Response 29

Respondent Details

Name	John Rowlands
Position (if applicable)	
Organisation (if applicable)	
Address (including postcode)	Tanrallt, Mynydd Parys, Rhosybol, Anglesey, LL68 9RD
Email address	
Telephone number	
Please state whether you are responding on behalf of yourself or the organisation stated above	Myself

	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	
• Tenant representative organisation	
• Other interested party (please specify)	Individual

Question 1

a. Yes
b. Yes
c. no comment

Question 2.

a. No
b. I consider that the entire height of the wall, from ground (or below ground where relevant) to the top of the building should have the ban applied. This is because there are (a) alternative, non-combustible materials available that this ban and Grenfell should encourage

and (b) a fire starting at lower levels could be prevented from spreading at all if the external cladding were non- or of limited combustibility.

d. No. All buildings.
e. Yes. All buildings.

Question 3.
a. Yes
b. Yes
c. N/A

Question 4.
a. Yes
b. N/A
c. Yes

Question 5.

a. Possibly, but subject to there genuinely not being other components of lower fire risk available, and that there should. in parallel, be continuous promotion of safer materials. The ban should not only stop the use of combustible materials, but promote the development of new, lower risk materials. It is unlikely that there cannot be solutions in the near-medium future to those components that remain combustible.

b. I consider that, where a component is likely to contribute to fire spread, the answer should not be to seek exemptions and permit continued use of combustible materials. Instead, this ban should provide the opportunity to promote the use of the most non-combustible materials available. Paint and wall coverings may initially appear to be minor components, but have the capacity to fuel a fire to a very signigificant degree. This fact is recognised in ;standalone' domestic situations, for example, by the need to cover timber cladding, etc, in approved levels of intumescent coatings. Mindful of this, why is an exemption to high rise or any other occupied building considered appropriate at all?

c. I refer to my general stance that this should not be an opportunity to exempt combustible materials, but to strike towards the very safest materials available, and to promote development of even better and ultimately lowered cost materials.

Question 6.

a. Yes.
b. Yes.
c. Disagree.

Question 7.

I am not a building professional. My response is that clearly, there are systems of cladding and other refurbishments that do already use materials that are of lower, limited or non-combustibility. I think that anything other than an outright ban on comustible materials is simply a lost opportunity to stimulate the uptake of lower risk materials, and the development of new ones. I regret that some of the questions put in this consultation appear to be falling

into the trap of permitting those who make their money from selling ever-greater quantities of hopelessly combustible materials to continue doing so, when Grenfell and both earlier and subsequent fires demonstrate is wholly unaccaptable. The focus must not be on trading human lives for commercial gain and what is, most often, simply a cosmetic exercise to please those who do not live in, but look out onto tower blocks.

John Rowlands
Tanrallt,
Mynydd Parys,
Rhosybol,
Anglesey
LL68 9RD.

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 30

Respondent Details

Name	Stephen Blackmore
Position (if applicable)	
Organisation (if applicable)	
Address (including postcode)	
Email address	Stephen.Blackmore@swansea.gov.uk
Telephone number	
Please state whether you are responding on behalf of yourself or the organisation stated above	Myself

	Select one
Please indicate whether you are applying to this consultation as:	
• Builder / Developer	
• Designer / Engineer / Surveyor	Yes
• 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	
• Tenant representative organisation	
• Other interested party (please specify)	

Question 1.

a. Do you agree that combustible materials in cladding systems should be banned?

b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?

c. If no, how else could the ban be achieved?

a;
Combustible materials should be banned in cladding systems in buildings over 12 metres in height or four stories whichever is the less.

b;
The building regulations have schedules which provide the use of Approved Documents for guidance, that is where the ban should be as not to overload the general requirements of the regulations.

c;
As stated above the Approved Document can be amended to suit the requirement.

Question 2.

Do you agree that the ban should apply:

a. to buildings 18m or over in height?

b. If no, to what height, higher or lower, should the ban apply? Explain why.

c. throughout the entire height of the wall, i.e. both below and above 18m?

d. to high-rise residential buildings only?

e. If no, should the ban apply to high-rise non residential buildings, e.g. offices and other buildings, as well as residential buildings?

a;Yes the ban should apply to building over 18 metres in height but that height needs to be restricted to 12 metres.

b;
The height limit on the cladding systems should be restricted to 12 metres in height. This is the height that a standard fire appliance can reach from the ground, anything higher would need to be non-combustible to avoid fire services having to provide specialist equipment for high rise structures.

c;
The height should be restricted to the accessibility of the standard fire appliance.

d;
All buildings above fire service accessibility should have non-combustible cladding.

e;

As advised elsewhere the ban should be enforced on all buildings with a height over and above the accessibility of the fire service, also hospitals and other buildings where people present are vulnerable and have motorbility issues.

Question 3.

a. Do you agree that the European classification system should be used?

b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?

c. If no, what class should be allowed in wall construction and why?

a;
The use of the European classification BS EN 13501 to keep the standards harmonised throughout Europe.

b;
Class A2 classification (limited combustibility) should be removed from the cladding systems above the accessibility of the fire service, only class A1 materials should be allowed in building over the height of fire service accessibility of a standard fire appliance.

c;
Only A1 non-combustible materials should be used outside the accessibility of the fire service and its standard fire equipment.

Question 4.

a. Do you agree that a ban should cover the entire wall construction?

b. If no, what aspects of the wall should it cover?

c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?

a;
The ban should only be made effective in buildings outside the accessibility of the fire service standard equipment, 12 metres and above.

b;
The ban should only reflect on the buildings where their height is outside the fire services accessibility.

c;
Yes, unless there are substantial fire breaks between floors and adjacent rooms.

Question 5.

a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban?

b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?

c. If no, what alternative way of achieving the policy aims would you suggest?

a;
No, all components need to be fire resisting.

b;

c;
Only materials that when broken down by fire do not cause the collapse of the cladding system.

Question 6.

