Banning the use of combustible materials in the external walls of high-rise residential buildings

RIBA Response 10 August 2018

Respondent Details

Question 1	**Respondent details**
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Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of the Royal Institute of British Architects

Question 2	**Select one**
Please indicate whether you are applying to this consultation as:	
• Builder / Developer	
• Designer / Engineer /Surveyor	
• Local Authority	
• Building Control Approved Inspector	
• Architect	
• Manufacturer	
• Insurer	
• Construction professional	
• Fire and Rescue Authority representative	
• Property Manager / Housing Association / Landlord	
• Landlord representative organisation	
• Building Occupier/ Resident	
• Tenant representative organisation	
• Other interested party (please specify)	Professional Body

Question 3	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	**Yes** – Combustible materials in cladding systems should be banned, subject to the responses below.
b. Should the ban be implemented through changes to the law?	**Yes** – The ban should be implemented in Law, through a change in the Building Regulations (Requirement B4).
c. If no, how else could the ban be achieved?	

Question 4	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	**Yes** – The ban should apply to buildings 18m or over in height.
b. throughout the entire height of the wall, i.e. both below and above 18m?	**Yes** – The ban should be applied throughout the entire height of the wall, both below and above 18m.
c. to high-rise residential buildings only?	**No** – The ban should include all buildings over 18m.
d. to all high-rise, non-residential buildings e.g. offices and other buildings, as well as residential buildings?	**Yes** – The ban should apply to all high-rise buildings above 18m in height. The RIBA recommends that a ban applied to all buildings over 18 meters is the only way to ensure safety of residents and building users, and protection of built assets.
e. Please provide any further information in relation to your answers above.	The RIBA supports the proposal for a ban on certain combustible materials but believe that additional measures must be considered to further support safer buildings: **Sprinklers** – retro-fitting of sprinklers / automatic fire suppression systems and centrally addressable fire alarm systems to existing residential buildings above 18m from ground, plus mandatory requirement for sprinklers/automatic fire suppression systems in all new and converted residential buildings, as already required in Wales. **More than one staircase** – In all new multiple occupancy residential buildings, a requirement for at least two staircases, offering alternative means of escape, where the top floor is more than 11m above ground level or the top floor is more than three storeys above the ground level storey (as required for commercial buildings).

Question 5	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used and do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	Only the European Classification system should be used, which would remove any ambiguity. It is noted in Approved Document B that *'The National Classifications do not automatically equate with the equivalent European classifications, therefore, products cannot typically assume a European class, unless they have been tested accordingly'*. Within external wall construction, sheathing boards, insulation and outermost cladding products must be certified as meeting European Classification A1 only. In the internal leaf, plasterboard must be certified as meeting European Classification A2-s1, d0 or above (as the RIBA are unaware of any plasterboard products that meet the A1 classification, but there are many at A2 with the additional provision of limited smoke production and no flaming particles/droplets).
b. If no, what class should be allowed in wall construction and why?	The RIBA recommends European Classification A1 over A2, to protect against production of smoke ("s" rating) and flaming particles/droplets ("d" rating). A1 will provide clarity to the construction industry, residents and the public If the government decides to proceed with the ban using the lower classification (A2), the RIBA recommends that this be strictly limited to "**A2-s1, d0**". This would ensure very limited smoke production and no flaming particles/droplets from the products included in the ban. A simple A2 classification would allow unlimited smoke production and unlimited flaming particles/droplets, which would put building users and the Fire and Rescue Authorities at unnecessary risk.

Question 6	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	**No** – For absolute clarity, the ban should only include specific product types rather than a long list of exemptions.
b. If no, what aspects of the wall should it cover?	Within external wall construction, the ban should cover sheathing boards, insulation and outermost cladding products (European Classification A1 products only), not the buildings primary structure. The primary structure should have adequate fire protection (see Building Regulation's Requirement B3). Within the internal leaf, the ban should cover plasterboard (European Classification A2-s1, d0 products and above only).
c. Should a ban also cover window spandrels, balconies, brise soleil, and similar building elements?	**Yes** – The ban should include window spandrels, balconies, brise soleil and similar building elements.
c. Please provide any further information in relation to your answers above.	Expandable foam used in external wall construction should have a fire resistance rating of at least 120 minutes.

