Wood Protection Association

GUIDANCE NOTE

Ref: WPA **FR 5**

Issue 5: November 2024

External Timber Cladding and Fire Risk

Guidance to Amended Building Regulations

REVISED July 2022

in collaboration with

TIMBER DEVELOPMENT UK

tdca TIMBER DECKING AND CLADDING ASSOCIATION

In the wake of the Grenfell fire tragedy, the UK government has conducted a series of consultations into the use of different cladding materials on high rise buildings. The results of the latest of these, published in late June 2022, confirm that timber, where necessary enhanced with flame retardant, continues to be approved as a suitable material for external cladding and balconies on residential buildings, under Building Regulations, for BUILDINGS BELOW 11 METRES in England, Wales and in Scotland.

WPA , TTF and TDCA recommendations

These three industry bodies strongly advocate that an independent, professional fire risk assessment that considers building design, use, materials and location is essential at the design stage for multi-occupancy and assembly buildings, such as community centres and schools – regardless of height.

Furthermore, in **multi-occupancy** and **assembly buildings**, timber-based cladding and balcony components should be treated using a **quality assured factory-applied flame retardant** to **Euroclass B performance levels** – the highest 'reaction to fire' standard achievable for an organic substrate – unless shown NOT to be necessary by an appropriate risk assessment process. This principle of risk assessment is embodied in the Construction Design and Management Regulations and is reinforced by the **Ministry of Housing, Communities & Local Government**.

Building Regulation requirements in England

The requirement for treatment with a flame retardant depends on the **building type, boundary distances** and the **size of the cladding area** being considered. Timber can be pressure pre-treated with a flame retardant to enhance its reaction to fire properties to varying degrees. The substrate properties are then categorised using the Euroclass system. See Guidance Note **WPA FR2** for further details.

External surface cladding on buildings in all residential purpose groups, including those classed as **RELEVANT** must be **Euroclass Class A1** or **A2** where there is a storey **at least 11m above the ground**. For a material to be classed as non-combustible or of limited combustibility it must achieve Class A1 or A2 in testing.

Whilst it is not possible to enhance any organic substrate, including wood, to a Euroclass A rating, flame retardant treatments enhance safety, add value and continue to enable timber cladding to be fit for purpose for many low rise, domestic housing or non-residential applications in compliance with Building Regulations (see diagram overleaf). **Untreated** wood-based materials normally have a **Euroclass E or D** rating and this can be enhanced to **Euroclass B or C** by the industrial application of a flame retardant formulation.

Relevant Buildings

'Relevant' buildings where the upper floor level **exceeds 18m** above external ground level pose special design and maintenance challenges. **Non-combustible external cladding** is now mandatory for this category and is generally considered as a sensible design precaution in the wake of the lessons learnt from Grenfell.

Definition of 'relevant' building (ref. Approved Document B)

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 18m above ground level and which -

i) contains one or more dwellings;

ii) contains an institution; or

iii) contains a room for residential purposes

The requirement for non-combustible materials also applies to **structural timbers** within the external wall frame of relevant buildings but does not apply to doors, door frames and window frames.

RELEVANT buildings are now defined as **residential flats/rooms, hospitals, care homes, sheltered housing, dormitories in boarding schools, student accommodation, hotels, hostels and boarding houses.**

For such buildings, the new performance requirements apply to all faces, above and below 18 metres, right down to ground level.

