



Air Quality in Scotland

Welcome to the 15th Scottish Air Quality Database (SAQD) stakeholder's newsletter. This newsletter is produced on behalf of the Scottish Government by Ricardo Energy & Environment (Ricardo) and is designed to provide regular updates and news regarding the SAQD and local air quality matters to all stakeholders. This may include; updates to the network; new information on air quality issues; updates on changes in policy and procedures; new initiatives and events; technical reports; and how to access data using the Air Quality in Scotland website.

If you have any information which you think would be beneficial to include in a future newsletter, please email us at aq-monitoring-scotland@ricardo.com.

NEWS

2022 ANNUAL PROGRESS REPORTS (APR) AND 2021 DIFFUSION TUBE DATA

As 2022 LAQM APR approvals begin to filter through and in turn be published, please can you send through the reports to be uploaded to the Air Quality Scotland Website? If you have any other historical LAQM documents missing from the website (<https://www.scottishairquality.scot/laqm/laqm-reportsplease>) please send them through as well.

Once your APR is published can you also send through your diffusion tube data (as done previously) for 2021 to be included in the Air Quality in Scotland NO₂ diffusion tube map <https://www.scottishairquality.scot/latest>.

As previously, please use the two Excel templates ("Scottish NO₂ Site" and "NO₂ annual mean data") provided in the email from David Hector on 29th July 2022 to send through your data.

Alternatively, you can use previously populated templates and add the 2021 annual mean data. If you have added new sites in 2021 please include the new meta data and annual mean concentrations in both templates. If you have any queries please do not hesitate in contacting David Hector.

SCOTTISH AIR QUALITY MAPS 2020 PUBLISHED

The latest technical report and mapping of 2020 data was published during September. <https://www.scottishairquality.scot/data/mapping>
[https://www.scottishairquality.scot/sites/default/files/publications/2022-09/Scottish mapping report 2020.html](https://www.scottishairquality.scot/sites/default/files/publications/2022-09/Scottish%20mapping%20report%202020.html)

The report provided Scotland-specific air pollutant maps of annual mean background and roadside NO_x, NO₂, PM₁₀ and PM_{2.5} concentrations for the Scottish Government for 2020. The methodology was tailored to represent air pollutant concentrations in Scotland, using Scotland-specific measurements from Scottish air quality monitoring sites to calibrate and verify the model.

For the first time, Scotland-specific PM_{2.5} maps have been produced. This has been possible due to the expansion programme undertaken by the Scottish Government to increase the number of PM_{2.5} monitoring sites in the Scottish air quality network.

ENVIRONMENTAL STANDARDS SCOTLAND REPORT ON AIR QUALITY LIMIT VALUES

This improvement report makes several recommendations to the Scottish Government following an investigation into its compliance

with the statutory limit values. The news release can be read [here](#).

EURO 7 "POST EURO6/VI EMISSIONS STANDARDS"

The publication of Euro 7 emissions standards proposal was once again been pushed back, and was published on the 10th November. The proposal looks to simplify rules by brining all vehicles into one group, Euro 7, and are fuel and technology neutral, meaning that all fuel types face the same regulations. The proposal also brings in regulations for emissions from brakes and tyres in addition to those from the tail pipe. More details from the full proposal can be found [here](#).

2022 SITE AUDIT UKAS CERTIFICATES AND Q2 2022 DATA MARKED AS RATIFIED

Please be advised that last summer's QA/QC site audits UKAS accredited certificates can be located [here](#). In addition, the 2022 Quarter 2 data (April to June 2022) is now locked as ratified on the Air Quality in Scotland website.

This data and all historic data can be accessed via the data selector tool located on the Measure and Annual Statistics page [here](#). The data can also be analysed using a variety of R based Openair analytical tools [here](#). If you have any issues with any of these functions please contact one of the Ricardo Energy and Environment Air Quality team by emailing aq-monitoring-scotland@ricardo.com.

REVOKING AND AMENDING AQMA'S

Please can you let us know when AQMA revocations/amendments have been carried out so that we can update the Scottish Air quality website pages. As well as informing ourselves can you please also provide the relevant information to the Defra LAQM page <https://laqm.defra.gov.uk/1rsw2/index.php>. The Defra LAQM database is where the information will be held centrally and is the

database that the Air Quality in Scotland website will use to update the AQMA interactive map.

Each Local authority should have an account set up to access this page but if this has been forgotten you can contact the LAQM support helpdesk. Details provided below.

LAQM Helpdesk contact details:

Telephone: 0800 0327953

E-mail: laqmhelpdesk@uk.bureauveritas.com

BONFIRE NIGHT AQ REPORT

Ricardo have produced a report that provides data on how this years bonfire night impacted Particulate Matter concentrations across Scotland, the report can be found [here](#).

NEW SENSORS BLOG POST

Ricardo has recently published the latest in a series of blog posts about Air Quality Sensors, this latest post talks about designing and implementing useful applications for air quality sensors and can be found [here](#).

