

Contractor UPDATE

October 2023
No: 202311

Fire compartmentation

Changes to “Fire Safety: Approved Document B 2019 with Amendments Issued - A review by Bauder Ltd”

In the above document, there is a section on “Compartmentation - Junction of compartment wall with roof” that explains that there has always been a level of disagreement on the interpretation, but now your attention needs to be drawn to a changing situation.

Generally most, including Building Control (BC), have agreed that if you can demonstrate your roof build-up achieves $B_{ROOF}(t_4)$, then no further consideration should be made (unless the deck is combustible and >15m high) and the section on Compartmentation goes on to explain why. However there has always been a small percentage of Building Control who did not agree.

The change I wish to make you aware of is that, with the increase in culture being over cautious, more are becoming what could be seen as over zealous and are requiring a non-combustible (NC) fire stop above the deck for the width of the wall i.e. in the insulation.

The reason this is important to you is that, whilst I might have a strong opinion on why this is usually not necessary, I still always advise that BC should be consulted. Currently, you do not know which way BC will decide on this issue. Previously you had the long established custom and practice of $B_{ROOF}(t_4)$ being acceptable in this situation, therefore you must encourage the designer or client to engage with BC. If BC are not consulted and are later asked to give their view on Compartmentation, there is now a much increased risk that they will request more than just $B_{ROOF}(t_4)$ and they can fine the roofing contractor for everyday they do not comply after a given date.

This is more likely to be an issue for refurbishment projects, especially where you may be unaware that there is a specific consideration for roof over wall compartmentation.

Having made you aware of this changing situation, we have changed our advice process for refurbishment projects. Going forward we will indicate in specifications and survey reports as standard wording, that BC should be consulted to gain their advice on the roof over compartment wall situation and you are advised to always verbally draw this to the attention of the designer or client or contractor.



Approved Document B - June 2022 amendments

floor e.g. a roof terrace). However, there are possibly some precautions required for a flat roof passing over the junction with a wall, and it is this that divides opinion. Department for Levelling Up, Housing and Communities (DLUHC) acknowledge the issue and have started on a programme of work to clarify the requirement at this wall/roof junction, the outcome is anticipated 2023.

The current wording states that to reduce the risk of fire spreading over a flat roof from one compartment to another, a 1500mm wide zone of the roof, either side of the wall, should have both a “roof covering” classified as $B_{ROOF}(t_4)$ and a substrate or deck of a material rated Class A2-s3-d2 or better e.g. concrete or steel. However, there is a Special Application for Purpose Groups Residential (dwellings), Residential (other), Office or Assembly and Recreation - where if the roof is not more than 15m high it allows materials rated Class B-s3-d2 or worse, e.g. timber or plywood, as a deck to the roof covering.

In practice this means that flat roofs achieving $B_{ROOF}(t_4)$ that are on a concrete or metal deck will comply with the general requirement. Flat roofs achieving $B_{ROOF}(t_4)$ that are on a timber deck will meet the Special Application requirement provided that roof is less than 15m high and on a residential, office or assembly and recreation building. If the flat roof is not in one of these three Purpose Groups or is above 15m in height, the roof deck will need to be changed to a suitable non-combustible material for 1500mm either side of the wall.

The issue in dispute is the statement “fire stopping to be carried up to the underside of the roof covering” and whether “roof covering” means just the waterproofing or if it also includes the insulation and AVCL, as would be included in a full roof system as tested to TS1487 Test 4. It is accepted that the “roof covering” does not include the insulation and AVCL then using non-combustible insulation would be required, although finding a non-combustible AVCL for flat roof application maybe difficult for some systems. It is further complicated by the guidance trying to cover both pitched and flat roofs together and this brings debate about if the “substrate or deck” should be non-combustible? In flat roofing it is common to use the term “deck”, but this does not always work for pitched roofing and therefore “substrate” is the more appropriate term, but if you apply the term “substrate” to a flat roof some may then interpret that everything below the “roof covering” must be non-combustible. This contradicts the reliance on

Adaptation of diagram 5.2a, Approved Document B

Roof covering over this distance to be designated Class A2-s3-d2 or better.

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Proposed paragraph to be included in our specifications and survey reports:

"Fire Regulations - Compartmentation

Approved Document B Vol 1:Dwellings Section 5 Internal Fire Spread covers Compartmentation (Compartmentation is covered in Section 8 of Vol 2: Buildings other than dwellings and for Scotland, Wales and NI similar consideration is necessary for both Dwellings and Buildings other than Dwellings) and there is a consideration to be made if the roof goes over a compartment wall. For New Build we will expect the principal designer to establish Building Control requirements and notify accordingly. For Refurbishment, it is not always easy for the roofing team to establish if there is a compartment wall under the roof and what is its full orientation, we will rely on the specifier or client to tell Bauder Ltd if there is a known compartment wall under the existing roof. As the requirements have proven to be open to various interpretations across Building Control authorities, the Bauder advice is to consult with the Building Control officer for the building."

In new build, it will be reasonable to assume the principal designer has considered the issue, but following our refurbishment procedures will do no harm.

The cost of putting NC insulation in lieu of say PIR, especially on tapered designs, can be very high, especially if it is more practical to then change all the insulation to NC. So, getting this correct is important. Ignorance of the answer to the question "How do you interpret the requirement for the roof above a compartment wall?" is increasingly going to cause arguments and additional costs.

If however, you ask the question in good time and the answer is not as you would usually expect, you have time and a reasonable chance to change opinion, the argumentation in our fire document is still respected by many, including BC.

The Fire Safety: Approved Document B 2019 with Amendments issued can be found on our website: <https://www.bauder.co.uk/technical-centre/standards-and-knowledge/fire-protection-statement>

And is also attached to this contractor update.

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