

Welsh Government consultation on carbon monoxide alarms

Joint response from Propertymark and Policy Connect, April 2023

Background – responding organisations

About Propertymark: <https://www.propertymark.co.uk/>

Propertymark is the UK's leading professional body for estate and letting agents, inventory providers, commercial agents, auctioneers and valuers, comprising over 17,000 members. We are member-led with a Board which is made up of practicing agents and we work closely with our members to set professional standards through regulation, accredited and recognised qualifications, an industry-leading training programme and mandatory Continuing Professional Development.

About Policy Connect: <https://www.policyconnect.org.uk/>

Policy Connect is a membership-based, not-for-profit, cross-party think tank. We bring together parliamentarians and government in collaboration with academia, business and civil society to inform, influence and improve UK public policy through debate, research and innovative thinking, so as to improve peoples' lives. We lead and manage an extensive network of parliamentary groups, research commissions, forums and campaigns. We are a London living wage employer and a Member of Social Enterprise UK, and have been operating since 1995. Our work focuses on key policy areas including health and accessibility; education & skills; industry, technology & innovation; and sustainability. We shape policy in Westminster through meetings, events, research and impact work.

About the All-Party Parliamentary Carbon Monoxide Group (APPCOG):

<https://www.policyconnect.org.uk/appcog>

The All-Party Parliamentary Carbon Monoxide Group (APPCOG) is the leading forum for parliamentarians to discover, discuss and promote ways of tackling carbon monoxide (CO) poisoning in the UK. Through a busy programme of events and research, the Group seeks to improve government policy, to promote research, and to raise public awareness of the health threat posed by carbon monoxide. The APPCOG is Co-Chaired by Barry Sheerman MP and Baroness Finlay. Policy Connect provides the secretariat for the APPCOG, which was named the APPG for Gas Safety until 2012.

Overview

The Welsh Government is consulting on the installation of Carbon Monoxide alarms in all residential buildings. They are proposing to amend the current guidance to include the installation of a carbon monoxide alarm for the installation of all flued fixed combustion appliances of any fuel type in all residential dwellings, including private dwellings. The policy will mean that all the following fuel types will be covered: oil, gas (including LPG) and solid fuel in all residential dwellings.

The Welsh Government believes this presents the safest option and provides benefits for residents such as improved safety and peace of mind. Whilst the statistics show, deaths from carbon monoxide poisoning are relatively low, they are avoidable deaths. In addition, it is the view of some medical experts that carbon monoxide poisonings are wrongly diagnoses and under-reported, meaning deaths and injuries could be much higher. The Welsh Government proposes to implement this change

through amending the current statutory guidance contained in Approved Document J (Heat producing appliances.)

Q1 Do you support the Welsh Government's proposal to amend the statutory guidance (Building regulations guidance: Part J (Heat producing appliances) supporting Part J of the Building Regulations, to require carbon monoxide alarms to be fitted alongside the installation of a flued fixed combustion appliance of any fuel type?

Yes.

While the number of deaths from carbon monoxide poisoning is low, these deaths are tragic but are also preventable.

Although it is right that "Mild poisoning can cause headaches and flu-like symptoms, whilst higher concentrations can lead to collapse, coma or death."; at sub-lethal levels, carbon monoxide has been associated with a wide range of severe long term health conditions and illnesses. Exposure to carbon monoxide has been linked to cardiovascular issues, neurological disorders, falls and loss of mobility, visual impairments, and problems with cognition. We support the consultation response submitted by CO Research Trust, which outlines the potential harms from carbon monoxide in detail.

Carbon monoxide has a far greater affinity to haemoglobin than oxygen, with some estimates that it is 245 times as high¹. This means that if an individual is exposed to a sub-lethal level of carbon monoxide for extended periods of time, or repeatedly over a short time, the levels of carbon monoxide in their body can increase gradually. This gradual poisoning and the subsequent development of symptoms over time can add to the difficulty of diagnosis, and the importance of having alarms installed.

Some groups are at greater risk from carbon monoxide. It is well established that children are more susceptible to the health impacts of poor air quality². Pregnant women and babies also have altered haemoglobin to the usual adult human³, which makes them more vulnerable to the impact of carbon monoxide poisoning.

Q2 Do you agree that 'connected spaces' should be excluded as part of the above proposal?

No.

We support the installation of carbon monoxide alarms in integrated spaces such as garages and lofts that contain a flued device or a flue. While these spaces can be well-ventilated, it is still possible for carbon monoxide to build up in these areas and leak into adjoining rooms. Ensuring carbon monoxide alarms are located in these spaces would further limit risk of death.

