Reservoir	Rur	0.1	0.1	0.1	0.2	mgl^{-1}
Goonhilly	Rur	0.4	4.1	0.3	0.7	mgl^{-1}
Llyn Brianne	Rur	0.1		1.2	0.1	mgl^{-1}
Llyn Llagi	Rur	0.3	0.3	0.1	0.1	mgl^{-1}
Llyn Llydaw	Rur	0.5	0.1	0.1	0.1	mgl^{-1}
Loch Chon	Rur	1.6	2.3	0.7	0.1	mgl^{-1}
Lochnagar	Rur	0.1	0.1	0.1	0.1	mgl^{-1}
Lough Navar 5006	Rur	0.2	0.1	0.1	0.2	mgl^{-1}
Lough Navar 5161	Rur			0.1		mgl^{-1}
Polloch	Rur	0.1	0.1	0.3	0.1	mgl^{-1}
Pumlumon	Rur	0.4		0.4	0.2	mgl^{-1}
Redesdale	Rur	0.1	0.1	0.1	1.6	mgl^{-1}
River Etherow	Rur	0.1	0.1	0.4	0.1	mgl^{-1}
River Mharcaidh	Rur	0.1	0.1	0.0	0.1	mgl^{-1}
Scoat Tarn	Rur	0.3		0.2	0.1	mgl^{-1}
Strathvaich Dam	Rur	0.1	0.1	0.1	0.2	mgl^{-1}
Tycanol Wood	Rur	0.2		0.8	0.6	mgl^{-1}
Whiteadder	Rur		0.1	0.1		mgl^{-1}
Yarner Wood	Rur	0.3	0.1	0.2		mgl^{-1}

Potassium in precipitation K^+ 124

Potassium wet deposited

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	8.4				mgm^{-2}
Beaghs Burn	Rur	9.7				mgm^{-2}
Bottesford	Rur	1.1				mgm^{-2}
Compton	Rur	2.5				mgm^{-2}
Eskdalemuir 5002	Rur	3.1				mgm^{-2}
Flatford Mill	Rur	2.7				mgm^{-2}
Glen Dye	Rur	3.1				mgm^{-2}
High Muffles	Rur	2.0				mgm^{-2}
Hillsborough Forest	Rur	7.8				mgm^{-2}
Jenny Hurn	Rur	8.1				mgm^{-2}
Preston Montford	Rur	2.3				mgm^{-2}
Stoke Ferry	Rur	1.3				mgm^{-2}
Thorganby	Rur	2.2				mgm^{-2}
Wardlow Hay Cop	Rur	2.1				mgm^{-2}
Woburn	Rur	3.4				mgm^{-2}

Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	4.5				mgm^{-2}
Balquhidder 2	Rur	3.3				mgm^{-2}
Bannisdale	Rur	5.8				mgm^{-2}
Cow Green Reservoir	Rur	3.7				mgm^{-2}
Crai Reservoir	Rur	10.6				mgm^{-2}
Goonhilly	Rur	7.9				mgm^{-2}
Llyn Brianne	Rur	4.9				mgm^{-2}
Llyn Llagi	Rur	12.3				mgm^{-2}
Llyn Llydaw	Rur	8.2				mgm^{-2}
Loch Chon	Rur	57.9				mgm^{-2}
Lochnagar	Rur	2.4				mgm^{-2}
Lough Navar 5006	Rur	4.8				mgm^{-2}
Polloch	Rur	6.5				mgm^{-2}
Pumlumon	Rur	6.7				mgm^{-2}
Redesdale	Rur	1.2				mgm^{-2}
River Etherow	Rur	2.9				mgm^{-2}
River Mharcaidh	Rur	1.6				mgm^{-2}
Scoat Tarn	Rur	18.2				mgm^{-2}
Strathvaich Dam	Rur	3.8				mgm^{-2}
Tycanol Wood	Rur	7.3				mgm^{-2}
Yarner Wood	Rur	5.1				mgm^{-2}

Propane C_3H_8 125

Alternative Name: dimethylmethane
CAS Number: 74-98-6
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	4				318				μgm^{-3}
Birmingham East	UB	5				92				μgm^{-3}
Bristol East	UB	4				175				μgm^{-3}
Cardiff East	UB		4				126			μgm^{-3}
Edinburgh Med. Sch.	UB	4	7			443	533			μgm^{-3}
Harwell	Rur	2	2			17	26			μgm^{-3}
Leeds Potternewton	UB	5				60				μgm^{-3}
Liverpool Speke	UB	5				134				μgm^{-3}
London Eltham	SU	3				169				μgm^{-3}
London Marylebone Road	K	6	6	6	6	59	546	467	67	μgm^{-3}
London UCL	Rd	4				47				μgm^{-3}
Middlesbrough	UI	7				822				μgm^{-3}
Southampton Centre	UC	4				208				μgm^{-3}

Propylene C_3H_6 126

Alternative Name: Propene
CAS Number: 115-07-1
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	1				21				μgm^{-3}
Birmingham East	UB	1				29				μgm^{-3}
Bristol East	UB	2				26				μgm^{-3}
Cardiff East	UB	2	2			24	19			μgm^{-3}
Edinburgh Med. Sch.	UB	2	2			95	180			μgm^{-3}
Harwell	Rur	0	0			5	9			μgm^{-3}
Leeds Potternewton	UB	3				21				μgm^{-3}
Liverpool Speke	UB	2				200				μgm^{-3}
London Eltham	SU	2				14				μgm^{-3}
London Marylebone Road	K	7	5	4	3	35	30	17	15	μgm^{-3}
London UCL	Rd	3				29				μgm^{-3}
Southampton Centre	UC	3				36				μgm^{-3}

p-xylene C_8H_{10} 127

Alternative Name: 1,4-dimethylbenzene
CAS Number: 106-42-3
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Air Quality Monitoring Data

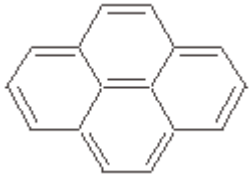
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Cardiff Centre	UC				2.4				86.8	μgm^{-3}
Edinburgh Med. Sch.	UB		2.9				89.6			μgm^{-3}
Glasgow Kerbside	K				4.4				65.7	μgm^{-3}
Harwell	Rur	0.5		0.7		11.5		18.5		μgm^{-3}
London Marylebone Road	K	18.3	14.2	11.1	9.2	346.5	106.7	95.9	63.1	μgm^{-3}
London UCL	Rd	4.2				86.0				μgm^{-3}

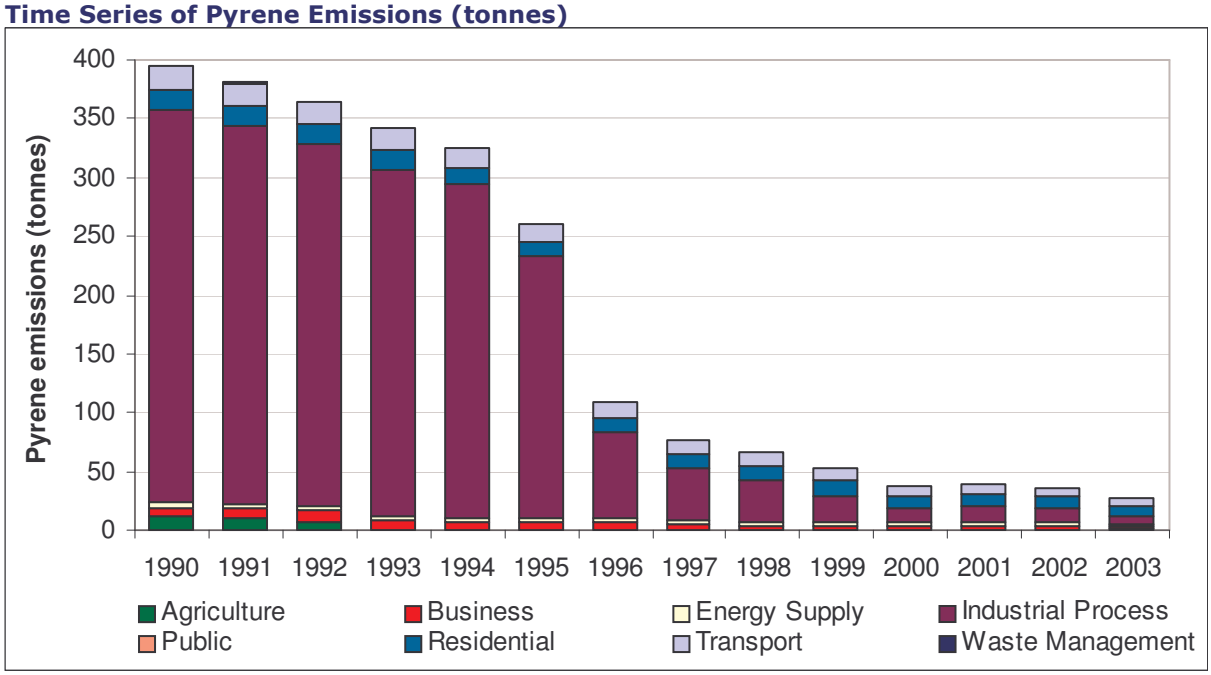
Pyrene 128

Alternative Name:
CAS Number: 129-00-0
Type of pollutant: Polycyclic Aromatic Hydrocarbon

Structure



Time Series of Pyrene Emissions (tonnes)



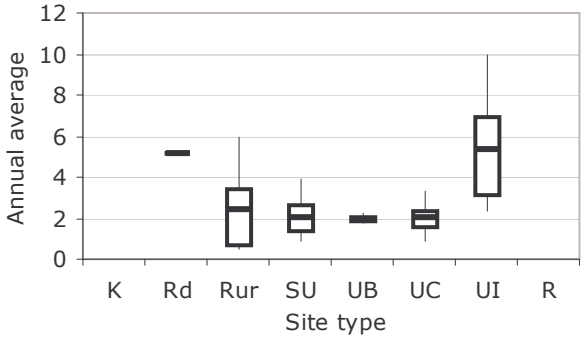
Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	5.2	5.2	5.2	5.2	5.2
Rur	3	2.4	0.5	6.0	0.5	5.5
SU	6	2.1	0.9	3.9	1.0	3.6
UB	3	2.0	1.8	2.2	1.8	2.2
UC	6	2.0	0.9	3.3	1.1	3.0
UI	3	5.4	2.3	10.0	2.5	9.4
R	0					



Pyrene Annual Average Boxplot

Pyrene 128

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

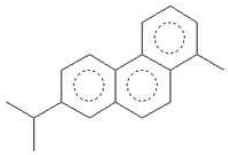
Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	2.70	2.40		2.30	μgm^{-3}
Belfast	SU		3.80	1.90	0.92	μgm^{-3}
Birmingham 1	UB		2.10	2.30	2.20	μgm^{-3}
Bolsover	SU	2.40	2.20	2.60	2.90	μgm^{-3}
Brent	UB				1.80	μgm^{-3}
Bromley	Rd			6.10	5.20	μgm^{-3}
Glasgow	UC	2.30	1.80	1.90	0.90	μgm^{-3}
Hazelrigg	Rur	8.40	9.10	7.50	6.00	μgm^{-3}
High Muffles	Rur	0.68	0.57	0.57	0.50	μgm^{-3}
Holyhead	UI	1.90	2.00		1.70	μgm^{-3}
Hove	UC				1.50	μgm^{-3}
Kinlochleven	SU	11.00	2.20	1.90	1.30	μgm^{-3}
Leeds 1	UC		2.40	2.50	2.30	μgm^{-3}
Lisburn	SU	5.50	3.50	2.90	3.90	μgm^{-3}
London 2a	UC	2.50	2.20	2.60	2.30	μgm^{-3}
Manchester	UC	4.40	4.20	3.40	3.30	μgm^{-3}
Middlesbrough	UB	2.70	3.40	2.10	1.90	μgm^{-3}
Newcastle	UC		1.50	1.80	1.80	μgm^{-3}
Newport	SU	3.40	4.10	2.60	1.60	μgm^{-3}
Port Talbot	UI	6.20	4.50	3.60	3.90	μgm^{-3}
Scunthorpe	UI	8.20	6.30	9.20	10.00	μgm^{-3}
Speke	SU			2.00	1.80	μgm^{-3}
Stoke Ferry	Rur	0.67	0.78	0.77	0.78	μgm^{-3}

