

CAVITY WALL INSULATION EXTRACTION AND FILL

Toolbox Talk



Background

Insulation of the cavity wall will provide improved thermal comfort, airtightness and sound protection for the resident; approximately 35% of overall heat loss will escape through the walls so it is a key area to insulate. There are various types of cavity wall insulation available, all of which have their own benefits and drawbacks. EPS Beads tend to offer the best mixture of thermal improvement, longevity, resistance to degradation and ease of installation, as such this is the product which we currently specify.

Key Point 1 - Noise

Extraction and installation of CWI are both noisy and, in the case of extraction particularly, can take a relatively long time. Bricks will need to be drilled out, high pressure air guns will be in operation and generators will be running; all of these things can cause disruption and annoyance for the resident if they come as a surprise. If honest expectations are set before the work is completed this can be mitigated. Simply by letting the resident know it will be noisy they can make alternative plans or at least they will be prepared for a day of disruption.

Key Point 2 - Dust

Where existing insulation is deemed to have failed, it is a requirement that this is completely removed from the cavity before new insulation can be installed, this removes the risks of cold spots causing damp and mould issues. The removal of certain types of insulation can result in large amounts of dust being created, this can then find its way inside the property through gaps in the construction.



Care should be taken to seal any holes in the construction which can be identified, these might include: air bricks, extraction vents, window sills and service penetrations. The cavity head should also be inspected before work commences to ensure it is sealed otherwise the loft will very likely be completely covered in dust.

It is extremely likely that some dust will enter the dwelling, setting this expectation with the resident and ensuring that it is tidied up afterwards will ensure a positive experience.

Key Point 3 – Empty Cavity

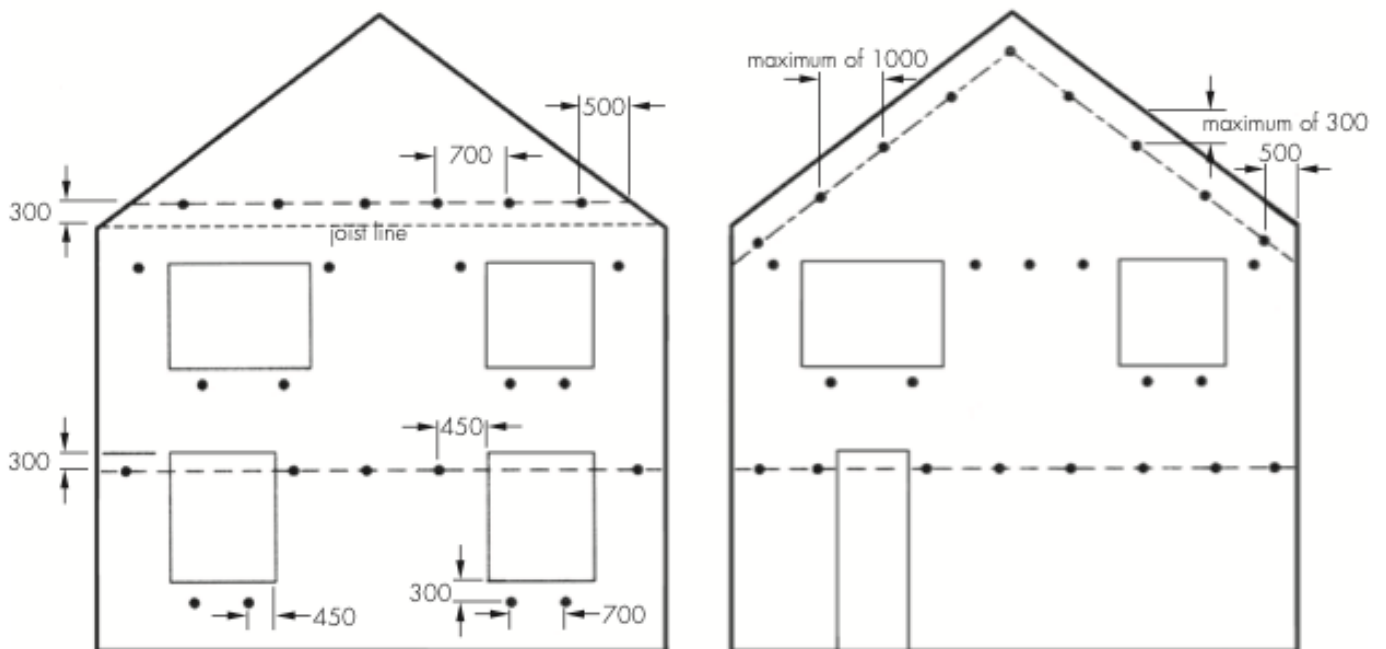
Evidence that the cavity wall has been completely emptied should be supplied as part of the mid-install evidence pack.



