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Convener  
Education, Children and Young  
People Committee  
The Scottish Parliament  
Edinburgh  
EH99 1SP

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23 March 2022

Dear Convener,

### **Learning Estate CO2 Monitoring**

I am writing to update the Education, Children and Young People Committee on the outcome of CO2 assessments, covering January and February, being undertaken by local authorities across Scotland's learning estate.

#### **Background**

An agreement was reached with COSLA and ADES that local authorities would ensure that all schools and ELC settings had access to fixed or mobile CO2 monitoring to support action to improve ventilation (in spaces where CO2 monitoring was not appropriate, airflow digital modelling or other means could be used). Sufficient monitors should be made available for use to enable ongoing decision-making by staff about balancing ventilation (including by opening of doors and windows) with temperature.

Following my update to the Committee at the end of October 2021, which provided details of the comprehensive initial monitoring of all learning, teaching and play spaces in Scotland, local authorities have reported that they have continued to take forward work on ventilation and CO2 monitoring. A further agreement was reached with local authorities that, to inform ongoing policy-making and identify any requirements for local authorities to carry out remedial work, appropriate assessment and reporting arrangements should be put in place. Local authorities were asked to put in place arrangements that would allow receipt of reports from ongoing monitoring at least once a week regarding the ventilation in learning, teaching and play spaces, beginning from the start of January 2022. Guidance recognised that local authorities would require time to put these arrangements in place and ensure sufficient monitors were available to support them (subject to supply constraints).

The policy was agreed prior to the breakup of schools in December, and updated Scottish Government COVID-19 Guidance was published on 17 December 2021. A funding package (details of which are set out below) to support the delivery of this policy was also agreed with COSLA Leaders.

Collective information sharing arrangements were developed in collaboration with local authorities and, under current plans, will be used by the Scottish Government and Scottish Futures Trust to gather information until June 2022, in order to encompass seasonal and school calendar variations and maximise the learning which will help inform future ventilation strategies and healthy school and ELC operational practices. This update summarises feedback from the information we have received at the start of March.

### **Funding**

In January, we announced additional capital funding of up to £5m to support any further urgent remedial work that is needed to ensure good ventilation in schools and ELC settings. Up to £4.82m is available to local authorities directly for their learning estate. Private and voluntary sector nurseries were able to access funding via the Scottish Government's Business Ventilation Fund which has now closed. This funding is on top of the previously announced £10m of funding for ventilation and CO2 monitoring, to ensure ventilation is as effective as possible in schools and ELC settings and to support remedial action. Previous funding of £90m for Covid logistics could also be used for purposes including improved ventilation.

At this stage, from returns received and ongoing engagement with local authorities, we are aware that this funding has been and is being used to take remedial action where required, and to provide for further CO2 monitoring. Funding availability is not currently presenting as a barrier to monitoring progress and/or undertaking remedial action where needed. Based on the returns received to date, not all funding allocations have been fully utilised, so there is still an opportunity for authorities to access this funding where required. We expect to have a clear position on the extent to which overall funding has been used once final funding claims are received at the end of this month.

### **Overall assessment**

The agreement to assess and report centrally against learning, teaching and play spaces every week (subject to monitor availability and supply constraints) was an increase in ambition from previous requirements (we understand that Scotland is the only part of the UK to have sought to put in place arrangements of this kind to inform policy development). Local authorities report that this has necessitated the procurement and deployment of additional monitors and staff resources. As was anticipated, the start of the year has seen a progressive increase in the number of devices and the percentage of spaces able to be reported against centrally (some local authorities have indicated they have adopted an exception reporting approach for problematic spaces). In addition, staff monitoring arrangements needed to be revised to reflect the increased monitoring and reporting frequency.

It is important to note that the reporting below is based on the number of spaces where data has been gathered and reported centrally to local authority teams for the purposes of policy development and remedial action. This does not encompass all

situations in which the monitors available to schools/settings are being used to regulate ventilation on a day-to-day basis by staff, and/or where central reporting arrangements have not to date been finalised. Local authorities have confirmed that they continue to be committed to ensuring that all schools and ELC settings have access to fixed or mobile CO2 monitors for those day-to-day operational purposes.

More generally, following the letter that Councillor Stephen McCabe and I wrote to the workforce unions in January 2022, requesting specific details of any ventilation issues that have already been raised at a local level and that have not been successfully dealt with through the appropriate processes, COSLA officials report that they have not to date received any concerns via this process. They remain very willing to receive any such specific concerns as outlined in the original offer and will continue to reiterate this offer in appropriate fora to ensure it is well understood.