Retene 129

Alternative Name: 1-methyl-7-isopropyl phenanthrene
CAS Number: 483-65-8
Type of pollutant: Polycyclic Aromatic Hydrocarbon

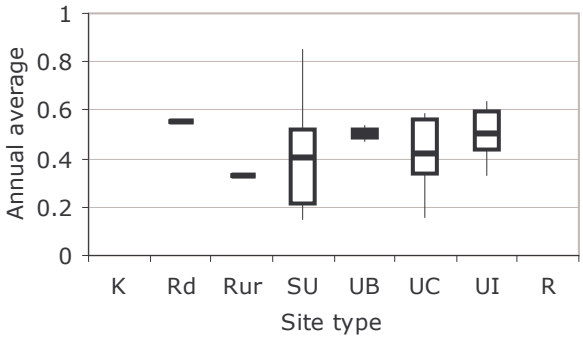
Structure



Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	0.6	0.6	0.6	0.6	0.6
Rur	1	0.3	0.3	0.3	0.3	0.3
SU	6	0.4	0.2	0.9	0.2	0.8
UB	2	0.5	0.5	0.5	0.5	0.5
UC	5	0.4	0.2	0.6	0.2	0.6
UI	3	0.5	0.3	0.6	0.4	0.6
R	0					



Retene Annual Average Boxplot

Air quality non-automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - PAH

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Ashington	UI	0.70	0.49		0.55	µgm^{-3}
Belfast	SU		0.72	0.30	0.15	µgm^{-3}
Birmingham 1	UB		0.60	0.63	0.54	µgm^{-3}
Bolsover	SU	0.78	0.73	0.72	0.85	µgm^{-3}
Brent	UB				0.47	µgm^{-3}
Bromley	Rd			0.59	0.55	µgm^{-3}
Glasgow	UC	0.36	0.34	0.33	0.16	µgm^{-3}
Holyhead	UI	0.43	0.31		0.28	µgm^{-3}
Hove	UC				0.46	µgm^{-3}
Kinlochleven	SU	0.35	0.29	0.33	0.17	µgm^{-3}
Leeds 1	UC		0.49	0.51	0.59	µgm^{-3}
Lisburn	SU	0.83	0.58	0.40	0.58	µgm^{-3}
London 2a	UC	0.47	0.50	0.61	0.56	µgm^{-3}
Newcastle	UC		0.29	0.34	0.34	µgm^{-3}
Newport	SU	0.54	0.44	0.43	0.35	µgm^{-3}
Port Talbot	UI	0.35	0.35	0.31	0.33	µgm^{-3}
Scunthorpe	UI	0.82	1.30	0.68	0.64	µgm^{-3}
Speke	SU			0.43	0.35	µgm^{-3}
Stoke Ferry	Rur		0.27	0.25	0.33	µgm^{-3}

Sodium Na^+ 130

Alternative Name:
CAS Number:
Type of pollutant: Acid Rain Component

Sodium in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	4.4		5.4		mgl^{-1}
Beaghs Burn	Rur	3.0	2.8	2.7	4.7	mgl^{-1}
Bottesford	Rur	0.9	0.9	1.6	1.6	mgl^{-1}
Compton	Rur	1.2	1.1	1.6	1.4	mgl^{-1}
Driby	Rur		2.1	2.9		mgl^{-1}
Eskdalemuir 5002	Rur	1.4	1.7	1.5	1.7	mgl^{-1}
Eskdalemuir 5162	Rur			1.3	1.9	mgl^{-1}
Flatford Mill	Rur	1.6	1.6	1.8	1.5	mgl^{-1}
Glen Dye	Rur	1.7	1.6	1.9	2.8	mgl^{-1}
High Muffles	Rur	1.7	1.9	2.2	2.9	mgl^{-1}
Hillsborough Forest	Rur	2.3	1.9	2.3	2.2	mgl^{-1}
Jenny Hurn	Rur	1.1				mgl^{-1}
Loch Dee	Rur		5.0	2.0		mgl^{-1}
Preston Montford	Rur	1.1		1.8		mgl^{-1}
Stoke Ferry	Rur	2.3		1.8	3.4	mgl^{-1}
Thorganby	Rur	1.5	2.0	1.9	1.4	mgl^{-1}
Wardlow Hay Cop	Rur	1.2	1.5	1.4	1.8	mgl^{-1}
Woburn	Rur	1.2	1.0	1.4	2.0	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	6.0	4.2	5.3	7.5	mgl^{-1}
Balquhidder 2	Rur	1.5	1.3	1.6	1.6	mgl^{-1}
Bannisdale	Rur	1.6	1.4	1.6	1.7	mgl^{-1}
Cow Green Reservoir	Rur	1.5		1.7	2.2	mgl^{-1}
Crai Reservoir	Rur	1.6	1.7	2.5	2.0	mgl^{-1}
Goonhilly	Rur	7.0	6.9	6.3	8.3	mgl^{-1}
Llyn Brianne	Rur	1.9		2.8	2.6	mgl^{-1}
Llyn Llagi	Rur	2.0	1.9	2.5	2.5	mgl^{-1}
Llyn Llydaw	Rur	1.4	1.5	2.4	1.6	mgl^{-1}
Loch Chon	Rur	2.0	1.6	2.8	1.5	mgl^{-1}
Lochnagar	Rur	1.2	1.1	1.5	1.7	mgl^{-1}
Lough Navar 5006	Rur	2.8	2.4	2.8	3.2	mgl^{-1}
Lough Navar 5161	Rur			2.1		mgl^{-1}
Polloch	Rur	2.8	2.8	3.0	3.2	mgl^{-1}
Pumlumon	Rur	2.3		3.1	2.2	mgl^{-1}
Redesdale	Rur	1.6	1.4	1.7	2.5	mgl^{-1}
River Etherow	Rur	1.1	1.2	2.0	1.9	mgl^{-1}
River Mharcaidh	Rur	1.5	1.1	1.1	1.6	mgl^{-1}
Scoat Tarn	Rur	1.5		1.6	1.7	mgl^{-1}
Strathvaich Dam	Rur	2.9	2.2	1.9	4.6	mgl^{-1}
Tycanol Wood	Rur	2.8		3.8	3.0	mgl^{-1}
Whiteadder	Rur		1.9	2.0		mgl^{-1}
Yarner Wood	Rur	2.2	2.5	3.4		mgl^{-1}

Sodium Na^+ 130

Sodium wet deposited

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	131.0	131.3			mgm^{-2}
Beaghs Burn	Rur	257.0	257.1			mgm^{-2}
Bottesford	Rur	9.0	9.1			mgm^{-2}
Compton	Rur	20.0	19.6			mgm^{-2}
Eskdalemuir 5002	Rur	49.8				mgm^{-2}
Flatford Mill	Rur	21.0	20.9			mgm^{-2}
Glen Dye	Rur	45.0	44.8			mgm^{-2}
High Muffles	Rur	33.0	33.4			mgm^{-2}
Hillsborough Forest	Rur	41.0	41.5			mgm^{-2}
Jenny Hurn	Rur	11.0	10.6			mgm^{-2}
Preston Montford	Rur	17.0	17.1			mgm^{-2}
Stoke Ferry	Rur	14.0	13.6			mgm^{-2}
Thorganby	Rur	15.0	15.2			mgm^{-2}
Wardlow Hay Cop	Rur	22.0	22.4			mgm^{-2}
Woburn	Rur	13.0	12.8			mgm^{-2}

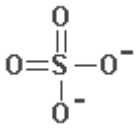
Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	85.0	84.8			mgm^{-2}
Balquhidder 2	Rur	78.0	78.2			mgm^{-2}
Bannisdale	Rur	116.0	115.6			mgm^{-2}
Cow Green Reservoir	Rur	78.0	77.9			mgm^{-2}
Crai Reservoir	Rur	220.0	220.3			mgm^{-2}
Goonhilly	Rur	189.0	189.2			mgm^{-2}
Llyn Brianne	Rur	108.0	107.5			mgm^{-2}
Llyn Llagi	Rur	264.0	264.5			mgm^{-2}
Llyn Llydaw	Rur	104.0	104.5			mgm^{-2}
Loch Chon	Rur	164.0	164.4			mgm^{-2}
Lochnagar	Rur	44.0	43.9			mgm^{-2}
Lough Navar 5006	Rur	102.9				mgm^{-2}
Polloch	Rur	177.0	177.1			mgm^{-2}
Pumlumon	Rur	142.0	142.1			mgm^{-2}
Redesdale	Rur	25.0	25.4			mgm^{-2}
River Etherow	Rur	55.0	55.1			mgm^{-2}
River Mharcaidh	Rur	36.0	36.4			mgm^{-2}
Scoat Tarn	Rur	188.0	188.4			mgm^{-2}
Strathvaich Dam	Rur	108.0	107.9			mgm^{-2}
Tycanol Wood	Rur	124.0	124.2			mgm^{-2}
Yarner Wood	Rur	70.0	69.8			mgm^{-2}

Sulphate SO_4^{2-} 131

Alternative Name: Particulate sulphate, sulphate aerosol
CAS Number: 14808-79-8
Type of pollutant: Acidifying Agent, Particulate Component

Structure



Sulphate as S in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	1.0		1.1		mgl^{-1}
Beaghs Burn	Rur	0.5	0.7	0.5	0.8	mgl^{-1}
Bottesford	Rur	0.8	0.9	1.0	1.3	mgl^{-1}
Compton	Rur	0.7	0.8	1.0	0.9	mgl^{-1}
Driby	Rur		1.0	1.0		mgl^{-1}
Eskdalemuir 5002	Rur	0.5	0.6	0.5	0.7	mgl^{-1}
Eskdalemuir 5162	Rur			0.5	0.7	mgl^{-1}
Flatford Mill	Rur	1.0	0.8	0.9	0.9	mgl^{-1}
Glen Dye	Rur	0.5	0.7	0.6	0.8	mgl^{-1}
High Muffles	Rur	1.1	1.0	0.8	1.2	mgl^{-1}
Hillsborough Forest	Rur	0.9	0.8	0.6	0.8	mgl^{-1}
Jenny Hurn	Rur	1.3				mgl^{-1}
Loch Dee	Rur		2.1	1.6		mgl^{-1}
Preston Montford	Rur	0.6		0.8		mgl^{-1}
Stoke Ferry	Rur	1.1		1.0	1.2	mgl^{-1}
Thorganby	Rur	1.3	1.4	1.3	1.3	mgl^{-1}
Wardlow Hay Cop	Rur	1.1	1.2	1.0	1.1	mgl^{-1}
Woburn	Rur	0.8	0.8	0.9	1.1	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	0.8	0.7	0.9	1.1	mgl^{-1}
Balquhidder 2	Rur	0.5	0.5	0.5	0.5	mgl^{-1}
Bannisdale	Rur	0.7	0.6	0.6	0.7	mgl^{-1}
Cow Green Reservoir	Rur	0.5		0.6	0.7	mgl^{-1}
Crai Reservoir	Rur	0.4	0.5	0.5	0.7	mgl^{-1}
Goonhilly	Rur	1.1	2.0	1.0	1.6	mgl^{-1}
Llyn Brianne	Rur	0.5		1.1	0.6	mgl^{-1}
Llyn Llagi	Rur	0.5	0.6	0.5	0.5	mgl^{-1}
Llyn Llydaw	Rur	0.6	0.5	0.6	0.5	mgl^{-1}
Loch Chon	Rur	1.0	1.2	0.8	0.5	mgl^{-1}
Lochnagar	Rur	0.4	0.5	0.5	0.6	mgl^{-1}
Lough Navar 5006	Rur	0.5	0.5	0.4	0.5	mgl^{-1}
Lough Navar 5161	Rur			0.4		mgl^{-1}
Polloch	Rur	0.4	0.4	0.5	0.4	mgl^{-1}
Pumlumon	Rur	0.6		0.6	0.6	mgl^{-1}
Redesdale	Rur	0.6	0.6	0.6	0.8	mgl^{-1}
River Etherow	Rur	0.7	0.9	1.1	0.8	mgl^{-1}
River Mharcaidh	Rur	0.3	0.4	0.3	0.3	mgl^{-1}
Scoat Tarn	Rur	0.6		0.5	0.5	mgl^{-1}
Strathvaich Dam	Rur	0.4	0.4	0.4	0.4	mgl^{-1}
Tycanol Wood	Rur	0.6		0.9	0.9	mgl^{-1}
Whiteadder	Rur		1.0	0.7		mgl^{-1}
Yarner Wood	Rur	0.6	0.6	0.8		mgl^{-1}

