REPORT

Communication of Air Quality Data and Information: Operational Report for May to July 2002

A report produced for the Department for Environment, Food and Rural Affairs, the Scottish Executive, the National Assembly for Wales and the Department of the Environment for Northern Ireland

AEAT/ENV/R/1222 Issue 1
October 2002

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Executive Summary

The objective of the Air Quality Communications project is to collate and disseminate air quality information and data in line with the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, and the EC Directive on Air Quality Management and Assessment and associated Daughter Directives. This quarterly report details the project progress made from 1st May to 31st July 2002.

Development of a new air quality database for the world-wide-web commenced in mid-October 2001 following agreement of the specification set out in the report AEAT/ENV/R0813/Issue 1.

The new Web site was launched on May 17th, together with the associated improvements to the Teletext, Freephone and e-mail bulletin services. All these services also launched the Department's new, updated air pollution forecasting service at the same time.

All the new air quality information systems were successfully launched without any downtime in the services.

In the first half of May the existing Air Quality Communications systems continued to deliver data to a high success rate. At the same time the final pre-launch developments to the new services were made in the following areas:

- Upload of historical measurement data to the on-line database.
- Upload of reports and contracts to the new contracts and reports databases.
- Finishing touches to the user-interface for the web site.
- Testing the functionality for Frequently Asked Questions.
- Preparing final text and links for the web pages.
- Uploading information on air quality management areas to the LAQM database.
- Testing of the data and statistics selection screens and downloads.
- Testing of the e-mail and Freephone bulletin services.

The development of the new web was carried out according to the project specification and the requirements of the government e-guidelines.

There have been some initial problems with the download of air quality data and statistics to technical users of the web site. Many of the initial comments from these users have been addressed and improvements made during this quarter. Further developments and improvements to this service are ongoing.

During the 3-month period the overall success rates for the delivery of air quality bulletins were as follows:

Freephone 0800 556677 – 100% transmission success rate.
TELETEXT page 155 – 93% transmission success rate.
E-mail bulletins - 99% transmission success rate.

The changing of the Air Quality Archive format and style as well as the way in which archive usage is calculated, has resulted in a significant change to the number of recorded web site hits. The number of monthly averaged hits per day on the air quality archive web site varied between 1,886 (in May) and 2,732 (in July) during this quarter. We dealt with 209 enquiries to the aqinfo@aeat.co.uk e-mail address for further help with the Web site.

An average 31 people per day called the Freephone number for air quality information for their area, whilst an average 24 callers per day requested information for another area of the UK.

There was only a single breakdown in the service during the quarter. This took longer than the specified time for repair:

- **12th – 13th June 2002** – A technical error by the service provider for the Air Quality Freephone service prevented operation of the system for more than 22 hours between 12.17 on June 12th and 10.30 on the following day. The fault was quickly identified and although it took longer than the specified time for repair, measures have now been implemented to prevent the error occurring in the future.

During July and August 2002, **netcen** provided air quality statistics to complete the EC First Daughter Directive questionnaire for 2001 on behalf of Defra. 2001 was the first time that the questionnaire was required to be completed and a considerable amount of work was involved. Around 20 tables of statistics had to be filled in and the results from the monitoring networks then merged with modelled data to complete the picture for the whole of the UK. The tables were completed to schedule, carefully checked to confirm their accuracy and then forwarded to Defra.

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1 Introduction

Air pollution and its impacts on human health and the natural environment continue to be a major policy issue for the Department for Environment, Food and Rural Affairs, The Scottish Executive, The National Assembly for Wales and DoE Northern Ireland. This is the third operational report on the Communication of Air Quality Data and Information contract which these organisations have let to **netcen**.

The objective of this project is to collate and disseminate air quality information and data in line with the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, and the EC Directive on Air Quality Management and Assessment and associated Daughter Directives. This report details the progress of the project made from 1st May to 31st July 2002.

The objective of the project involves 4 principal elements:

1. Management of air quality data from monitoring networks.
2. Dissemination of air quality data from monitoring networks.
3. Provision of statistical summaries of air quality data.
4. Maintenance and development of the Air Quality Archive web site.

The dissemination of air quality information will be achieved through the use of the Air Quality Information System (Figure 1.1) which is able to present a large volume of wide-ranging and regularly updated information to the end user via a number of different media:

1. *Freephone 0800 556677.*
   This service is updated hourly via the bulletin dissemination system and is widely available to members of the public.

2. *Teletext page 155*
   This is updated hourly by the bulletin dissemination system and provides air quality information via the television making it widely accessible from people's homes.

3. *Email bulletin*
   Emails are currently dispatched daily to over 100 recipients. The service is available on request and bulletins can be tailored the specific needs of the recipient.

4. *Web based access to archive*
   The web site is updated hourly via the bulletin dissemination system and is a very effective mechanism for providing both large data volumes and more meaningful summaries and statistics. A wide variety of data can be stored here allowing the end user to select the information most appropriate to them in a number of formats (graphical, numerical)

This provides a diverse range of people with access to up to date air quality information that is most appropriate to their individual needs. The AQ Information System contains back up servers and systems to allow for full fault tolerance. The result is a highly reliable information dissemination system.

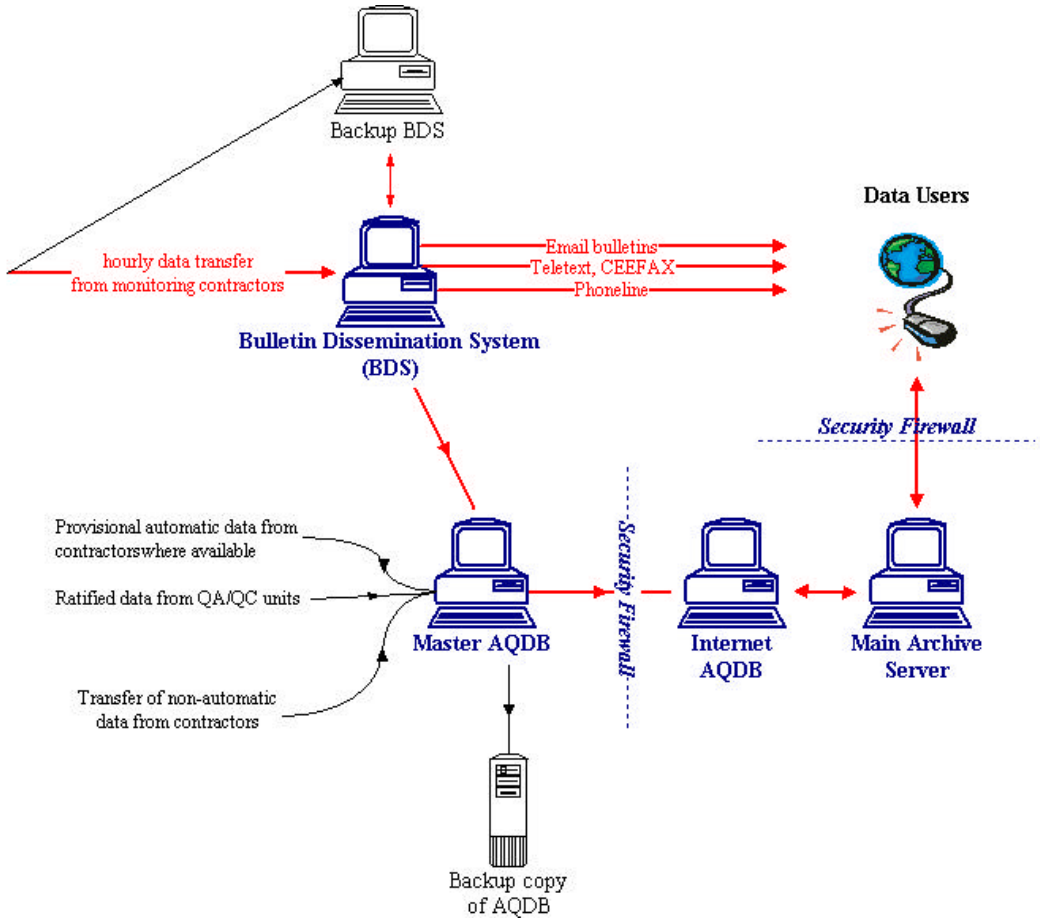


Figure 1.1 - Air Quality Information System

2 Developments during this period

A major task within the project has been to radically change the way in which the air quality data are stored on the internet server. Since its inception, the Air Quality Archive has used “flat files” of simple text to store all the values. These have now been replaced by an on-line relational database which will make the user interface more flexible and also improve the efficiency and reliability of the whole system.

The first step in the development of the new database was the delivery of the specification – AEAT/ENV/R0813/Issue1. This dealt with the definition of the database structure:

- The pollutants, site details, networks, to be included.
- The data selection options.
- The reporting of raw data including units
- The reporting of standard summary data
- The reporting of exceedence statistics.

The document was circulated for comment and the development of the core database structure commenced at this stage.

Previous quarterly reports have summarised progress on:

1. Developing the back-end of the new air quality database. This had involved setting up all the data fields, writing and testing the scripts for data input, and setting up the systems for managing the new system. It also reported work on designing the new reports and contracts databases, reviewing the content of the old web site, and on some initial designs for the new web site pages.
2. Developing the new style air quality bulletins, web site and database. This included:
   (i) Uploading over 80 million data records.
   (ii) Designing and developing the Web site Home Page including the interactive map and drill-down bulletins and associated information.
   (iii) Designing and developing the interface for providing basic air quality data and exceedences.
   (iv) Designing and developing the other main sections of the web site on Local Air Quality Management, Research Reports and Research Contracts.
   (v) Writing the text for static information pages and preparing the Frequently Asked Questions, Site Map and other related information and links for the web site.
   (vi) Preparing for the launch of the new air quality bulletin services on Teletext, Freephone and e-mail.

During the period of this quarterly report there were really two separate periods of activity, as detailed below.

2.1 PRIOR TO LAUNCH OF THE NEW SERVICES – MAY 1ST TO 17TH 2002

Most of the activity during this period was in putting the finishing touches to the text on the static information pages on the web site, and in testing and implementing the software for the air quality bulletins, data and statistics downloads.

Specifically, the following items of work were carried out:

- During this period the provisional hourly data from the automatic networks continued to be uploaded in real time to the database.
- Monitoring data from the NO_2 diffusion tube survey, 1992 to 2001 were uploaded to the database.
- The routines for presenting hourly air quality bulletins to the public via the web site home page were tested.
- The new Freephone and e-mail bulletin services were tested.
- Further air quality reports and contracts information were uploaded to the Research Information databases.
- **Some finishing touches were made to the format of the user-interface for the web site.**
- **Testing the functionality for Frequently Asked Questions.**
- **Preparing final text and links for the web pages.**
- **Uploading further information on air quality management areas to the LAQM database.**
- **Testing of the data and statistics selection screens and downloads.**

On May 17th 2002 all the new air quality information systems were successfully launched without any downtime in the services. Figure 2.1 below shows the final version of the Air Quality Archive home page, which is now live to the public. An example of the new e-mail air quality bulletin with the readings and forecasts summarised into the 16 zones and 16 agglomerations format is given in Appendix 2.