Do you agree that:

a. the ban should apply to proposed material alterations to existing buildings, including over cladding?

b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?

c. the ban should not affect projects where building work has already begun?

a;
Yes the ban should apply to existing buildings and improvement works.

b;
No, financial penalties should be avoided post approval of the project.

c;
No, the ban should not affect buildings already under construction.

Question 7.

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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?

b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?

c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test is likely to be?

d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)

e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains

a;
Cladding, insulation and brackets and possibly gaskets.

b;
A lot of cladding used meets either B or C ratings.

c;
Building would be non compliant unless they have Class A rated materials and it has been suggested that the BS 8414 test is not fit for purpose and that the crib fire does not represent a true fire load of modern materials.

d;
Costs unkown to me.

e;
Massive impact on industry manufacturers and material suppliers for high rise buildings.

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 31

Respondent Details

Name	Stuart Ropke
Position (if applicable)	Chief Executive
Organisation (if applicable)	Community Housing Cymru
Address (including postcode)	2 Ocean Way, Cardiff, CF24 5TG
Email address	
Telephone number	02920 674811 07590 034071
Please state whether you are responding on behalf of yourself or the organisation stated above	Community Housing Cymru

	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	
• Tenant representative organisation	
• Other interested party (please specify)	Membership body for Housing Associations

Dear Emma,

We wanted to take this opportunity to write to you to express our support for the proposed ban on the use of combustible materials when cladding high-rise buildings in Wales and to offer our assistance in implementing the ban in a successful manner.

We are aware that for such a ban to work, clear definitions of *combustible* and *non-combustible* are required. For some years, the European Standard EN-13501-1 has been the headline industry standard for classifying the combustibility of materials used to clad buildings. The EN-13501-1 rates materials from A1-F, with A1 and A2 rated materials being classified as *non-combustible*. Therefore, materials classified as B through to F would be classed as *combustible*, albeit of different levels of combustibility. If a ban on combustible materials was implemented using the EN-13501-1 definitions, both A1 and A2 rated materials would remain suitable for use on the outside of high rise buildings.

CHC's call for a ban on the use of combustible materials on the outside of buildings was based on the European Standard definition of *non-combustible* and *combustible* and would be applied to new developments or refurbishments.

However, an additional, older standard exists for classifying materials used in cladding buildings as *combustible* or *non-combustible*. BS 476 part 7 & 6 are not widely referred to in the marketing or during the selection of materials for cladding buildings, as it has been superseded by the European Standard. BS 476 would classify materials rated as A2 under EN-13501-1 as *combustible*. Only materials rated as A1 under EN-13501-1 would be classified as *non-combustible* under BS 476.

The two standards have created uncertainty over exactly what a ban on combustible materials would mean for developments and refurbishments currently underway. These developments and refurbishments are being undertaken with regard to the current advice from Welsh Government, namely to follow the results of the BRE full system tests undertaken to BS8414 classifying to BR135 and to have regard to current building regulations requiring materials to be of *limited combustibility*. However, it is possible for materials to be specified following this guidance that would then be banned if the definition of combustibility followed BS 476.
A practical example of this would be a removal and replacement of cladding, utilising replacement A2 cladding covering existing mineral wool insulation. This specification both satisfies the *limited combustibility* criteria set out in Approved Document B and conforms with one of the specifications which passed the full system tests undertaken by UK Government to BR 135 standard using the BS 8414 test. However, under BS 476, the A2 rated cladding would be classified as *combustible.*

Utilisation of the BS 476 classifications of combustible and non-combustible would therefore significantly contradict the current advice being given to owners and developers of high rise buildings and unnecessarily restrict the choice of materials when cladding high rise buildings. European Standard has been shown to be safe, through the full system test carried out last summer, and we believe should be the standard used when determining whether a material is combustible or non-combustible.

Clarity on the proposed definition of *combustible* in the proposed ban would provide the sector with the confidence to continue to undertake urgent remedial works on existing buildings and to develop much needed new homes.

I would be pleased to meet with you to discuss further.

Yours sincerely,

Stuart Ropke

Cartrefi Cymunedol Cymru
Community Housing Cymru
2 Ocean Way, Caerdydd/Cardiff, CF24 5TG
Ffôn/Tel: **029 2067 4800** | Ffâcs/Fax: **029 2067 4801**

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Response 32

Respondent Details

Name	Peter Richards
Position (if applicable)	Building Control Manager
Organisation (if applicable)	LABC Cymru
Address (including postcode)	Civic Centre, Oystermouth Road, Swansea, SA1 3SN
Email address	peter.c.richards@swansea.gov.uk
Telephone number	01792 635622
Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of the above organisation

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

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	Yes
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	Yes
c. If no, how else could the ban be achieved?	[Free text answer]

Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	Yes
b. If no, to what height, higher or lower, should the ban apply? Explain why	
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes
d. to high-rise residential buildings only?	No
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	Yes
f. Please provide any further information in relation to your answers above	The ban should apply to any building to which the Regulatory Fire safety order applies, irrespective of height.

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	Yes
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	No
c. If no, what class should be allowed in wall construction and why?	Class A1 only (non combustible). It will remove all ambiguity in interpretation and application.

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	Yes
b. If no, what aspects of the wall should it cover?	

c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Yes
d. Please provide any further information in relation to your answers above	[Free text answer]

Question 5	**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?	No
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	[Free text answer]
c. If no, what alternative way of achieving the policy aims would you suggest?	Limiting the exemption to components that are non critical in terms of contributing to the structural integrity, stability and performance of the system.

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	Yes
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	Yes
c. the ban should not affect projects where building work has already begun on site?	Yes
e. Please provide any further information in relation to your answers above	Effective transitional arrangements will need to be implemented with no "blanket" coverage on commencement.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards	Cladding, insulation, brackets, gaskets, sheathing boards, rails, bolts, screws and retaining clips.

or vapour barriers)?	
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	Limited experience in terms of number of proposals. Instance of design change to achieve improvement from limited combustibility to non combustible.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Buildings would be non compliant unless they have Class A rated materials. It has been suggested that BS 8414 test is not fit for purpose and that the crib fire does not represent a true fire load of modern materials.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	Costs unknown ….. unable to quantify but will be significantly higher.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	Massive impact on industry manufacturers and material suppliers for high rise buildings. Likely to be significant cost implications. Increase in structural loadings. Impact on design input. Will drive inovation. Will remove ambiguity. Will instill confidence in the end product. Will create demand for upskilling.