Sulphate as S wet deposited

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	20.9				mgm^{-2}
Beaghs Burn	Rur	40.2				mgm^{-2}
Bottesford	Rur	9.5				mgm^{-2}
Compton	Rur	10.1				mgm^{-2}
Eskdalemuir 5002	Rur	13.8				mgm^{-2}
Flatford Mill	Rur	10.3				mgm^{-2}
Glen Dye	Rur	13.6				mgm^{-2}
High Muffles	Rur	16.9				mgm^{-2}
Hillsborough Forest	Rur	12.4				mgm^{-2}
Jenny Hurn	Rur	13.8				mgm^{-2}
Preston Montford	Rur	8.7				mgm^{-2}
Stoke Ferry	Rur	10.2				mgm^{-2}
Thorganby	Rur	14.6				mgm^{-2}
Wardlow Hay Cop	Rur	18.1				mgm^{-2}
Woburn	Rur	9.8				mgm^{-2}

Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	10.7				mgm^{-2}
Balquhidder 2	Rur	16.5				mgm^{-2}
Bannisdale	Rur	30.9				mgm^{-2}
Cow Green Reservoir	Rur	21.7				mgm^{-2}
Crai Reservoir	Rur	40.4				mgm^{-2}
Goonhilly	Rur	24.7				mgm^{-2}
Llyn Brianne	Rur	20.3				mgm^{-2}
Llyn Llagi	Rur	55.8				mgm^{-2}
Llyn Llydaw	Rur	23.6				mgm^{-2}
Loch Chon	Rur	51.1				mgm^{-2}
Lochnagar	Rur	22.0				mgm^{-2}
Lough Navar 5006	Rur	13.9				mgm^{-2}
Polloch	Rur	22.2				mgm^{-2}
Pumlumon	Rur	24.3				mgm^{-2}
Redesdale	Rur	9.1				mgm^{-2}
River Etherow	Rur	30.7				mgm^{-2}
River Mharcaidh	Rur	6.3				mgm^{-2}
Scoat Tarn	Rur	51.4				mgm^{-2}
Strathvaich Dam	Rur	12.5				mgm^{-2}
Tycanol Wood	Rur	21.6				mgm^{-2}
Yarner Wood	Rur	14.4				mgm^{-2}

Non-marine sulphate as S in precipitation

Air Quality Monitoring Data

Annual Data Statistics – low annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.6		0.7		mgl^{-1}
Beaghs Burn	Rur	0.3	0.5	0.2	0.4	mgl^{-1}
Bottesford	Rur	0.7	0.8	0.9	1.2	mgl^{-1}
Compton	Rur	0.6	0.7	0.9	0.8	mgl^{-1}
Driby	Rur		0.8	0.8		mgl^{-1}
Eskdalemuir 5002	Rur	0.4	0.5	0.3	0.5	mgl^{-1}
Eskdalemuir 5162	Rur			0.4	0.6	mgl^{-1}
Flatford Mill	Rur	0.8	0.7	0.8	0.8	mgl^{-1}
Glen Dye	Rur	0.4	0.5	0.5	0.5	mgl^{-1}
High Muffles	Rur	0.9	0.8	0.7	0.9	mgl^{-1}
Hillsborough Forest	Rur	0.8	0.7	0.4	0.6	mgl^{-1}
Jenny Hurn	Rur	1.2				mgl^{-1}
Loch Dee	Rur		1.7	1.4		mgl^{-1}
Preston Montford	Rur	0.5				mgl^{-1}
Stoke Ferry	Rur	1.0		0.8	0.9	mgl^{-1}
Thorganby	Rur	1.2	1.3	1.1	1.1	mgl^{-1}
Wardlow Hay Cop	Rur	1.0	1.1	0.8	0.9	mgl^{-1}
Woburn	Rur	0.7	0.8	0.8	0.9	mgl^{-1}

Annual Data Statistics – high annual rainfall stations: average weekly concentration in rain by year

Site Name	Site Type	Average weekly concentration				Unit
		2000	2001	2002	2003	
Achanarras	Rur	0.3	0.3	0.5	0.4	mgl^{-1}
Balquhidder 2	Rur	0.4	0.4	0.4	0.3	mgl^{-1}
Bannisdale	Rur	0.6	0.5	0.4	0.5	mgl^{-1}
Cow Green Reservoir	Rur	0.4		0.4	0.5	mgl^{-1}
Crai Reservoir	Rur	0.3	0.4	0.3	0.5	mgl^{-1}
Goonhilly	Rur	0.5	1.4	0.5	1.0	mgl^{-1}
Llyn Brianne	Rur	0.3		0.8	0.4	mgl^{-1}
Llyn Llagi	Rur	0.3	0.4	0.3	0.3	mgl^{-1}
Llyn Llydaw	Rur	0.5	0.3	0.4	0.4	mgl^{-1}
Loch Chon	Rur	0.9	1.1	0.6	0.4	mgl^{-1}
Lochnagar	Rur	0.3	0.4	0.4	0.5	mgl^{-1}
Lough Navar 5006	Rur	0.2	0.3	0.2	0.3	mgl^{-1}
Lough Navar 5161	Rur			0.2		mgl^{-1}
Polloch	Rur	0.2	0.2	0.3	0.2	mgl^{-1}
Pumlumon	Rur	0.4		0.4	0.4	mgl^{-1}
Redesdale	Rur	0.5	0.5	0.5	0.6	mgl^{-1}
River Etherow	Rur	0.6	0.8	1.0	0.6	mgl^{-1}
River Mharcaidh	Rur	0.2	0.3	0.2	0.2	mgl^{-1}
Scoat Tarn	Rur	0.5		0.4	0.3	mgl^{-1}
Strathvaich Dam	Rur	0.2	0.2	0.3	0.1	mgl^{-1}
Tycanol Wood	Rur	0.4		0.6	0.7	mgl^{-1}
Whiteadder	Rur		0.8	0.5		mgl^{-1}
Yarner Wood	Rur	0.4	0.4	0.5		mgl^{-1}

Sulphate SO_4^{2-} 131

Non-marine sulphate as S wet deposited

Annual Data Statistics – low annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	9.8				mgm^{-2}
Beaghs Burn	Rur	18.6				mgm^{-2}
Bottesford	Rur	8.7				mgm^{-2}
Compton	Rur	8.4				mgm^{-2}
Eskdalemuir 5002	Rur	9.7				mgm^{-2}
Flatford Mill	Rur	8.6				mgm^{-2}
Glen Dye	Rur	9.8				mgm^{-2}
High Muffles	Rur	14.1				mgm^{-2}
Hillsborough Forest	Rur	8.9				mgm^{-2}
Jenny Hurn	Rur	12.9				mgm^{-2}
Preston Montford	Rur	7.3				mgm^{-2}
Stoke Ferry	Rur	9.0				mgm^{-2}
Thorganby	Rur	13.3				mgm^{-2}
Wardlow Hay Cop	Rur	16.2				mgm^{-2}
Woburn	Rur	8.7				mgm^{-2}

Annual Data Statistics – high annual rainfall stations: average weekly deposition by year

Site Name	Site Type	Average weekly deposition				Unit
		2000	2001	2002	2003	
Achanarras	Rur	3.6				mgm^{-2}
Balquhidder 2	Rur	9.9				mgm^{-2}
Bannisdale	Rur	21.2				mgm^{-2}
Cow Green Reservoir	Rur	15.2				mgm^{-2}
Crai Reservoir	Rur	21.9				mgm^{-2}
Goonhilly	Rur	8.8				mgm^{-2}
Llyn Brianne	Rur	11.2				mgm^{-2}
Llyn Llagi	Rur	33.6				mgm^{-2}
Llyn Llydaw	Rur	14.8				mgm^{-2}
Loch Chon	Rur	37.3				mgm^{-2}
Lochnagar	Rur	18.4				mgm^{-2}
Lough Navar 5006	Rur	5.4				mgm^{-2}
Polloch	Rur	7.3				mgm^{-2}
Pumlumon	Rur	12.4				mgm^{-2}
Redesdale	Rur	7.1				mgm^{-2}
River Etherow	Rur	26.1				mgm^{-2}
River Mharcaidh	Rur	3.3				mgm^{-2}
Scoat Tarn	Rur	35.6				mgm^{-2}
Strathvaich Dam	Rur	3.5				mgm^{-2}
Tycanol Wood	Rur	11.1				mgm^{-2}
Yarner Wood	Rur	8.6				mgm^{-2}

Sulphate as S aerosol

Annual Data statistics - Other Acid deposition measurements

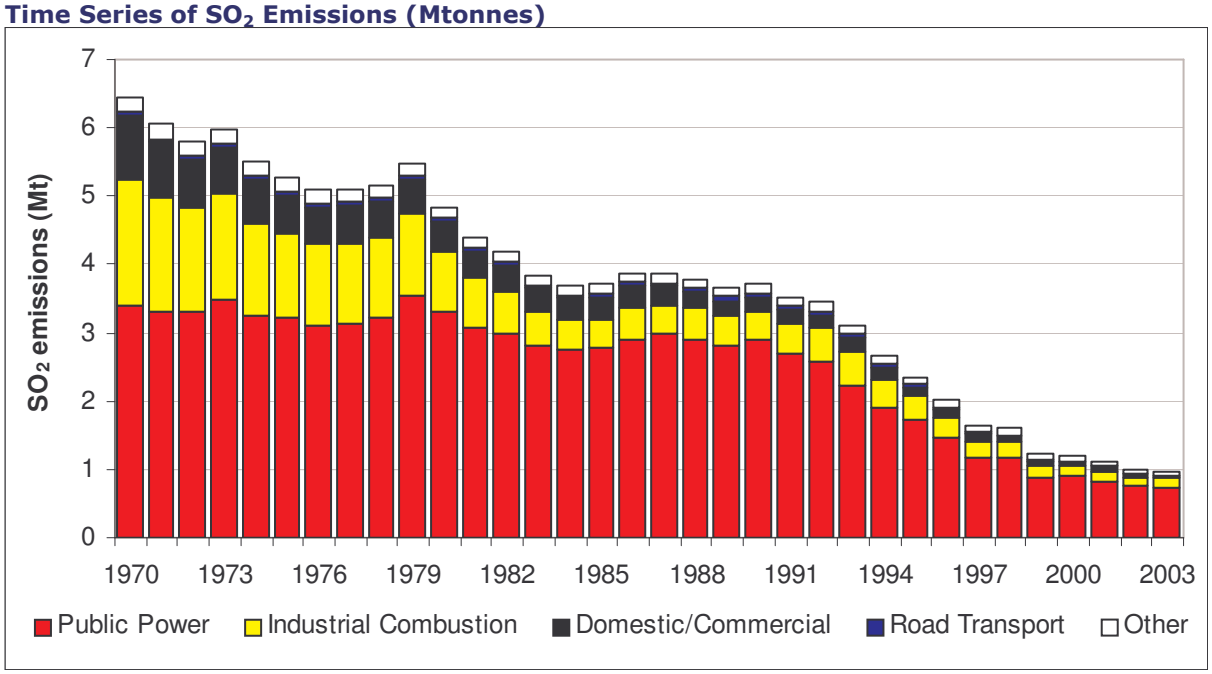
Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.8	0.8	0.7	1.0	μgm^{-3}
Eskdalemuir 5002	Rur	0.4	0.5	0.5	0.6	μgm^{-3}
Glen Dye	Rur	0.4				μgm^{-3}
High Muffles	Rur	0.6	0.6	0.6	0.7	μgm^{-3}
Lough Navar 5006	Rur	0.4	0.4	0.4	0.5	μgm^{-3}
Stoke Ferry	Rur	0.8	0.7			μgm^{-3}
Strathvaich Dam	Rur	0.2	0.3			μgm^{-3}
Yarner Wood	Rur	0.5	0.7	0.6	0.8	μgm^{-3}