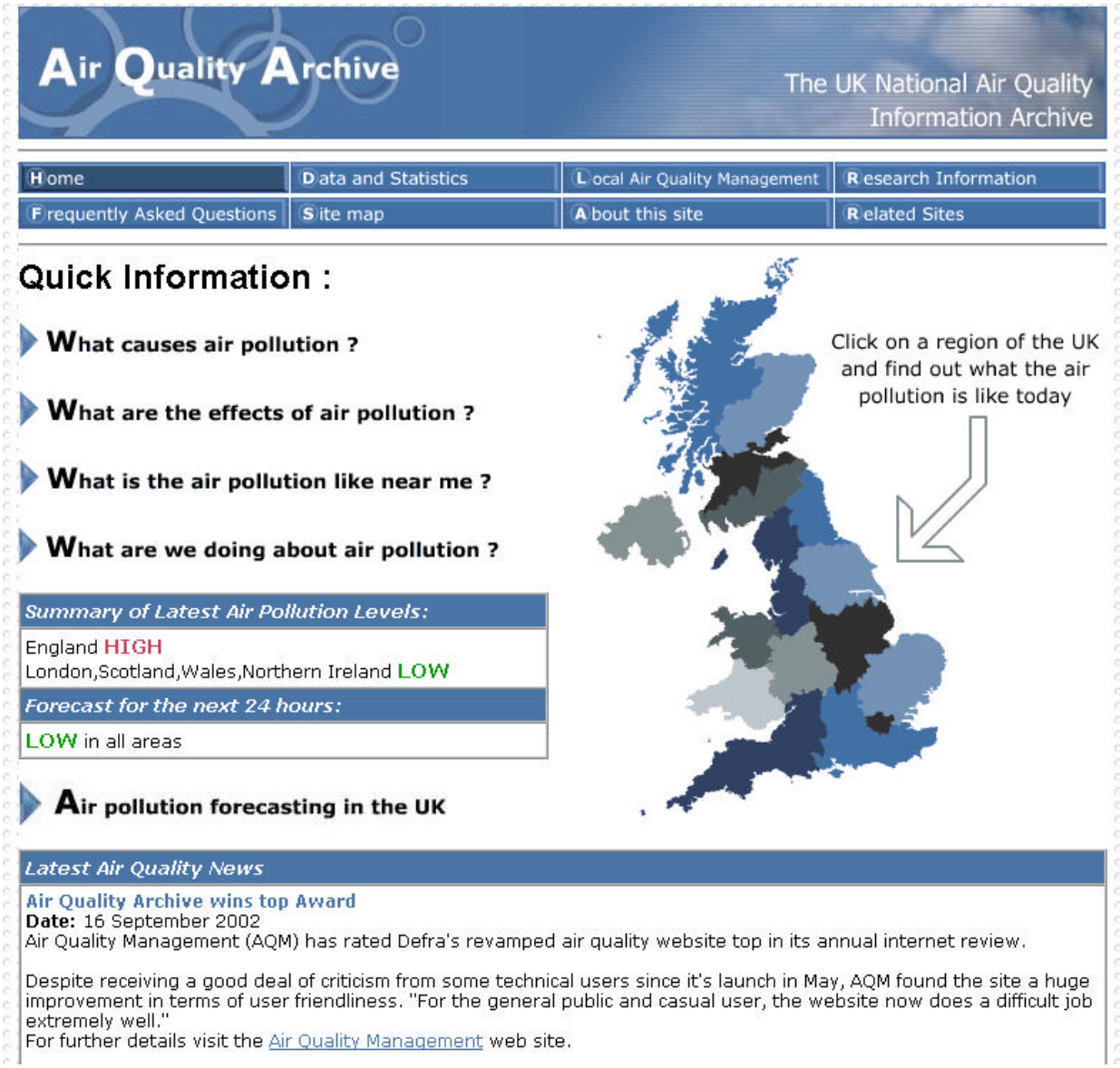


Figure 2.1 – The Air Quality Archive Web Site Home Page

2.2 FOLLOWING THE LAUNCH OF THE NEW SERVICES – MAY 17TH TO JULY 31ST 2002

Following the launch of the new air quality bulletin services and the Air Quality Archive Web Site general feedback indicated that users of the new services were clearly split into two categories:

1. The casual or occasional user of air pollution data.

These users were mainly non-technical and were looking for some simple information on either the latest air pollution levels in their area, or some background information for a report or project. This group found the new services much more user friendly and accessible than previously. In particular, the air pollution bulletins, forecasts, reports and local air quality management information sections of the new air quality web site were praised. In addition, the interactive FAQ's section was found to be very helpful was frequently updated following enquiries about the site.

2. The technical user of air pollution data.

These users often required specific or large volumes of air quality data and statistics. Many of them had become very familiar with the format of the data on the old site and its drawbacks, some had even set up clever and sophisticated software to download and manipulate the data for their own means. Because of this there were a number of complaints about the changes to the way in which the new site allowed people to select and download data. In addition there were a number of initial problems with the "data and statistics" section of the web site which did not become apparent until they were pointed out by the regular users.

Any minor problems were fixed immediately that they were pointed out to us, whilst a series of more detailed comments were compiled and listed for ongoing improvements to the service. The list of comments is presented in Box 1 below and was discussed with Defra at a project review meeting on July 19th 2002.

Box 1 - Comments on the new Air Quality Archive

The following were published in Air Quality Management:

Overall – "The new site is far more user-friendly and accessible to the public"

LAQM – "Map is clunky, not particularly versatile and not up-to-date."
"Guidance is collated nicely, as are the Helpdesk details. FAQs in danger of confusing people by replicating UWE's helpdesk site."

Site Map – "Far easier to see where one's been".

Research Information – "The Top 30 and new reports shown in "latest news" on the home page are excellent functions".

Frequently Asked Questions – "Brave move to allow moans and groans to be published for the world to see"

Data and Statistics – "Some have found queries easier than before, others more difficult and even impossible".
"Using the old archive system it was easy and quick to download a years' data or to quickly look at another authority's year data".
"When data is retrieved it contains a number of –99 values, it's not clear what this signifies."
"I'm finding your new web site virtually impossible to get data from"
"Emails have had nothing in them"
"I haven't yet managed to get anything out of your site"
"It's a lot slower than the old site if you just want to have a quick look at the data"
"I keep getting 'no data' spreadsheets being sent to me by e-mail."
"I am interested in finding nitrogen dioxide diffusion tube data, but cannot find this on the archives on the site".

Box 1 - Comments on the new Air Quality Archive (continued)

*The following were received by **netcen** in other correspondence:*

"Data for 2002 appear incomplete"
"There are discontinuities in the data set where values are missing"
"There are many –999.9 or "no data" values"
"The data are not flagged as ratified or otherwise"
"Exceedence statistics are missing or incorrect for some years and pollutants"
"Data units are not displayed"
"There are too many decimal places displayed on the data"
"There isn't a general search facility"
"What I really wanted was a map of the UK showing site locations of monitoring sites for each pollutant or each network/scheme that I could zoom into - I was really disappointed not to be able to see this."
"No telephone number to contact, though I did get a prompt reply to an email query."
"In terms of the queriable database, it's going to be very important for users that the format of the query doesn't change without notice. Is it possible for you to supply more information on the different values that can be taken by some of the fields in the query e.g. a complete list of site names and pollutants? I appreciate not all pollutants are recorded at all sites, but a complete list of possible field names would be very useful."
"It would have been extremely useful to have a search facility that lists all available data within a specified distance of a location - like the 'what's in your back yard' on the Environment Agency web site."
Most sites are missing from each region for each pollutant when Environment Agency Region is selected (Thames and Southern tested)

"Data does not appear as 'all dates', ie, hours may jump from 04:00 to 08:00, or simply miss an hour. This makes the data extremely difficult to use for comparisons. May only apply to 2002 data. Eg, Westminster NO 18th May onward has gaps."

"Brighton and Hove Council is missing from LA list"

"LA list of sites is not complete, eg, Tower Hamlets Roadside in Tower Hamlets and, most importantly, Marylebone Road in Westminster."

"No PM2.5 data is available for sites in Rochester or Bloomsbury"

Box 1 - Comments on the new Air Quality Archive (continued)

"* It is not indicated whether data are provisional or ratified (the old site flagged provisional data)
* Raw data differ slightly from original data (e.g. http://www.aeat.co.uk/netcen/airqual/data/auto/bex.html). Some hours have recorded data in one set but not in the other. Westminster 17 data for smoke & SO2 appear to have some significant changes in recent years.
* For PM10, there is no indication of whether sites are TEOM or whether the gravimetric factor of 1.3 has been applied.
* Daily mean SO2 2001 for Bexley gave lots of negative (& obviously incorrect) values, whereas hourly raw data did not.
* Units aren't always clear (e.g. nitrogen oxides, nitrogen oxides as nitrogen dioxide, NOx(NO2) are all listed in the pollutants list). It would be most helpful to include units in the generated files to avoid confusion.
* The -99 values for missing data may be confusing & require extra processing of data. People using the data will, inevitably, forget to remove these values from time to time. A return to using spaces instead might be better.
* When creating large files, the url I have been emailed for downloading hasn't worked.
* For raw data, if you select multiple pollutants including SO2, it generates 15 min (null) values for all pollutants, creating an unwieldy file. A warning might help people stop generation of large files containing unwanted information.
* The link to the site information archive is not very obvious.
* The NO2 as Nitrogen option appears not to work &, in any case, might encourage people to use and report data in a non-standard format.
* We have not been able to generate stats for 2001, although the data on the old site appear to be ratified for 2001.
* We have had problems generating the 'simple statistics' from the raw data option.
* When selecting, for example, NO2 raw data for London, the interface lists ALL London sites, including passive monitors, which is confusing.
* When selecting multiple pollutant raw data, monitoring sites are listed multiple times.
* For every column of data in the emailed .csv files we receive, there is a column of 'No Data' values, which is tending to make the files much larger than necessary.

Having said all that, it is very useful to be able to query the data online & to have data in columns, rather than the old format. Once the initial teething problems are sorted out and the download area is a little more user friendly, it will be a significant improvement on the old site."

After considering all these comments a plan was drawn up to make further progress on improving the "data and statistics" section of the Archive web site. During the rest of this period up to July 31st 2002 the following upgrades were made to the site.

- Problems with the format of downloaded data files were investigated and corrected. Missing data now appears as a blank entry in the download files.
- All data are now identified as ratified or provisional, with appropriate units.
- The problem with selecting data for a single site was resolved and uploaded to the live site.
- Site and parameter start and end date information has been included in the selection scripts so that non-operational site/parameter choices are screened out.
- If multiple parameters are chosen at one site then the site name now only appears once in the selection menu, not once for each parameter.
- Discontinuities in the provisional data on the live site were investigated. A problem was identified with some data files not making it through the "firewall" to the external Air Quality Archive web site. The number of "retries" was increased, and the fault log for sending ftp data improved. This means firstly that the fault is now less likely to happen, and secondly it can be easily identified and rectified. Missing hourly files have been uploaded to the live site.
- The full list of selected sites are shown on screen during data selection. This was tested and then released to live. The number of sites which can be selected is limited by individual

browser settings and not by the capacity of the database. Most users should be able to select up to 100 sites with no problems.
- Improvements were made to the date selection menus including the addition of buttons for "This year", "This month" etc. Tested and released to live.
- The unit definitions were modified so that it is clear which particulate data are from TEOM, BAM or gravimetric monitors.
- "All" buttons were added on appropriate data selection menus.
- Routines for units conversion (i.e. ppb to ug/m^3 and so on) were designed, implemented and released to the live site.

These upgrades have already made the data far more accessible, further improvements to be addressed over the next 3-months are detailed in section 8 of this report.

2.3 GOVERNMENT E-GUIDELINES

The design and development of the web site takes account of these, and a number of issues were discussed at the early project initiation meetings. These included:

- On-line help
- Policy on the use of cookies on the site
- HTML vs. PDF format
- Requirements for the home page content
- Content disclaimer
- Copyright notices
- Disability Discrimination Act
- Welsh Language
- Public Records Act
- Links to non-Government sites

Although they are not prescriptive, our interpretation of the e-guidelines leads us to believe that the look of the new site should be kept as "clean" as possible. This is reflected in the designs which have been agreed with the Department and launched on the new Air Quality Archive. Features of the designs which meet the requirements of the e-guidelines are as follows:

- A fairly simple home page using a white background to make it easily legible.
- Minimal use of features such as flash-graphics, Java script and frames throughout the site, so that it is easily negotiable and compatible with a basic web browser.
- Minimal use of colours and font changes to indicate key areas of the site, thus not discriminating against the disabled or visually impaired.
- Information on copyright and content accessible from the home page.
- The use of on-line help throughout the site, and a specific help section accessible from the home page.
- Where cookies are to be used, a warning will be made to users that information will be left on the hard disk of their computer.

