

CWI/EWI 'interactions' guide

Introduction

External wall insulation (EWI) provides a range of benefits for householders and their homes and, whilst the use of EWI on solid wall houses is widespread and well understood, these systems can also be applied to houses with cavity walls. This guidance note is therefore intended to outline industry practice in applying external wall insulation systems to properties with a cavity wall construction but cannot cover all situations and therefore the note should be used in conjunction with system holder guidance.

Guidance notes

Removing intact, functioning cavity wall insulation (CWI) that has had no detrimental effect to the property prior to EWI being applied will create a thermal bypass risk - heat may escape through the open cavity and into the roof space or through other openings into the cavity. Intact cavity insulation should therefore be left in place rather than removed. If the cavity is empty, the perimeter must be sealed, if it has not already been done, prior to EWI being installed so that thermal bypass is avoided.

Before considering application of external wall insulation to a cavity wall which has already been filled with cavity wall insulation, it is essential that a condensation risk analysis is carried out to ensure that the thickness of the proposed external insulation is enough to push the dew point to the outside face of the wall. This will ensure that condensation and dampness does not occur within the wall make up.

There are circumstances where removal of the insulation is necessary; for example, as part of repairs to address structural defects, where the property has been subject to flooding or where the insulation has been disturbed or compromised by building defects. In such cases a full investigation into the defect must be undertaken by a suitably qualified and competent person (e.g. Structural Engineer or Building Surveyor) and a report issued providing remedial requirements that must be addressed before any further work proceeds.

Process if cavity insulation is being removed;

- No Solid wall system should be installed on a wall that later needs the cavity insulation removed, if cavity insulation has failed it will need extracting by a suitably qualified organisation.
- If you are applying for a solid wall insulation guarantee you must make any cavity wall guarantee provider aware that cavity wall is being extracted prior to starting the works
- If a Cavity Guarantee exists for the property(s) in question, guarantee providers can provide details of its members that are able to undertake and complete the work according to CIGA best practice. This will ensure that the extraction is compliant so that an extraction certificate can be issued.
- The cavity wall insulation can then be extracted by the qualified operatives.
- Following the extraction, the walls may need to dry out (assuming the insulation was wet). The walls will require inspection (by the Structural Engineer or Building Surveyor) to identify any building defects which need to be rectified and to confirm the wall ties have enough life (25 years for ECO) prior to EWI installation.
- If the cavity is to be refilled the property should be re-assessed to ensure it is in a suitable condition to receive CWI. Wall ties should be assessed for corrosion to ensure they have 25 years of life remaining.
- When the cavity walls have completely dried out, and the original defects have been made good, the cavity can be refilled with insulation, or the head of the cavity wall can be sealed using a proprietary insulating firestop sock (to prevent thermal bypass) before applying a solid wall system.
- If the external (solid) wall insulation system that is to be installed relies on mechanical fixings, in-situ pull-out tests should be carried out by the EWI system supplier or their appointed representative to confirm that the wall has enough strength for the insulation fixings.

If the property does not have a cavity guarantee the removal must still be carried out using best industry practice by an operative with the requisite skills.

If the CWI is still doing its job and the cavity remains filled and the condensation risk analysis confirms that the dew point can be effectively moved to the outside of the wall following EWI application, then EWI can be installed and any CWI guarantee revoked with the EWI guarantee becoming the prime guarantee.