



Llywodraeth Cymru  
Welsh Government

PUBLICATION

# Carbon monoxide alarms

Date of issue: 3 February 2023

Action required: Responses by 28 April 2023

First published: 3 February 2023

Last updated: 3 February 2023

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# Overview

This consultation seeks views on proposals to:

Amend the statutory guidance (Approved Document J) supporting Part J of the Building Regulations to require that carbon monoxide alarms are fitted alongside the installation of flued fixed combustion appliance of any fuel type.

## How to respond

You can email your response to the questions in this consultation to:

[enquiries.brconstruction@gov.wales](mailto:enquiries.brconstruction@gov.wales)

If you are responding in writing, please make it clear which consultation and which questions you are responding to:

Written responses should be sent to:

Carbon Monoxide,  
Building Regulations,  
Welsh Government,  
Cathays Park,  
Cardiff,  
CF10 3NQ

When you reply, it would be useful if you confirm whether you are replying as an individual or submitting an official response on behalf of an organisation and include:

- your name,

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- your position (if applicable),
- the name of organisation (if applicable),
- an address (including post code),
- an email address, and
- a contact telephone number

## Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

## Contact details

For any enquiries about the consultation please contact the Welsh Government Building Regulations team by emailing: [enquiries.brconstruction@gov.wales](mailto:enquiries.brconstruction@gov.wales)

For further information:

Building Regulations  
Welsh Government  
Cathays Park,  
Cardiff,  
CF10 3NQ  
Telephone: 0300 062 8144

# General Data Protection Regulation (GDPR)

The Welsh Government will be data controller for any personal data you provide as part of your response to the consultation. Welsh Ministers have statutory powers they will rely on to process this personal data which will enable them to make informed decisions about how they exercise their public functions. Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about or planning future consultations. Where the Welsh Government undertakes further analysis of consultation responses then this work may be commissioned to be carried out by an accredited third party (e.g. a research organisation or a consultancy company). Any such work will only be undertaken under contract. Welsh Government's standard terms and conditions for such contracts set out strict requirements for the processing and safekeeping of personal data.

In order to show that the consultation was carried out properly, the Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. If you do not want your name or address published, please tell us this in writing when you send your response. We will then redact them before publishing.

You should also be aware of our responsibilities under Freedom of Information legislation.

If your details are published as part of the consultation response then these published reports will be retained indefinitely. Any of your data held otherwise by Welsh Government will be kept for no more than three years.

## Your rights

Under the data protection legislation, you have the right:

- to be informed of the personal data held about you and to access it
- to require us to rectify inaccuracies in that data
- to (in certain circumstances) object to or restrict processing
- for (in certain circumstances) your data to be 'erased'
- to (in certain circumstances) data portability
- to lodge a complaint with the Information Commissioner's Office (ICO) who is our independent regulator for data protection

For further details about the information the Welsh Government holds and its use, or if you want to exercise your rights under the GDPR, please see contact details below:

Data Protection Officer:

Welsh Government

Cathays Park

CARDIFF

CF10 3NQ

E mail: [Data.ProtectionOfficer@gov.wales](mailto:Data.ProtectionOfficer@gov.wales)

The contact details for the Information Commissioner's Office are:

Wycliffe House

Water Lane

Wilmslow

Cheshire

SK9 5AF

Tel: 01625 545 745 or  
0303 123 1113

[Information Commissioner's Office website](#)

## Introduction

The Welsh Government want to ensure everyone is protected from the risks of carbon monoxide poisoning in their homes.

## Carbon Monoxide

Carbon monoxide (CO) poisoning is a serious and preventable form of poisoning. It is produced from the burning of any carbon-based fuel such as mains gas, liquefied petroleum gas, oil, coal, coke and wood, which are used in many household appliances. CO poisoning can occur when an appliance has been incorrectly fitted or used, badly repaired or poorly maintained. It can also occur if flues, chimneys or vents are blocked. It is colourless, odourless and tasteless. Mild poisoning can cause headaches and flu-like symptoms, whilst higher concentrations can lead to collapse, coma or death.