3 Usage statistics for current web site and freephone services

The updated statistics on hits on the Air Quality Archive Web site are available from the home page of this service and are updated monthly. The summary for the May to July 2002 period was as follows:

Average hits per day for each month:
May: 1886
June: 2732

July: 2171

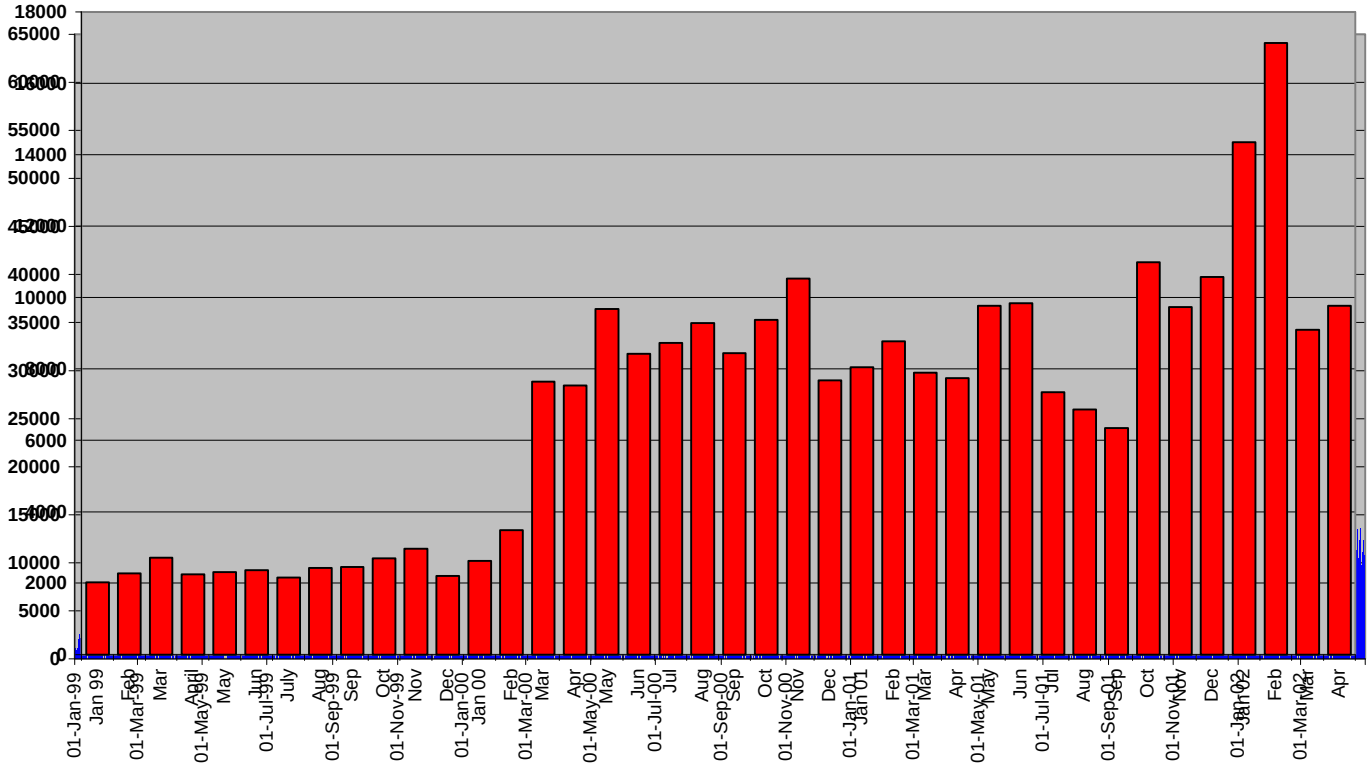
Total hits over quarter: 207,714

Figure 3.1 (below) shows an historical graph of the daily number of hits on the archive and Figure 3.2 shows the average daily hits for each month up to the end of April 2002. These figures are quite different from those shown for the new Air Quality Archive in Figures 3.3 and 3.4 below.

The peak number of daily hits on the new Archive during this quarter was 4911, which occurred on June 12th. June was the busiest month for web activity, with average daily hits of 2732.

Figure 3.2 - Monthly Average Hits per day, Jan 1999 - April 2002

Figure 3.1 - Hits Per Day, Jan 1999 - April 2002



Figures 3.3 and 3.4 show daily hits and daily average hits by month on the new Air Quality Archive. These have been separated from the previous period's statistics because the old archive and the new archive are not comparable. There are several reasons why the hits for the new archive are lower than the corresponding figures for the old archive:

- The design of the site is different. The site has been compacted so that the same amount of information is available on fewer pages, requiring less navigation to see the same amount of data. Therefore, there are correspondingly fewer web hits generated.
- The National Air Emissions Inventory now exists on a different server so NAEI hits are no longer counted as hits on the archive.
- The script that counts the hits was modified in March 2000 and resulted in a significantly larger number of hits being recorded (see Figure 3.1 and 3.2). The improved script no longer counts incompletely loaded or 'not found' pages and files.

This accounts for the lower number of recorded web hits under the new archive with the improved counting script which are now more consistent with levels recorded before March 2000.

Figure 3.3 Daily hits for new Air Quality Archive (May to July 2002)

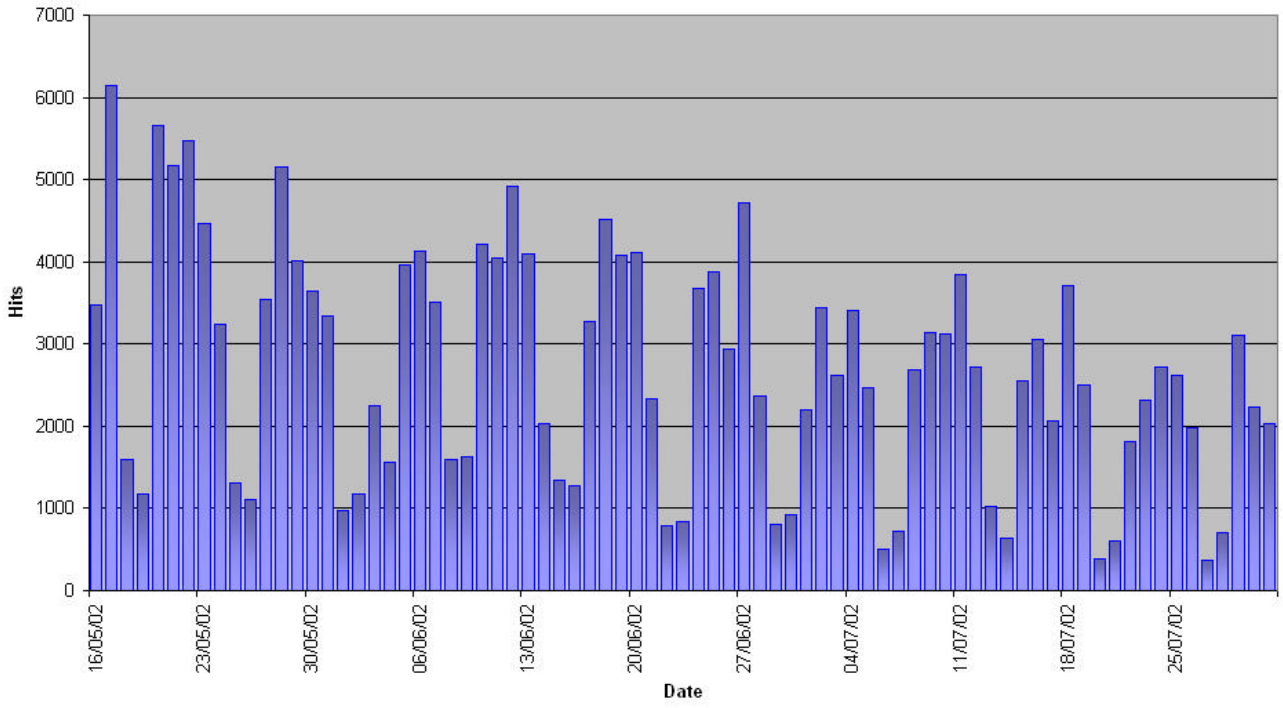
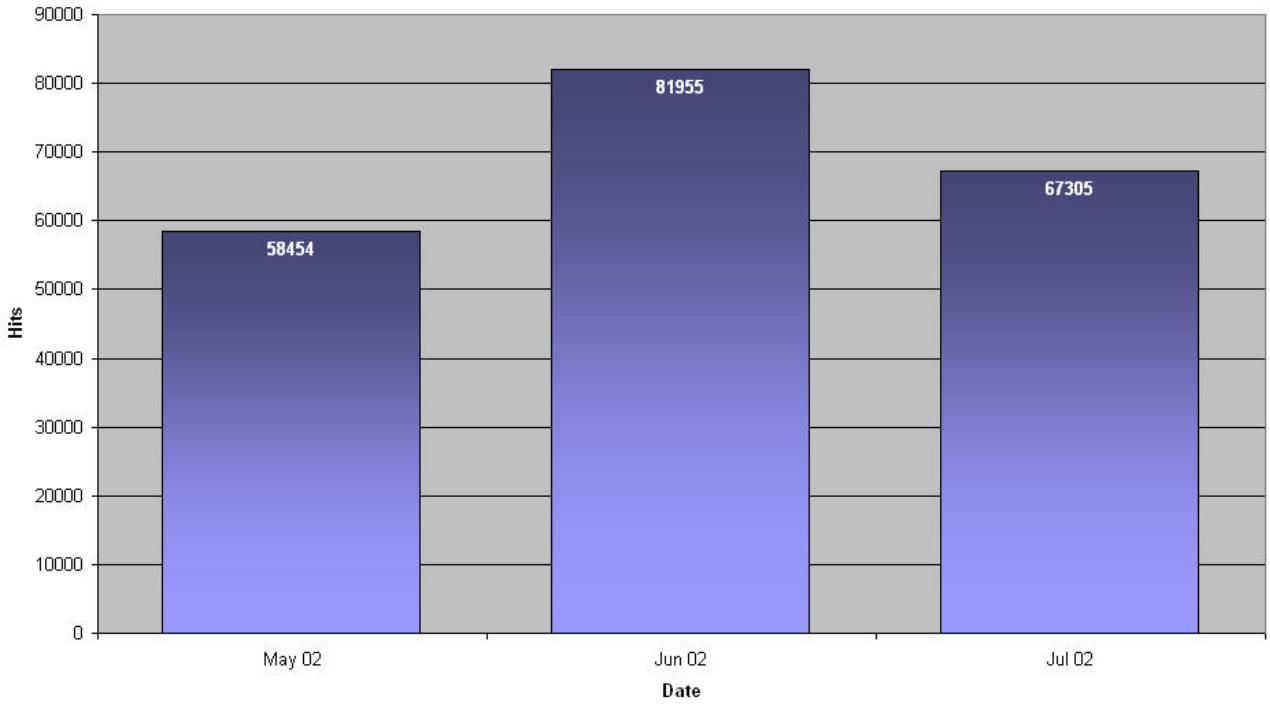


Figure 3.3 (above) shows an interesting weekly cycle due to the lower number of hits during the weekends. Figure 3.4 (below) shows the average daily number of web hits for each month during the quarter. These statistics for the new archive show average daily hits of between 1800 and 2800 -much more similar to the pre-March 2000 period.

Figure 3.4 Total Hits on the Air Quality Archive for 2002



During the May to July 2002 period we dealt with a total of 209 enquiries to the aqinfo@aeat.co.uk e-mail information point, by which we provide further help on the Web site content.

The number of calls to the Freephone service is shown graphically in the Appendix to this report. The figures track a call through the system, so do not give a true representation of the number of individual callers entering the system. In contrast to previous quarters, the number of calls to the Freephone service did not rise during May to July 2002. Instead, the average number of daily calls was 181 for this quarter compared with a slightly higher figure of 202 for the first quarter of 2002. Within each category there were also some marked changes. In summary the figures for this quarter show:

- On average during the quarter, 31 calls per day accessed the air quality bulletin for their area, about half the average number for this category during the previous quarter.
- On average 24 callers requested information for another region. This represents a significant reduction from the previous quarter during which 150 people on average accessed information for a different region from their own.
- There was a large increase in the average number of calls per day accessing the full national air quality forecasts during this quarter. This was 30 calls per day compared with only 10 during February to April 2002.
- The average number of freephone calls accessing the health information held steady at 8 per day over the quarter.
- The number of calls requesting leaflets also remained steady at an average of 4 requests per day compared with 5 during the previous 3 months.
- On average there were 181 calls a day, of which 73 were hang-ups
- The average call duration over the period was 74 seconds.

