

Automatic Urban and Rural Network

Autumn 2022 Newsletter

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Environment Agency

Department of Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

Llywodraeth Cymru
Welsh Government

The Scottish Government



Welcome

Welcome to the Autumn 2022 edition of the Automatic Urban and Rural Network (AURN) Newsletter.

Covid-19 Guidance and Lone Working Safety

Covid-19 remains an ongoing public health risk.

As a reminder, your health and safety still take priority. Where an individual or their employer does not feel happy with conducting their normal site attendance tasks on health and safety grounds then the Environment Agency supports their position and would not want to put anyone in a situation that they are uncomfortable with.

The guidance for AURN stations remains as follows:

1. It is no longer necessary for a site to go to the 'high risk' status and therefore be closed to all visitors, if a recent visitor tests positive for Covid-19. The process now is to inform the relevant network manager, who will update the H&S Database to ensure all who plan to visit the site are aware.

2. Walk in enclosures are an enclosed space, and therefore it is recommended that you minimise the number of people in the cabin at any one time, minimise the time that two or more people spend inside the enclosure together, try to maintain social distancing where possible, and keep the door open to maximise ventilation. Face coverings are advised. The final decision on Covid-safe ways of working is down to individual employers, but we ask that everyone respects differences in approaches between organisations.

3. LSOs and site staff must maintain the cleanliness of the site in accordance with the normal practices. When attending site, we advocate the following precautions: frequent hand washing (for at least 20 seconds using soap), and use of sanitiser gels whilst undertaking duties at site. Where possible wipe surfaces that you touch within the cabin (as long as doing so will not damage instrumentation).

Health and Safety (H&S) Information

We are continually working to improve H&S on the network and during this contract we are aiming to gather further information from our contractors in relation to training having been provided by employers. You should have already received a request for training information from the BV team. Please can we ask that you provide as such information as possible in relation to the training provided by your employer back to us. We will then use this to determine what additional support may be required to those of you undertaking work on the network.

We would also like to remind you to submit your method statement for undertaking your LSO role, and also to ensure an accurate and up to date risk assessment is available on the H&S database.

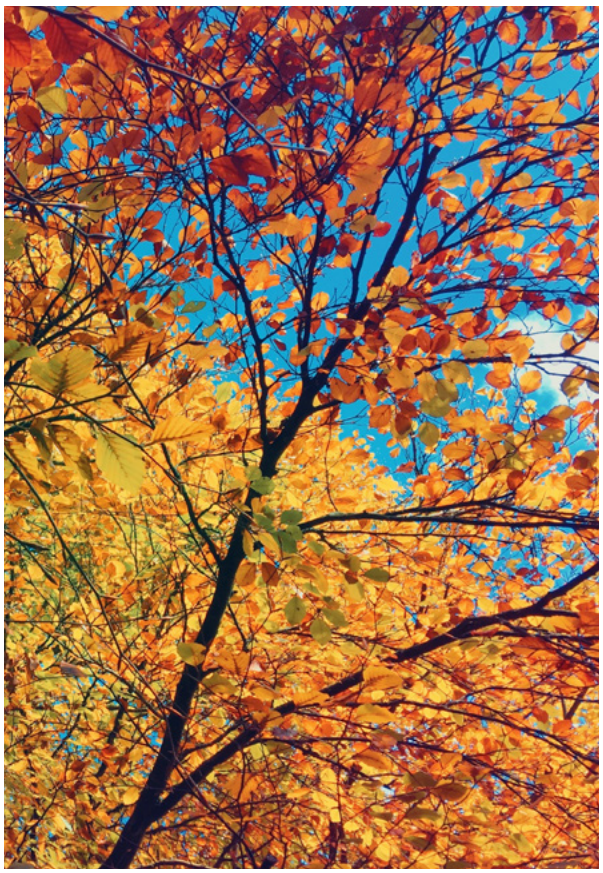
Lone Working

As many LSOs carry out calibrations alone, it is important to be vigilant and remember how to remain safe while on site.