An inspection of the wall ties should be completed when the cavity is empty to ensure there is no corrosion or excessive mortar attached.

Key Point 4 – Filled Cavity

The BBA includes a lot of key information describing the approved install method for the specific product, this information must be understood fully by the installer. One of the key elements depicted, is the drill pattern required to achieve a full fill of the cavity, below is an example of a typical drill pattern for a basic property configuration:

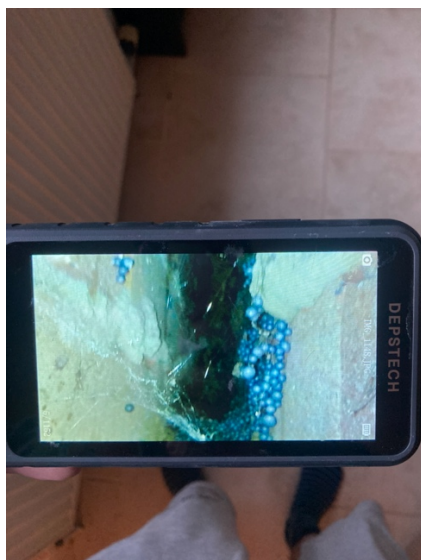


The Retrofit Design will also include key details for the different corners and junctions and should therefore be fully reviewed by the installer.

Photographic evidence of the cavity being fully filled should be taken on all elevations and provided within the post install pack. Evidence can be taken before the drill holes are filled or retrospectively however if taken after install is complete, the surveyor must be very careful not to damage the insulation when inspecting the cavity.