Sulphur Dioxide SO_2 132

Alternative Name:
CAS Number: 7446-09-5
Type of pollutant: Acid Gas, Urban Pollutant

Structure
O=S=O

Time Series of SO_2 Emissions (Mtonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	✓
Year Began	1998	1985	2001	1996

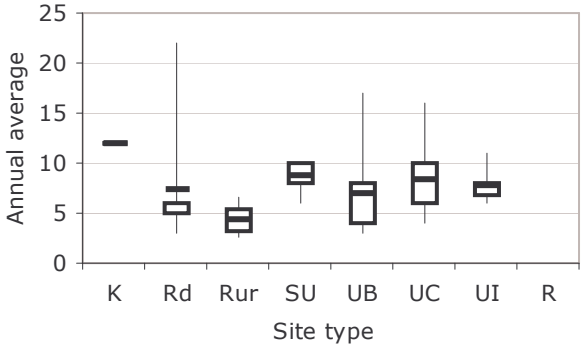
Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive		✓	✓		✓	
WHO	✓		✓			✓
EPAQS	✓		✓			
AQS		✓	✓		✓	✓
EAL						
Other			✓			

Summary of Air Quality Data in 2003

Automatic Monitoring Annual Mean (µgm^{-3})

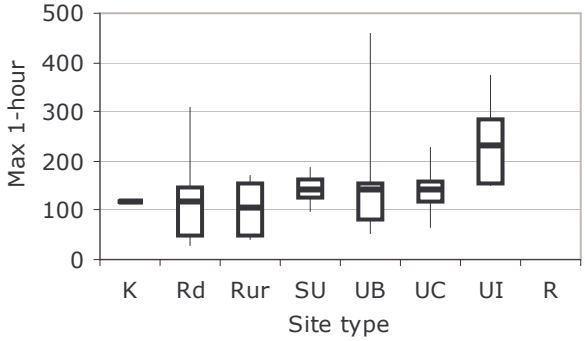
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	12	12	12	12	12
Rd	7	7	3	22	4	17
Rur	5	4	3	7	3	6
SU	5	9	6	10	6	10
UB	25	7	3	17	3	16
UC	23	8	4	16	4	14
UI	4	8	6	11	6	10
R	0					



SO_2 Annual Average Boxplot

Automatic Monitoring Annual Max (µgm^{-3})

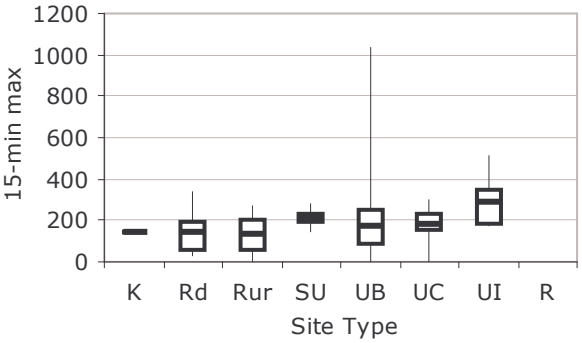
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	117	117	117	117	117
Rd	7	117	27	309	30	267
Rur	5	107	39	170	41	167
SU	5	142	98	189	103	184
UB	25	141	53	460	60	260
UC	23	140	64	226	80	225
UI	4	233	149	372	150	355
R	0					



SO_2 Maximum 1-hour Boxplot

Automatic Monitoring Annual mean of maximum 15-minute (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	1	146	146	146	146	146
Rd	7	142	32	340	35	308
Rur	6	133	0	269	15	254
SU	5	212	146	282	155	272
UB	31	175	0	1037	0	306
UC	24	182	0	303	98	281
UI	4	294	170	516	173	483
R	0					



SO_2 15 minute maximum Boxplot

Sulphur Dioxide SO_2 132

Air quality automatic monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Automatic Rural and Urban Monitoring Network

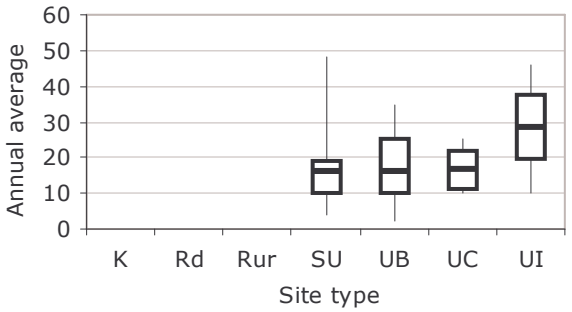
Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Aberdeen	UB		5	6	7		98	93	74	μgm^{-3}
Barnsley 12	UB	11	14	13	11	444	239	181	226	μgm^{-3}
Barnsley Gawber	UB	12	13	13	17	575	343	130	213	μgm^{-3}
Belfast Centre	UC	15	11	7	8	322	253	215	186	μgm^{-3}
Belfast East	UB	23	24	10	8	466	399	314	194	μgm^{-3}
Birmingham Centre	UC	8	9	7	7	168	128	90	218	μgm^{-3}
Birmingham East	UB	7	6	4	4	141	136	72	90	μgm^{-3}
Blackpool	UB		15	12			157	101		μgm^{-3}
Bolton	UB	5	6	6	5	130	160	176	154	μgm^{-3}
Bournemouth	UB		2	2	3		59	255	56	μgm^{-3}
Bradford Centre	UC	9	12	10	14	136	386	128	178	μgm^{-3}
Bristol Centre	UC	9	8	7	7	98	128	120	80	μgm^{-3}
Bury Roadside	Rd	24	22	18	22	317	237	184	309	μgm^{-3}
Cardiff Centre	UC	7	6	5	4	165	104	186	138	μgm^{-3}
Coventry Centre	UC	12				98				μgm^{-3}
Coventry Memorial Park	UB		18	16	17		149	85	106	μgm^{-3}
Cwmbran	UB			3	4			37	53	μgm^{-3}
Derry	UB	10	10	10	11	383	136	101	125	μgm^{-3}
Edinburgh Centre	UC	6	5	7		141	122	197		μgm^{-3}
Exeter Roadside	Rd	3	3	4	3	32	43	45	27	μgm^{-3}
Glasgow Centre	UC	10	10	6	5	120	112	80	122	μgm^{-3}
Grangemouth	UI		8		7		269		372	μgm^{-3}
Harwell	Rur	4	3	2	4	329	173	181	122	μgm^{-3}
Hove Roadside	Rd		4	4	5		51	40	37	μgm^{-3}
Hull Centre	UC	12	10			189	160			μgm^{-3}
Hull Freetown	UC				7				160	μgm^{-3}
Ladybower	Rur	4	5	5	6	207	285	167	155	μgm^{-3}
Leamington Spa	UB	5	6	4	4	109	136	93	77	μgm^{-3}
Leeds Centre	UC	8	10	9	8	213	234	176	226	μgm^{-3}

Annual Data statistics - Automatic Rural and Urban Monitoring Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Leicester Centre	UC	7	9	6	6	149	295	104	109	µgm^{-3}
Liverpool Centre	UC	7	7			231	112			µgm^{-3}
London Bexley	SU	7	7	8	10	186	245	133	189	µgm^{-3}
London Bloomsbury	UC	11	11	7	8	186	133	74	130	µgm^{-3}
London Brent	UB	4	4	4	4	101	72	104	136	µgm^{-3}
London Cromwell Road 2	Rd	8	7	7	6	59	67	64	88	µgm^{-3}
London Eltham	SU	6	6	4	6	170	184	114	162	µgm^{-3}
London Hillingdon	SU	10	9	7	8	90	77	93	138	µgm^{-3}
London Lewisham	UC			4	6			181	226	µgm^{-3}
London Marylebone Road	K		12	10	12		136	93	117	µgm^{-3}
London N. Kensington	UB	6	6	4	5	90	117	74	80	µgm^{-3}
London Southwark	UC	8	9	6	8	122	82	125	120	µgm^{-3}
London Teddington	UB	5	5	4	5	117	118	62	124	µgm^{-3}
London Westminster	UB			4				128		µgm^{-3}
Lullington Heath	Rur	3	3	3	3	83	53	38	39	µgm^{-3}
Manchester Piccadilly	UC	11	13	9	14	239	173	74	130	µgm^{-3}
Manchester South	SU	9	10	9	10	104	82	64	98	µgm^{-3}
Middlesbrough	UI	8	8	7	6	194	149	184	154	µgm^{-3}
Narberth	Rur	5				82				µgm^{-3}
Newcastle Centre	UC	7	6	5	5	184	162	136	138	µgm^{-3}
Northampton	UB		4	3	5		93	82	122	µgm^{-3}
Norwich Centre	UC	18	13	10	14	82	80	61	80	µgm^{-3}
Nottingham Centre	UC	17	19	12	14	346	170	388	146	µgm^{-3}
Oxford Centre Roadside	Rd	3	4	4	5	154	138	56	59	µgm^{-3}
Plymouth Centre	UC		5	5	4		29	59	64	µgm^{-3}
Port Talbot	UB	8	8	6	7	125	144	117	154	µgm^{-3}
Portsmouth	UB		3	3	6		64	53	80	µgm^{-3}
Preston	UB		16	11	9		146	130	160	µgm^{-3}
Reading	UB	7	6	6		117	154	269		µgm^{-3}
Redcar	SU	12	13	12	10	226	245	120	125	µgm^{-3}
Rochester	Rur	8	8	6	7	200	146	234	170	µgm^{-3}
Rotherham Centre	UC	16	17	12	12	160	192	133	157	µgm^{-3}
Salford Eccles	UI	7	8	6	7	149	117	90	149	µgm^{-3}
Sandwell West Bromwich	UB	7	8	5	5	120	157	85	269	µgm^{-3}
Scunthorpe	UI	14	12	10	11	460	261	239	258	µgm^{-3}
Sheffield Centre	UC	9	10	9	7	176	221	152	149	µgm^{-3}
Southampton Centre	UC	8	8		6	67	133		120	µgm^{-3}
Southend-on-Sea	UB		9	8	13		104	138	98	µgm^{-3}
Southwark Roadside	Rd	5	7	5	6	93	104	64	168	µgm^{-3}
Stockport	UB	5	6			128	149			µgm^{-3}
Stockport Shaw Heath	UB				5				130	µgm^{-3}
Stoke-on-Trent Centre	UC	13	15	15	16	146	215	117	136	µgm^{-3}
Sunderland	UB		5	3	3		80	149	77	µgm^{-3}
Sutton Roadside	Rd	8	9			112	109			µgm^{-3}
Swansea	UC	6	6	4	4	96	85	98	112	µgm^{-3}
Thurrock	UB	9	8	5	7	242	184	194	460	µgm^{-3}
Wicken Fen	Rur	2	2	2	3	53	65	74	49	µgm^{-3}
Wigan Leigh	UB		6	4	4		149	210	117	µgm^{-3}
Wirral Tranmere	UB		13	9	8		122	112	149	µgm^{-3}
Wolverhampton Centre	UC	13	14	10	7	223	189	178	101	µgm^{-3}
Wrexham	Rd				5				128	µgm^{-3}

Non-automatic Monitoring Annual Mean (µgm^{-3})

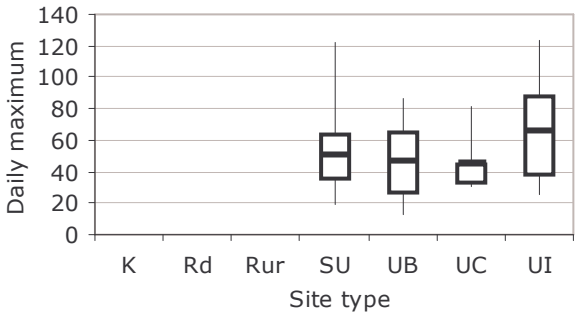
Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	0					
Rur	0					
SU	54	16	4	48	6	33
UB	30	16	2	35	5	31
UC	9	17	10	25	10	25
UI	3	28	10	46	12	44