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 33

Respondent Details

Name	[redacted]
Position (if applicable)	
Organisation (if applicable)	
Address (including postcode)	
Email address	
Telephone number	
Please state whether you are responding on behalf of yourself or the organisation stated above	

	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	x
• Building Occupier	
• Tenant representative organisation	
• Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	Yes
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	Yes
c. If no, how else could the ban be achieved?	[N/A]

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	Yes
b. If no, to what height, higher or lower, should the ban apply? Explain why	n/a
c. throughout the entire height of the wall, i.e. both below and above 18m?	The entire height of building for consistency
d. to high-rise residential buildings only?	No.
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	n/a
f. Please provide any further information in relation to your answers above	[We recognise the added risk that exists in residential buildings resulting from the quantum of time spent in the home and that for many hours the occupants will be asleep, increasing the risk of a slower building evacuation time. However, similar patterns of occupancy could be experienced in hotels. Furthermore, there are from time to time changes in Government housing policy that allow or even promote the conversion of unused office accommodation into residential accommodation. If another 'Use Class' of tall building were excluded from the ban at the point of construction this may reintroduce the risk at change of use. It is accepted that this change of use would trigger the requirement for the use of the non-combustible materials but this would most likely make the conversion unviable or at the very least add excessive costs to the project necessitating a new cladding system that might not otherwise have been required. A small change in specification at the point of initial construction overcomes this risk. Finally, the risk to the Fire and Rescue staff that tackle blazes and the risk of fire spread from falling debris to adjacent property could be significantly reduced if the materials used in all tall buildings are non-combustible.]

Question 3	Yes/No/Don't Know
a. Do you agree that the European classification system should be used?	Yes
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	Yes
c. If no, what class should be allowed in wall construction and why?	[N/A]

Question 4	Yes/No/Don't Know
a. Do you agree that a ban should cover the entire wall construction?	No
b. If no, what aspects of the wall should it cover?	The external cladding only. The use of combustible material in a sealed cavity of masonry for example would pose minimal risk and might afford a very efficient and cost-effective approach to obtaining high thermal insulation levels. A total ban might result in the need to build all tall buildings from concrete as embedded steel frames would be caught by the combustible material ban (it melts at high temperatures). Retrofitting of buildings utilising composite insulated plasterboard (using insulation that is potentially combustible) is a tried and tested method of efficiently upgrading the thermal performance of older buildings. This method is especially useful when working in properties that have an attractive exterior/historical appearance that should not be over clad. Similarly, a spray applied insulation material (using insulation that is potentially combustible) is an extremely useful approach to insulating uneven internal walls of old buildings whilst sealing all air pathways; then covered with an internal layer of plasterboard on a timber of light gauge steel frame. Such a ban would prevent such flexible systems being used.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	No
d. Please provide any further information in relation to your answers above	[In reference to c – such a ban on these relatively small elements of the building

	would restrict the design flexibility needed by designers to create attractive modern buildings. Laminated safety glass is a very useful material that features significantly in modern architecture. Brise soleil perform an important function in reducing building overheating. Constructing brise soleil in materials other than steel and occasionally timber to achieve a non-combustible in all probability would see these components of a building impossible to construct.]

Question 5	**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
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	[windows, balconies, brise soleil, rain water goods, balustrading, glazing, renewable technologies, maintenance cradles, 'green/living' walls, lighting, signage, certain services punctuating the fabric (such as acoustic baffles, water overflow pipes etc)]
c. If no, what alternative way of achieving the policy aims would you suggest?	N/A

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	Yes
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	No.
c. the ban should not affect projects where building work has already begun on site?	We agree; this would be unreasonable and cause the project significant delays – perhaps even be impractical given structural issues. It may cause some schemes to be financially unviable.
e. Please provide any further information in relation to your answers above	[Regarding a – Caveated with where the existing structural capability of the building can carry the additional loading safely. Again caveated where removal of embedded combustible materials within the building fabric are beyond practicable removal contingent upon their encapsulation with non-combustible material.]

	[Regarding b - The weight of the non-combustible cladding will be significant higher than the light weight alternatives. This would probably result in the redesign of the structure of the building, all architectural detailing completed and incur significant costs for the developer and ultimate building owner. It is also possible that pre orders for materials and structural components on long lead times have already been ordered by the time a building notice is served creating a contractual situation. Not applying the ban immediately would mean that some building projects that have not yet started when the ban is introduced would be allowed to continue to comply with existing building regulations only where all materials are A1 or A2 or the entire system satisfies BS 8414. However, a transitional period of 12 months could be introduced with a cut-off date to allow those projects that have been significantly designed and or contractually committed to be brought forward quickly and so limited in number. After the transitional period expires all projects would incorporate the ban and the Welsh Government could demonstrate that they we mindful of the implications of a sudden ban and had mitigated this issue for schemes imminently due on site.]

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	We have no further materials to add to those materials that have already been mentioned in responses above.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	As an organisation, we have very limited experience with high rise buildings. However, we are aware of a number of local high rise buildings that have been clad using 'Rockwool' insulation, which is Euroclass A2 or better. (The Tower, Cwmbran and Fairview court, Pontypool, both Bron Afon.)
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	From reviewing articles published by manufacturers, removing the BS 8414 route to compliance would result in combustible materials (Euroclass C-F)

	not achieving compliance. The materials would need to meet Euroclass A1 or A2, and be either non-combustible or have limited combustibility). Please review the article below and refer to pages 6-13 for more info. If the legislation were to change, you would expect manufacturers of PUR and PE type insulation to probably either remove themselves from the high rise market or look to evolve to meet the new requirements. *http://www.rockwool.co.uk/globalassets/rockwool-uk/downloads/brochures/regulation-guides/rw16-041-routes-to-compliance-update-may16-for-web.pdf*
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	We have limited experience with high rise, however we do understand that 'Rockwool' type insulation is more expensive than PUR. However, if the legislation were to change, you would expect more competition in this market, as company's evolve and new ones enter the market.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	As 7d above.

