

# Air Quality in Scotland

Welcome to the seventh 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 [info@scottishairquality.co.uk](mailto:info@scottishairquality.co.uk).

## HEALTH AND SAFETY UPDATE

### ADVICE FOR OPERATORS OF BAM AIR QUALITY MONITORS – COMPLY WITH RADIOACTIVE SUBSTANCE REGULATIONS – OCTOBER 2018

Air Quality Monitors using beta attenuation monitoring (BAM) technology are in common use by local authorities. These monitors contain radioactive sources, typically carbon-14 (C-14) (3.7 MBq) or krypton-85 (Kr-85) (1.85 GBq). The purpose of this update is to clarify the regulatory arrangements which apply to these sources. For more information, please click [here](#).

## NEWS

### NATIONAL LOW EMISSIONS FRAMEWORK JANUARY 2019

Scottish Government have published the National Low Emissions Framework. The Framework provides a methodology for local authorities to undertake air quality assessment to inform decisions on transport related actions. The document can be found [here](#).

### SCOTTISH AIR QUALITY DATABASE AND WEBSITE SEMINAR

The annual Scottish Air Quality Database and Website Annual Seminar will take place on Tuesday 12<sup>th</sup> February 2019 at COSLA, Verity

House, 19 Haymarket Yards, Edinburgh, EH12 5BH.

February 2019						
M	T	W	T	F	S	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

The seminar theme this year will be air quality management, building the evidence base and consideration of measures to bring about improvements. The seminar will include amongst other interesting topics, presentations on the health impacts of air pollution, plans for low emission zones in Scotland, the importance of considering real world driving emissions and the impacts of vegetation on urban air pollution.

Further details will follow in due course, but in the meantime please **SAVE THE DATE** and register. Please follow this link to the [Registration Form](#).

#### [LOW EMISSION ZONES \(LEZ\) PAGE UPDATE](#)

The third meeting of the LEZ leadership group took place on the 13<sup>th</sup> June 2018. The minutes to that meeting can be found on the LEZ pages [here](#).

#### [NEW WEB ADDRESS](#)

Please note that the Air Quality in Scotland website recently changed from [www.scottishairquality.co.uk](http://www.scottishairquality.co.uk) to [www.scottishairquality.scot](http://www.scottishairquality.scot) in line with other Scottish Government sites.

#### [NEW SITES TO THE SAQD](#)

We are pleased to announce the addition of the following air quality monitoring station to the SAQD:

**Edinburgh Tower Street:** this is an urban background monitoring station measuring PM<sub>10</sub> and PM<sub>2.5</sub> (additional pollutants monitored PM<sub>1</sub>, PM<sub>4</sub> & TSP). For more information on this site, please visit [http://www.scottishairquality.scot/atest/site-info?site\\_id=ED012](http://www.scottishairquality.scot/atest/site-info?site_id=ED012).



Figure 1. New monitoring station at Tower Street, Edinburgh

#### [SAQD ANNUAL REPORT AND AIR QUALITY SCOTLAND BROCHURE 2017 HAVE BEEN PUBLISHED](#)

The [Scottish Air Quality Database Annual Report for 2017](#) was published on the Air Quality in Scotland website on 11<sup>th</sup> December. The report provides a summary of the latest ratified air quality monitoring results for Scotland in 2017 - together with an update on project progress including QA/QC, website improvements, AQ mapping and the annual seminar. The report

also includes information on the air pollutant emissions in Scotland obtained from the National Atmospheric Emissions Inventory and the SEPA Scottish Pollution Release Inventory.

In turn, the [Air Quality in Scotland Brochure 2017](#) was also published on the website on the 11<sup>th</sup> December. This annual brochure aims to provide a summary of the air quality monitoring and associated work carried out by and on behalf of Scottish Government and local authorities during 2017.