Bubbler SO_2 Annual Average Boxplot

Non-automatic Monitoring Annual Max (µgm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	0					
Rur	0					
SU	54	51	19	122	19	102
UB	30	47	13	86	18	86
UC	9	46	31	82	31	74
UI	3	67	25	124	28	117



Bubbler SO_2 Daily Maximum Boxplot

Air quality non-automatic monitoring site map in 2003

Sulphur Dioxide SO_2 132

Air Quality Monitoring Data

Annual Data statistics - Smoke and SO_2 Network

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
ABERDEEN 3	SU	20	28	22	36	56	64	54	106	μgm^{-3}
ACCRINGTON 5	UB	11	11	11		31	37	32		μgm^{-3}
ACKWORTH 1	SU	22	17	13	10	74	60	53	44	μgm^{-3}
ALFRETON 4	SU	33	28	31	48	61	49	56	88	μgm^{-3}
ANTRIM 1	SU				23				79	μgm^{-3}
ARMADALE 2	UI	34	33	46	46	116	96	122	124	μgm^{-3}
ARMAGH 1	UB	11		13		28		20		μgm^{-3}
ASHTON-IN-MAKERFIELD 1	UB		2	1			13	39		μgm^{-3}
ASHTON-UNDER-LYNE 8	UB	11	9	7	2	40	39	21	26	μgm^{-3}
BACUP 5	UB	11	9	8		33	27	18		μgm^{-3}
BALLINGRY 2	SU	14				32				μgm^{-3}
BALLYMENA 3	UB	30				89				μgm^{-3}
BALLYMENA 5	SU				13				30	μgm^{-3}
BALLYMENA 6	SU			12	15			55	37	μgm^{-3}
BALLYMONEY 4	SU		13	12	11		40	26	45	μgm^{-3}
BANGOR (CO DOWN) 5	SU		11	14	18		48	48	71	μgm^{-3}
BARNSLEY 12	UB	29	32	28	33	60	73	80	77	μgm^{-3}
BARNSLEY 13	SU	18				48				μgm^{-3}
BARNSLEY 8	SU	46	44	37		202	228	139		μgm^{-3}
BATH 6	SU		10	12	15		37	26	52	μgm^{-3}
BELFAST 12	UB	19	18	16	18	55	87	63	66	μgm^{-3}
BELFAST 13	UB	40	38	30	27	166	160	90	51	μgm^{-3}
BELFAST 33	UI	42	43	32	29	115	160	90	51	μgm^{-3}
BELFAST 42	SU	42	41	29	28	172	160	96	64	μgm^{-3}
BELFAST 44	UC	39	33	28	25	153	141	57	45	μgm^{-3}
BELFAST 45	UB	37	36	28	28	128	134	70	57	μgm^{-3}
BELFAST 46	SU	31	29	22	21	140	134	58	45	μgm^{-3}
BIRCOTES 1	SU	20	21	17	19	109	105	92	91	μgm^{-3}
BLACKPOOL 6	SU	9	8	6	6	24	26	19	19	μgm^{-3}
BLETCHLEY 2	SU	11	13			31	35			μgm^{-3}
BOLSOVER 5	UB	12	15			56	88			μgm^{-3}
BOLTON 24	UC	13	9		12	46	40		45	μgm^{-3}
BRADFORD 6	UC	11	11	11		32	64	37		μgm^{-3}
BRAMPTON 1	SU	16	26	32	38	85	120	173	122	μgm^{-3}
BRIDGWATER 3	UB	13	20		18	54	66		43	μgm^{-3}
BRISTOL 26	SU	19	19	13	15	50	50	51	99	μgm^{-3}
BURNLEY 12	UB	10	13			33	40			μgm^{-3}
BURTON-UPON-TRENT 13	UB	18				51				μgm^{-3}
BUSHMILLS 1	SU				4				25	μgm^{-3}
CARDIFF 12	SU	19	21	20	20	40	51	44	37	μgm^{-3}
CARLISLE 13	SU	2				7				μgm^{-3}
CARLISLE 14	SU	1				7				μgm^{-3}
CASTLE DONINGTON 1	SU		9				55			μgm^{-3}
CASTLEFORD 11	SU	24	22	12	13	82	104	92	71	μgm^{-3}
CHEADLE & GATLEY 6	UB		6	7	6		50	25	19	μgm^{-3}
CHORLEY 6	UB	14	13	6		40	60	33		μgm^{-3}
COALVILLE 5	SU				9				30	μgm^{-3}
COATBRIDGE 11	UC			20	24			57	62	μgm^{-3}
COATBRIDGE 12	SU			16	19			47	54	μgm^{-3}
COWDENBEATH 1	SU	14	19	17	15	27	42	34	35	μgm^{-3}
CROSBY 3	SU	19	20	24		49	43	52		μgm^{-3}
CUDWORTH 2	UB	32	34	29	35	83	112	95	86	μgm^{-3}
DARLINGTON 13	UB	5	5	8	10	24	24	24	27	μgm^{-3}
DERBY 24	UB			10	10			55	28	μgm^{-3}
DEWSBURY 12	SU	17	18	18	18	62	54	56	45	μgm^{-3}
DINNINGTON 4	SU	8	13	13		54	60	97		μgm^{-3}
DUDLEY 2	SU		12	12	10		36	30	25	μgm^{-3}

Annual Data statistics - Smoke and SO_2 Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
DUNGANNON 1	SU			14	17			31	45	µgm^{-3}
DUNMURRY 2	SU	82				250				µgm^{-3}
DUNMURRY 3	SU		20		21		58		48	µgm^{-3}
EASTBOURNE 5	SU	10				36				µgm^{-3}
ELLAND 2	UB	13	16		16	76	78		72	µgm^{-3}
ELLESMERE PORT 12	UB	17	15	14	10	36	50	56	38	µgm^{-3}
ENFIELD 14	SU	19	17	13	12	63	47	31	26	µgm^{-3}
FARNWORTH 8	SU	11	8	13	13	49	37	38	40	µgm^{-3}
FEATHERSTONE 1	SU	25	23	15		80	110	66		µgm^{-3}
GLASGOW 20	UC	25				57				µgm^{-3}
GLASGOW 51	SU	22	22	27	26	50	50	79	71	µgm^{-3}
GLASGOW 69	UB		23	32			54	101		µgm^{-3}
GLASGOW 73	UI	16	15	22		43	93	61		µgm^{-3}
GLASGOW 95	UB	17	16	30	29	49	99	116	86	µgm^{-3}
GLASGOW 98	SU	19			17	46			105	µgm^{-3}
GLOUCESTER 4	UB	9	11	10	12	26	33	33	36	µgm^{-3}
GOLDTHORPE 1	UB	29	31	27		103	90	168		µgm^{-3}
GREENWICH 9	UB	17	11	9	15	49	36	31	49	µgm^{-3}
GRIMETHORPE 2	SU	30				68				µgm^{-3}
HALIFAX 16	UC		15				69			µgm^{-3}
HATTON 1		7				12				µgm^{-3}
HEMSWORTH 3	UB	20	16	13	12	61	73	67	62	µgm^{-3}
HOLMFIRTH 5	UB		25	26	28		76	65	70	µgm^{-3}
HOLYWOOD 1	SU		11	12			25	33		µgm^{-3}
HORWICH 1	UB	10	8	14		30	38	40		µgm^{-3}
HUDDERSFIELD 19	UC	22	21	19	22	60	61	57	82	µgm^{-3}
ILFORD 6	UC	19	19	19	21	48	36	39	33	µgm^{-3}
KEADY 1	SU		3	1			19	13		µgm^{-3}
KEIGHLEY 11	UB			15				53		µgm^{-3}
KIRKCALDY 6	SU		12	12	12		67	44	37	µgm^{-3}
KIRKINTILLOCH 10	SU	20		14	16	74		67	75	µgm^{-3}
KIRKINTILLOCH 8	SU	10	11	10	10	76	60	66	61	µgm^{-3}
KIRKINTILLOCH 9	SU	13	14	15	13	74	63	56	63	µgm^{-3}
KNOTTINGLEY 3	SU	24	18	15	14	81	71	45	51	µgm^{-3}
LARNE 3	UB	17	18			25	32			µgm^{-3}
LARNE 4	SU				17				36	µgm^{-3}
LARNE 5	SU				18				40	µgm^{-3}
LEICESTER 19	UC	9	9			31	25			µgm^{-3}
LEIGH 4	SU		3	1			13	19		µgm^{-3}
LINCOLN 5	UB	9	8	7	7	50	25	50	44	µgm^{-3}
LISBURN 3	SU	17	17	14	19	70	63	54	41	µgm^{-3}
LIVERPOOL 16	UB	19				54				µgm^{-3}
LONDON CITY 16	UC	17		11	10	56		45	44	µgm^{-3}
LONDONDERRY 12		36				58				µgm^{-3}
LONDONDERRY 14	SU	36		19		120		74		µgm^{-3}
LONGSIDE 1		5				12				µgm^{-3}
LUNDWOOD (BARNSLEY) 1	SU	28				66				µgm^{-3}
LUNDWOOD (BARNSLEY) 2	SU		27	27	27		101	108	100	µgm^{-3}
MAGHERAFELT 1	SU	12	13	11	11	33	32	27	27	µgm^{-3}
MALTBY 2	SU	18	17	19		99	50	59		µgm^{-3}
MANCHESTER 11	UC	13	11	10	11	31	43	31	32	µgm^{-3}
MANCHESTER 15	UI	10	9	10	10	25	25	37	25	µgm^{-3}
MANCHESTER 21	SU	9	7	7	8	31	19	13	19	µgm^{-3}
MANSFIELD 10	UB	19	21			59	85			µgm^{-3}
MANSFIELD WOODHOUSE 2	SU	26	31	26	22	77	93	87	61	µgm^{-3}
MIDDLETON 3	SU	19	18			43	37			µgm^{-3}
MOIRA (LEICS) 1	SU		26				125			µgm^{-3}
NEW OLLERTON 2	SU	16	9	15	12	84	30	80	56	µgm^{-3}
NEWBURN 2	SU	8				39				µgm^{-3}

Annual Data statistics - Smoke and SO_2 Network (cont)