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	None

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here: X**

Response 34

Respondent Details

ice | wales cymru

Name	**Keith Jones**
Position (if applicable)	Director ICE Wales Cymru
Organisation (if applicable)	Institution of Civil Engineers
Address (including postcode)	Cambrian Buildings, Mount Stuart Square Cardiff CF10 5FL
Email address	Keith.jones@ice.org.uk
Telephone number	029 2063 0561
Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of ICE Wales Cymru

	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	
• Tenant representative organisation	
• Other interested party (please specify)	Professional Membership Organisation

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	yes
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	yes
c. If no, how else could the ban be achieved?	Legislation of some kind
Question 2	Yes/No/Don't Know

Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No not just buildings over 18m, all buildings, including over 18m in height
b. If no, to what height, higher or lower, should the ban apply? Explain why	To all buildings as they are all at risk
c. throughout the entire height of the wall, i.e. both below and above 18m?	yes
d. to high-rise residential buildings only?	no
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	Yes and not just high-rise buildings
f. Please provide any further information in relation to your answers above	To all buildings, the criteria chosen should not just picking an arbitrary figure based perhaps on the availability of a random height of some firefighting equipment in some locations

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	yes
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	Yes, A2 or better
c. If no, what class should be allowed in wall construction and why?	A1

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	no
b. If no, what aspects of the wall should it cover?	External walls and cladding

c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	no
d. Please provide any further information in relation to your answers above	This is not practical and in some cases can assist if constructed properly

Question 5	**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
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	As your example given, 'for example, apply to internal wallpaper and paint, window frames, gaskets and seals, vapour membranes, surface finishes and laminated glass'.
c. If no, what alternative way of achieving the policy aims would you suggest?	Set criteria / limits / standards / types etc.

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	Yes
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	Yes
c. the ban should not affect projects where building work has already begun on site?	The ban should affect all projects including those already begun on site
e. Please provide any further information in relation to your answers above	It should affect all works planned and under construction – these hazards and risks are now known.

Question 7	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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	All elements that do not or did not meet Class 2 or better
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	I have little information personally but anecdotally this is likely
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	No comments offered
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	This is likely to be very considerable costs
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	This needed to be speedily addressed and must affect all construction

Question 8	Free text answer
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	All changes should be legislative and not guidance
Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 35

Respondent Details

Question 1	**Respondent details**
Name	Paul Jervis
Position (if applicable)	Technical Executive
Organisation (if applicable)	British Plastics Federation Windows Group
Address (including postcode)	BPF House Bath Place Rivington Street London EC2A 3JE
Email address	paul@paul-jervis.co.uk
Telephone number	07831 504934
Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of BPFWG

Respondent Details

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)	Trade Association

Question 3	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	There is no straight answer. Either a requirement for Class A2 or better or large-scale testing to BS 8414 will ensure proper risk assessment of the entire system. Proscribing individual elements may not serve to increase safety and the application of large-scale testing, coupled with enforcement of the

	regulations would do. The presence of sprinkler systems, more than one staircase, etc., may be considered when choosing wall components.. It is reported that there is an average 1 fire a day in tower blocks in London without deaths or serious injury so existing systems can work.
b. Should the ban be implemented through changes to the law?	If banning is chosen then Yes
c. If no, how else could the ban be achieved?	Correct adherence to Regulation B4 (I) (Part B of schedule 1 - BR) guidance that is detailed in Approved Document B.

Question 4	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	If banning is chosen, then Yes
b. throughout the entire height of the wall, i.e. both below and above 18m?	If banning is chosen, then Yes
c. to high-rise residential buildings only?	any high rise buildings where people sleep – residential, hospitals, student accommodation, care homes, etc.
d. to all high-rise, non-residential buildings e.g. offices and other buildings, as well as residential buildings?	
e. Please provide any further information in relation to your answers above.	

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?	Depends on the definition of wall construction. Windows and doors such as balcony doors should be excluded. A2 or better to the remaining components would be appropriate or the use of large-scale testing. This ensures assemblies meet the BR 135 criteria without relying only on small-scale tests and proscribed lists.

b. If no, what class should be allowed in wall construction and why?	

Question 6	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	Depends on the definition of wall construction. Windows and doors such as balcony doors should be excluded. addition, it is recognized that some elements of a wall need other properties vital to performance, such as breathable membranes and insulation, which would need to be excluded from the ban if they are shown to pass BS 8414 large-scale testing.
b. If no, what aspects of the wall should it cover?	
c. Should a ban also cover window spandrels, balconies, brise soleil, and similar building elements?	Yes, as far as it goes, but "similar building elements" is too vague. Any list is likely to change as innovations occur so a means of doing this quickly is needed.
c. Please provide any further information in relation to your answers above.	

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?	At this stage, it is not clear whether a list of exempt components or a list of banned components would be the most suitable. This may become clearer as a list is developed.
b. If yes, what components should be included on an exemption list and what	Windows, door height windows, balcony doors and their components should be on any list of exemptions.
conditions should be imposed on their use?	
c. Would you recommend an alternative way of achieving the policy aims stated above?	

