

Home Energy Grants: Technical Bulletin

External Wall Insulation Ventilation Guidance

Series 2021-11-002 EWI



Ventilation guidance for external wall insulation

This technical bulletin outlines common reworks noted by SEAI regarding ventilation for external wall insulation works. The information below is intended as guidance. All measures must be installed as per the Domestic Technical Standards and Specification (DTSS) and in accordance with the Contractors Code of Practice. Please see the Contractors Support page for further information: <https://www.seai.ie/grants/supports-for-contractors/>. The Quality Assurance and Disciplinary Procedures (QADP) document contains a full list of checks, used by SEAI inspectors. This list should be used to check your work, prior to completing and signing the Declaration of Works (DOW) form. **Nominated Personnel must not sign the DOW stating that the works have been completed to standard if these items are outstanding.**

1. General ventilation requirements

The installation of wall insulation may reduce unintended ventilation (such as draughts) and increase the overall air tightness of a home. It is essential therefore that contractors consider the effect the installation may have on the ventilation of the building and offer suitable solutions for the homeowner. Insulation works must not compromise the air quality or internal environment of the home. Where installed, homeowners must be informed of proper operation and maintenance of ventilation systems. Further information may be found in the DTSS and *NSAI S.R. 54:2014 Code of practice for the energy efficient retrofit of dwellings*.

2. Mechanical Extract Ventilation (MEV) Advisory Note

Where mechanical extract ventilation in wet rooms has NOT been installed before the installation of wall insulation, it is a requirement that contractors issue a safety notice to the homeowner. The notice must be signed by both the homeowner and the contractor to confirm that the homeowner has been properly advised on their options. The signed form must be retained by the homeowner and made available to an SEAI inspector upon request.

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IMPORTANT SAFETY NOTICE

Mechanical Extract Ventilation Safety Notice
Please read carefully and sign if satisfied

Mechanical Extract Ventilation allows for the rapid removal of water vapour and other pollutants at source to the outside, and helps to reduce the likelihood of these pollutants spreading throughout the remainder of the dwelling. Cooking, laundry, showers, humidifiers and other activities using water contribute to this condition.

When improvements to the thermal envelope (wall insulation) are being made, as improvements will reduce heat loss and lead to higher internal temperatures within a building. All wet rooms (Kitchen, Bathroom, Utility rooms, etc.) should be fitted with mechanical extract ventilation.

To address this issue, there is a requirement with SEAI to ensure that ventilation is in accordance with Chapter 10 of NSAI's SR 54 - Code of Practice for the energy efficient retrofit of dwellings, which can be accessed through the following link: <http://www.ii.co.uk/en/S.R.54-2014.pdf>

All wall insulation works under the Better Energy Homes programme must be in full compliance with the published Better Energy Homes Technical Specification.

- SEAI requires that wall insulation contractors discuss the installation of mechanical extract ventilation (where it does not exist) with homeowners and that homeowners are properly advised on the option, which will best meet their household needs, as part of the specification process ahead of installation commencement.
- SEAI requires that contractors discuss this matter fully with homeowners and that homeowners are properly advised on the option, which will best meet their household needs, as part of the specification process ahead of installation commencement.
- SEAI requires that this notice is used in all instances where mechanical extract ventilation in wet rooms has NOT BEEN INSTALLED before the installation of wall insulation.
- This form must be signed by both the homeowner and the wall insulation installer. This form should be retained with any documents relating to your Mechanical Extract Ventilation installation for possible SEAI inspection, future maintenance and any future users of the system.

I have discussed the options with the householder and have agreed not to install mechanical extract ventilation in the wet rooms.

Installer Name: _____ Installer No.: _____
Signature: _____ Date: _____

Homeowner Name: _____ Application ID: _____
Signature: _____ Date: _____

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Figure 1: MEV Advisory Note

A copy of the safety notice is available on the 'Support for Contractors' page on the SEAI website at the following link: www.seai.ie/grants/supports-for-contractors/.

3. Permanent ventilation

Permanent ventilation refers to any permanent non-adjustable vent, opening directly to the external air. For wall insulation works, permanent ventilation should be provided in any room with a fixed open flued appliance. Because these appliances draw fresh air from the room during combustion, insufficient ventilation may result in an accumulation of carbon monoxide.



Figure 2: Permanent ventilation – indoor view



Figure 3: Permanent ventilation – outdoor view

Please see *NSAI S.R. 54:2014 Table 35* for further information regarding permanent ventilation and retrofit works. All new permanent vents should be installed in accordance with the manufacturer's instructions and tested to *EN 13141-1*.

4. Background ventilation

Background ventilation provides a flow of natural air to maintain indoor air quality and reduce moisture levels. Background ventilation may take the form of sleeved wall ventilators or trickle window/door ventilators and should be located so as to avoid draughts. The requirements for background ventilation will depend on the air permeability of the home.



Figure 4: Background ventilation – window ventilator (adjustable)

Further guidance can be found in *NSAI S.R. 54:2014: Clause 10.2.2.1.1*. All background vents should be installed in accordance with the manufacturer's instructions and tested to *EN 13141-1*.

5. Mechanical ventilation

Mechanical extract ventilation allows for the active removal of moisture and other pollutants from the air. All wet rooms e.g. utility room, bathroom, kitchen areas, should be fitted with MEV in accordance with *NSAI S.R. 54:2014*

Table 31. Please see Section 2 above regarding the requirement for an MEV Advisory Note/Safety Notice. Further information regarding the requirements for mechanical ventilation can be found in the DTSS and *NSAI S.R. 54:2014*.



Figure 5: Mechanical extract ventilation

Mechanical extract ventilation must be installed by suitably qualified personnel and in accordance with manufacturer's guidelines.

6. Training material

Further guidance and information can be found on the 'Support for Contractors' page on the SEAI website. Our most recent online training webinar on wall insulation and ventilation is available to view at the following link: <https://www.youtube.com/watch?v=taikpQ5bmgM>.

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