- Work in daylight hours and wear a high visibility jacket.
- Carry portable chargers to ensure phone is always usable.
- Checking mobile phone signal before commencing work at site, or if sites have had issues previously then consider making it a two-person site.
- Have a buddy system in place and ensure your buddy knows where, and when you are heading. You can also share your location using the 'find friends' function or track location on What3Words.
- If you ever have any issues at site from the public – leave site immediately if you are safe to do so and phone the police. Always alert CMCU to issues that have occurred at site.



LSO Training



- The winter audit round of all AURN sites will commence in January, and as a reminder all LSOs are required to attend yearly training from your QAQC Unit (Ricardo for most non-London sites, NPL for sites in the Automatic London Network).
- Individual auditors will be in touch to confirm dates for each site, and to arrange on site training. Please make sure you can join the QAQC auditor at their visit where possible.
- The proposed schedule for the winter audits is available on the 'Operations' page of the AURN Hub at **https://aurnhub.defra.gov.uk/login.php** (this schedule may be subject to change). A copy is also attached as an annex to this newsletter.

LSO Reminders

When submitting calibration sheets can you please ensure that you are using both of the email address' below.

aurn.team@bureauveritas.com

AQAdmin@Ricardo.com

Also we have had a change in CMCU Project Manager for the network. Samantha Britton has returned from maternity leave and Joanne Davies has left Bureau Veritas.

Contact details for Samantha are as below:

samantha.britton@bureauveritas.com

01841 540 584

Any onsite issues for LSOs can also be directed to Ricardo's Air Quality Monitoring Helpline:

airqualitymonitoring@ricardo.com

01235 753 513

- When visiting monitoring stations can we please ask that if you notice any changes to the surrounding area which have the potential to influence data to please reports these via your calibration sheets. You are the ones who visit the stations most often and your input is vital in terms of understanding the monitoring environment.

- Please continue to keep the monitoring stations clean and tidy – ensuring that you remove any waste you have generated and tidy up any equipment you have used. If you have any concerns regarding the condition of your site following a contractor visit, please let us know.

- When replacing gaseous filters, please ensure that you are installing the filter and not the backing paper used to separate the filters in the pack. This was highlighted in the spring 2022 newsletter, but the audit team are still finding cases where the backing paper has been installed instead of the actual filter. This impacts data quality, and often results in large amounts of data being rejected. If unsure as to how to distinguish the filter from the backing paper, please let either BV or QAQC teams know so that we can provide further assistance.

Gas Pressure Recording

- As a reminder, please can all LSOs ensure they are recording gas cylinder pressure in the correct units, PSI or Bar. There have been instances recently of new cylinder deliveries being triggered, because pressures that are actually in Bar have been given in units of PSI (for example 150 Bar being listed as 150 PSI), meaning a cylinder that has plenty of gas remaining appears to be empty.

- The cylinder number should always be the long barcode printed in the red label for BOC cylinders.

Figure 1: BOC Cylinder barcode, example 1



Figure 2: BOC Cylinder barcode, example 2



Sustainability Reporting

The new LSO contracts require LSOs to report sustainability data to Bureau Veritas. An update template and guidance document will be issued to all LSOs in November, and we are asking for the Q4 2022 data to be returned to CMCU by 13th February 2023. If you have any questions relating to the sustainability reporting requirements, please contact Samantha Britton.

Update on $PM_{2.5}$ Expansion

The Environment Agency is currently working on the enhancement of $PM_{2.5}$ monitoring in the AURN and ALN. This is being driven by the adoption of the Environment Act 2021 into Law in 2021. The Act requires that the UK Government sets targets for $PM_{2.5}$; the targets have now been set and are as follows:

- Annual mean concentration target of 10 µg m^{-3} to be met across England by 2040; and
- A 35% reduction in population exposure by 2040 (base year 2018).