#### [SCOTTISH ENVIRONMENT PROTECTION AGENCY \(SEPA\)](#)

##### [EPA NETWORK/EEA PROJECT ON CITIZEN SCIENCE AND AIR QUALITY](#)

SEPA, through its membership of the European Network of the Heads of Environment Protection Agencies (EPA Network) is participating in a joint project with the European Environment Agency (EEA) on citizen science and air quality. SEPA attended a workshop in Copenhagen on 18<sup>th</sup> October (hosted by the EEA) to discuss the purpose, scope and practicalities of the proposed project with other EPAs and academic institutions.

The main purpose of the project is intended to assess the influence of various European air quality citizen science initiatives on behaviour change and is primarily aimed at schools and educational facilities. The project will look at a variety of methods for assessing air quality (in particular nitrogen dioxide (NO<sub>2</sub>)) and how the data and information is used to inform and educate children and their parents. The project will then assess the effectiveness of different citizen science approaches and the impact they have had on behaviour change.

The project scope is currently being finalised by the EEA, but SEPA will be participating through further development and roll-out of the Learning About Air Quality teaching package (<http://www.learnaboutair.com>) and the practical aspects of the project will run from February to October 2019.

This project provides Scotland with an opportunity to participate in a significant European project and SEPA is looking for volunteer local authorities to become involved. Those interested in participating in the project can obtain more information from [colin.gillespie@sepa.org.uk](mailto:colin.gillespie@sepa.org.uk) or [graham.applegate@sepa.org.uk](mailto:graham.applegate@sepa.org.uk).

**Contact:** Graham Applegate & Colin Gillespie

### LOCAL AUTHORITY

In this section, we plan to showcase local authority's contribution to Local Air Quality Management (LAQM). The aim of this section will be to provide information on what air quality initiatives the local authority is undertaking, and the experiences gained. If you would be interested in contributing, please send an email to [info@scottishairquality.co.uk](mailto:info@scottishairquality.co.uk). Many thanks to William McNish, Contaminated Land Officer, at North Ayrshire Council, for contributing to this issue!

#### NORTH AYRSHIRE COUNCIL

North Ayrshire Council is committed to improving the local environment and health of residents and visitors alike. With support from partner organisations, we are consistently looking at ways we can make positive changes to our physical infrastructure, while also working with local people to make changes that can have a positive impact on the environment.

We have two main air quality issues here in North Ayrshire. The main pollutant of concern is nitrogen dioxide (NO<sub>2</sub>).

The first relates to traffic congestion in a small section of High Street, Irvine. This is a town centre location where several bus stops are located together. Public realm works (see Figure 2) are well underway in this area – due to be complete in 12 months' time – and works include the widening of the pavements where the high levels of NO<sub>2</sub> are being recorded. One of the bus stops has also been relocated further

along the street, with another being moved to Bank Street.



Figure 2. Photo 2: New Stagecoach Route 11 Euro VI buses (January 2018).

Bus operator, Stagecoach, also replaced a fleet of 27 buses on Route 11 with new Euro VI standard engine buses (see Figure 3). Route 11 has one bus approximately every 7 – 8 minutes.



Figure 3. Stagecoach replacement fleet with new Euro VI engine. Source: Irvine Times, January 2018

Monitoring data to date is encouraging and it would appear that NO<sub>2</sub> concentrations are reducing in High Street and this will continue to be monitored by the local air quality monitoring station.

The other area of concern is Dalry due to the traffic lights on the A737 which passes through the town. However, the new bypass is due to be complete by winter 2019 and we are confident this will alleviate traffic congestion in the village. A fly through of the new bypass can be found [here](#).

**Contact:** William McNish

### SAQD QAQC ACTIVITIES

Ricardo began the winter six monthly site audits on 3<sup>rd</sup> December 2018. Ricardo will contact each local authority in advance to confirm the date of the scheduled audit.

After each audit, a summary of the findings will be sent to you by the auditor. This summary should be forwarded on to your Engineer Support Unit (ESU) for the next schedule service.