The changes to these statistics may simply have resulted from the launch of the new service in May 2002. Our subcontractors IMS Group are considering how the statistics are generated and whether they continue to give a fair picture of the way in which the service is being used. An improved statistical analysis of the calls is expected to be available from October 2002 onwards.

4 Breakdowns in the service

4.1 LIST OF ALL DETECTED FAULTS

A single fault with the Air Quality Communications system was recorded during the quarter. This was a fault with the freephone service involving a network error by the service provider which resulted in lower call figures than usual. The fault occurred on June 12th and the problem was quickly identified. The service provider has assured us that processes have been implemented to ensure that the error does not occur in the future.

4.2 FAULTS WHICH LED TO NON-COMPLIANCE WITH SERVICE LEVEL AGREEMENTS FOR THE REPAIR OF SYSTEMS

During normal working hours any faults with the Air Quality Communications systems should be fixed within 6 hours, or within 18 hours at any other time.

The fault with the freephone service on June 12th (described in section 4.1) occurred at 12.17 and was rectified by the service provider by 10.30 the following day. During this 22 hour period the service was not available. This was outside the service level agreement for system repair although the fault was outside **netcen**'s control.

5 Performance statistics for the air quality archive systems

5.1 FREEPHONE SERVICE, 0800 556677

There was a 100% success rate for delivering bulletins to IMS for publication during this period. There was a single fault in the freephone service during May to July 2002, explained in section 4.1.

5.2 TELETEXT PAGE 155

Over 90% of hourly updates were successfully transmitted to TELETEXT during each month of the period May to July 2002. The majority of failures which resulted in unsuccessful transmission were due to technical problems at TELETEXT.

5.3 E-MAIL BULLETINS

The e-mail bulletin service operated to a 100% success rate during June and July 2002. There was a 96.8 success rate in May due to mail system errors at AEA Technology.

6 Provision of air quality data to Europe

During July and August 2002, **netcen** provided air quality statistics to complete the EC First Daughter Directive questionnaire for 2001 on behalf of Defra. 2001 was the first time that the questionnaire was required to be completed and a considerable amount of work was involved. Around 20 tables of statistics had to be filled in and the results from the monitoring networks then merged with modelled data to complete the picture for the whole of the UK. The tables were completed to schedule, carefully checked to confirm their accuracy and then forwarded to Defra.

At the same time we also completed a submission of our 2001 monitoring data to the European Environment Agency Airbase via their Data Exchange Model (DEM) software. In the past this has caused problems due to bugs in the program meaning that the UK data have not always successfully got through to the database. As usual this year there were several corrections to the software issued in the run up to the deadline for submission at the end of September. All the UK data were successfully uploaded to the DEM software as far as we could tell, and submitted before the end of September.

7 Presentation at IAPSC

On Thursday June 16th Paul Willis presented a paper entitled “What’s New on the Air Quality Archive” at the IAPSC conference.

The paper was well received with comments from the delegates similar to those presented in Section 2.2 above. It was presented as part of a session on how to build a good air quality web site, and it was clear that the development of the Archive web site generally followed the examples of best practise which were put forward by the other speakers.

The presentation will be made available in the Research Reports section of the Archive web site alongside this report.

8 Ad-hoc services provided

During this quarter a number of services were prepared under the ad-hoc section of the contract. These were typically Parliamentary Questions and queries or requests for information and data reporting to government. All ad-hoc services during the period are listed here:

- PQ6652 “St. Albans Air Monitoring”, completed 12th to 17th June 2002.
- PQ7025 Monitoring and Air Quality Strategy Exceedences, 26th June 2002.
- PQ7087 Air Quality Strategy Exceedences 2001, completed 1st July 2002.
- Submission of 2001 data to Jeremy Grove for the DEFRA Digest of Environmental Statistics, July 2002.
- Submission of 2001 data to Jeremy Grove for the OECD Questionnaire, July 2002.
- Data analysis for the new local authority Technical Guidance notes for Review and Assessment. Provision of all data summaries for all pollutants for the previous 5 years. Analysis and graphing of empirical relationships between different statistics, e.g. 99.8th percentile hourly NO_2 vs. annual mean. About 20 relationships were analysed for (a) 1990 to 2001 and (b) 1997-2001.
- Providing comments to DEFRA on the proposals for reviewing the UK’s Headline Air Quality Indicator, and to the Audit Commission on the Revised Quality of Life Indicator – Air Quality.

9 Forward work plan for August to October 2002

As well as the routine air quality data dissemination activities during this period, we are expecting to carry out the following tasks:

- Complete the test and validation of the exceedence statistics and simple statistics output to screen and file. Release to live site.
- Complete the transfer of remaining acid deposition, metals, dioxins, furans and PCBs data from the old Archive to the new database.
- Add historical TEOM PM2.5 data from 4 sites and Harwell TEOM PM10 data to the new database when received from Casella Stanger. Provisional data have already been loaded on an hour-by-hour basis since March 2002.
- Add NPL non-automatic hydrocarbon monitoring network data to the new database when received from NPL. Set the system up for automatic monthly updates.
- Liase with Harjinder Grewal to upload new information to the Research Contracts databases.
- Add new comprehensive hourly and daily pollution bulletins to the Archive Web site. These will be automatically updated every hour and will show the latest data for each monitoring site grouped into the sixteen zones and sixteen agglomerations. The bulletins will also show the latest air pollution forecast.
- Add a search function which can be accessed from the bottom of each page on the Archive web site.
- Publish May to July quarterly report on the Air Quality Archive Web Site.
- Ad-hoc data analysis as required.
- Presentations at other meetings or seminars as required.
- Monthly or quarterly progress meetings with DEFRA as required.

10 Annual timetable for data submissions

As discussed at recent project review meetings, we are working to the following annual timetable for submission of UK data to government and the European Commission.

Submission of UK data to government and the European Commission

Annual Time Table of Work Program

Time Specific Objectives	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Headline indicator statistics												
Provision of Ozone data to EC												
Provision of Ozone data to EC - Annual statistics												
Provision of NO_2 data to EC												
EC Questionnaire completion												
Provision of data to AIRBASE												

11 Hardware and software inventory

The Department will own two UNIX database servers at the end of this contract. These are being acquired on a lease-purchase agreement.

All the software developed as part of the Air Quality Communications contract will be owned by the Department.

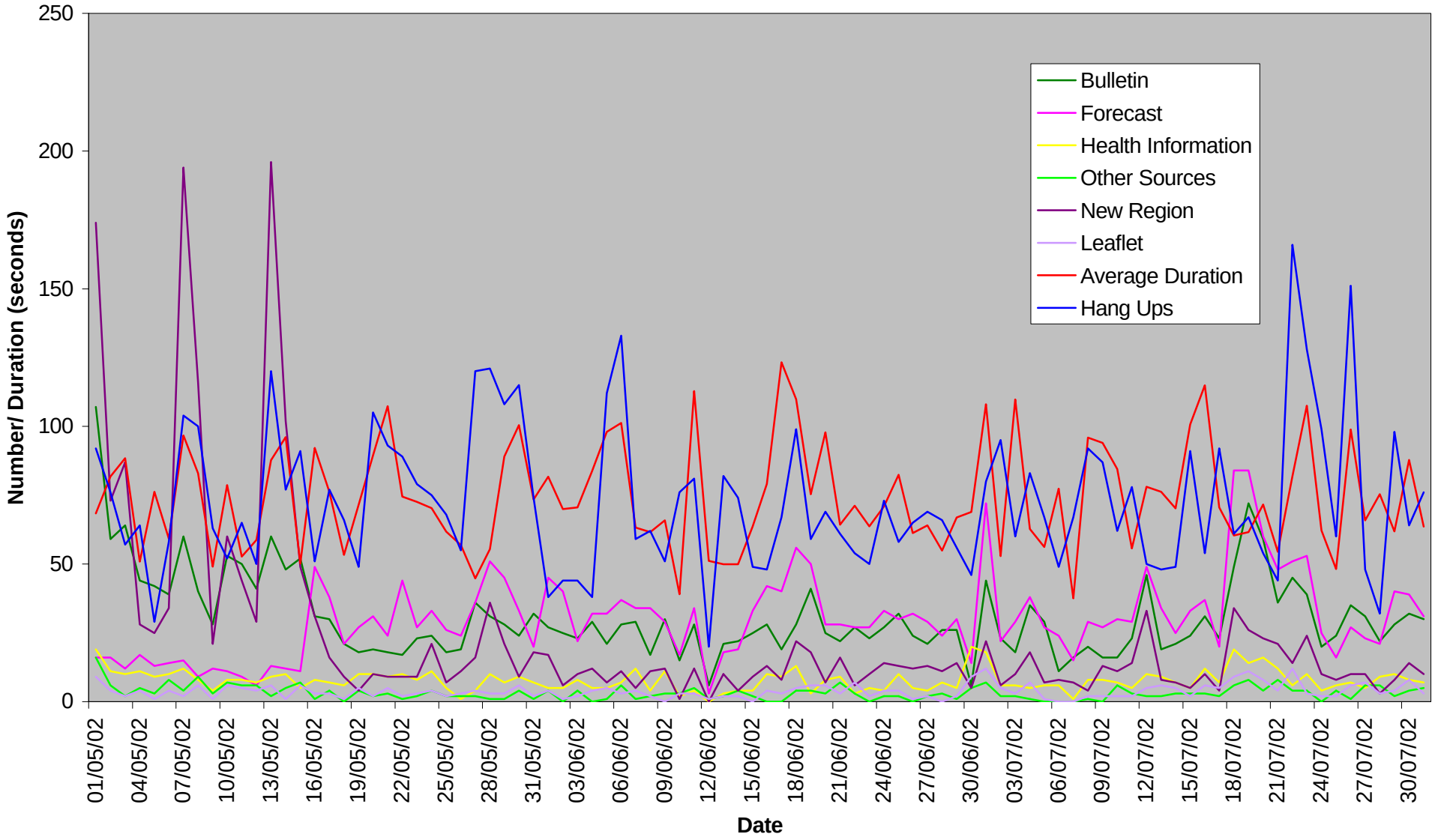
The software for the New Air Quality Archive will be fully documented, and design and operational manuals made available to the Department.