Question 8	**Yes/No/Don't Know**
Do you agree that:	

a. a risk-based approach is appropriate for existing buildings?	Yes, as long as the risk is assessed by a competent, independent person.
b. the ban should apply to alterations to existing buildings, including overcladding?	Yes
c. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	Yes
d. the ban should not affect projects where building work has already begun?	Yes, but only after a risk assessment. Mortgage and insurance companies may take the opposite view but that raises the question of who pays for the change when the original installation complies with the relevant building regulations.
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)?	No info
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?	No info
c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?	Don’t know

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?	Don't know.
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.)	Don't know
f. Please provide any further comments on the likely impact of this change for construction (e.g. supply chains)	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 36

Respondent Details

Name	Neil Parfitt
Position (if applicable)	Building Control Manager
Organisation (if applicable)	Rhondda Cynon Taf County Borough Council
Address (including postcode)	Sardis House, Sardis Road, Pontypridd, CF37 1DU
Email address	neil.parfitt@rctcbc.gov.uk
Telephone number	01443 494749
Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of the above organisation

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

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	Yes
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	Yes
c. If no, how else could the ban be achieved?	N/A

Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	Yes (but why should any cladding be made of combustible materials?)
b. If no, to what height, higher or lower, should the ban apply? Explain why	N/A
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes
d. to high-rise residential buildings only?	No
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	Yes (especially hospitals, student accommodation, hotels and care homes)
f. Please provide any further information in relation to your answers above	The ban should apply to any building to which the Regulatory Fire Safety Order applies, irrespective of height.

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	Yes (although any implications of BREXIT should be considered)
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	No
c. If no, what class should be allowed in wall construction and why?	Class A1 only (non combustible). It will remove all ambiguity in interpretation and application.

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	Yes
b. If no, what aspects of the wall should it cover?	N/A
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Yes

d. Please provide any further information in relation to your answers above	N/A

Question 5	**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?	No
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	N/A
c. If no, what alternative way of achieving the policy aims would you suggest?	Limiting the exemption to components that are non critical in terms of contributing to the structural integrity, stability and performance of the system.

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	Yes (but the definition of "material alteration" needs to be unambiguous".
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	Yes in principle (but see "e"). Some fully costed and funded projects may be "past the point of no return" and lose the funding or face a large price hike.
c. the ban should not affect projects where building work has already begun on site?	Yes
e. Please provide any further information in relation to your answers above	Effective transitional arrangements will need to be implemented with no "blanket" coverage on commencement.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	Cladding, insulation, brackets, gaskets, sheathing boards, rails, bolts, screws and retaining clips.

b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	Limited experience in terms of number of proposals. Instance of design change to achieve improvement from limited combustibility to non combustible.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Buildings would be non compliant unless they have Class A rated materials. It has been suggested that BS 8414 test is not fit for purpose and that the crib fire does not represent a true fire load of modern materials.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	Costs unknown, unable to quantify but will be significantly higher.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	Massive impact on industry manufacturers and material suppliers for high rise buildings. Likely to be significant cost implications. Increase in structural loadings. Impact on design input. Will drive innovation. Will remove ambiguity. Will instil confidence in the end product. Will create demand for up skilling. Contractual difficulties on committed but as yet unconstructed projects.

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here**

Consultation Response

Response 37

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

13th September 2018

Introductory Note

The Home Builders Federation (HBF) welcomes the opportunity to respond to the Independent Review - Building Regulations and Fire Safety.

HBF is the representative body for house builders in England and Wales. HBF's membership of more than 300 companies build most of the market for sale homes completed in England and Wales, and encompasses private developers and Registered Providers. As the main trade association for the house building industry our members constitute one of the largest customers who will be affected by the outcome of this review. As such, we trust that appropriate quantitative and qualitative weight will be attached to our response, in particular when crystallising any decisions and/or recommendations arising from the review. Moreover, these comments have been collated from the output from a HBF dedicated working group tasked with the review of high rise residential buildings.

Respondent details	
Name	Craig Ferrans MCIAT
Position (if applicable)	Technical Director
Organisation (if applicable)	Home Builders Federation
Address (including postcode)	HBF House, 27 Broadwall, London DE1 9PL
Email address	Craig.ferrans@hbf.co.uk
Telephone number	0207 960 1600
Please state whether you are responding on behalf of yourself or the organisation stated above	Trade body representing Developers

Question 1	Yes/No/Don't Know
a. Do you agree that combustible materials in cladding systems should be banned?	No
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No, a ban would need to be implemented through changes to the law.
c. If no, how else could the ban be achieved?	We would query whether, if a cladding system has been tested in line with BS8414, should this not also be an alternative and acceptable compliance method, therefore not to preclude its use if the cladding system is constructed in strict compliance with the test? This would also require additional on-site inspection as noted in Dame Judith Hackitt's Final report. Such an approach would further support existing buildings and related insurance policies. It should be made clear that existing buildings with combustible materials are not necessarily unsafe. Our concern being that a raft of buildings will be blighted as a consequence of a complete ban.

Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	Yes
b. If no, to what height, higher or lower, should the ban apply? Explain why	N/A
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes
d. to high-rise residential buildings only?	No
e. If no, should the ban apply to high-rise non residential buildings, e.g.	We would ask for greater clarity on where the measurement for the 18m rule is taken from and to. This would require further guidance /

offices and other buildings, as well as residential buildings?	clarification on sloping sites. Q4a, we would suggest the wording is changed to read “only to building 18m or over in height” We would also suggest that this should apply to all buildings over 18m in height where there is a sleeping risk, where there is a stay-put policy or prolonged evacuation or mobility challenges such as medical/residential care. We would also like to consider the 18m rule where there are restricted access points such as podium decks and whether the 18m rule would be adequate in these circumstances.

Question 3	**Yes/No/Don’t Know**
a. Do you agree that the European classification system should be used?	Yes
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	Yes subject to certain elements contained within the external wall make-up. Please refer to Question 5b.
c. If no, what class should be allowed in wall construction and why?	Please refer to Question 5b for materials that would need to be assessed separately.

Question 4	**Yes/No/Don’t Know**
a. Do you agree that a ban should cover the entire wall construction?	No
b. If no, what aspects of the wall should it cover?	Please refer to Question 5b for materials that would need to be assessed separately.
c. Should a ban also cover window spandrels, balconies, brise soleil, and similar building elements?	No We would like to refer to our comments to Question 5b. The overall construction make-up of a balcony, by way of an example, will contain elements of combustible materials.