If a garage is connected to a home, then there is a risk of carbon monoxide build up from vehicles being stationed within the garage. Once again, we support the consultation response submitted by CO Research Trust which covers the risks posed by garages in greater detail.

¹ UKHSA: Carbon monoxide: toxicological overview, Updated 24 May 2022: [Carbon monoxide: toxicological overview - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/carbon-monoxide-toxicological-overview)

² "Why is air pollution especially harmful to babies and young children?" Asthma and Lung UK, page updated [1 June 2022](#)

³ Kaufman DP, Khattar J, Lappin SL. Physiology, Fetal Hemoglobin. [Updated 2022 Mar 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK500011/>

A correctly fitted alarm next to a potential source of carbon monoxide will sound more quickly than an alarm in an adjoining room or space. Due to the 'silent killer' nature of carbon monoxide; the only possible way to detect its presence is with an alarm. This makes it vitally important to ensure that carbon monoxide is detected as quickly as possible to ensure that occupants are not overcome in acute cases.

As stated by CO Research Trust; survivors of acute exposures recall they did not realize they were being poisoning, became dizzy, then quickly collapsed, and were unable to move toward the exit. Seconds count when it comes to detecting CO, which is why we believe connected and integrated spaces should be furnished with alarms where there is flue or appliance.

We suggest that it will be simpler not to differentiate between different rooms/spaces of the home, and instead require a carbon monoxide alarm to be fitted in any room or space where there is either a fixed combustion appliance or a flue, irrespective of how frequently the room or space is visited or used. The APPCOG report 'Tenants Safe and Secure in Their Homes'⁴ found that the 2015 regulations for carbon monoxide alarms in England were "too complicated and make communication to landlords difficult. This is exacerbated by singling out solid fuel-burning appliances.". It is submitted that singling out connected and integrated spaces in Wales is a parallel complication that will result in unnecessary confusion.

It seems likely that Welsh housing may be more vulnerable to carbon monoxide poisoning than other UK housing stock. Wales has some of the poorest and oldest housing stock in the UK. According to the BRE Trust, 26.2% of Welsh housing was built pre-1919, compared to 20.6% in the UK overall and 20.8% in England.⁵

Households in fuel poverty are at an elevated risk of carbon monoxide exposure⁶. Wales has high levels of poverty and deprivation and a high proportion of vulnerable tenants living in the Private Rented Sector. Lower income families, many of whom may live in the Private Rented Sector, can be reliant on older boilers to heat their homes, which pose a greater risk of carbon monoxide poisoning if they are poorly maintained.

While on the one hand, many 'connected spaces' such as lofts may have adequate ventilation, it is often the case that such spaces within the home are rarely visited and can be poorly ventilated. There is danger of a slow build-up of carbon monoxide which could create a dangerous situation.

Q3 Do you agree that where a flue passes through spaces such as a bedroom, they should be excluded as part of the above proposal?

No.

If there was a failure in the flue at the point of passing through a bedroom, such as a blockage or leak, then the outcome could be fatal for occupants within a bedroom. Many people who die of

⁴ All-Party Parliamentary Carbon Monoxide Group, Carbon monoxide alarms: tenants safe and secure in their homes, published 9 November 2017: [Carbon monoxide alarms: tenants safe and secure in their homes | Policy Connect](#)

⁵ https://files.bregroup.com/bretrust/The-Housing-Stock-of-the-United-Kingdom_Report_BRE-Trust.pdf

⁶ Understanding Carbon Monoxide Rise in Households Vulnerable to Fuel Poverty, National Energy Action, 15 September 2017: [Understanding Carbon Monoxide Rise in Households Vulnerable to Fuel Poverty - National Energy Action \(NEA\)](#)

carbon monoxide poisoning do so while sleeping. Accordingly, where a flue passes through a bedroom, we believe an alarm should be present.

The tragic case of Dominic Rodgers, who died in his bed at ten years old, is a pertinent reminder of the need to install carbon monoxide alarms in bedrooms⁷. Carbon monoxide had seeped through the wall of a neighbouring property and into Dominic's bedroom. If an alarm had of been installed, he may well still be alive today.

We support the suggestion from the Gas Safe Register and the CO Research Trust: To address situations where concealed flue systems cannot be visually examined and confirmed as being complete/intact and effective, the guidance issued by Gas Safe Register recommends inspection hatches and regular servicing by a Gas Safe registered engineer, in addition to "the installation of room monitoring CO alarms throughout the length of the flue route, will ensure as far as is reasonably practicable that the boiler and chimney/flue system is safe for continued use".⁸

We wish to highlight the submission from CoGDEM that states: "Referring to EN 50292 it states a CO alarm to be installed in every sleeping area".