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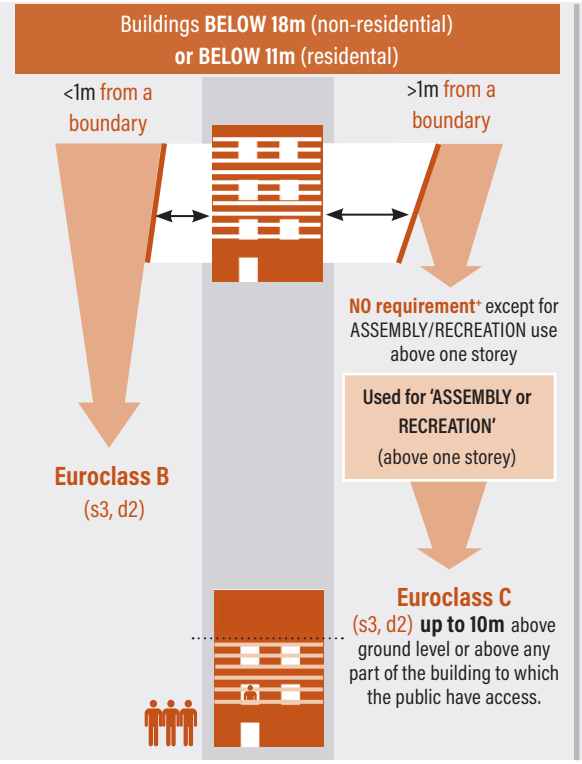
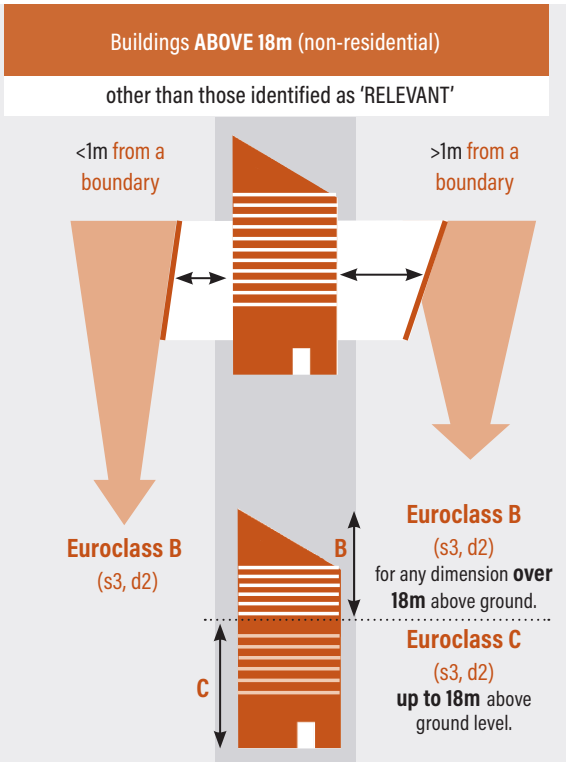
Regulations (England and Wales) **for MINIMUM Euroclass performance requirements for timber cladding applied to buildings** (+further rules apply around unprotected areas - see current Building Regulations).

Euroclass (EN 13501-1) reaction to fire performance criteria also includes classification categories for smoke production (class s1 to s3) and creation of flaming droplets (class d0 to d2).

Fire Safety: Approved Document B details the definitions of building uses and information regarding +unprotected areas where the building is more than 1m from a boundary.





SUMMARY

For 'RELEVANT' (residential multi-storey) Buildings

- **No timber cladding on buildings over 11m**, but you can use timber within the external wall structure **up to 18m.**
- **No timber in external walls on buildings above 18m** – this affects external wall framing/CLT and cladding.

Other Buildings (non-residential other than domestic housing)

- No change to before – **timber cladding can be used, normally with FR treatment, up to and beyond 18m**

Building Regulations in Scotland (from April 2024)

External wall cladding and balconies not more than 1m from a boundary should be rated Euroclass A1 or A2. Where the building is more than 1m from the boundary these should be constructed from materials with a reaction to fire rating in accordance with the following table+:

BUILDING USE	TOPMOST STOREY HEIGHT ABOVE GROUND	EUROPEAN CLASSIFICATION
Entertainment and Assembly Building	Any	A1 or A2
Entertainment and Assembly Building with a total storey area not more than 500 m^2	Less than 11m	B - E (see Regulations)
Hospital and residential care building	Any	A1 or A2
Hospital and residential care building with a total storey area not exceeding 200 m^2	Less than 11m	B - E (see Regulations)
Any other building (including domestic)	11m or more	A1 or A2
	Less than 11m	B - E (see Regulations)

For further information or advice, please contact either :

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