Appendix 1
Air Quality Freephone Statistics

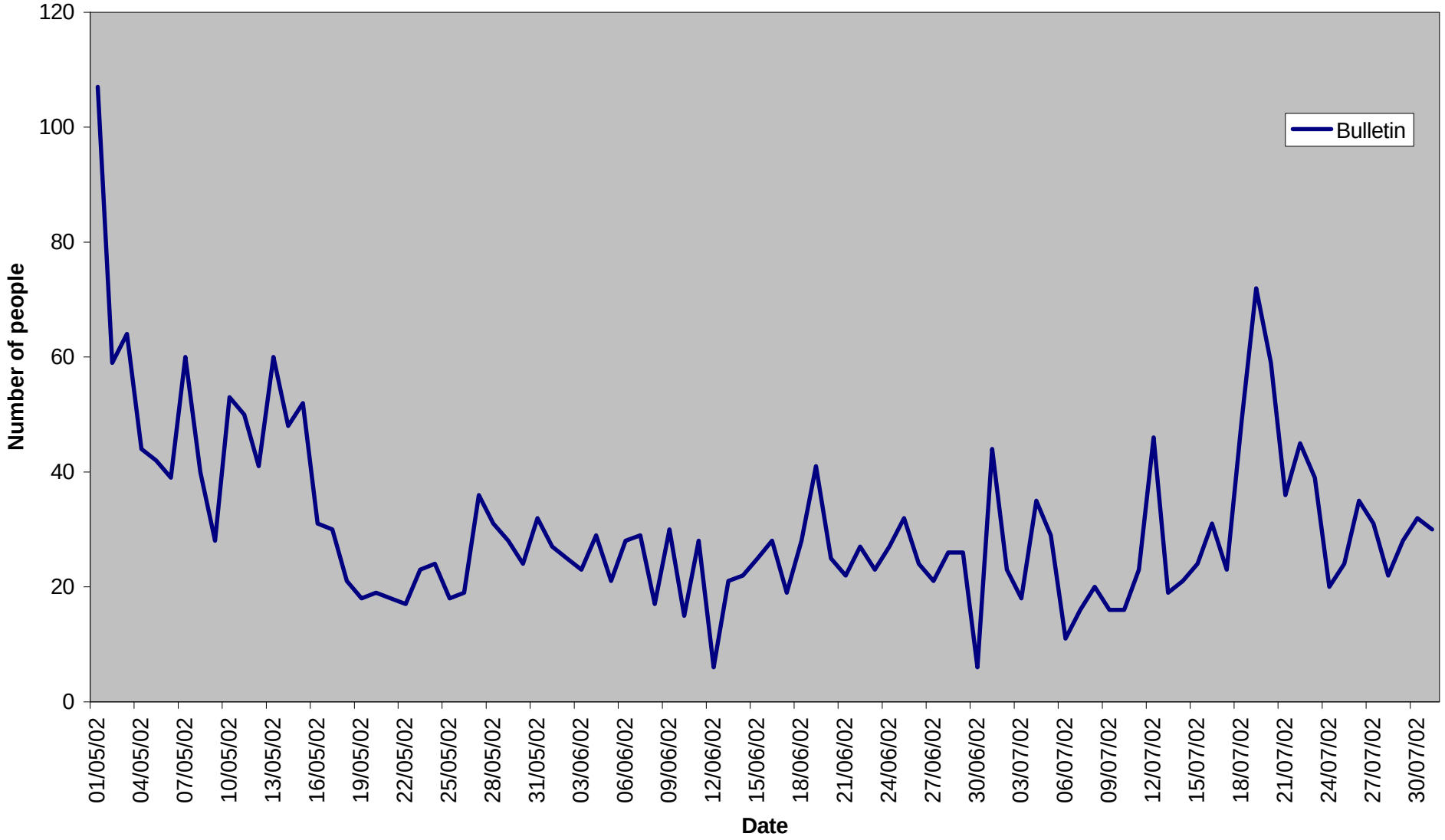
CONTENTS

1 Chart of total access to the Freephone service
2 Number of people accessing bulletins
3 Number of people accessing forecasts
4 Number of people accessing health information
5 Number of people accessing other sources of information
6 Number of people accessing data for different regions
7 Number of people ordering leaflets
8 Average duration of call
9 Number of 'hangups'