Q4 Do you agree that flued cookers should be included as part of the above proposal?

Yes.

Given the cost of carbon monoxide alarms is low, we agree that flue cookers should be included as part of the proposal. Research from UKHSA found that gas cookers were almost three times as likely to be a source of carbon monoxide than boilers⁹; and National Energy Action reports that gas cookers are less likely to be serviced than boilers¹⁰. This indicates that gas cookers may pose an equal or higher risk of carbon monoxide exposure, when compared with boilers.

Q5 Do you think that the guidance in Approved Document J (outlined above) on what type of carbon monoxide alarm should be installed requires updating.

No. We are not aware of any evidence to suggest that the guidance requires updating.

Q6. Do you think that the guidance in Approved Document J on where carbon monoxide alarms should be situated requires updating?

No. We believe this guidance is fit for purpose.

Q7 Do you agree with the cost estimates and the overall Impact Assessment?

This is unclear – can more information be provided about the calculations which led to the cost estimates? We think it is unlikely that the health benefits of Option 2 (with the inclusion of gas

⁷ All-Party Parliamentary Carbon Monoxide Group, Carbon monoxide alarms: tenants safe and secure in their homes, published 9 November 2017: [Carbon monoxide alarms: tenants safe and secure in their homes | Policy Connect](#)

⁸ Gas Safe Register. Technical Bulletin 008 (Edition 3): Flues in Voids. Available from <https://registeredgasengineer.co.uk/technical/tb008-flues-in-voids/>

⁹ McCann LJ, et al. Indoor carbon monoxide: a case study in England for detection and interventions to reduce population exposure. J Environ Public Health. Epub 2013 Apr 4. Available: <https://pubmed.ncbi.nlm.nih.gov/23690806/>

¹⁰ Understanding Carbon Monoxide Rise in Households Vulnerable to Fuel Poverty, National Energy Action, 15 September 2017: [Understanding Carbon Monoxide Rise in Households Vulnerable to Fuel Poverty - National Energy Action \(NEA\)](#)

cookers) would be only a minimal increase from option 1 (less than £1m in any of the cost scenarios). Evidence from UKHSA¹¹ indicates that gas cookers are more likely to be a source of carbon monoxide than gas boilers. Therefore, we would expect that including gas cookers within the regulations for alarms would provide a greater health benefit than currently estimated.

Q8 Please use this question to provide any other commentary or observations you have on the proposal.

The safety of contract holders and all individuals within a property must be paramount, especially with regards to carbon monoxide. However, ensuring properties are compliant and safe must be achieved in a practical and deliverable way for landlords and their agents. With so many checks required on the first day of occupancy, we do not see it as feasible for landlords and property agents to conduct carbon monoxide alarm checks on the first day of occupancy. We would recommend several days when checks should be made. This would allow property agents the time to adequately assess the risk of carbon monoxide poisoning.

We support the suggestion from CoGDEM: “CoGDEM would recommend referencing EN 50292¹² throughout the Welsh legislation. EN 50292 is reviewed every five years under the supervision of the European Committee for Electrotechnical Standardization (CENELEC), the association that brings together the National Electrotechnical Committees of 34 European countries; each technical committee is headed by technical experts from each participating member state.”

Q9 We would like to know your views on the effects that the proposals would have on the Welsh language, specifically on opportunities for people to use Welsh and on treating the Welsh language no less favourably than English. What effects do you think there would be? How could positive effects be increased, or negative effects be mitigated?

We do not believe there will be any adverse impact on the Welsh language from the proposals.

Q10 Please also explain how you believe the proposals could be formulated or changed so as to have positive effects or increased positive effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language, and no adverse effects on opportunities for people to use the Welsh language and on treating the Welsh language no less favourably than the English language.

We do not anticipate any significant changes to ensure there are no negative impact on the Welsh language.

¹¹ McCann LJ, et al. Indoor carbon monoxide: a case study in England for detection and interventions to reduce population exposure. J Environ Public Health. Epub 2013 Apr 4. Available: <https://pubmed.ncbi.nlm.nih.gov/23690806/>

¹² Electrical apparatus for the detection of carbon monoxide in domestic premises, caravans and boats. Guide on the selection, installation, use and maintenance, November 2013: [BS EN 50292:2013 | 30 Nov 2013 | BSI Knowledge \(bsigroup.com\)](#)