## Background

### Carbon Monoxide Statistics

According to the Health and Safety Executive (HSE), there were around 20 deaths from accidental CO poisoning in England and Wales for the period Autumn 2020-21.

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## **Cross government group on gas safety and carbon monoxide (CO)**

**awareness.** Additionally, there are around 200 major injuries that require hospitalisation and around 4,000 minor injuries. The view of some medical experts is that some carbon monoxide poisonings are being wrongly diagnosed and therefore under-reported.

Installing carbon monoxide alarms will give advance warning of carbon monoxide in a property, providing reassurance and protection to residents from the devastating harm caused to lives by accidental carbon monoxide poisoning. Carbon monoxide alarms detect and warn of the presence of dangerous levels of the gas. The Health and Safety Executive (HSE) recommend the use of an audible CO alarm as an important precaution. According to the Welsh Housing Conditions Survey report April 2017 to March 2018, most dwellings in Wales (82%) used gas to heat their homes and only 46% of homes had a working carbon monoxide detector . [1]

## **Current Building Regulations Guidance**

Currently, carbon monoxide alarms must be installed in all residential buildings when a fixed solid fuel burning appliance, such as a wood burning stove, is installed. This requirement is set out in **Building regulations guidance: Part J (Heat producing appliances)** and applies to installations regardless of tenure in private and social rented homes and in owner occupied homes.

Building control bodies are responsible for interpreting the guidance and enforcing the requirements of the Building Regulations, but in practice, most combustion appliance installations are carried out by engineers registered with an **approved competent persons schemes** who self-certify that the installation is compliant with the requirements of the building regulations.



## Rented and Social Housing Sector

Following Implementation of the Renting Homes (Wales) Act in July 2022, landlords will need to ensure properties are in repair and fit for human habitation in all rental property. To meet these obligations, a working carbon monoxide alarm must be present in any room which has a gas, oil or solid fuel-burning appliance. This applies to all rented properties, both social and private rented [2].

In addition, the Welsh Development Quality Requirements 2021: Creating Beautiful Homes and Place sets out the minimum functional quality standards for new and rehabilitated affordable homes. The requirements stipulate that new homes should be fitted with mains powered hard wired carbon monoxide detectors with battery back-up. [Development quality requirements for housing associations](#).

[1] [Welsh Housing Conditions Survey \(energy efficiency of dwellings\): April 2017 to March 2018](#)

[2] [SL\(6\)129 - The Renting Homes \(Fitness for Human Habitation\) \(Wales\) Regulations 2022](#)

## Proposal

### Carbon Monoxide (CO): GENERAL

The Welsh Government is consulting on the installation of Carbon Monoxide alarms in all residential buildings.

We are proposing to amend the current guidance to include the installation of a CO 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 CO 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).

## Questions

### Question 1

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?

If no, please provide your reasoning and evidence.

## Integrated Spaces

In addition, we are seeking your views on whether a CO alarm should be installed in associated areas such as connected and / or integrated spaces, such as garages and lofts. Connected Spaces such as integrated garages and lofts that contain a flued appliance, for example, some households locate their boilers in a garage or loft. This has been common practice in certain households.

Whilst these areas may not be occupied area, they are well ventilated spaces and may not prove a significant risk regarding CO poisoning, we want to capture your views.

### Question 2

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

If no, please provide your reasoning and evidence.

## Bedroom spaces

Whilst a CO alarm may be installed at the location of an appliance within the household, the flue may extend through one or more of the bedrooms.

### Question 3

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

If no, please provide your reasoning and evidence.

## **Cookers**

We are proposing to only include flued cookers, as building regulations do not cover cookers in general. Whilst cookers may only prove a low risk for CO poisoning, the cost of installing a CO alarm is low and will provide protection.

## **Question 4**

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

If no, please provide your reasoning and evidence.

