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Toolbox Talk (TBT03)

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Firestop to Party and Compartment Walls

Image 1: *inadequate firestop allowed fire spread to neighbouring building*

This Toolbox Talk highlights the requirements for, and importance of, the installation of firestops at party wall and compartmental wall locations; and how they should be installed correctly and in accordance with manufacturers' recommendations.

Party Walls

A party wall is a dividing partition that sits at the junction between two adjoining buildings or units. It can provide structural support and separates buildings or different parts of a larger building, preventing the spread of flames and smoke from one compartment to another. To ensure that the party wall remains effective in preventing the spread of flames and smoke, it is essential to install firestops correctly.

Risk

An incomplete or incorrectly installed firestop increases the potential for rapid fire spread from buildings to buildings, or between different compartments within one building. Flames and smoke can easily spread through the gap where the party wall meets the roof structure and ignite neighbouring buildings or compartments. This puts both property and lives at risk, as the fire strategy for the building has been compromised and the occupants may be trapped inside with no means of escape.

Additionally, an incomplete firestop compromises the effectiveness of firefighting efforts. Firefighters rely on these barriers to contain fires and smoke within a certain area to prevent them from spreading further. Without the correct fire stopping, their job becomes more challenging and dangerous.

Fire Safety

Fire protection is a crucial aspect of a building construction. Whilst active fire protection systems detect and suppress flames through fire alarms and water sprinkler systems, the purpose of passive fire protection is to prevent the spread of fire and smoke and to reduce structural damage. Firestops are materials or devices used to seal openings and joints in walls, floors, and ceilings, and provide compartmentation to contain fire and smoke spread from building to building. This helps to protect the building's structural integrity and provide a clear path of escape.

Although there are different types of purposely-designed firestops for party wall locations, the most common type is the use of flexible (or semi-flexible) stone wool insulation compressed into the void above the party or compartmental wall and into the batten space. When utilising this material, the following procedure must be observed:

1. Install a band of stone wool insulation over the top of the party wall, filling the void between the top of the wall and the top of the timber roof truss without any gaps or voids. Utilising this flexible material compressed into the void will compensate for any movement in the roof timbers and fill any irregular gaps.

   Image 2 shows an ***incorrectly***-installed firestop as there is a void within the stone wool between the top of the party wall and the top of the timber roof truss.

Image 2: *incorrectly-installed firestop*

2. Semi-rigid stone wool slab should be used to fill the batten void on top of the roof membrane, cut and installed tightly without any gaps between the roofing battens. The semi-rigid stone wool slab should be deeper than the roof battens *(see image 3)* to ensure that there is a complete seal to the underside of the roof coverings, including the filling of any profile within the roof tiles, but should not push the tiles out of line with the tiles that they interlock with *(hogging)*.

Please Note

It is advisable to install the semi-rigid stone wool slab wider than the party or compartmental wall *(see image 4)* to ensure any tolerances of the compartment wall below can be accommodated.