Additionally, Ricardo, on behalf of the Scottish Government, have obtained replacement QR stickers for all the sites within the SAQD. If your site has recently been upgraded or the current QR sticker is damaged, please let Ricardo know before the audits.



Figure 4. QR Sticker for external cabinet

#### **POLLUTION EVENT – 6<sup>TH</sup> NOVEMBER 2018**

This particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) episode was the direct result of local bonfire night celebrations, weather conditions and air masses on the 5<sup>th</sup> and 6<sup>th</sup> November 2018.

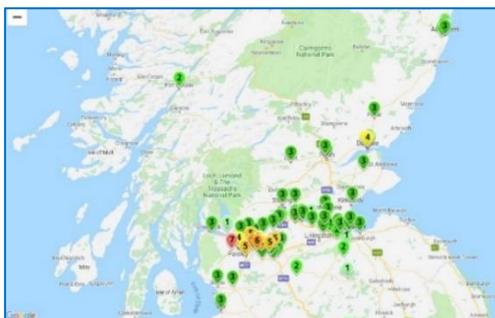


Figure 5. Air Quality in Scotland Website display on 6<sup>th</sup> November 2018

After the bonfire celebrations, localised areas of 'Moderate' and 'High' air pollution levels affected the central belt of Scotland. Air mass trajectory from the south (see Figure 6) coupled with benign weather conditions for the central belt, resulted in poor dispersion conditions around the 5<sup>th</sup> and 6<sup>th</sup> November. This caused particulate emissions from the various fireworks and bonfire events to stagnate for several hours.

Air mass back trajectories for 96 hours upto 12:00 Tuesday 06-11-2018

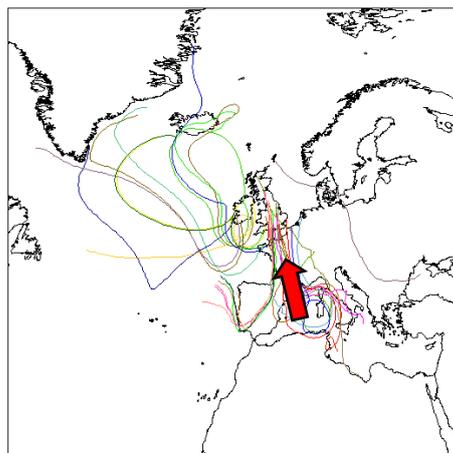


Figure 6. Air mass trajectory for Tuesday 6<sup>th</sup> November 2018

As predicted, the situation improved the following day due to the change in direction of the air masses from the west (See Figure 7) and the ensuing unsettled weather. This created an environment for pollutants to be more easily dispersed, thereby reducing particulate matter concentrations.

Air mass back trajectories for 96 hours upto 12:00 Wednesday 07-11-2018

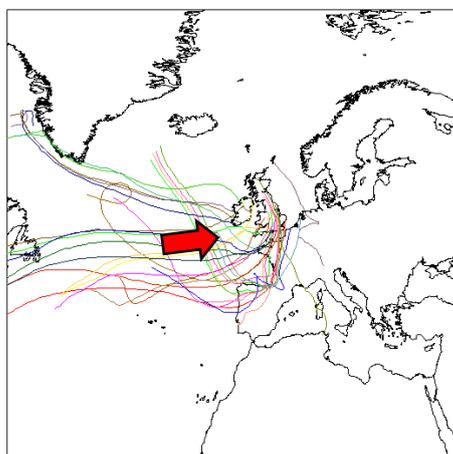


Figure 7. Air mass trajectory for Wednesday 7<sup>th</sup> November 2018

## 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 [info@scottishairquality.co.uk](mailto:info@scottishairquality.co.uk).

*Q: Can I attend site to get training during the next scheduled audits?*

*A:* Yes! Current Local Site Operators (LSO) may attend site to meet the auditor and ask any questions or gain refresher training. This is especially important if there are new LSOs that require full training, please let Ricardo know before the audit.

## STAY CONNECTED

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