## **Other Considerations**

### **Type of Alarm**

Building regulations do not specify if the alarm type must be battery or mains-powered hard wired. Approved Document J also sets out guidance on ways of meeting compliance with the requirements of the building regulations. A carbon monoxide alarm should comply to British Standard Institute standards (British Standard BS EN 50291) and be powered by either a battery designed to operate for the working life of the alarm (it should also have a warning device to alert users when the working life of the alarm is due to pass) or a mains-powered alarm with fixed wiring (not plug-in) and a sensor failure warning device.

The Welsh Government would like to seek views on whether the information on what type of carbon monoxide alarm should be installed remains fit for purpose and whether it would need adapting or updating alongside an extension of the regulations and guidance

## Question 5

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

If no, please provide your reasoning and evidence

## Location of Alarm

Approved Document J provides guidance on placement of carbon monoxide alarms. It says that an alarm should be fitted on the ceiling at least 300mm from any wall or on a wall, as high up as possible (above any doors and windows) but not within 150mm of the ceiling and between 1m and 3m horizontally from the appliance.

The Welsh Government would like to seek views on whether the information on placement of carbon monoxide alarms remains fit for purpose and whether they would need adapting or updating alongside an extension of the regulations and guidance

## Question 6

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

If no, please provide your reasoning and evidence

## Cost estimates

### Impact Assessment (IA)

This IA report sets out the results of a cost benefit analysis of the Welsh Government's proposals to amend the statutory guidance (Approved Document J) so that carbon monoxide alarms must be fitted alongside the installation of flued fixed combustion appliances of any fuel type in all dwellings.

### Costs

Our Impact Assessment analysis considered two types of costs: installation and supply, and then calculated a cost benefit analysis of the two options over a 10-year period:

1. CO monitors with boilers and fire: At present value capital and installation costs, the cost ranged from £13.64m to £14.60m for low and high scenarios estimates.
2. CO monitors with added cost for cookers: At present value capital and installation costs, the cost ranged from £14.14m to £15.28m for low and high scenarios estimates

Table:

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Table 2.1: Total Costs	Total Costs (10 year) £m		
	Low-cost	Mid-cost	High-cost

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Table 2.1: Total Costs	Total Costs (10 year) £m		
	scenario	scenario	scenario
Option 1 (CO monitors with boilers, fires)	£13.64	£14.03	£14.60
Option 2 (Option 1 + cookers)	£14.14	£14.61	£15.28

## Health Benefits

The IA also estimated health and cost benefits of both policy options, looking at the estimated number of fatalities and non-fatal casualties related to CO poisoning, and the estimated effectiveness of CO monitors at reducing incident rates.

The analysis considered:

- Reduced/avoided fatalities
- Reduced/ avoided injuries – both major and minor injuries

The monetised health benefits, calculated at a 20-year time frame, are estimated to be around ££15.38m to £34.20m for option 1 and £15.79m to £35.12m for option 2.

	<b>Low cost scenario</b>	<b>Mid cost scenario</b>	<b>High cost scenario</b>
Option 1 (CO monitors with boilers, fires)	£15.38	£24.22	£34.20
Option 2 (Option 1 + cookers)	£15.79	£25.34	£35.12

This will have a cost impact for social landlords, private landlords, owner-occupiers and housebuilders as outlined above in the cost section. However, as the health benefits outline, the occupiers of dwellings of all tenures will benefit from the reduced risk of carbon monoxide poisoning as a result.

## Question 7

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

If no, please explain what you consider an appropriate cost range and provide evidence to show why.

## Associated changes

The Approved Documents provide information on other legislation outside of Building Regulations. This information is relevant to the content of the AD and is designed to assist the user by sign posting to interaction with other legislation. AD J contains information on “Smoke control areas”. It is proposed this information is updated. This does not affect the policy of the AD.



## Question 8

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

## Question 9

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?

## Question 10

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.

## Next Steps

1. This consultation will close on 28 April 2023. Responses to this consultation

will be analysed and a Welsh Government Response will follow.

2. Responses to consultations are likely to be made public, on the internet or in a report. If you would prefer your response to remain anonymous, please tick here.

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