Site Name	Site Type	Annual Mean				Annual Max (24-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
NEWBURN 3	SU			7	9			46	39	µgm^{-3}
NEWCASTLE UPON TYNE 24	SU		7	8	10		33	59	39	µgm^{-3}
NEWCASTLE UPON TYNE 27	UC	8	9	11	14	37	37	58	42	µgm^{-3}
NEWPORT (MON) 26	UB	6	7	6	6	19	19	14	18	µgm^{-3}
NEWRY 3	UB	10	8	7	4	33	25	19	13	µgm^{-3}
NEWTOWNABBEY 1	SU	13	13			42	49			µgm^{-3}
NEWTOWNABBEY 2	SU	12	15			38	44			µgm^{-3}
NEWTOWNABBEY 4	SU				4				19	µgm^{-3}
NEYLAND 1	UB	5	1			18	12			µgm^{-3}
NORMANTON 4	SU	13	10	9		69	71	70		µgm^{-3}
NORWICH 7	UB	10	13		21	47	37		52	µgm^{-3}
NOTTINGHAM 20	UB	16	17			60	62			µgm^{-3}
OLDHAM 13	SU	39		36		90		77		µgm^{-3}
PETERHEAD 1		9				13				µgm^{-3}
PETERHEAD 2		6				13				µgm^{-3}
PETERHEAD 3		8				13				µgm^{-3}
PONTEFRACT 10	SU	12	14	10	9	41	73	47	43	µgm^{-3}
PORTADOWN 4	UB		9				24			µgm^{-3}
PORTSMOUTH 10	SU	12	12			49	61			µgm^{-3}
RAWTENSTALL 7	UB	13	13	9	10	37	49	20	25	µgm^{-3}
RETFORD 3	UB	19	17	16	16	71	66	65	52	µgm^{-3}
ROWLEY REGIS 3	SU	15	13	12		32	31	38		µgm^{-3}
RUNCORN 10	SU	9	8	10		27	20	27		µgm^{-3}
SCARBOROUGH 1	UB		11	10			55	56		µgm^{-3}
SEDGLEY 5	UB	13	11			56	32			µgm^{-3}
SELBY 5	UB	10	11	11	19	36	24	26	71	µgm^{-3}
SLOUGH 16	SU	9	7	7		18	18	12		µgm^{-3}
SOUTH KIRKBY 1	SU	22	19	14	16	74	69	51	56	µgm^{-3}
SOUTH NORMANTON 2	SU	9	10			44	45			µgm^{-3}
ST HELENS 36	UB	11	10	10	9	30	25	36	25	µgm^{-3}
ST HELENS 43	UB	12	11	8	9	33	63	39	20	µgm^{-3}
STIRLING (BURGH) 5	SU	12				38				µgm^{-3}
STOKE-ON-TRENT 20	UB	22				58				µgm^{-3}
STRABANE 2	SU	12	12	10	11	28	67	20	21	µgm^{-3}
SWINDON 2	SU	9	9	7	8	19	24	13	19	µgm^{-3}
THURROCK 13	SU	21	21	14	14	45	58	37	31	µgm^{-3}
TRAFFORD 1	SU	24	29	27	32	63	105	55	69	µgm^{-3}
TWINBROOK 1	SU		20	16			74	35		µgm^{-3}
WAKEFIELD 26	UC	12	10			110	68			µgm^{-3}
WALSALL 18	UB	6	6	4		60	43	30		µgm^{-3}
WARRINGTON 17	UB	10	13	13	11	31	25	83	33	µgm^{-3}
WATH-UPON-DEARNE 6	UB	12	19	18	28	69	92	86	85	µgm^{-3}
WEDNESFIELD 2	SU	13	8	10	6	80	30	67	49	µgm^{-3}
WEST KIRBY 2	SU	8	7	7	7	48	31	25	19	µgm^{-3}
WHITBURN 3	UB	20		21	27	39		97	56	µgm^{-3}
WHITEHAVEN 5	UB	8	8			19	18			µgm^{-3}
WIGAN 8	UB		2	1			13	13		µgm^{-3}
WOMBWELL 2	UB	23				57				µgm^{-3}
WOOLWICH 9	SU	22		14	22	51		33	54	µgm^{-3}
WORKINGTON 3	UB	13			11	33			24	µgm^{-3}
WORKSOP 12	UC			13	11			61	31	µgm^{-3}
WORSBROUGH BRIDGE 2	SU	27				62				µgm^{-3}
WREXHAM 10	SU	16	20	17		43	42	49		µgm^{-3}

Sulphur Dioxide SO_2 132

Sulphur dioxide as S

Air Quality Monitoring Data

Annual Data statistics - Other Acid deposition measurements

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Barcombe Mills	Rur	0.8	0.8	0.7	0.8	μgm^{-3}
Eskdalemuir 5002	Rur	0.3	0.4	0.3	0.4	μgm^{-3}
Glen Dye	Rur	0.3	0.5	0.3	0.4	μgm^{-3}
High Muffles	Rur	1.6	1.5	1.2	1.2	μgm^{-3}
Lough Navar 5006	Rur	0.2	0.3	0.1		μgm^{-3}
Stoke Ferry	Rur	1.1	0.9	0.8	0.9	μgm^{-3}
Strathvaich Dam	Rur	0.1	0.2	0.1	0.1	μgm^{-3}
Yarner Wood	Rur	0.4	0.7	0.3	0.6	μgm^{-3}

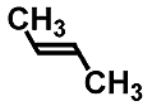
Annual Data statistics - Weekly Rural SO_2

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Appleacre1	Rur	1	1	1	1	μgm^{-3}
Benniguinea	Rur	0	0	0	0	μgm^{-3}
Bentra	Rur		1	1	1	μgm^{-3}
Brockhill 1	Rur	1				μgm^{-3}
Bush	Rur	1	1	1	1	μgm^{-3}
Bylchau	Rur	0	1	1	1	μgm^{-3}
Caenby 1	Rur	3	3	2	2	μgm^{-3}
Cam Forest	Rur	0	0			μgm^{-3}
Camborne 1	Rur	1	1	0	1	μgm^{-3}
Camphill 1	Rur	1	1	1	1	μgm^{-3}
Cardington 2	Rur	4	4			μgm^{-3}
Church Fenton	Rur				2	μgm^{-3}
Corpach 1	Rur	1	1	0	1	μgm^{-3}
Crai	Rur	1	1	1	1	μgm^{-3}
Cresselly 1	Rur	1	1	1	1	μgm^{-3}
Cwmystwyth	Rur	1	1	0	1	μgm^{-3}
Drayton	Rur			1	1	μgm^{-3}
Etton 1	Rur	2			1	μgm^{-3}
Fairseat	Rur	1		1	2	μgm^{-3}
Formoyle	Rur			0	0	μgm^{-3}
Forsinain	Rur	0	0	0	0	μgm^{-3}
Fort Augustus 2	Rur		0	0	0	μgm^{-3}
Hebden Bridge 2	Rur	2	2	1	2	μgm^{-3}
Husborne Crawley 1	Rur	1	2	1	1	μgm^{-3}
Little Horkesley 1	Rur	1	1	1	1	μgm^{-3}
Loch Leven 2	Rur	1	1	2	1	μgm^{-3}
Marshfield 1	Rur	1	2	1	1	μgm^{-3}
Pitlochry	Rur	0	0	0	0	μgm^{-3}
Preston Montford 2	Rur	1	1	1	1	μgm^{-3}
Ratcliffe 13	Rur	3	2			μgm^{-3}
Redesdale 2	Rur	1	0	1	2	μgm^{-3}
Rockbourne 1	Rur	1	1	1	1	μgm^{-3}
Rosemaund	Rur	1	1	0	1	μgm^{-3}
Sutton Bonington	Rur			2	1	μgm^{-3}
Wakefield 24	Rur	3	3	2	2	μgm^{-3}
Waunfawr 1	Rur	1	3	1	1	μgm^{-3}

t-but-2-ene C_4H_8 133

Alternative Name: trans-2-butene
CAS Number: 624-64-6
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

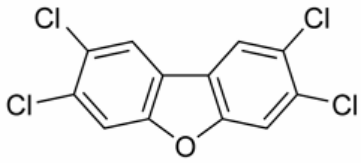
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				9				μgm^{-3}
Birmingham East	UB	1				44				μgm^{-3}
Bristol East	UB	1				10				μgm^{-3}
Cardiff East	UB	0	0			5	3			μgm^{-3}
Edinburgh Med. Sch.	UB	1	0			5	6			μgm^{-3}
Harwell	Rur	0				1				μgm^{-3}
Leeds Potternewton	UB	1				17				μgm^{-3}
Liverpool Speke	UB	1				43				μgm^{-3}
London Eltham	SU	0				4				μgm^{-3}
London Marylebone Road	K	2	1	1	1	12	11	8	7	μgm^{-3}
London UCL	Rd	1				7				μgm^{-3}
Southampton Centre	UC	1				8				μgm^{-3}

2,3,7,8-Tetrachlorodibenzofuran 134

Alternative Name: 2378 TCDF
CAS Number: 51207-31-9
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

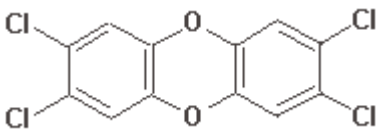
Annual Data statistics - Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	3.4	3.9	9.0	9.5	fgm^{-3}
High Muffles	Rur	2.5	1.7	6.4		fgm^{-3}
London 2a	UB		10.5	17.1	14.3	fgm^{-3}
Manchester	UB	27.3	22.8	52.8	64.0	fgm^{-3}
Middlesbrough	UB	10.5	19.0	39.7	27.5	fgm^{-3}
Stoke Ferry	Rur		6.3	10.3	13.1	fgm^{-3}

2,3,7,8-Tetrachlorodibenzo-p-dioxin 135

Alternative Name: 2378 TCDD
CAS Number: 1746-01-6
Type of pollutant: Dioxins & Furans

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL	✓					
Other						

Air Quality Monitoring Data

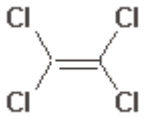
Annual Data statistics -Dioxins and Furans

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Hazelrigg	Rur	0.5	0.7	0.9	1.5	fgm^{-3}
High Muffles	Rur	0.3	0.3	2.0		fgm^{-3}
London 2a	UB		1.6	1.7	2.1	fgm^{-3}
Manchester	UB	2.8	3.1	2.0	5.3	fgm^{-3}
Middlesbrough	UB	1.7	2.0	2.2	5.6	fgm^{-3}
Stoke Ferry	Rur		0.9		2.0	fgm^{-3}

Tetrachloroethylene $CCl_2=CCl_2$ 136

Alternative Name: Tetrachloroethene', perchloroethylene
CAS Number: 127-18-4
Type of pollutant: Trace Gas

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO	✓					
EPAQS						
AQS						
EAL						
Other						

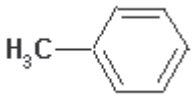
Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	09/2000		17	ngm^{-3}
Mace Head	R	10/2000	17	17	ngm^{-3}
Mace Head	R	11/2000	21	26	ngm^{-3}
Mace Head	R	12/2000	25	58	ngm^{-3}
Mace Head	R	01/2001	27	49	ngm^{-3}
Mace Head	R	02/2001	28	34	ngm^{-3}
Mace Head	R	03/2001	30	49	ngm^{-3}
Mace Head	R	04/2001	33	41	ngm^{-3}
Mace Head	R	05/2001	34	54	ngm^{-3}
Mace Head	R	06/2001	25	29	ngm^{-3}
Mace Head	R	07/2001	20	22	ngm^{-3}
Mace Head	R	08/2001	17	20	ngm^{-3}
Mace Head	R	09/2001	17	26	ngm^{-3}
Mace Head	R	10/2001	23	32	ngm^{-3}
Mace Head	R	11/2001	33	38	ngm^{-3}
Mace Head	R	12/2001	35	58	ngm^{-3}
Mace Head	R	01/2002	37	44	ngm^{-3}
Mace Head	R	02/2002	38	39	ngm^{-3}
Mace Head	R	03/2002	39	49	ngm^{-3}
Mace Head	R	04/2002	35	45	ngm^{-3}
Mace Head	R	05/2002	34	40	ngm^{-3}
Mace Head	R	06/2002	27	28	ngm^{-3}
Mace Head	R	07/2002	21	22	ngm^{-3}
Mace Head	R	08/2002	17	21	ngm^{-3}
Mace Head	R	09/2002	19	53	ngm^{-3}
Mace Head	R	10/2002	25	47	ngm^{-3}
Mace Head	R	11/2002	37	42	ngm^{-3}
Mace Head	R	12/2002	44	90	ngm^{-3}
Mace Head	R	01/2003	44	50	ngm^{-3}
Mace Head	R	02/2003	44	81	ngm^{-3}
Mace Head	R	03/2003	44	57	ngm^{-3}
Mace Head	R	04/2003	42	72	ngm^{-3}
Mace Head	R	05/2003	35	41	ngm^{-3}
Mace Head	R	06/2003	28	32	ngm^{-3}
Mace Head	R	07/2003	22	25	ngm^{-3}
Mace Head	R	08/2003	18	21	ngm^{-3}
Mace Head	R	09/2003	19	26	ngm^{-3}
Mace Head	R	10/2003	27	49	ngm^{-3}
Mace Head	R	11/2003	31	68	ngm^{-3}
Mace Head	R	12/2003	44	54	ngm^{-3}

Toluene C_7H_8 137

Alternative Name: Methylbenzene
CAS Number: 108-88-3
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓					

Air Quality Monitoring Data

Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	4				105				μgm^{-3}
Birmingham East	UB	5				2047				μgm^{-3}
Bristol East	UB	5				70				μgm^{-3}
Cardiff Centre	UC				4				69	μgm^{-3}
Cardiff East	UB		6				86			μgm^{-3}
Edinburgh Med. Sch.	UB		4				131			μgm^{-3}
Glasgow Kerbside	K				7				87	μgm^{-3}
Harwell	Rur	1	1	2	1	136	31	30	25	μgm^{-3}
Leeds Potternewton	UB	6				76				μgm^{-3}
Liverpool Speke	UB	6				202				μgm^{-3}
London Eltham	SU	5				88				μgm^{-3}
London Marylebone Road	K	29	21	17	13	146	175	639	99	μgm^{-3}
London UCL	Rd	8				125				μgm^{-3}
Middlesbrough	UI	4				67				μgm^{-3}
Southampton Centre	UC	9				208				μgm^{-3}

t-pent-2-ene C_5H_{10} 138

Alternative Name: trans-2-pentene
CAS Number: 646-04-8
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure

Air Quality Monitoring Data

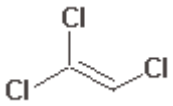
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
Belfast South	UB	0				7				μgm^{-3}
Birmingham East	UB	0				20				μgm^{-3}
Bristol East	UB	0				6				μgm^{-3}
Cardiff East	UB	0	0			5	5			μgm^{-3}
Edinburgh Med. Sch.	UB	0	0			4	6			μgm^{-3}
Harwell	Rur	0				1				μgm^{-3}
Leeds Potternewton	UB	0				8				μgm^{-3}
Liverpool Speke	UB	0				35				μgm^{-3}
London Eltham	SU	0				3				μgm^{-3}
London Marylebone Road	K	2	1	1	1	25	10	9	8	μgm^{-3}
London UCL	Rd	0				6				μgm^{-3}
Middlesbrough	UI	0				4				μgm^{-3}
Southampton Centre	UC	0				21				μgm^{-3}

Trichloroethylene $CHCl=CCl_2$ 139

Alternative Name: Trichloroethene
CAS Number: 79-01-6
Type of pollutant: Trace Gas

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓		✓			

Background and Average

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	01/2000	18	25	ngm^{-3}
Mace Head	R	02/2000	17	18	ngm^{-3}
Mace Head	R	03/2000	10	17	ngm^{-3}
Mace Head	R	04/2000	6	17	ngm^{-3}
Mace Head	R	05/2000	1	22	ngm^{-3}
Mace Head	R	06/2000	1	8	ngm^{-3}
Mace Head	R	07/2000		40	ngm^{-3}
Mace Head	R	08/2000	1	58	ngm^{-3}
Mace Head	R	09/2000	1	8	ngm^{-3}
Mace Head	R	10/2000	3	4	ngm^{-3}
Mace Head	R	11/2000	7	22	ngm^{-3}
Mace Head	R	12/2000		114	ngm^{-3}
Mace Head	R	01/2001	21	100	ngm^{-3}
Mace Head	R	02/2001	21	47	ngm^{-3}
Mace Head	R	03/2001	15	98	ngm^{-3}
Mace Head	R	04/2001	4	6	ngm^{-3}
Mace Head	R	05/2001	1	29	ngm^{-3}
Mace Head	R	06/2001	1	7	ngm^{-3}
Mace Head	R	07/2001	1	4	ngm^{-3}
Mace Head	R	08/2001	1	9	ngm^{-3}
Mace Head	R	09/2001	1	10	ngm^{-3}
Mace Head	R	10/2001	2	14	ngm^{-3}
Mace Head	R	11/2001	5	14	ngm^{-3}
Mace Head	R	12/2001	17	80	ngm^{-3}
Mace Head	R	01/2002	14	29	ngm^{-3}
Mace Head	R	02/2002	13	13	ngm^{-3}
Mace Head	R	03/2002	9	24	ngm^{-3}
Mace Head	R	04/2002	3	17	ngm^{-3}
Mace Head	R	05/2002	2	10	ngm^{-3}
Mace Head	R	06/2002	1	4	ngm^{-3}
Mace Head	R	07/2002		7	ngm^{-3}
Mace Head	R	08/2002	0	5	ngm^{-3}
Mace Head	R	09/2002	1	49	ngm^{-3}
Mace Head	R	10/2002	3	43	ngm^{-3}
Mace Head	R	11/2002	8	14	ngm^{-3}
Mace Head	R	12/2002	12	86	ngm^{-3}
Mace Head	R	01/2003	14	34	ngm^{-3}
Mace Head	R	02/2003	13	73	ngm^{-3}

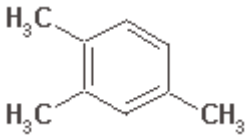
Background and Average (cont)

Site Name	Site Type	Period	Background	Average	Unit
Mace Head	R	03/2003	10	95	ngm^{-3}
Mace Head	R	04/2003	5	37	ngm^{-3}
Mace Head	R	05/2003	1	6	ngm^{-3}
Mace Head	R	06/2003	1	8	ngm^{-3}
Mace Head	R	07/2003	1	5	ngm^{-3}
Mace Head	R	08/2003	0	7	ngm^{-3}
Mace Head	R	09/2003	1	4	ngm^{-3}
Mace Head	R	10/2003	4	41	ngm^{-3}
Mace Head	R	11/2003	5	37	ngm^{-3}
Mace Head	R	12/2003	16	27	ngm^{-3}

1,2,4-trimethylbenzene C_9H_{12} 140

Alternative Name: Pseudocumene
CAS Number: 95-63-6
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Standards

Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other			✓			

Air Quality Monitoring Data

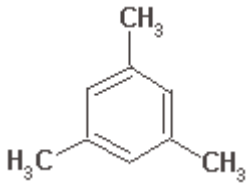
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
London Marylebone Road	K		6	4	3		210	47	20	μgm^{-3}

1,3,5-trimethylbenzene C_9H_{12} 141

Alternative Name: Mesitylene
CAS Number: 108-67-8
Type of pollutant: Volatile Organic Compound, Urban Pollutant

Structure



Air Quality Monitoring Data

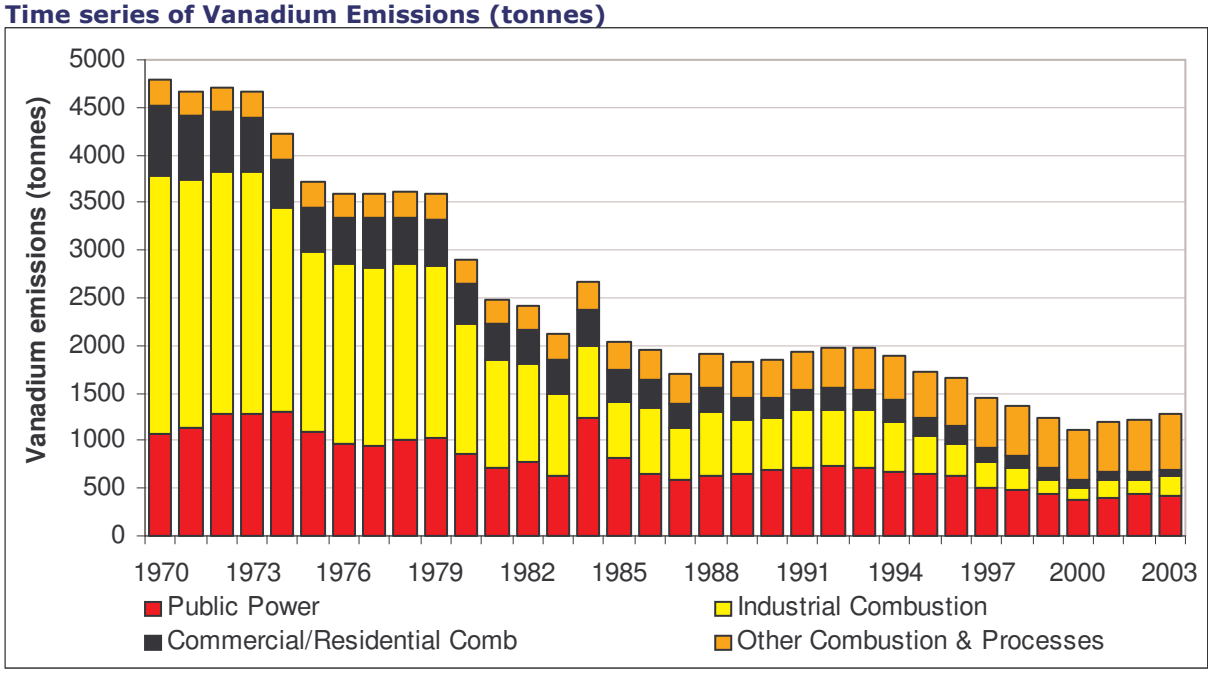
Annual Data statistics - Automatic Hydrocarbon Monitoring Network

Site Name	Site Type	Annual Mean				Annual Max (1-hour)				Unit
		2000	2001	2002	2003	2000	2001	2002	2003	
London Marylebone Road	K		2	1	1		67	17	8	μgm^{-3}

Vanadium V 142

Alternative Name:
CAS Number: 7440-62-2
Type of pollutant: Trace Metal

Time series of Vanadium Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓		
Year Began	1998	1990	2001	1996

Air Quality Standards

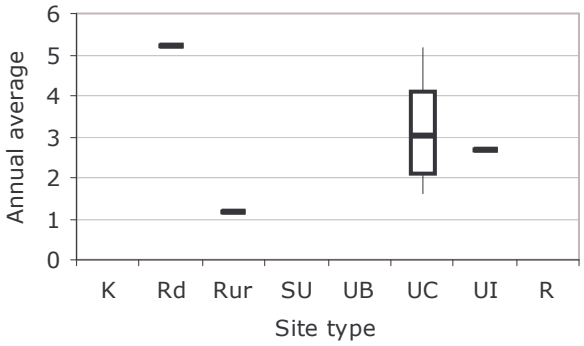
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO			✓			
EPAQS						
AQS						
EAL						
Other			✓			

Vanadium V 142

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	5.2	5.2	5.2	5.2	5.2
Rur	1	1.2	1.2	1.2	1.2	1.2
SU	0					
UB	0					
UC	6	3.0	1.6	5.2	1.7	5.0
UI	1	2.7	2.7	2.7	2.7	2.7
R	0					



Vanadium Annual Average Boxplot

Air quality monitoring site map in 2003

Air Quality Monitoring Data

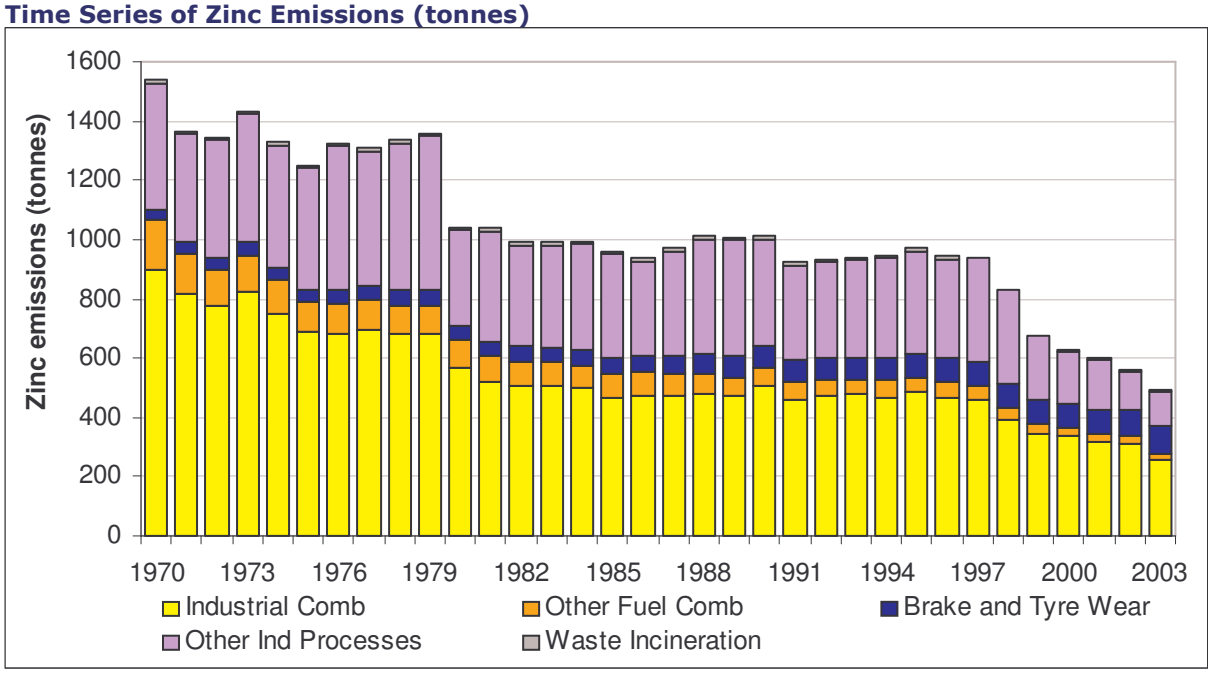
Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				2.7	ngm^{-3}
Cardiff	UC				2.5	ngm^{-3}
Central London	UC			3.9	5.2	ngm^{-3}
Eskdalemuir	Rur	0.5	0.4	0.7	1.2	ngm^{-3}
Glasgow	UC	1.7	2.2	1.4		ngm^{-3}
Leeds	UC	2.8	2.9	2.8	2.2	ngm^{-3}
London Brent	UB	4.4	4.7	3.8	4.7	ngm^{-3}
Manchester	UC				2.1	ngm^{-3}
Motherwell	UC	1.3	2.1	1.2	1.6	ngm^{-3}