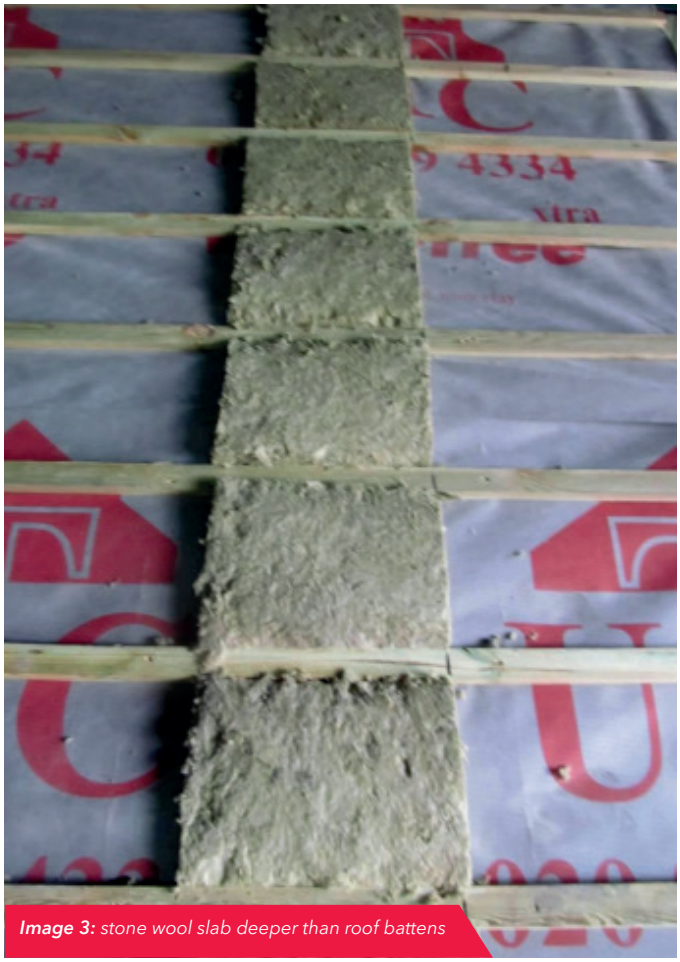

Image 3: *stone wool slab deeper than roof battens*

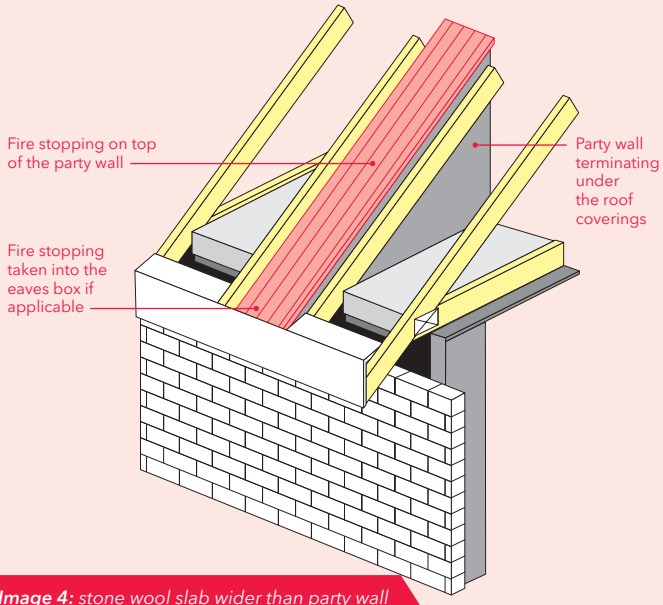

Image 4: *stone wool slab wider than party wall*

3. If a boxed eave is present, then a firestop of fire-resisting board or a wire-reinforced stone wool insulation *(50 mm minimum)*, nailed to the rafter and carefully cut to fully seal the boxed eaves, should be installed *(ordinary stone wool is unacceptable in these locations)*.

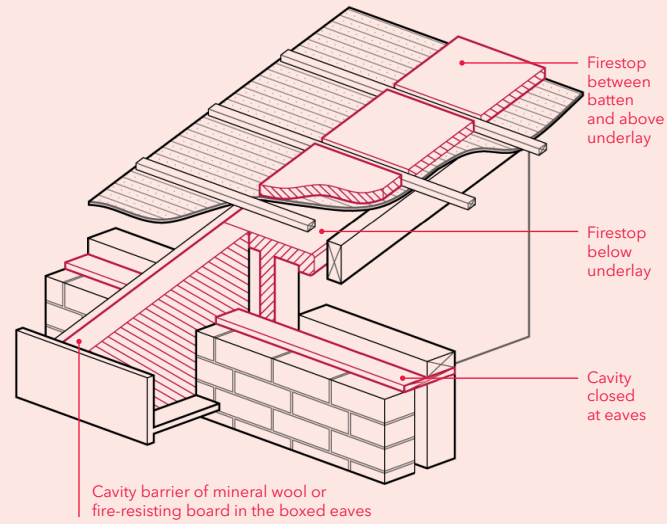

Image 5: *boxed eave firestop*

4. All fire-stopping materials should be stored, handled, cut and installed as per the manufacturer's recommendations.

5. It is imperative that the step-by-step process of the installation of a firestop should be recorded, photographed and signed off by a supervisor prior to being covered up and incorporated into the works to prove compliance upon completion.

6. If you have any concern about firestops, you must suspend works and report your concerns to your Contracts Manager or supervisor at the earliest opportunity.

The requirement to install or maintain the provision of firestops applies to refurbishment as well as new build works.

Questions

1. Name one risk of incomplete firebreaks.
2. Give two locations where firestops should be installed.
3. What should you do if you have concerns about firestops?
4. What should you ensure happens before installing the final roof covering and covering over the firestop?

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