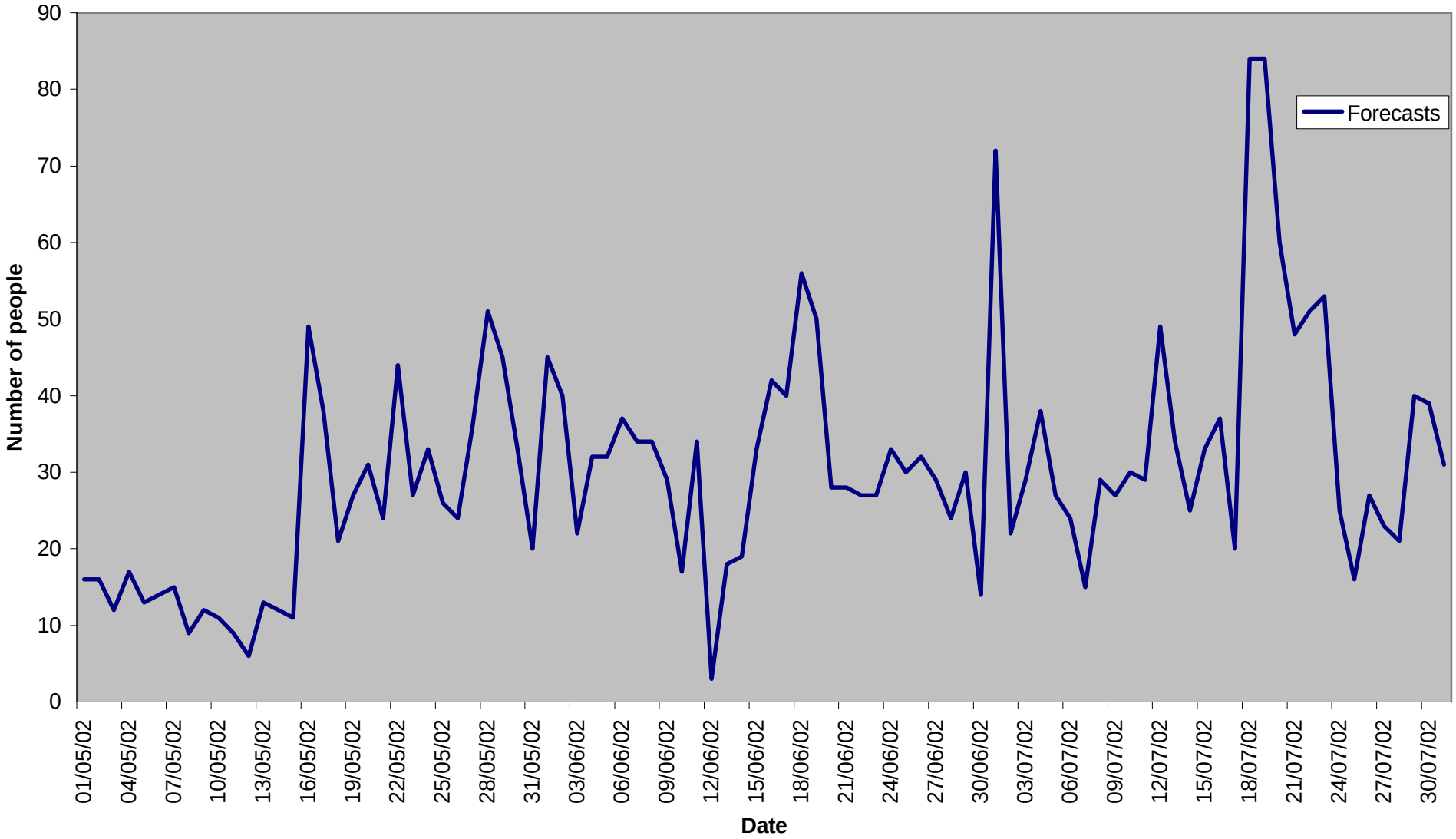
Total Access to Freephone Service



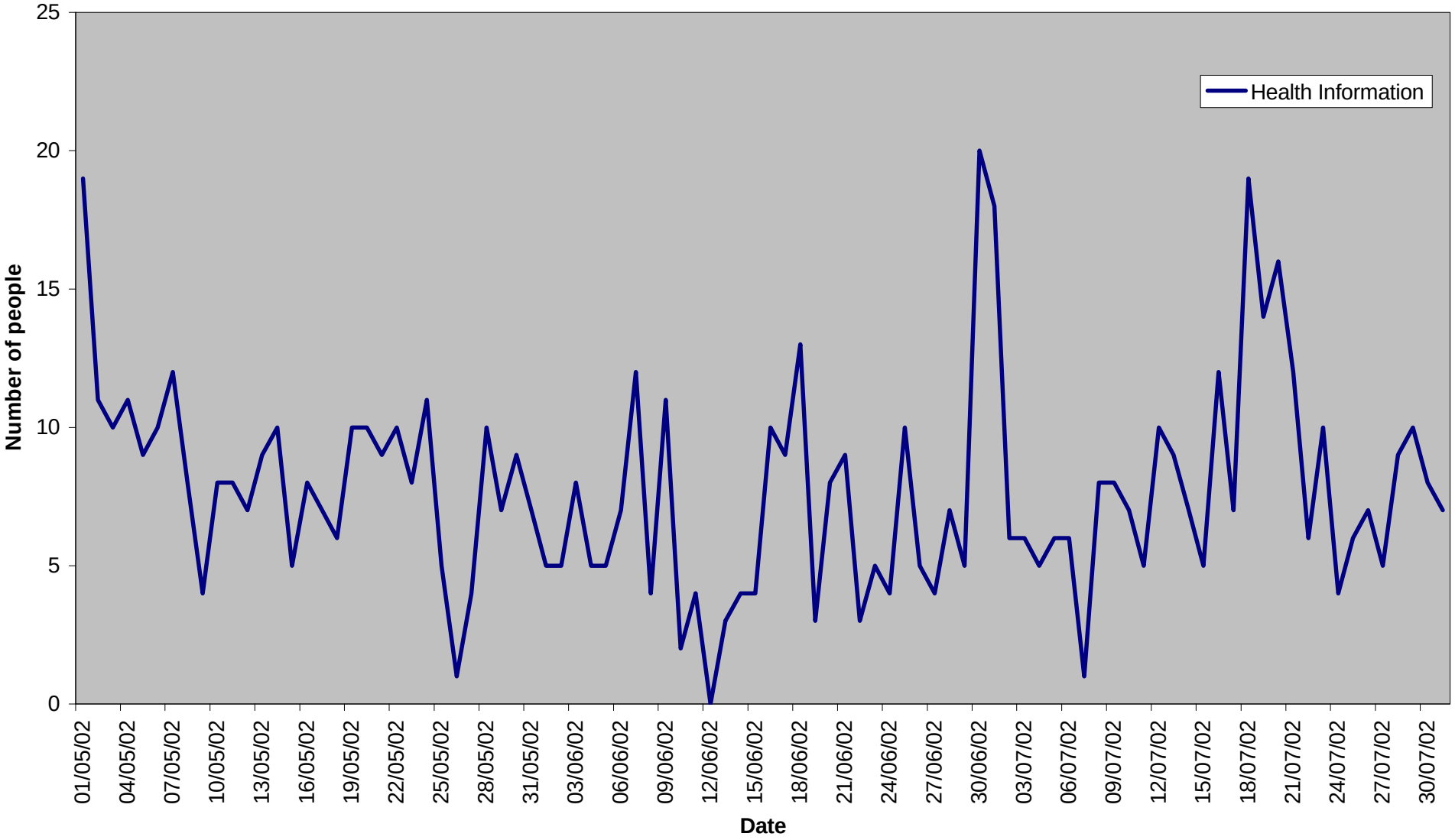
Number of People Accessing Bulletins



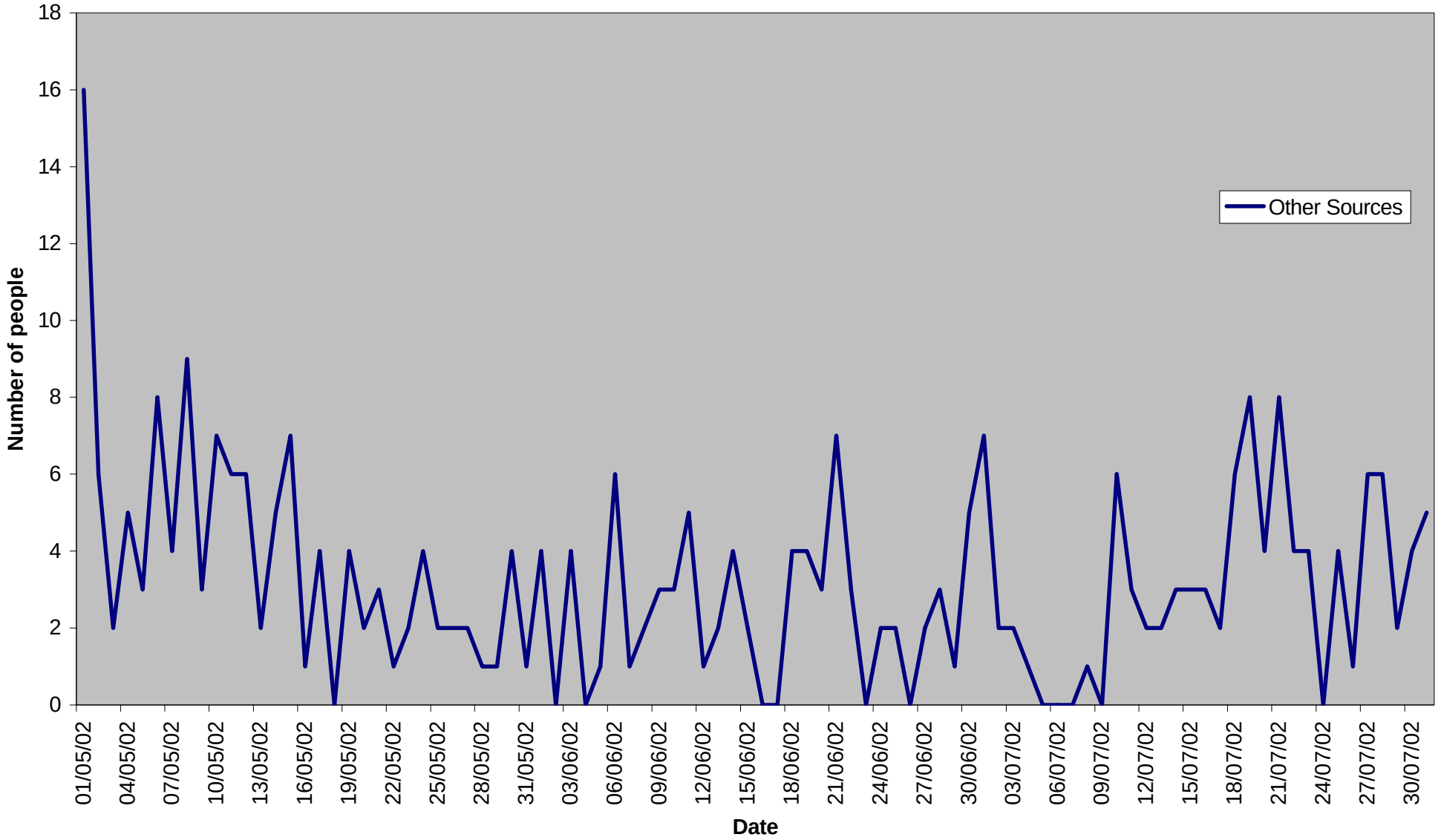
Number of People Accessing Forecasts



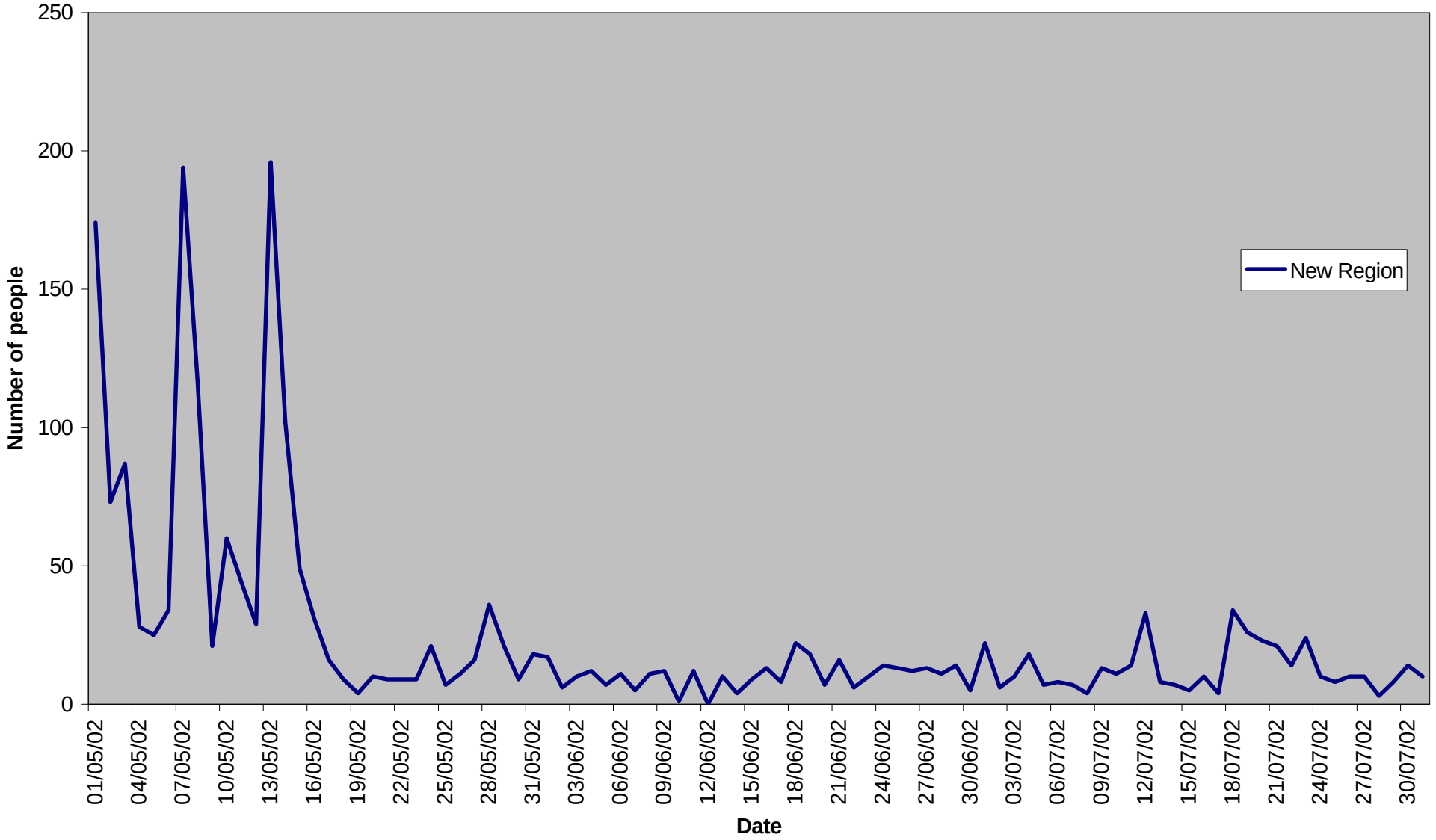
Number of People Accessing Health Information



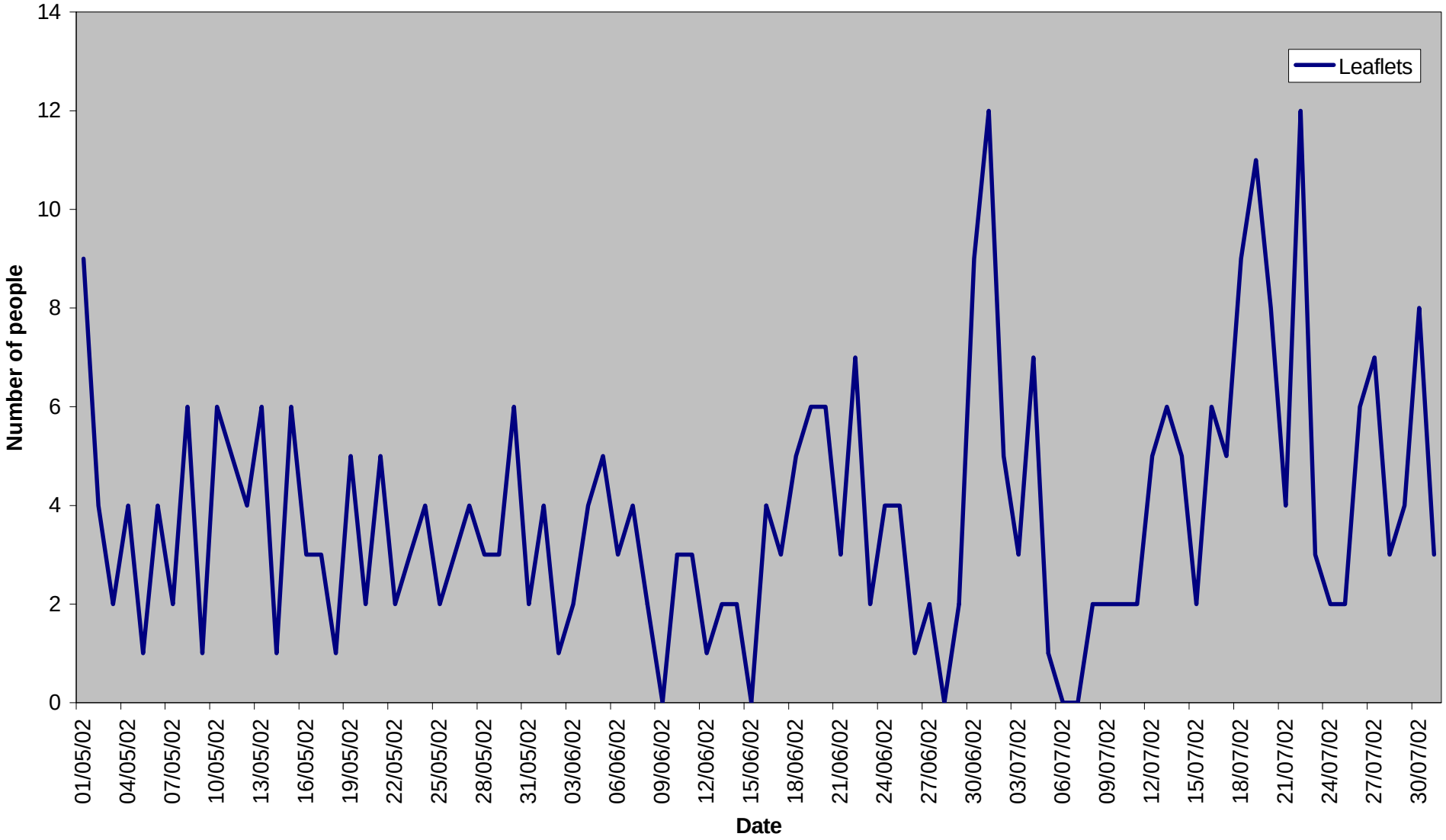
Number of People Accessing Other Sources of Information

