

External Timber Cladding: Guidance to Amended Building Regulations December 2018

The outcome of the UK government's in depth assessment of the use of different cladding materials in the wake of the Grenfell tragedy has confirmed that timber, where necessary enhanced with flame retardant (depending on aspect), remains fit for purpose and compliant with new Building Regulations (in England), where the upper floor level of a building is less than 18m above ground, so enabling the market for this safe, versatile and attractive cladding material to continue to grow.

Building Regulations are intended to ensure that a reasonable standard of life safety is provided in case of fire. The appropriate use of timber products can play a critical part in improving the performance of buildings in fire and in extending the time available to occupants to exit the building.

Buildings where the upper floor level exceeds 18m above external ground level – which do not represent a significant market for timber cladding - pose special design and maintenance challenges and the decision to make non-combustible external cladding mandatory for this category was anticipated as a sensible design precaution in the wake of the lessons learnt from Grenfell Tower.

Amendments to Approved Documents B (Fire Safety) & 7 (Materials and workmanship)

Section B4(1) continues to state the underlying principle that *'The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another having regard to the height, use and position of the building'*.

The amended Regulation 7(2): states that *'building work shall be carried out so that materials which become part of an external wall, or specified attachment, of a relevant building are of European Classification A2-s1, d0 or Class A1 standard (non-combustible),where 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 (excluding any room in a hotel or boarding house).'*

This requirement does not apply to doors, door frames and window frames.

In their announcement dated 29th November, the government interprets **relevant buildings** as including (where there is a storey at least 18 metres above ground level) – *'Residential flats/rooms (excluding any room in a hostel, hotel or boarding house), hospitals, care homes, sheltered housing, dormitories in boarding schools, student accommodation and schools which are built as part of the government's centrally delivered build programmes.'* For such buildings, the new performance requirements apply to all faces, above and below 18m, right down to ground level.

Other than where Reg 7(2) applies (ie. building is not defined as ‘relevant’ in this context), there is no significant change to requirements.

The requirement for treatment with a flame retardant depends on the need for protected escape routes, boundary distances and the size of the cladding area being considered. As previously, the revised Approved Document B makes a clear distinction for the requirements as follows:

TIMBER CLADDING

For any building where the upper floor level is less than 18m above external ground level –

- the faces less than 1000mm from boundary must meet class Euroclass B-s3, d2 or better.
- where faces are more than 1000mm from boundary there is no requirement for flame retardant treatment, except for assembly or recreation buildings of more than one storey, where faces facing boundary must meet class Euroclass C-s3, d2 or better up to 10m above ground level or above any part of the building to which the public have access.

For any building, other than those stipulated under Regulation 7(2), where the upper floor level is more than 18m above external ground level

- the faces less than 1000mm from boundary must meet class Euroclass B-s3, d2 or better.
- the faces more than 1000mm from boundary must meet class Euroclass C-s3, d2 or better up to 18m above ground level and Euroclass B-s3, d2 or better for any dimension over 18m above ground.

NOTE: ‘Specified attachments’ attached to an external wall, which are included under these requirements, include balconies.

Important Further Information

There are four recognised stages in the development of any fire. In the critical early stages, it is the **reaction to fire** properties of the various materials and substrates exposed that are important – see *WPA FR FAQ Factsheet No 1 for details*. The data obtained from testing the reaction to fire properties of a material results in that material being given a Euroclass performance rating – see *WPA FR FAQ Factsheets 2 & 3 for details*.

The reaction to fire properties of most wood-based materials can be enhanced by the application of flame retardants under factory-controlled conditions. WPA operates three complementary, independent quality schemes to verify flame retardant enhanced timber products have been manufactured appropriately for their intended end use under the WPA Benchmark FR banner.

WPA fire protection fact-sheet No 5: FR External Timber Cladding & Fire.

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