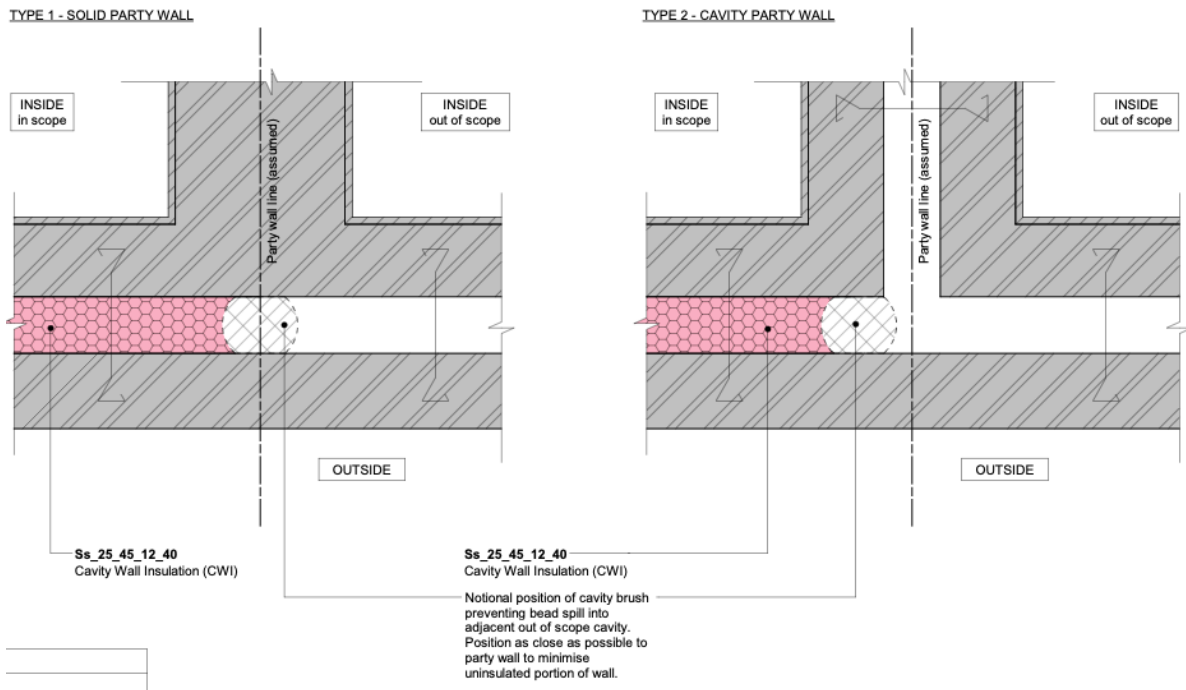


It is important to check all elevations in order to avoid the issues such as voids being left uninsulated, as below:



Key Point 5 – Party Walls

Brushes are installed at the party wall line to ensure CWI does not spill into the cavity of the adjoining property or into the party wall itself, should it be of unfilled cavity construction. The design detail will provide clear information with regards to the placement of brushes.