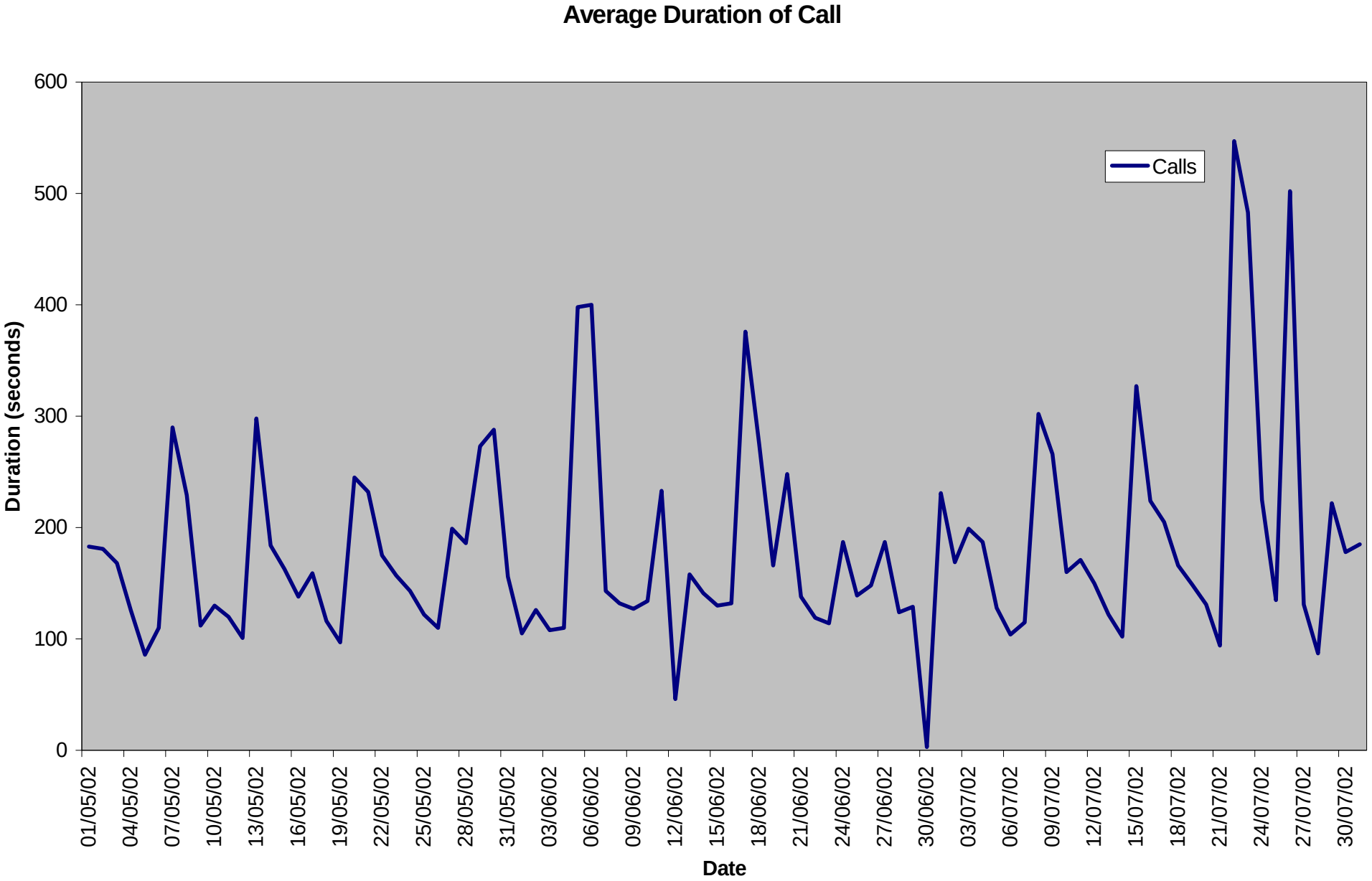


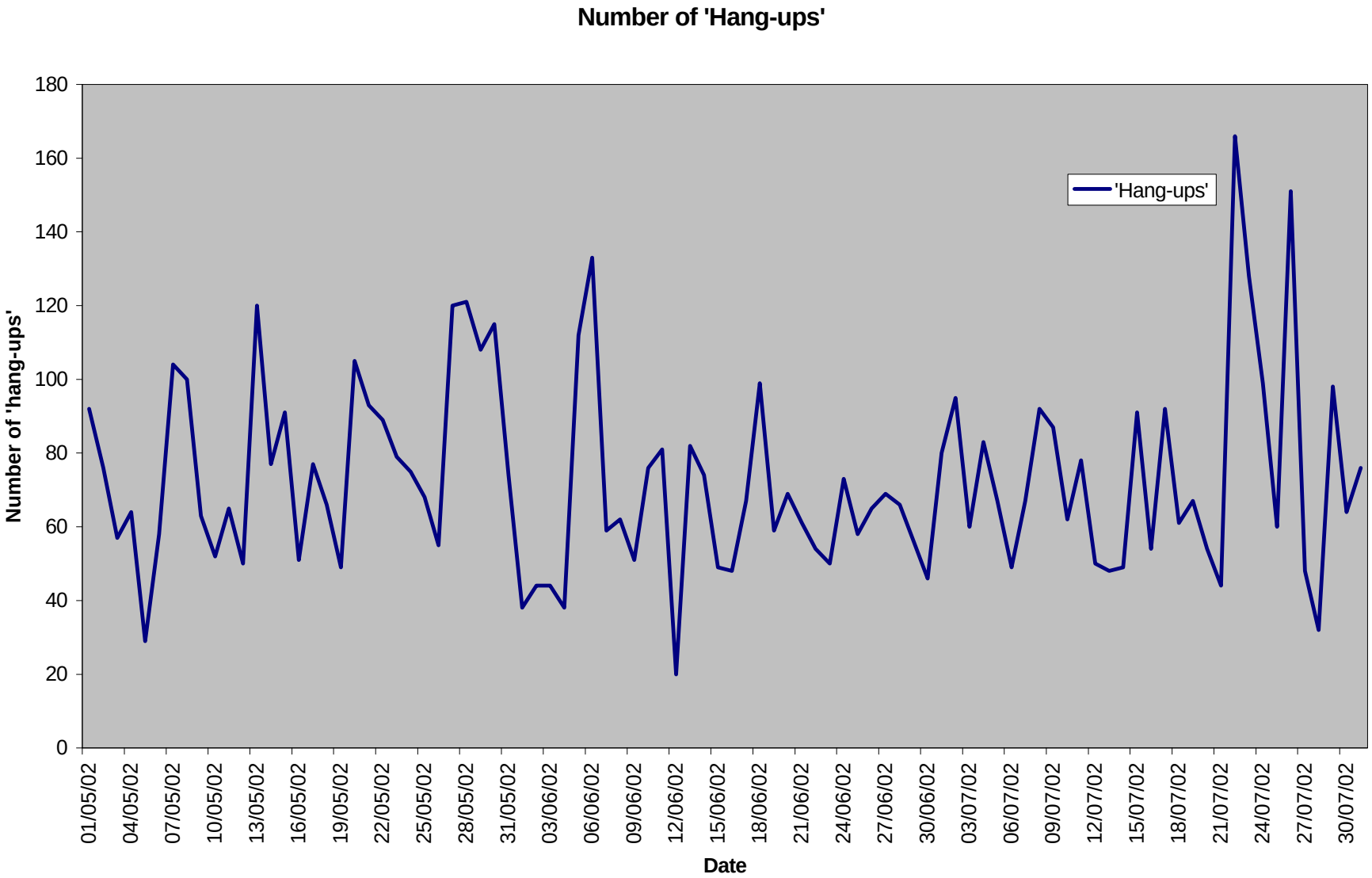
Number of People Accessing Data for Different Regions



Number of People Requesting Leaflets




Average Duration of Call
Duration (seconds)
600
500
400
300
200
100
0
Calls
01/05/02
04/05/02
07/05/02
10/05/02
13/05/02
16/05/02
19/05/02
22/05/02
25/05/02
28/05/02
31/05/02
03/06/02
06/06/02
09/06/02
12/06/02
15/06/02
18/06/02
21/06/02
24/06/02
27/06/02
30/06/02
03/07/02
06/07/02
09/07/02
12/07/02
15/07/02
18/07/02
21/07/02
24/07/02
27/07/02
30/07/02
Date


Number of 'Hang-ups'
'Hang-ups'
Number of 'hang-ups'
Date
0
20
40
60
80
100
120
140
160
180
01/05/02
04/05/02
07/05/02
10/05/02
13/05/02
16/05/02
19/05/02
22/05/02
25/05/02
28/05/02
31/05/02
03/06/02
06/06/02
09/06/02
12/06/02
15/06/02
18/06/02
21/06/02
24/06/02
27/06/02
30/06/02
03/07/02
06/07/02
09/07/02
12/07/02
15/07/02
18/07/02
21/07/02
24/07/02
27/07/02
30/07/02

Appendix 2
New Format
Daily Air Pollution Bulletin

CONTENTS

1 Example of the new e-mail air quality bulletin

Air Pollution is on a scale of 1 to 10
Low (1 - 3) Moderate (4 - 6) High(7 - 9) Very High (10)

About this scale

Click on any of the links below to see the relevant information

Measurements **Forecast** **Alerts**

Maximum Pollutant levels recorded in the 24 hour period up to 5pm Fri May 31st					
N/M means that the pollutant is not measured at that site N/A means that no data were recorded for the period					
Greater London Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bexley	40 (3 Low)	20 (1 Low)	5 (1 Low)	0.0 (1 Low)	20 (2 Low)
Bloomsbury	28 (2 Low)	29 (1 Low)	7 (1 Low)	0.1 (1 Low)	20 (2 Low)
Brent	34 (3 Low)	30 (1 Low)	10 (1 Low)	0.1 (1 Low)	19 (2 Low)
Camden Kerbside	N/M	52 (2 Low)	N/M	N/M	30 (2 Low)
Cromwell Road	N/M	74 (2 Low)	11 (1 Low)	1.1 (1 Low)	N/M
Earls Court	N/M	28 (1 Low)	N/M	0.3 (1 Low)	N/M
Eltham	43 (3 Low)	16 (1 Low)	2 (1 Low)	N/M	20 (2 Low)
Hackney	42 (3 Low)	31 (1 Low)	N/M	0.4 (1 Low)	N/M
Haringey	37 (3 Low)	N/M	N/M	N/M	N/M
Haringey Roadside	N/M	37 (1 Low)	N/M	N/M	21 (2 Low)
Hillingdon	38 (3 Low)	33 (1 Low)	6 (1 Low)	2.4 (1 Low)	25 (2 Low)
Hounslow Roadside	N/M	52 (2 Low)	N/M	0.6 (1 Low)	N/M
Lewisham	32 (2 Low)	20 (1 Low)	3 (1 Low)	N/M	N/M
London A3 Roadside	N/M	46 (1 Low)	N/M	0.8 (1 Low)	21 (2 Low)
London Bromley	N/M	37 (1 Low)	N/M	0.6 (1 Low)	N/M
London Westminster	39 (3 Low)	29 (1 Low)	6 (1 Low)	0.4 (1 Low)	N/M
Marylebone Road	21 (2 Low)	68 (2 Low)	9 (1 Low)	2.6 (1 Low)	50 (4 Moderate)
North Kensington	40 (3 Low)	31 (1 Low)	5 (1 Low)	0.5 (1 Low)	22 (2 Low)
Southwark	42 (3 Low)	34 (1 Low)	6 (1 Low)	0.4 (1 Low)	N/M
Southwark Roadside	N/M	N/A	N/A	0.8 (1 Low)	N/M
Sutton	N/A	N/A	N/M	N/M	N/M
Sutton Roadside	N/M	N/A	N/A	N/A	N/A
Teddington	49 (3 Low)	11 (1 Low)	2 (1 Low)	N/M	N/M
Tower Hamlets Rdside	N/M	53 (2 Low)	N/M	1.3 (1 Low)	N/M
Wandsworth	37 (3 Low)	51 (2 Low)	N/M	N/M	N/M
Birmingham Urban area					

SITE	Ozone (ppb)	Nitrogen dioxide (ppb)	Sulphur dioxide (ppb)	Carbon monoxide (ppm)	PM_{10} Particles (μgm^{-3})
Birmingham Centre	41 (3 Low)	12 (1 Low)	4 (1 Low)	0.7 (1 Low)	18 (2 Low)
Birmingham East	47 (3 Low)	13 (1 Low)	5 (1 Low)	0.3 (1 Low)	16 (1 Low)
Sandwell West Bromwich	36 (3 Low)	12 (1 Low)	10 (1 Low)	0.4 (1 Low)	N/M
Walsall Alumwell	N/M	28 (1 Low)	N/M	N/M	N/M
Walsall Willenhall	N/M	7 (1 Low)	N/M	N/M	N/M
Wolverhampton Centre	33 (3 Low)	10 (1 Low)	22 (1 Low)	2.0 (1 Low)	19 (2 Low)
Greater Manchester Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bolton	44 (3 Low)	8 (1 Low)	2 (1 Low)	0.1 (1 Low)	12 (1 Low)
Bury Roadside	21 (2 Low)	47 (1 Low)	10 (1 Low)	0.0 (1 Low)	39 (3 Low)
Manchester Piccadilly	28 (2 Low)	26 (1 Low)	12 (1 Low)	0.4 (1 Low)	19 (2 Low)
Manchester South	35 (3 Low)	20 (1 Low)	16 (1 Low)	N/M	N/M
Manchester Town Hall	N/M	27 (1 Low)	N/M	0.3 (1 Low)	N/M
Salford Eccles	42 (3 Low)	20 (1 Low)	4 (1 Low)	0.1 (1 Low)	14 (1 Low)
Stockport	N/M	38 (1 Low)	13 (1 Low)	0.1 (1 Low)	11 (1 Low)
West Yorkshire Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bradford Centre	33 (3 Low)	27 (1 Low)	8 (1 Low)	0.5 (1 Low)	15 (1 Low)
Leeds Centre	29 (2 Low)	26 (1 Low)	1 (1 Low)	0.6 (1 Low)	15 (1 Low)
Tyneside Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Newcastle Centre	35 (3 Low)	16 (1 Low)	1 (1 Low)	0.5 (1 Low)	10 (1 Low)
Liverpool Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Liverpool Centre	38 (3 Low)	26 (1 Low)	4 (1 Low)	0.7 (1 Low)	18 (2 Low)
Sheffield Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Rotherham Centre	34 (3 Low)	22 (1 Low)	11 (1 Low)	N/M	N/M
Sheffield Centre	40 (3 Low)	19 (1 Low)	8 (1 Low)	0.0 (1 Low)	14 (1 Low)
Sheffield Tinsley	N/M	35 (1 Low)	N/M	0.5 (1 Low)	N/M
Nottingham Urban area					