Zinc Zn 143

Alternative Name:
CAS Number: 7440-66-6
Type of pollutant: Trace Metal

Time Series of Zinc Emissions (tonnes)



Emission Inventory

	Pollution Inventory	NAEI	EPER	LAEI
Annual Totals	✓	✓	✓	
Year Began	1998	1990	2001	1996

Air Quality Standards

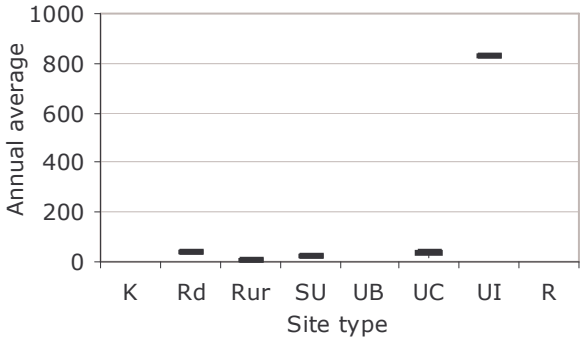
Organisation	Annual Mean	Seasonal Mean	24-hourly Mean	8-hourly Mean	1-hourly Mean	15-minute Mean
EC Directive						
WHO						
EPAQS						
AQS						
EAL						
Other	✓		✓			

Zinc Zn 143

Summary of Air Quality Data in 2003

Non-automatic Monitoring Annual Mean (ngm^{-3})

Site type	No. of Sites	Mean	Min	Max	5%ile	95%ile
K	0					
Rd	1	39.5	39.5	39.5	39.5	39.5
Rur	1	7.6	7.6	7.6	7.6	7.6
SU	1	26.3	26.3	26.3	26.3	26.3
UB	0					
UC	6	37.2	16.4	47.4	21.0	46.5
UI	1	834.7	834.7	834.7	834.7	834.7
R	0					



Zinc Annual Average Boxplot

Air quality monitoring site map in 2003

Air Quality Monitoring Data

Annual Data statistics - Metal

Site Name	Site Type	Annual Mean				Unit
		2000	2001	2002	2003	
Brookside	UI				834.7	ngm^{-3}
Cardiff	UC				47.4	ngm^{-3}
Central London	UC			35.3	35.1	ngm^{-3}
Eskdalemuir	Rur	3.3	5.3	4.1	7.6	ngm^{-3}
Glasgow	UC	30.0	50.0	28.0		ngm^{-3}
Leeds	UC	33.0	42.0	46.2	39.1	ngm^{-3}
London Brent	UB	32.0	45.0	34.2	41.6	ngm^{-3}
Manchester	UC				43.7	ngm^{-3}
Motherwell	UC	12.0	35.0	15.1	16.4	ngm^{-3}
Pontardawe	SU				26.3	ngm^{-3}

4 Sources for more information

This section of the *UKAP* provides references and links (in the following table) to sources of more detailed and up-to-date information on:

- environmental standards
- online sources of monitoring data
- information on health effects of atmospheric pollutants
- trends in UK air quality
- What's In Your Backyard (WIYB) (information on Agency-regulated processes in England and Wales)

Air Pollution in Canada	**http://www.ec.gc.ca/air_e.html**
Air Quality in Wales	**http://www.welshairquality.co.uk/**
Defra	**http://www.defra.gov.uk/environment/airquality/**
Environmental Protection Agency – United States	**http://www.epa.gov/air/**
Environment Agency	**http://www.environment-agency.gov.uk/subjects/airquality/**
European Environment Agency	**http://themes.eea.eu.int/Specific_media/air**
National Atmospheric Emissions Inventory	**http://www.naei.org.uk/**
UK Air Quality Archive	**http://www.airquality.co.uk**
UK Air Quality Expert Group	**http://www.defra.gov.uk/environment/airquality/aqeg/index.htm**
World Health Organisation	**http://www.euro.who.int/eprise/main/WHO/Progs/AIQ/Home/**

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Abbott, J., Stedman, J. and Bower, J., 2005. *Review of background air-quality data and methods to combine these with process contributions: technical modelling aspects*. Bristol: Environment Agency.

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Stedman, J., Abbott, J., Willis, P. and Bower, J., 2005. *Review of background air-quality data and methods to combine these with process contributions*. Bristol: Environment Agency.

Department of the Environment, 1995. *Air Quality A to Z: a directory of air quality data for the United Kingdom in the 1990s.* Contract number PECD 7/12/182, June 1995. London: DoE.

Appendix A: Definition of site classes and other terminology

Kerbside (K)

A site sampling within 1 m of the edge of a busy road.

Sources influences:	*Local traffic.*
Examples of objectives:	*Identifying vehicle pollution blackspots.*
	Assessing worst-case scenarios.
	Evaluating impacts of vehicle emission control technologies.
	Determining impacts of traffic planning/calming schemes.

Roadside (Rd)

A site sampling between 1 m of the kerbside of a busy road and the back of the pavement. Typically this will be within 5 m of the road, but could be up to 15 m.

Sources influences:	*Local traffic.*
Examples of objectives:	*Assessing worst-case population exposure.*
	Evaluating impacts of vehicle emission controls.
	Determining impacts of traffic planning/calming schemes.

Urban Centre (UC)

A non-kerbside site, located in an area that is representative of typical population exposure in town or city centres (e.g. pedestrian precincts and shopping areas). This is likely to be strongly influenced by vehicle emissions, as well as other general urban sources of pollution. Sampling at or near breathing-zone heights will be applicable.

Sources influences:	*Vehicle, commercial, space heating.*
Examples of objectives:	*Identification of long-term urban trends.*

Urban Background (UB)

An urban location that is some way from pollutant sources and therefore broadly representative of city-wide background conditions (for example, elevated locations, parks and urban residential areas).

Sources influences:	*Vehicle, commercial, space-heating.*
Examples of objectives:	*Trend analysis.*
	Urban planning.
	Traffic and land-use planning.

Urban Industrial (UI)

An area where industrial sources make an important contribution to the total pollution burden.

Sources influences:	*Industrial, motor vehicles.*
Examples of objectives:	*Assessing local impacts on health and amenity.* *Process optimisation.* *Source attribution/identification.* *Providing model input data.* *Model development/validation.* *Local planning and plant authorisation.*

Suburban (SU)

A location type situated in a residential area on the outskirts of a town or city.

Sources influences:	*Traffic, commercial, space-heating, regional transport, urban plume downwind of a city.*
Examples of objectives:	*Traffic and land-use planning.* *Investigating urban plumes.*

Rural (Rur)

An open country location, in an area of low population density, situated as far as possible from roads, and populated and industrial areas.

Sources influences:	*Regional long-range transport, urban plume.*
Examples of objectives:	*Ecosystem impact studies.* *Assessing compliance with critical loads and levels for crops and vegetation.* *Investigating regional and long-range transport.* *Identification of ozone "hotspots".*

Remote (R)

A site in open country, located in an isolated rural area, experiencing regional background pollutant concentrations for much of the time.

Sources influences:	*Regional/hemispheric background.*
Examples of objectives:	*Assessing 'unpolluted' global or hemispheric background conditions.* *Long-range transport studies.* *Long-term baseline trend analysis.*

(Special) (Sp)

A special source-oriented category covering monitoring studies undertaken in relation to specific emission sources such as power stations, petrol stations, car parks or airports.

Pollutant Index

Pollutant	ID
Cis-2-pentene	35
Copper	34
C-pent-2-ene	35
Cyclopenta(c,d)pyrene	36
Cyclopentaphenanthrene	95
Dibenz(ae)pyrene	37
Dibenz(ah)anthracene	38
Dibenz(ai)pyrene	39
Dibenzo(al)pyrene	40
Dibenzo(cd,jk)pyrene	5
1,2,3,4-dibenzopyrene	40
1,2,4,5-dibenzopyrene	37
1,2-dibromo-1,1,2,2-tetrafluoroethane	51
1,2-dichloro-1,1,2,2-tetrafluoroethane	27
1,1-dichloro-1-fluoroethane	54
1,1-dichloro-2,2,2-trifluoroethane	52
Dichlorodifluoromethane	29
Dichlorodiphenyldichloroethylene	41
Dichloromethane	94
Dieldrin	42
1,1-difluoroethane	71
1,3-dimethylbenzene	100
1,2-dimethylbenzene	113
1,4-dimethylbenzene	127
Dimethylmethane	125
Diphenylenemethane	48
Endrin	43
Ethane	44
Ethene	46
Ethylbenzene	45
Ethylene	46
1,8-Ethylenenaphthalene	1
Ethyne	3
Fluoranthene	47
Fluorene	48
Halon-1211	49
Halon-1301	50
Halon-2402	51
HCFC-123	52
HCFC-124	53
HCFC-141b	54
HCFC-142b	55
HCFC-22	56
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1,2,3,4,6,7,8-Heptachlorodibenzodioxin	57
1,2,3,4,7,8,9-Heptachlorodibenzofuran	58
1,2,3,4,6,7,8-Heptachlorodibenzofuran	73
Heptane	59
Hexachlorobenzene	60
Hexachlorocyclohexane	61
1,2,3,4,7,8-Hexachlorodibenzofuran	62
1,2,3,6,7,8-Hexachlorodibenzofuran	63
1,2,3,7,8,9-Hexachlorodibenzofuran	64

Pollutant	ID
2,3,4,6,7,8-Hexachlorodibenzofuran	65
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	66
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	67
Hexane	68
HFC-125	69
HFC-134a	70
HFC-152a	71
1234678 HpCDD	57
123789 HpCDD	72
1234789 HpCDF	58
1234678 HpCDF	73
123478 HxCDD	66
123678 HxCDD	67
123478 HxCDF	62
123678 HxCDF	63
123789 HxCDF	64
234678 HxCDF	65
Hydrofluoric acid	75
Hydrogen	74
Hydrogen fluoride	75
i-butane	76
i-hexane	96
Indeno(123,cd)pyrene	77
Indenopyrene	77
Iodomethane	88
i-pentane	78
Iron	79
Isoprene	80
laughing gas	108
Lead	81
Magnesium	82
Magnesium in precipitation	82
Manganese	83
Marsh gas	85
Mercury	84
Mesitylene	141
Methane	85
Methyl bromide	86
Methyl chloride	89
Methyl chloroform	87
Methyl iodide	88
1-methylanthracene	90
9-methylanthracene	91
2-methylanthracene	92
Methylbenzene	137
2-methylbuta-1,3-diene	80
2-methylbutane	78
5-methylchrysene	93
Methylene dichloride	94
4,5-methylenephenanthrene	95
2-methylpentane	96
3-methylpentane	97
1-methylphenanthrene	98

Pollutant	ID
2-methylphenanthrene	99
2-methylpropane	76
m-xylene	100
n-butane	101
n-heptane	59
n-hexane	68
Nickel	102
Nitrate	103
Nitric acid	104
Nitrogen dioxide	105
Nitrogen monoxide	106
Nitrogen oxides	107
Nitrous oxide	108
n-pentane	109
12346789 OCDD	111
12346789 OCDF	110
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	110
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	111
Organic Carbon	112
o-xylene	113
Ozone	114
p,p`-DDE	41
Paranaphtalene	6
Pariculate element carbon, black carbon, EC	20
Particulate Matter 10	115
Particulate Matter 2.5	116
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