

TGN 24.4 [Technical Guidance Note]

Fire Regulations - Insulated Upstands

~ Background ~

The introduction of the ban on the use of combustible materials in external walls of **'relevant buildings'** was implemented through changes to the Approved Document B (Fire Safety) of the Building Regulations.

However unfortunately, this also introduced some confusion and caused some of the guidance to require further clarification, which following lobbying from various trade organisations, has led to some of these matters being further clarified by the Ministry of Housing, Communities and Local Government (MHCLG). See LRWA, NFRC & SPRA - 'GUIDANCE DOCUMENT Changes in Regulations and Approved Documents Relating to Fire Safety for Flat Roofs on 'Relevant Buildings' in England', dated June 2021, for further information.

~ Regulatory Requirements - Building Regulation Approved Document B: Fire Safety ~

Requirement B4) External fire spread Regulation 7 - Materials and workmanship

(4) In this regulation -

(a) a **"relevant building"** means a building with a storey (not including roof-top plant areas or any storey consisting exclusively of plant rooms) at least 18 metres above ground level and which - (i) contains one or more dwellings; (ii) contains an institution; or (iii) contains a room for residential purposes; and

(b) "above ground level" in relation to a storey means above ground level when measured from the lowest ground level adjoining the outside of a building to the top of the floor surface of the storey.

The **'external wall'** of a building includes a reference to:

1. anything located within any space forming part of the wall
2. any decoration or other finish applied to any external (but not internal) surface forming part of the wall
3. any part of a roof pitched at an angle of more than 70 degrees to the horizontal if that part of the roof adjoins a space within the building to which persons have access, but not access only for the purpose of carrying out repairs or maintenance.

Regulation 7 (2) also introduced a new term - **'specified attachment'**, which was also included in the ban of combustible materials along with parts of an 'external wall'. The definition given in Regulation 7 (2) includes a balcony 'attached' to an external wall.

The amendments require that materials which become part of an **'external wall'** or **'specified attachment'** achieve Reaction to Fire Classification (RtF) to European Class A1 or A2-s1, d0 (non-combustible), as set out in the standard BS EN 13501-1. Reaction to Fire measures how an individual product behaves when exposed to fire, and how the product continues to contribute to a fire as it decomposes as a result of that exposure.

Please note that in the case of flat roofing the requirement is to have a system fire performance test, not by individual components, as carried out by Moy Materials Ltd for our commonly used systems. A roof system when tested to TS 1187 Test 4 (UK & Ireland), can achieve European classification rating of B_{ROOF} (t4), C_{ROOF} (t4), D_{ROOF} (t4), E_{ROOF} (t4) and F_{ROOF} (t4) in accordance with BS EN 13501-5. Generally, most designers and manufacturers will aim for B_{ROOF} (t4) as this will mean the roofing system can be within 6m from any boundary and has unrestricted use in relation to the adjacent boundaries of surrounding buildings.

There are also notable exclusions to the ban, as shown in Regulation 7 (3), which are relevant to flat roofing and external walls, which include;

(b) any part of a roof (except if pitched above 70 degrees and that part of the roof adjoins a space within the building to which persons have access, but not access only for the purpose of carrying out repairs or

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maintenance) if that part is connected to an external wall

(g) membranes

(i) thermal break materials necessary to comply with Part L

~ Roof Upstand / Thermal Break ~

The flat roofing industry working with other appropriate bodies has developed some guidance which also deals with the additional questions about the insulation often used as part of the roof dressed up the wall, also referred to as a thermal break, stated in Part L as a minimum of **300mm** from the deck.

Insulation on the face of the wall/abutment is usually present as a thermal break and is subsequently exempt from the ban. Therefore, for the area **up to 150mm** above the roof finish/walking surface, it can be combustible insulation provided that it is no thicker than **60mm** (deemed sufficient thickness for a thermal break) and does not span across a compartment wall line or where this is adjacent to habitable space.

Insulation on a wall abutting a **habitable space** will need to be an appropriate **non-combustible** insulation board.

For heights above this distance, the insulation is recommended to be non-combustible. A suggested sensible maximum height limit for parapets and lift/stair overruns would be approximately **1100mm**. However, questions could be raised as to why this is even necessary. Beyond this would essentially be classed for all intents and purposes as a wall and should be treated as such.