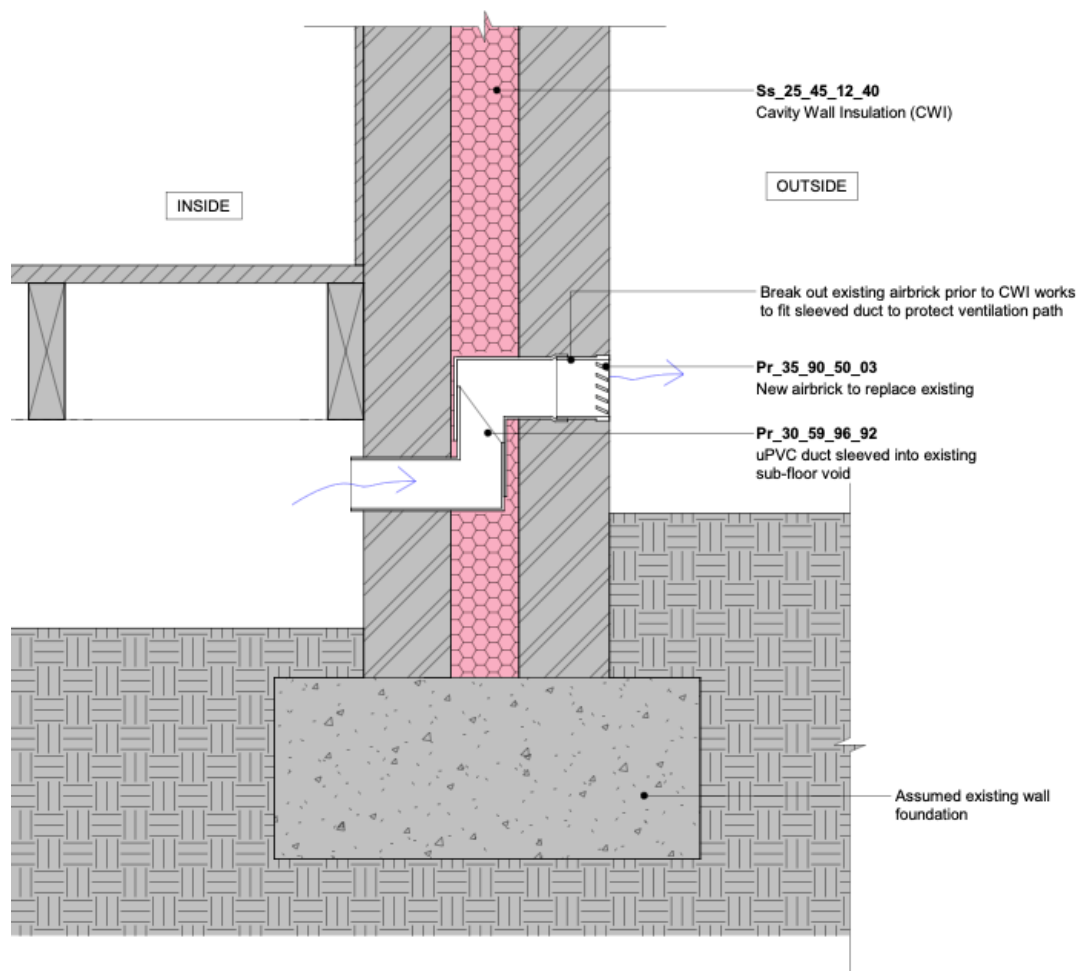


Evidence of brush install must be included in either the mid or post install evidence.



Key Point 6 – Sub Floor Air Bricks

Maintenance of ventilation to the sub floor void must be ensured when installing CWI. Existing air bricks or vents must be inspected to ensure that they are sleeved to the sub floor void, in the event that this is not done before installation, the CWI will block the ventilation pathway and the sub floor timber construction will become at risk of moisture related issues such as rot.



Key Point 7 – Protect the building services

Keen attention should be given to the location of all building services which penetrate the walls internally and externally. Gas and electricity meter boxes need to be sealed properly before extraction / installation of insulation to prevent them from filling up with the insulation material.

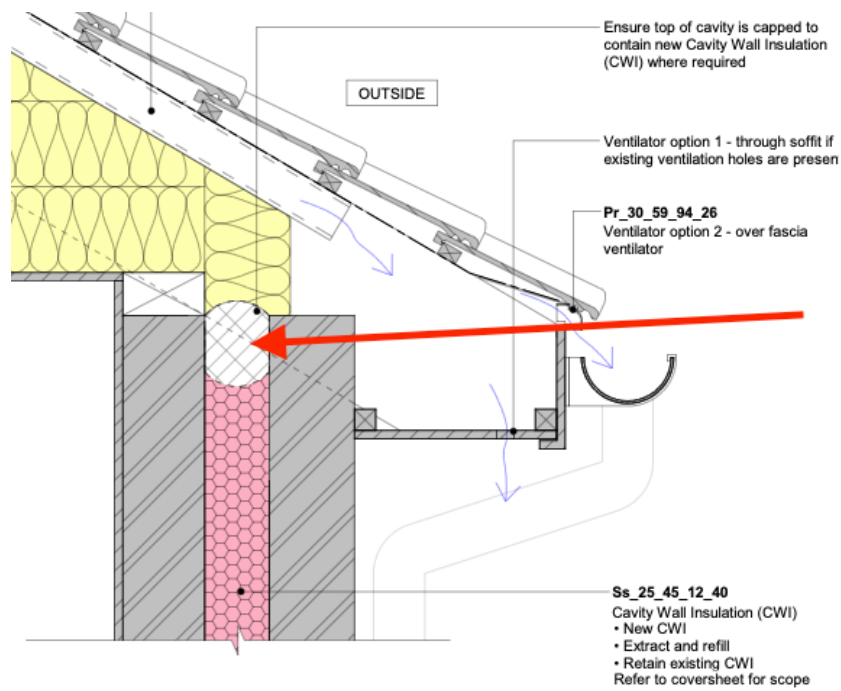
Where extractor fans pass through the wall, it is vital that these are checked both before and after the installation of CWI to ensure that there is both suitable ducting in the first place and that after installation, the ducting is still intact. The below picture shows where an extractor had been installed through the wall with flexi ducting, the CWI installation had caused the ducting to become disconnected and the extractor fan completely blocked:



In an ideal world, all ducting should be installed or upgraded before installation of CWI to ensure this situation is not possible.

Key Point 8 – Sealing at the Cavity Head

It is very important that the top of the cavity is checked to ensure that it is sealed. This can be done with a variety of materials but mineral wool installed from within the roof space would be most common.



If the head of the cavity is not sealed then the materials either being extracted or installed can end up filling the loft. Where foam is being extracted this can cause a terrible mess of dust which is extremely hard to clear up.