The enhancement covers both urban background and rural background monitoring locations to determine compliance with the future targets through robust scientific evidence.

The Environment Agency is installing an additional 24 $PM_{2.5}$ analysers at existing monitoring stations with a further 9 brand new sites to be identified and established. To date 20 existing sites have been enhanced with new $PM_{2.5}$ instrumentation and information is available on UK-AIR. Progress continues with the installation of the instrumentation at the remaining four existing sites and the nine brand new sites.

A big thank you to all LSOs who have provided assistance during the installation and identification of new monitoring locations.

ESU and LSO Re-Tender Exercise

As many of you will be aware the summer was a busy period for us, with the re-tendering of the Equipment Support Unit (ESU) and Local Site Operator (LSO) contracts. Thank you to all those who provided submissions and we are pleased to see so many organisations still interested in supporting the network. During the re-tendering round there was an increased focus on sustainability and matching site locations with geographic resources where possible. We hope through this approach we will see improved efficiencies particularly during ESU service rounds and also lead to further reductions in the AURN carbon footprint.

ESU Support by Geographic Area

Geographic Area	ESU Organisation
Scotland	Acoem
Midlands	Acoem
South West and Wales	Acoem
London	Enviro Technology
Northern Ireland and North Wales	Enviro Technology
North England	Enviro Technology
South East England	Enviro Technology
South England	Enviro Technology

The EA Ambient Air Monitoring Team continue to support 15 sites across the network in the North West area.

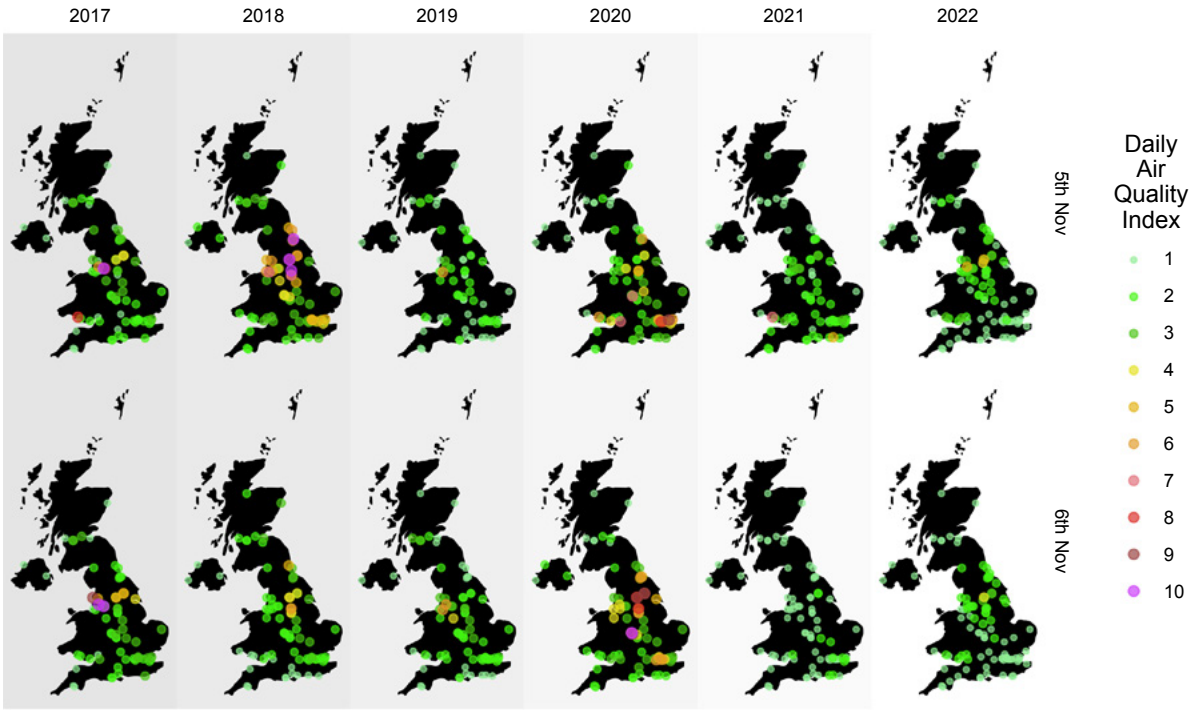
Particulate Pollution on Bonfire Night, 2022