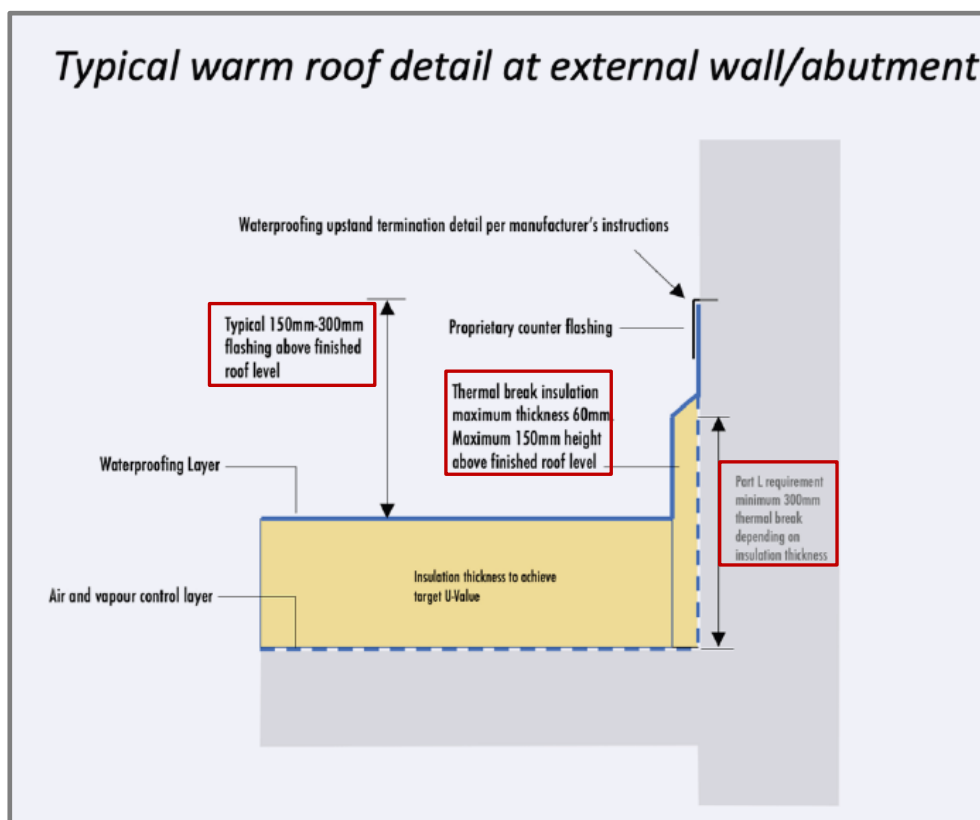


Image.1) Diagram 1 from LRWA/NFRC/SPRA - 'GUIDANCE DOCUMENT Changes in Regulations and Approved Documents Relating to Fire Safety for Flat Roofs on 'Relevant Buildings' in England', dated June 2021

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In cases, where it is unclear or if information is lacking, it would be sensible to consider specifying the use of non-combustible Class A insulants irrespective, such as mineral wool or cellular glass.

Moy always recommend early liaison with the designers, local Building Control Body and the Fire Consultant to check any specific design/fire safety criteria for the project and to ensure all requirements are fully met.

~ Regulatory Requirement - Building Regulation Approved Document B: Fire Safety ~

Requirement B3) Internal fire spread (structure) Regulation 8.25 - Junction of compartment wall with roof

A compartment wall should achieve both of the following.

- Meet the underside of the roof covering or deck, with **fire-stopping** to maintain the continuity of **fire resistance**.
- Be continued across any eaves.

To reduce the risk of fire spreading over the roof from one **compartment** to another, a 1500mm wide zone of the roof, either side of the wall, should have a roof covering system classified as $B_{ROOF}(t4)$, on a substrate or deck of a material rated class A2-s3, d2 or better, as set out in Diagram 8.2a (below).