Question 5	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
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	• Roof membranes • Breather membranes • Roof Insultation • Key element of timber construction (e.g. CLT) • Internal external wall linings (e.g. timber wall panelling) • Thermal breaks, for example in-between steel cavity wall lintels • Void formers • Cabling in-between systems • Damp Proof Courses • Cavity trays • Insulation material between masonry cavity walls • Doors – Having a fire resistance in terms of time, i.e. 30/60 minutes. • Windows (timber and UPVC) - other than stacking or ribbon. • Cills • Gaskets, seals, double glazing spacers, clips – assuming they are limited in number, and don't pass through a cavity barrier. • Laminated glass which has been shown to achieve A1 or A2. Some laminated glasses contain combustible plastic interlayers. • Ventilation grilles, together with M+E services within or fixed to the face of external walls. We would like to note that the list above is not exhaustive and that further research should be carried out as to assess necessary exclusions to the exemption list.

c.	If no, what alternative way of achieving the policy aims would you suggest?	N/A

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over cladding?	No If the cladding system was constructed to a BS8414 test then this should be risk assessed, based on test data and on-site inspection regime.
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	No We would ask for clarity on what would constitute as a start on site. For example, would this be taken to be read as the first foundation pile being driven or, if the physical superstructure of the building has commenced. The consideration of multi-phased blocks should also be discussed, and guidance prepared by Government.
c. the ban should not affect projects where building work has already begun?	Yes – We agree that the ban should not affect projects where building work has already begun. We would like to highlight the impact of projects that support any off-site fabrication/modern methods of construction that has already been commissioned and therefore a risk-based approach should be considered in these circumstances. We would therefore ask for a transitional period for implementation and compliance.

Question 7	**Yes/No/Don't Know**
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)?	• Brick slips • Class B Cladding panels • Gebrik/G-Brick system • Structural glazed systems/infill panels • Timber cladding features used a low-level only. • Ancillaries to all cladding systems • Solar Shading elements

	Please note that it is felt that there is crossover with our answer(s) to Question 7b. We would like to note that Diagram 34 AD B would not be deemed as acceptable if the wall construction contains a combustible material. For example, where traditional build has been specified containing combustible insulation between two leaves of masonry, particularly at low-level construction forming part of the 18m high building.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	We would note that HBF members support the specification in using elements that are Class A2 or better moving forward where possible.
c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?	The HBF do not have the technical expertise in commenting directly as to the removal of BS8414 test, however would add that this may possibly lead to the increase of wall thicknesses, due to the type of background insulants specified in some cases, as reported by members. Its removal may also affect public confidence in those buildings that have and are currently being constructed using the BS8414 test but are entirely safe.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	The HBF would not be able to provide a detailed answer as cost data is not shared/discussed and due to the vast number of variables, size, type, specification etc.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains the current requirements? (Please provide any further details.)	We would like to make reference to local planning policies where there is a drive to impose requirements that are in excess of that within building regulations and the risk of unintended consequences. For example, members have raised mixed experiences in the specification of external wall

	thicknesses required to meet higher thermal targets. This has required glazing being increased from double to triple glazed units and by increasing cavities to compensate for additional insulation thickness, pushing the boundaries for tested cavity barriers available on the market. There is also the potential additional risk if both interstitial and/or surface condensation manifest itself. Timber cladding features are often used at lower levels of a building – within canopies, briseole, fenestrations, which are often smaller areas as a proportion of the overall wall area and can be fire designed with appropriate substrate linings/backgrounds/make up/fire stopping therefore, this material should remain feasible with the appropriate design and construction / inspection practises, as with any material and not just relating to fire, but structure and robustness. We would ask for any restrictions on combustibility be communicated and supported at a local level to ensure that Local Planning Authority's will accept alternative materials where necessary, to ensure development is not unduly delayed.

Summary/Conclusion

The HBF is fully supportive of this consultation and would be more than willing to discuss any of the points raised in this response. The underlining message received from the HBF membership is that as industry we want to simplify the system and would welcome the opportunity to work alongside Government where appropriate.

Craig C Ferrans MCIAT - Technical Director - Home Builders Federation

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

NFCC
National Fire Chiefs Council

The professional voice of the UK Fire & Rescue Service

National Fire Chiefs Council
West Midlands Fire Service
99 Vauxhall Road
Birmingham
B7 4HW

Telephone +44 (0)121 380 7311
Email info@nationalfirechiefs.org.uk

Response 38

Banning the use of combustible materials
in the external walls of high-rise residential
buildings Building Regulations
Welsh Government
Rhydycar
Merthyr Tydfil
CF48 1UZ

Sent via email to: enquiries.brconstruction@gov.wales

7 September 2018

To the Welsh Government Building Regulations team,

Please find attached the National Fire Chiefs Council (NFCC) response to the consultation paper *'Banning the use of combustible materials in the external walls of high-rise residential buildings'*

The NFCC is the professional voice of the UK fire and rescue services, and is comprised of a council of UK Chief Fire Officers. This submission was put together through the NFCC's Protection and Business Safety Committee, which I Chair. The Committee is comprised of protection and fire safety specialists from across the UK.

In the wake of the fire at Grenfell Tower, it is vital that we use this time to reflect and examine the shortcomings that contributed to the terrible events of 14 June. In principle, the NFCC supports a ban on combustible materials in external wall systems, however we urge caution in ensuring that a ban does not create complacency that issues identified by Dame Judith have been fixed. There is

much more to be done to ensure the safety of building occupants, now and in the future.

A ban also requires careful consideration to ensure it can be practically implemented, and to ensure there are not unintended consequences. Regardless of what a ban covers, or if it applies retrospectively, the focus should be on making people safe and ensuring that they feel safe, and there must be a plan in place to achieve this.

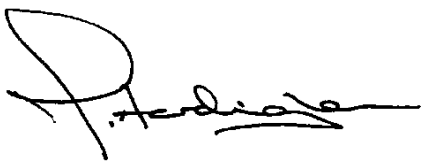
Whilst we are broadly in agreement with the aims, we are also suggesting consideration be given to extending the scope so that fire spread is appropriately restricted for buildings below 18 metres.