Peaks in hourly mean $PM_{2.5}$ and PM_{10} concentrations were observed across the UK in early November, coinciding with Bonfire Night celebrations. The greatest peaks in both particulate sizes were seen in the late afternoon of the 5th of November. The average hourly concentrations of $PM_{2.5}$ and PM_{10} over November 5th and 6th were 11.6 and 17.3 µg m^{-3}, compared to 6.42 and 12.8 µg m^{-3} for the rest of the period between November 1st and 9th. The highest measured hourly concentrations of the two particulate sizes were 255 and 283 µg m^{-3}, respectively, both measured at Wigan Centre at 9 pm on November 5th.

While hourly concentrations were elevated on the evening of Bonfire Night, the impact on the Daily Air Quality Index (DAQI) was minimal compared to previous years. The highest indices seen for $PM_{2.5}$ and PM_{10} were 5 and 4, respectively, seen exclusively within the North West & Merseyside and Yorkshire & Humberside. Only three AURN sites, Dewsbury Ashworth Grove, Leeds Headingley Kerbside, and Wigan Centre, had a "Moderate" air pollution banding for PM over the Bonfire Night period. Figure 3 shows the DAQI on historic bonfire nights, where the index for PM reached as high as 10 in 2018. The maximum observed concentration was higher even in 2020, when restrictions and public health guidelines related to the Covid-19 pandemic prohibited public events.

Particulate dispersion is influenced strongly by weather conditions. Through use of the NOAA HYSPLIT forecast model, it was determined that air masses arriving in the UK on both the 5th and 6th of November were from over the North Atlantic Ocean. This air mass origin typically provides clean air and good dispersion conditions in terms of wind and precipitation. This may help explain the relatively lower daily average particulate matter concentrations compared to previous non-pandemic year.

Figure 3: The Daily Air Quality Index (DAQI) over Bonfire Night for AURN sites over the past six years (2017-2022)



More information can be read in the AURN Bonfire Night Report, available to read **here**.

Contacts

Primary contacts at Bureau Veritas (the CMCU) are:

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Primary contacts at BOC (Gas Supplier) are:

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Primary contacts at Ricardo Energy & Environment (the QAQC contractor for non-London sites) are:

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Data Protection: Everyone listed here as a contact has given their permission for their name and contact details to be included in this Newsletter, in connection with the Automatic Urban and Rural Network.