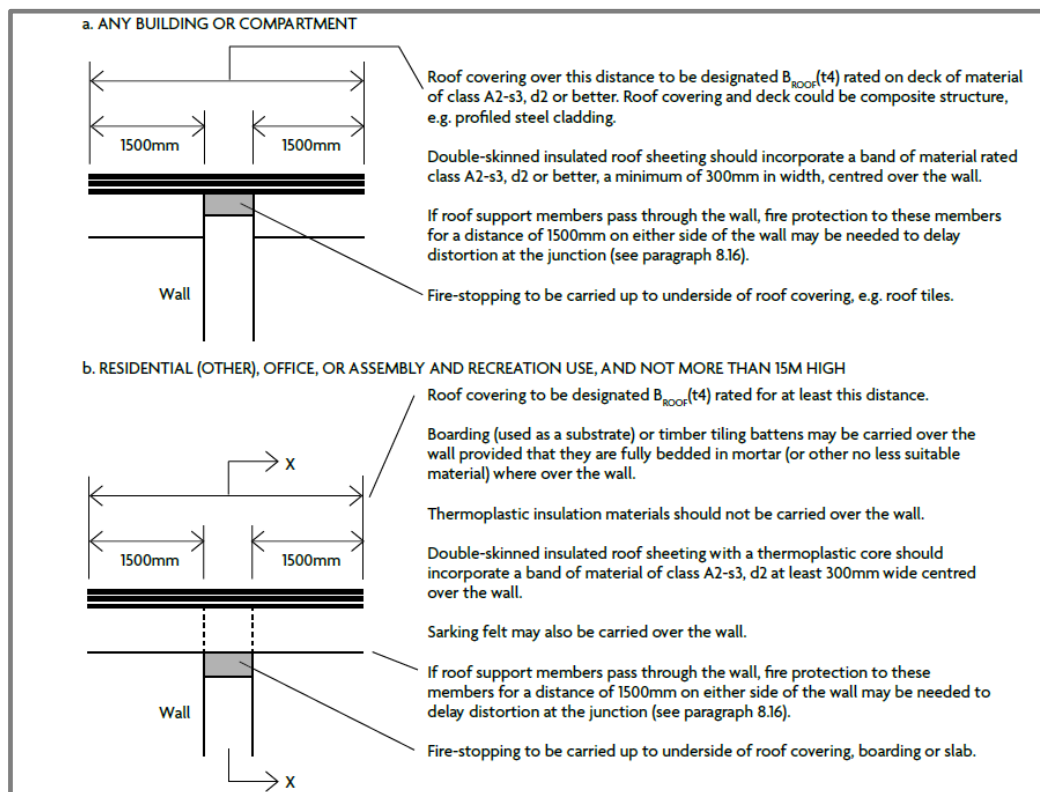


Image.2) Diagram 8.2 a. & b. from 'Approved Document B, Volume 2 2019 edition with 2020 amendments'

Materials achieving class B-s3, d2* or worse used as a substrate to the roof covering and any timber battens, provided they are fully bedded in cement mortar for the width of the wall (Diagram 8.2b above) may extend over the **compartment wall** in **buildings** that are both of the following.

- A maximum of 15m high
- In one of the following **purpose groups** – i) all residential (other than residential (institutional)), ii) office and

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iii) assembly and recreation.

* Class B-s3, d2 = Class B to F are 'combustible', giving off varying degrees of smoke (s) and/or burning droplets (d)

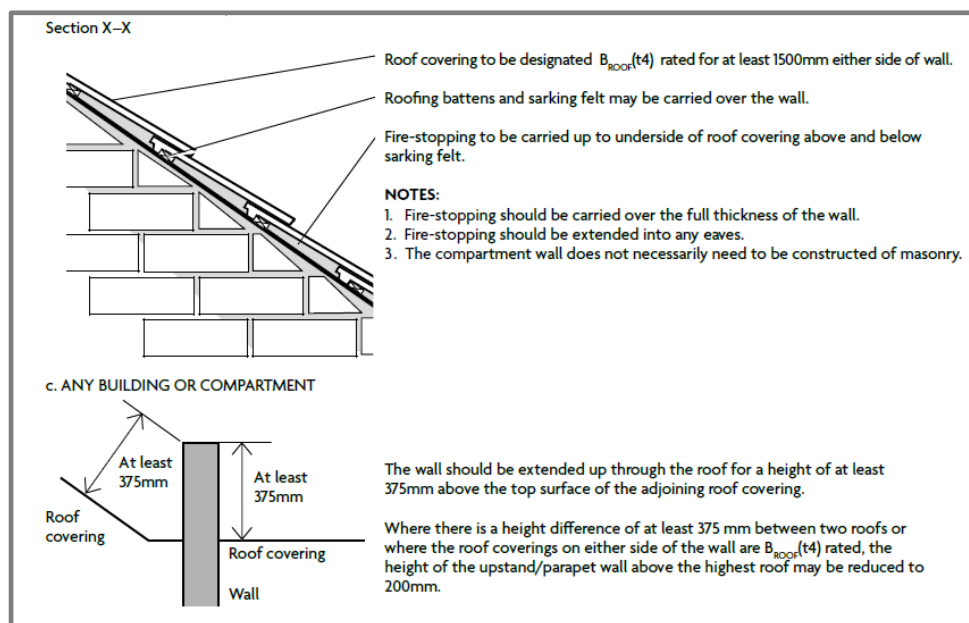


Image.3) Diagram 8.2 Section x-x & c. from 'Approved Document B, Volume 2 2019 edition with 2020 amendments'

Alternatively, the compartment wall may extend through the roof for a minimum of either of the following.

- Where the height difference between the two roofs is less than 375mm, 375mm above the top surface of the adjoining roof covering.
- 200mm above the top surface of the adjoining roof covering where either of the following applies.
 - The height difference between the two roofs is 375mm or more.
 - The roof coverings either side of the wall are of a material classified $B_{ROOF}(t4)$.

This Technical Guidance only contains Moy Materials Ltd interpretation of the guidance currently available and ultimately it will be down to the person who has overall design responsibility for the project to decide if a proposal is acceptable and meets the requirements of the Building Regulations in relation to Approved Document B – Fire Safety.

For further information, see the following;

LRWA, NFRC & SPRA – 'GUIDANCE DOCUMENT Changes in Regulation and Approved Documents Relating to Fire Safety for Flat Roofs on 'Relevant Buildings' in England', Issued June 2021

[Guidance-Note-Changes-in-Fire-Safety-Regs-0621-FINAL.pdf](https://www.lrwa.org.uk/Guidance-Note-Changes-in-Fire-Safety-Regs-0621-FINAL.pdf) ([lrwa.org.uk](https://www.lrwa.org.uk))

Fire Safety - Approved Document B

[Fire safety: Approved Document B - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/671442/Fire-safety-Approved-Documents-B-and-C-2019.pdf) (www.gov.uk)

BS 8579:2020 Guide to the design of balconies and terraces

[BS 8579:2020](https://www.bsigroup.com/Standards/BS-8579-2020) | 31 Aug 2020 | [BSI Knowledge](https://www.bsigroup.com) ([bsigroup.com](https://www.bsigroup.com))

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