Whilst we are broadly in agreement with the aims, we are suggesting some refinements and measures which would be needed to support such a ban. For instance:

- further refining the acceptable categories (classifications) of products to provide further restrictions on smoke production and flaming droplets; and
- addressing the potential for rapid external fire spread in buildings below 18m in addition to what is currently proposed; and
- extending the scope of the ban to incorporate all occupancy groups, in addition to those who are the most vulnerable.

We trust that the attached submission is helpful, and would welcome further discussions with your department following the outcome of the consultation.

Yours sincerely,



Mark Hardingham, Chief Fire Officer, Suffolk

Cadeirydd, Pwyllgor Diogelwch a Diogelwch Busnes / Protection and Business Safety Committee Chair

Cyngor Penaethiaid Tân Cenedlaethol / National Fire Chiefs Council

Llais Proffesiynol Gwasanaeth Tân ac Achub y DU

The Professional Voice of the UK Fire and Rescue Service

NFCC National Fire Chiefs Council

The professional voice of the UK Fire & Rescue Service

Banning the use of combustible materials in the external walls of high-rise residential buildings – Welsh consultation response

Executive summary

In principle, the National Fire Chiefs Council (NFCC) supports a ban on combustible materials in external wall systems, however we urge caution in ensuring that a ban does not create complacency that the broader issues identified by Dame Judith Hackitt have been fixed. There is much more to be done to ensure the safety of building occupants, now and in the future.

A ban also requires consideration to ensure it can be practically implemented, and to avoid unintended consequences. Such a ban would affect a significant number of buildings in some way, and therefore a significant number of residents. Those residents may either be in buildings which still have materials on them and would in the future be covered by a ban, or they might be marginally outside the scope of a ban and feeling concerned for their safety. Regardless of what a ban covers, or if it applies retrospectively, the focus should be on making people safe and ensuring that they feel safe, and there must be a plan in place to achieve this.

Based on the experience of our members to date, fire and rescue services will not have the capacity to manage the support and reassurance required from the public. We therefore suggest that any ban requires significant central resourcing to support and reassure the public.

The proposed ban, as it is suggested, appears to be:

- retaining the same acceptable categories (classifications) of products as an indication of combustibility;
- retaining the same height threshold;
- instigating this through a change in the Building Regulations – so not relying on guidance, as is the case at present.

And in doing so it is:

- removing one of the methods of showing compliance in AD-B (the BS 8414 tests); and
- removing another method of compliance which has been used from other external guidance (the assessment in lieu of test – ‘desktop studies’);

Whilst we are broadly in agreement with the aims, we have concerns regarding some of the proposals, and are therefore suggesting some refinements and measures which would be needed to support such a ban. For instance:

- further refining the acceptable categories (classifications) of products to A2-s1, d0; and
- addressing the potential for rapid external fire spread in buildings below 18m in addition to what is currently proposed; and
- whilst we support the intention to include other building types similar to residential (in particular those who are the most vulnerable) we also recommend extending the scope of the ban to incorporate all occupancy groups.

The ban does not solve all the issues

Dame Judith Hackitt described the design and build process as a 'broken system'. There were many necessary solutions identified, and banning combustible items should not be considered 'job done'. Whilst we agree that a ban would have obvious immediate benefits, there remains the possibility of complacency.

Some within the industry may consider a ban sufficiently addresses the issues, therefore the more difficult issues to address may receive less attention as a result. As Dame Judith has underlined, banning things is no guarantee that people will follow the rules, and this is supported by the NFCC view that much of the cladding on the side of buildings is already banned under the current regime.

The focus must be on ensuring people are safe, and feel safe

Notwithstanding our comments above, we support a ban, and we suggest further extending it so that:

- fire spread is appropriately restricted for buildings below 18 metres and
- for all occupancy types.

Regardless as to whether these suggestions are incorporated or not, subjecting products to a ban might suggest that regardless of what analysis (e.g. a BS 8414/BR 135 test/classification) took place, the products still pose an immediate fire risk.

We understand there are many examples of residents seeking advice and reassurance from our members directly relating to the cladding and whether they are 'safe' within their homes. We therefore recommend further thought be given to how it can be demonstrated to occupants that either their building is safe because:

- it is under a particular threshold, or
- it was built or refurbished prior to a ban being implemented regardless of what justification or analysis took place.

We suggest existing buildings with systems that have previously passed a full scale test (BS8414/BR 135 classification) should not be required to make alterations.

Limitations on FRS resources

We recognise if our recommendations are incorporated and applied retrospectively, this may impact many buildings. Any changes need to be accompanied by a carefully scoped implementation plan, taking account of supply chain considerations as well as the impact on residents. However, the number of buildings affected should not in itself be a barrier to applying the correct standard required to ensure people are safe.

If the ban is applied retrospectively it should apply to buildings where work has started, and on a risk assessment basis for existing buildings. We also suggest existing buildings with systems that have previously passed a full scale test (BS8414/BR 135 classification) should not be required to make alterations.

Specific support is likely to be needed for those affected, and for those in buildings with similar materials but for which the ban has not been applied. FRSs have been very active since Grenfell, inspecting buildings which have had combustible Aluminium Composite Materials (ACM). There is a legislative limitation on enforcement options available to FRS specifically related to external walls, so visits have been limited to checking existing general fire precautions[1], and encouraging owners or those in control to follow central Government advice in terms of interim measures required to support continued occupation of the buildings.

Alongside this, local FRSs have provided support and guidance to residents and owners to ensure they feel safe. Whilst they have undertaken that role, with the limited resources of current Fire and Rescue Services, that level of interaction, given the potential large increase of affected buildings, is not sustainable. It is therefore vital that any changes are supported by sufficient resources for implementation.

<u>The appropriate classification</u>

We welcome that the proposed ban goes further than just ACM products. It is more appropriate to ban all combustible products (with some itemised exceptions such as fixings) rather than just ACM. If a single product only was banned, it is possible this combustible product might be replaced with an alternative combustible product if caution isn't applied.