Annex 1

Ricardo Winter 2022 audit schedule

Date	Team 1	Team 2	Team 3	Team 4	Team 5
31/12/2022					
01/01/2023					
02/01/2023					
03/01/2023					
04/01/2023			Stoke-on-Trent Centre / Stoke A50 Roadside		
05/01/2023			Salford Eccles / Glazebury		
06/01/2023			Blackburn Accrington / Blackpool Marton		
07/01/2023					
08/01/2023					
09/01/2023	Oxford Centre Roadside / Oxford St Ebbes	Barnstable A39 / Charlton Mackrell	High Muffles		
10/01/2023	Reading London Road / Reading Newtown	Plymouth Centre / Saltash Callington Road	York Bootham / York Fishergate		
11/01/2023	Chilbolton	Yarner Wood / Honiton			
12/01/2023		Exeter Roadside / Plymouth Tavistock Road			Eskdalemuir
13/01/2023					
14/01/2023					
15/01/2023					
16/01/2023	Cardiff Centre / Cardiff Newport Road	Swindon Walcott / Bath Roadside	Doncaster Cleveland Street / Hull Holderness Road		Stockton-on-Tees A1035 Roadside / Stockton-on-Tees Eaglescliffe
17/01/2023	Swansea Roadside	Newport / Chepstow A48	Hull Freetown / Scunthorpe Town		Middlesbrough / Billingham
18/01/2023	Port Talbot Margam / Narberth	Bristol St Pauls / Bristol Temple Way	Immingham Woodlands Avenue / Lincoln Canwick		Hartlepool St Abbs Walk / Sunderland Silksworth
19/01/2023	Cwmbran Crownbridge / Hafod-yr-ynys Roadside		Chesterfield Roadside / Chesterfield Loundsley Green		Sunderland Wessington Way / Newcastle Cradlewell
20/01/2023					Newcastle Centre
21/01/2023					
22/01/2023					
23/01/2023	London Bloomsbury	Southend-on-Sea	Birmingham Acocks Green / Birmingham Ladywood / Birmingham A4540 Roadside		
24/01/2023	London Westminster	Chatham Roadside / Rochester Stoke	Birmingham University / Walsall Woodlands		
25/01/2023	London Hillingdon / London Harlington	Canterbury	West Brom Kendrick / Oldbury Birmingham Road / Telford Hollinswood		Glasgow Kerbside / Glasgow High Street
26/01/2023	London Teddington Bushy Park		Cannock A5190 Roadside / Burton-on-Trent Horninglow	Grangemouth / Grangemouth Moray	Glasgow Great Western Road / Glasgow Townhead
27/01/2023					
28/01/2023					
29/01/2023					
30/01/2023	Cambridge Roadside	Aston Hill	Warrington / St Helens Linkway		
31/01/2023	Wicken Fen / Weybourne	Leominster	Wigan / Preston		Peebles / Edinburgh Nicolson Street
01/02/2023	Norwich Lakenfields	Luton A505 Roadside		Fort William	Bush Estate / Auchencorth Moss
02/02/2023	St Osyth / Sibton		Widnes / Liverpool Speke	Greenock A8 Roadside / Dumbarton roadside	Edinburgh St Leonards
03/02/2023					
04/02/2023					
05/02/2023					
06/02/2023	Portsmouth / Portsmouth Anglesea Road	Lullington Heath	Sheffield Barnsley Road / Ladybower		
07/02/2023	Christchurch Barrack Road / Bournemouth	Brighton Preston park	Sheffield Devonshire Green	Belfast Stockmans Lane / Lough Navar	
08/02/2023	Southampton A33 / Southampton centre	Worthing A27 Roadside / Storrington Roadside	Barnsley Gawber	Mace Head	Strath Vaich
09/02/2023		Eastbourne	Sheffield Tinsley	Derry Rosemount	Inverness
10/02/2023				Ballymena Antrim Road	
11/02/2023					
12/02/2023					
13/02/2023	Coventry Binley Road	Derby St Alkmunds Way / Nottingham Western Boulevard	Bradford Mayo Avenue / Dewsbury Ashworth Grove		Aberdeen Errol Park
14/02/2023	Leamington Spa / Leamington Rugby Road	Crewe Coppenhall / Burton-on-Trent Horninglow	Leeds Centre / Leeds Headingley Kerbside	Ballymena Ballykeel	Aberdeen Wellington Street
15/02/2023	Coventry Allesley / Leicester A594	Northampton Spring Park	Birkenhead Borough Road / Wirral Tranmere	Belfast Centre / Armagh Roadside	Lerwick
16/02/2023	Leicester University	Nottingham Centre			Aberdeen Union St
17/02/2023					
18/02/2023					
19/02/2023					
20/02/2023			Shaw Crompton Way / Bury Whitefield Roadside		Dundee Mains loan
21/02/2023			Wrexham / Crewe Coppenhall		Carlisle / Dumfries
22/02/2023			Manchester Piccadilly / Manchester Sharston		
23/02/2023			Manchester University		
24/02/2023					
25/02/2023					
26/02/2023					