Key feedback from the local authorities is set out below:

- All local authorities returned information to the Scottish Government, although not all were able to provide information on all of their learning, teaching and play spaces (for the reasons set out above).
- c.40,000 monitors are in use or are awaiting delivery, an increase of c.18,000 since December 2021. As it stands, there is an overall ratio of around 1 monitor to every 1.5 spaces (some local authorities are continuing to make use of mobile monitoring strategies, moving devices between spaces on a regular basis). Currently, 22 local authorities are planning a 1:1 monitor:space approach. For the remaining 10 local authorities, our revised guidance on reducing risks in schools (published 17 March 2022) recommends that all local authorities move to a 1:1 ratio of monitors to learning, teaching and play spaces over the remainder of the academic year, supported by the funding provided by Scottish Government.
- With regard to central reporting of readings from CO2 monitors for the purposes of policy development and/or to identify any need for remedial action, at the end of February local authorities received reports against c.60% of their learning, teaching and play spaces. During this expansion period, councils report that they have required time to agree strategic approaches, develop operational plans and procure additional devices. As a result of this preparatory work, some appear to have initially had low levels of central reporting, which have increased significantly over the period in question. Based on information subsequently received, some level of regular central reporting is now being progressed in all council areas. The progress across each of the sectors (ELC, primary, secondary and ASN) was broadly consistent.

The range of problematic spaces (CO2 levels consistently above 1,500ppm despite mitigations having been put in place) identified during this period and reported by local authorities was generally 0-3%.

- Overall the percentage of reported problematic spaces v assessed spaces has decreased by more than 50% during the reporting period. This fell from 3.2% in w/c 3 January to 1.5% in w/c 21 February.

As the weather was relatively stable, this decrease in the percentage of problematic spaces identified and reported is a likely indication that physical and operational mitigations (e.g. repairing windows, ventilation system maintenance, increased monitoring and user guidance) are proving effective.

However, it is important to note that ventilation is a complex issue requiring, among other things, ongoing monitoring and management. For example, changes in room use or weather conditions can result in assessments of air quality changing over time, requiring fresh remedial action – this is why, despite remedial action being taken to address problematic spaces previously identified, additional problematic spaces may be identified at different times of the year.

Some ventilation enhancement works may also only be able to be carried out when spaces are unoccupied, for example during holiday periods when they are not achievable out of hours or at weekends. These spaces will be reported as problematic until those mitigations are complete. In these circumstances, local authorities have reported other temporary mitigation measures, such as reducing room occupancy by adjusting timetabling, or the provision of air cleaners.

### **Assessment Outcomes**

The agreed information sharing arrangements with local authorities ask that any ventilation mitigations arising from CO<sub>2</sub> monitoring are noted. In most cases, local authorities have continued to report simple measures such as repairing windows or ensuring that there is no obstruction to maximum opening. Inappropriately occupied spaces have also been identified and arrangements made to relocate to other spaces with the correct level of ventilation. In very occasional instances, additional fan systems have been required where no other ventilation was available e.g. internal non-occupied spaces adapted to be used as sensory rooms. Occasional use of additional mobile fans to assist airflow has been identified in large rooms with low ceilings. Instances of higher than expected CO<sub>2</sub> levels were sometimes examined and found to be the result of users not following guidance on providing ventilation by opening windows. Local authorities are assisting users to understand their environments by providing information sheets and video instructions.

To improve ventilation in some problem spaces where alterations to windows are not deemed appropriate or sufficient, Mechanical Ventilation and Heat Recovery (MVHR) units are being planned by three local authorities. These are intended to improve ventilation in a controlled manner, avoid cold drafts in winter and also minimise energy consumption by maximising heat recovery within the system.

One council has indicated it is actively using air cleaning devices as a temporary mitigation in problem spaces where longer term improvements to ventilation are not feasible until a holiday period. Three additional councils are considering the use of air cleaning devices. Officials are seeking feedback from the councils involved, and will ensure any learning is shared through appropriate networks.

### **Next Steps**

Officials will continue to capture the progress being made with monitor availability and space assessments across the seasons. As part of our efforts to ensure that

national and local policy on healthy learning environments is as fully informed as possible, the Scottish Government will continue to work in close partnership with local authorities and representative networks to share information until the end of the academic year and will be happy to provide further updates to the Committee on this work in due course.

As a legacy from the COVID pandemic, our ambition remains to have learning environments that are the healthiest they have ever been.

I hope this information is helpful.

Yours sincerely,

**Shirley-Anne Somerville**