ADVANCED SENSORS TRAINING WEBINAR

As part of the Scottish Air Quality Database and Website project, Ricardo, on behalf of Scottish Government, carried out an Air Quality Monitoring with Sensors training webinar in November last year. As a follow on from this Scottish Government have provided funding to carry out an "Advanced Air Quality Monitoring with Sensors" training Webinar. This will be a free event open to all Scottish Local authorities employees and will be held online using MS Teams. The training will be carried out in 1 day over 3 sessions during February 2023. The webinar will cover the following subjects amongst others;

- A refresher from the previous training event
- Update on sensor specifications and latest technology
- Advanced Sensor data processing and interpretation
- Advanced quality control procedures
- Case studies, working examples and practical exercises
- Q&A session

On completion of the training Ricardo will provide CPD certificates to all attendees that request a certificate to be issued.

If you are interested in attending this training please email David Hector. Once we have the final numbers we will arrange a suitable date in February.

SCOTTISH ENVIRONMENT PROTECTION AGENCY – Written by SEPA

Stirling Villages Community Engagement

Air quality monitors have been installed across villages in the Stirling Council area as part of a project to support rural communities to become more aware of local air quality and to consider steps that can be taken to help reduce our contributions to air pollution.

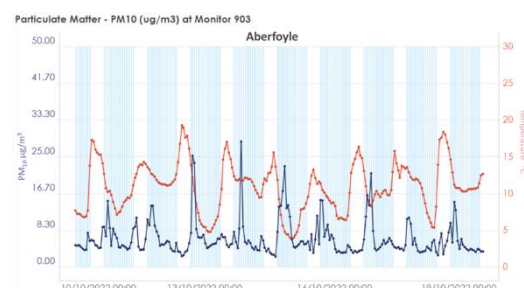
The project, launched as part of a partnership between SEPA, the University of Stirling and Stirling Council, has recently completed the first phase in Aberfoyle and has now moved to Doune and Deanston, with further events scheduled for Fintry, Kippen and Thornhill with project completion scheduled for April 2023. The outputs of the project will also feed into work being carried out on public engagement and behaviour change under the Scottish Government's current Cleaner Air for Scotland 2 Strategy.

In each village, air quality data is collected over a one-month period using lamppost-mounted monitors and low-cost sensors deployed by residents. A team from the University of Stirling are hosting a series of community engagement events in each location, aiming to empower

communities to take ownership of local air quality monitoring. These events will provide information on air pollution, its potential sources, and effects. Data from each local monitoring exercise is presented and residents are able to consider actions they may wish to take to reduce their own emissions and help reduce air pollution within their neighbourhoods.



First Community Event in Doune and Deanston on 12th November – Picture, University of Stirling



Data outputs highlighting the influence of domestic combustion contributions on air quality within Aberfoyle – Picture, SEPA

Local schools are encouraged to participate in the project with educational resources provided, access to SEPA's air pollution experts and the chance to monitor air pollution levels themselves. Participating schools will be encouraged to think about how they may take steps to reduce emissions and improve air quality, linking these actions to wider environmental issues, including climate change.

For further information please contact: Graham Applegate/Colin Gillespie at SEPA or Amy McCarron at Stirling University.

SAQD QAQC ACTIVITIES

Ricardo will soon be undertaking the winter six monthly audits. The auditor will contact you before attending site and an audit summary will be sent to you after each audit visit which will detail their findings. Could you please then pass these on to your ESU's in advance of the service so that any issues can be investigated. If you have not received an audit summary, please contact aq-monitoring-scotland@ricardo.com.

QUESTION AND ANSWERS SECTION

This section will provide answers to frequently asked questions that relate to different aspects of LAQM ranging from Local Site Operator (LSO) duties to advanced data analysis queries. If you have a question you would like to be answered in this section, please contact aq-monitoring-scotland@ricardo.com.

Q. What should I be looking for in an ESU proposal

A: We recommend that you look for the following in your ESU contracts:

- 6 monthly service of instruments in co-ordination with the audit, including travel, labour and consumables and provision of service report.
- Replacement, with equivalent instrumentation, within 48 hours if an instrument is being removed from site.
- Attendance to call outs within 48 hours.

- Remote technical support.

The following can also be useful to include:

- Replacement of sample line PTFE tubing up to the first sample inlet filter at service.
- PAT testing of equipment.
- PAT testing and service of Air conditioning unit.
- Provision of LSO consumables.
- Testing, provision and replacement of First aid kits and Fire extinguishers.

Q. I've been notified that my site is showing high concentrations and been asked to investigate, what should I be looking out for?

A: Occasionally Ricardo might ask an LSO to visit a site to investigate high or suspicious looking data. This can sometimes be down to a fault with the instrument or activity in the local area. So on arrival at the site can you please check for warnings or errors on the instrument such as flow or temperature warnings, as well as local activity, such as roadworks or a fire. Can any findings, or lack of findings, please be reported to aq-monitoring-scotland@ricardo.com.

Q: How do I tell the difference between a filter paper and a backing paper?

A: If you receive filter papers which are separated by backing paper its important to identify which is which. The backing paper is coloured a very light blue compared to the filter paper and is much stiffer and less flexible. If a backing paper or both a filter and backing paper are placed in the filter holder this can cause the instrument significant flow problems, which as well as damaging the instrument will likely impact the data too.

STAY CONNECTED

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