SITE	Ozone (ppb)	Nitrogen dioxide (ppb)	Sulphur dioxide (ppb)	Carbon monoxide (ppm)	PM_{10} Particles (μgm^{-3})
Nottingham Centre	37 (3 Low)	20 (1 Low)	10 (1 Low)	0.6 (1 Low)	14 (1 Low)
Bristol Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bristol Centre	32 (2 Low)	25 (1 Low)	19 (1 Low)	0.7 (1 Low)	21 (2 Low)
Bristol Old Market	N/M	76 (2 Low)	N/M	1.6 (1 Low)	N/M
Brighton Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Brighton Roadside	N/M	30 (1 Low)	N/M	0.6 (1 Low)	N/M
Hove Roadside	N/M	21 (1 Low)	3 (1 Low)	0.1 (1 Low)	N/M
Leicester Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Leicester Centre	36 (3 Low)	31 (1 Low)	5 (1 Low)	0.1 (1 Low)	15 (1 Low)
Portsmouth Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Portsmouth	N/M	11 (1 Low)	11 (1 Low)	0.3 (1 Low)	23 (2 Low)
Swansea Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Port Talbot	43 (3 Low)	13 (1 Low)	9 (1 Low)	N/M	43 (3 Low)
Swansea Centre	44 (3 Low)	37 (1 Low)	1 (1 Low)	0.1 (1 Low)	24 (2 Low)
Cardiff Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Cardiff Centre	42 (3 Low)	31 (1 Low)	2 (1 Low)	0.6 (1 Low)	29 (2 Low)
Edinburgh Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Edinburgh Centre	33 (3 Low)	44 (1 Low)	7 (1 Low)	0.4 (1 Low)	N/A
Glasgow Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Glasgow Centre	37 (3 Low)	18 (1 Low)	3 (1 Low)	0.3 (1 Low)	11 (1 Low)
Glasgow City	N/M	24 (1 Low)	N/M	0.2 (1 Low)	N/M

Chambers					
Glasgow Kerbside	N/M	34 (1 Low)	N/M	0.2 (1 Low)	19 (2 Low)
Belfast Urban area					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Belfast Centre	33 (3 Low)	32 (1 Low)	4 (1 Low)	0.0 (1 Low)	30 (2 Low)
Belfast East	N/M	N/M	2 (1 Low)	N/M	N/M
The North East					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Billingham	N/M	27 (1 Low)	N/M	N/M	N/M
Middlesbrough	45 (3 Low)	15 (1 Low)	1 (1 Low)	0.1 (1 Low)	N/A
Redcar	47 (3 Low)	29 (1 Low)	29 (1 Low)	0.5 (1 Low)	14 (1 Low)
Stockton-on-Tees Yarm	N/M	23 (1 Low)	N/M	N/M	16 (1 Low)
Sunderland	N/M	N/M	1 (1 Low)	N/M	N/M
North West & Merseyside					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Blackpool	47 (3 Low)	4 (1 Low)	8 (1 Low)	0.0 (1 Low)	19 (2 Low)
Glazebury	38 (3 Low)	N/M	N/M	N/M	N/M
Great Dun Fell	39 (3 Low)	N/M	N/M	N/M	N/M
Preston Centre	39 (3 Low)	20 (1 Low)	10 (1 Low)	0.4 (1 Low)	14 (1 Low)
Wigan	N/M	20 (1 Low)	1 (1 Low)	N/M	15 (1 Low)
Wirral Tranmere	40 (3 Low)	7 (1 Low)	2 (1 Low)	0.1 (1 Low)	15 (1 Low)
Yorkshire & Humberside					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Barnsley	N/M	N/M	3 (1 Low)	N/M	N/M
Barnsley Gawber	31 (2 Low)	10 (1 Low)	9 (1 Low)	N/M	N/M
High Muffles	41 (3 Low)	N/M	N/M	N/M	N/M
Hull Centre	N/A	N/A	N/A	N/A	N/A
Scunthorpe	N/M	N/M	4 (1 Low)	N/M	8 (1 Low)
The East Midlands					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bottesford	50 (4 Moderate)	N/M	N/M	N/M	N/M
Ladybower	40 (3 Low)	7 (1 Low)	8 (1 Low)	N/M	N/M
Northampton	N/M	11 (1 Low)	1 (1 Low)	0.0 (1 Low)	16 (1 Low)
The West Midlands					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Coventry Park	44 (3 Low)	7 (1 Low)	16 (1 Low)	0.1 (1 Low)	11 (1 Low)

Leamington Spa	41 (3 Low)	21 (1 Low)	1 (1 Low)	0.2 (1 Low)	16 (1 Low)
Stoke-on-Trent Centre	38 (3 Low)	25 (1 Low)	13 (1 Low)	0.3 (1 Low)	12 (1 Low)
East Anglia					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Cambridge Roadside	N/M	41 (1 Low)	N/M	N/M	N/M
Norwich Centre	33 (3 Low)	18 (1 Low)	17 (1 Low)	0.1 (1 Low)	13 (1 Low)
Norwich Roadside	N/M	20 (1 Low)	N/M	N/M	N/M
Sibton	39 (3 Low)	N/M	N/M	N/M	N/M
Southend-on-sea	46 (3 Low)	13 (1 Low)	8 (1 Low)	0.1 (1 Low)	17 (2 Low)
Thurrock	46 (3 Low)	23 (1 Low)	7 (1 Low)	0.2 (1 Low)	22 (2 Low)
Weybourne	47 (3 Low)	N/M	N/M	N/M	N/M
Wicken Fen	40 (3 Low)	2 (1 Low)	1 (1 Low)	N/M	N/M
The South East					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Canterbury	N/M	15 (1 Low)	N/M	N/M	20 (2 Low)
Harwell	50 (4 Moderate)	6 (1 Low)	1 (1 Low)	N/M	13 (1 Low)
Lullington Heath	50 (4 Moderate)	3 (1 Low)	2 (1 Low)	N/M	N/M
Oxford Centre	N/M	42 (1 Low)	2 (1 Low)	0.0 (1 Low)	N/M
Reading	35 (3 Low)	24 (1 Low)	5 (1 Low)	0.2 (1 Low)	13 (1 Low)
Rochester	46 (3 Low)	22 (1 Low)	24 (1 Low)	N/M	22 (2 Low)
Southampton Centre	35 (3 Low)	20 (1 Low)	8 (1 Low)	0.3 (1 Low)	26 (2 Low)
The South West					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Bath Roadside	N/M	59 (2 Low)	N/M	0.9 (1 Low)	N/M
Bournemouth	N/M	8 (1 Low)	0 (1 Low)	N/M	N/M
Exeter Roadside	29 (2 Low)	36 (1 Low)	2 (1 Low)	1.2 (1 Low)	N/M
Plymouth Centre	37 (3 Low)	23 (1 Low)	7 (1 Low)	0.1 (1 Low)	24 (2 Low)
Somerton	41 (3 Low)	N/M	N/M	N/M	N/M
Yarner Wood	42 (3 Low)	N/M	N/M	N/M	N/M
South Wales					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Cwmbran	N/M	8 (1 Low)	2 (1 Low)	0.2 (1 Low)	17 (2 Low)
Narberth	48 (3 Low)	3 (1 Low)	17 (1 Low)	N/M	21 (2 Low)
North Wales					
SITE	**Ozone (ppb)**	**Nitrogen dioxide**	**Sulphur dioxide**	**Carbon monoxide**	**PM_{10} Particles**

		(ppb)	(ppb)	(ppm)	(μgm^{-3})
Aston Hill	39 (3 Low)	N/M	N/M	N/M	N/M
Wrexham	N/M	12 (1 Low)	3 (1 Low)	0.5 (1 Low)	N/M
The Scottish Borders					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Dumfries	N/M	38 (1 Low)	N/M	0.5 (1 Low)	N/M
Eskdalemuir	33 (3 Low)	N/M	N/M	N/M	N/M
Central Scotland					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Grangemouth	N/M	6 (1 Low)	1 (1 Low)	N/M	10 (1 Low)
Penicuik	42 (3 Low)	N/M	N/M	N/M	N/M
North East Scotland					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Aberdeen	N/M	24 (1 Low)	2 (1 Low)	0.1 (1 Low)	7 (1 Low)
The Scottish Highlands					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Inverness	N/M	22 (1 Low)	N/M	0.6 (1 Low)	N/M
Strath Vaich	N/A	N/M	N/M	N/M	N/M
Northern Ireland					
SITE	**Ozone (ppb)**	**Nitrogen dioxide (ppb)**	**Sulphur dioxide (ppb)**	**Carbon monoxide (ppm)**	**PM_{10} Particles (μgm^{-3})**
Derry	39 (3 Low)	9 (1 Low)	6 (1 Low)	0.2 (1 Low)	13 (1 Low)
Lough Navar	31 (2 Low)	N/M	N/M	N/M	7 (1 Low)
N/M means that the pollutant is not measured at that site N/A means that no data were recorded for the period					

Click on any of the links below to see the relevant information

Measurements **Forecast** **Alerts**

Air Pollution Forecast

Air pollution forecast until 3pm Sat Jun 1st

Region	In rural areas	In towns and cities away from busier roads	In towns and cities next to busier roads
The North East	4 (Moderate)	3 (Low)	2 (Low)
North West & Merseyside	3 (Low)	3 (Low)	2 (Low)
Yorkshire & Humberside	3 (Low)	3 (Low)	2 (Low)
The East Midlands	4 (Moderate)	3 (Low)	2 (Low)
The West Midlands	3 (Low)	3 (Low)	2 (Low)
East Anglia	4 (Moderate)	3 (Low)	2 (Low)

The South East	4 (Moderate)	4 (Moderate)	2 (Low)
The South West	3 (Low)	3 (Low)	2 (Low)
South Wales	3 (Low)	3 (Low)	2 (Low)
North Wales	3 (Low)	3 (Low)	2 (Low)
The Scottish Borders	3 (Low)	3 (Low)	2 (Low)
Central Scotland	3 (Low)	3 (Low)	2 (Low)
North East Scotland	3 (Low)	3 (Low)	2 (Low)
The Scotish Highlands	3 (Low)	3 (Low)	2 (Low)
Northern Ireland	3 (Low)	3 (Low)	2 (Low)

Region	In towns and cities away from busier roads	In towns and cities next to busier roads
Greater London	3 (Low)	3 (Low)
Birmingham	3 (Low)	2 (Low)
Greater Manchester	3 (Low)	2 (Low)
West Yorkshire	3 (Low)	2 (Low)
Tyneside	3 (Low)	2 (Low)
Liverpool	3 (Low)	2 (Low)
Sheffield	3 (Low)	2 (Low)
Nottingham	3 (Low)	2 (Low)
Bristol	3 (Low)	2 (Low)
Brighton	3 (Low)	2 (Low)
Leicester	3 (Low)	2 (Low)
Portsmouth	3 (Low)	2 (Low)
Swansea	3 (Low)	2 (Low)
Cardiff	3 (Low)	2 (Low)
Edinburgh	3 (Low)	2 (Low)
Glasgow	3 (Low)	2 (Low)
Belfast	3 (Low)	2 (Low)

Air Pollution is on a scale of 1 to 10

Low (1 - 3) Moderate (4 - 6) High (7 - 9) Very High (10)

About this scale

Click on any of the links below to see the relevant information

Measurements **Forecast** **Alerts**

There are currently no pollution alerts anywhere in the UK