Question 7	**Yes/No/Don't Know**
a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban?	**Yes** – Several products required in external wall construction cannot be obtained with an A1 or A2 classification.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Internal linings such as wallpaper and paint, gaskets and seals, vapour membranes, damp proof membranes and glazing. Glazing should be considered within the overall external wall construction that should "adequately resist the spread of fire" as set by Requirement B4.

c. Would you recommend an alternative way of achieving the policy aims stated above?	No – the ban is the only way to achieve this policy aim. The RIBA supports the proposal for a ban on certain combustible materials but believe that additional measures must be considered in order to further support safer buildings: **Sprinklers** – retro-fitting of sprinklers / automatic fire suppression systems and centrally addressable fire alarm systems to existing residential buildings above 18m from ground, plus mandatory requirement for sprinklers/automatic fire suppression systems in all new and converted residential buildings, as already required in Wales. **More than one staircase** – In all new multiple occupancy residential buildings, a requirement for at least two staircases, offering alternative means of escape, where the top floor is more than 11m above ground level or the top floor is more than three storeys above the ground level storey (as required for commercial buildings).

Question 8	**Yes/No/Don't Know**
Do you agree that:	
a. a risk-based approach is appropriate for existing buildings?	**Yes** – A risk-based approach should be adopted for existing buildings over 18m, not undergoing material alterations, to determine if remedial works are required. If they are required, the ban should apply.
b. the ban should apply to alterations to existing buildings, including over-cladding?	**Yes** – the ban should be applied to all existing buildings undergoing upgrading, alterations / renovation works, that fall within the scope of material alterations as a consequential improvement.

c. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	**Yes –** The ban should be applied to all new buildings / material alterations to existing buildings, to safe guard life safety.
d. the ban should not affect projects where building work has already begun?	Buildings where works have already begun that do not meet the new requirements, should be subject to a risk-based approach to determine if changing products or systems should be required (as Q8a).
e. Please provide any further information in relation to your answers above.	

Question 9	**Free text answer**
a. Which wall elements are likely to be affected by the proposed change – i.e. where they would pass as part of a cladding system in a BS8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	As Question 7B and synthetic polymer insulation products and rainscreen cladding systems with a classification lower than A1.
b. We understand that since the Grenfell tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. How frequently are elements which do not meet the proposed requirement, as identified in question 3, currently being used on buildings in scope?	The RIBA recommends discussing the current situation with providers of the full-scale test BS 8414 and with insurance providers to learn how the industry is reacting.
c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?	Using non-combustible (European class A1) materials only would negate the requirement for testing for buildings above 18m. Buildings below 18m would benefit from an updated BS8414 test procedure.
d. What types of buildings 18m or over are likely to be affected by this change (e.g. hotels, residential, student accommodation)? What proportion of each type would likely be affected by the proposed change?	All buildings over 18m that do not meet the proposed requirements will be affected.

e. How much extra cost would typically be involved in meeting the proposed new requirements over and against a building which meets the current requirements? (Please provide any further details.)	The figures in in the impact assessment section of the consultation document appear to be reasonable at the higher level. However, the impact assessment does not consider the impact relative to the value of construction which, in 2016, was £4,793M in new public housing and £30,706m in private new housing (new orders for construction from ONS Construction statistics: Number 18, 2017 edition). The assessed impact of up to £11m per year additional cost is only 0.03% of the reported construction value in this sector.
f. Please provide any further comments on the likely impact of this change for construction (e.g. supply chains)	The aim of government should be to focus primarily on public safety. However, for the construction industry, the ban itself, demand and delays for A1 products and subsequent increased costs of these products will have an impact on the development economics of buildings over 18m. The RIBA is confident that product manufacturers will develop new innovative products that meet the A1 classification.