However, the category including A2 might be too broad. The European classification system set out in BS EN 13501 has sub categories A1 and A2 and then has additional classifications for smoke production (s1, s2 or s3) and flaming droplets (d0, d1 or d2).

Setting the threshold at A2 implies the least stringent A2, s3, d2 (and which is the current classification suggested by Approved Document B (AD-B). Whilst this assumes little contribution to fire, it offers no restriction on smoke production or flaming droplets. As is highlighted both in real fires and in large scale testing, the smoke production and flaming droplets present a hazard, and we think these should be controlled. We believe the classification of the materials warrants much closer scrutiny with regard to both smoke production and flaming droplets.

Whilst we have made suggestions in terms of smoke and flaming droplet classifications we further recommend that any classification chosen is subjected to a

programme of large scale testing to ensure that the classification is appropriate.

The 18 metre threshold

We note the intention is to introduce a ban for residential buildings (and similar building uses such as care homes and student accommodation) over 18 metres. Whilst we agree with the principle, we feel that other types of buildings, and buildings below 18 metres should also be considered.

Whilst an 18 metre threshold aligns with current guidance (AD-B and British Standards) in respect of areas such as firefighting shafts, it is a historical height which does not reflect modern firefighting equipment and practices. 18 metres could be considered at best out of date, but perhaps more appropriately, an arbitrary threshold.

Therefore, it may be more appropriate to either:

1. adopt a threshold of 11m which aligns with current operational equipment carried on front line fire appliances, or
2. to consider banning combustible items for any building of any height.

We have recommended the latter (implement the ban at any height for any building) on the basis that:

- Recent experience has shown anything other than a binary approach lends itself to being misinterpreted or misused. This is supported by the review which highlights a culture of monopolising loopholes. Banning combustible items on any height building will be the least risky option, at least until systemic and cultural change within the industry is achieved and trust is rebuilt.

- Our members have also reported it is common to receive designs that are intentionally as close to a threshold as possible, to avoid fire safety measures. In some cases, designs are presented explicitly on that basis. The same thinking would be applied to the proposed 18m threshold.

We see no justification why fire spread below 18 metres should not be restricted or controlled. The functional requirements of the Building Regulations are about the external walls of the building adequately resisting the spread of fire. Those functional requirements are not limited to building height, and we are of the opinion that nor should any solutions adopted (by either law or guidance).

If the threshold (of 18m, or a more appropriate one) is retained, then we suggest some control over combustible items on buildings below this height should be instigated. An option to achieve this might be to require items below the threshold to undergo large scale testing in accordance with BS 8414/BR 135 and make amendments to that testing/classification to incorporate measures for smoke production and flaming droplets.

What buildings should be covered?

We commend the intention of this proposal to apply more widely than just purpose built residential occupancy. As acknowledged, there are other sleeping risks which are rightly

considered within scope (for example hotels, student accommodation and residential care homes). It is acknowledged these occupancies have a different evacuation strategy than the usual stay put applied to a purpose built residential, and in most tall buildings they will have access to more than one stair. However, persons will still be at risk from a fire which has the potential to rapidly involve large portions of the exterior of the building.

Similarly, there are some very tall office blocks in which the evacuation is on a phased basis by which some floors (which are not the floor of fire origin) are not immediately evacuated. In a phased evacuation building the stair size has been calculated on the occupants from a limited number of floors evacuating at any one time. This is an appropriate strategy for a tall office building however it is not intended to account for a fire spreading rapidly up the outside of a building and affecting multiple floors. In many cases a building designed for phased evacuation will not have sufficient staircase capacity to simultaneously evacuate all the building's occupants.

We therefore also recommend consideration be given to including all building occupancies.

<u>Other items we suggest could be included in the ban</u>

We strongly support the suggestion to include areas not traditionally considered to be part of the 'wall' but which contribute to rapid external fire spread. Balconies are a good example and we see these involved in fires which spread from floor to floor rapidly, and into flats above the original fire flat. There is currently little guidance on the construction of balconies in purpose built blocks of flats, and in some cases these are built themselves from combustible materials.

In addition, green/living walls should be considered as we have seen these contribute to rapid fire spread. We suspect designers may consider them to be separate from the traditional 'wall' and therefore not in need of protection against rapid external fire spread.

Our members have also reported an emerging trend of incorporating solar panels on the outside wall of buildings rather than the traditional roof location. In some cases, these run the entire height of the building. Energy saving should not be detrimental to the appropriate fire performance of the building. The potential for fire spread via these vertically located solar panels should be considered as part of this consultation.

Respondent Details

Respondent details	
Name	Mark Hardingham
Position (if applicable)	Protection and Business Safety Committee Chair
Organisation (if applicable)	National Fire Chiefs Council
Address (including postcode)	99 Vauxhall Road, Birmingham, B7 4HW
Email address	mark.hardingham@suffolk.gov.uk
Telephone number	07827 281979
Responding on behalf of the National Fire Chiefs Council (NFCC)	

Questions

Question 1.

a. Do you agree that combustible materials in cladding systems should be banned?

b. Should the ban be implemented through changes to the Building Regulations (i.e. through legislation rather than the Approved Documents)?
c. If no, how else could the ban be achieved?

a. Yes, the circumstances surrounding the fire at Grenfell Tower have indicated that stronger measures are required, underpinned by legislation. The Building Regulations and complementary guidance has been subject to different interpretations by persons with an obligation to comply with those regulations.

b. Yes, it will be of central importance that reforming legislation is drafted with sufficient clarity to prevent the legislation being subject to varying interpretations as occurs in the case of the current Building Regulations and associated guidance.

c. Whilst, legislation is the appropriate vehicle for a ban on combustible materials in cladding systems, there will be complementary actions needed by industry and government, as set out in the Hackitt review.

Question 2.

Do you agree that the ban should apply:

a. to buildings 18m or over in height?

b. If no, to what height, higher or lower, should the ban apply? Explain why.
c. throughout the entire height of the wall, i.e. both below and above 18m?

d. to high-rise residential buildings only?

e. If no, should the ban apply to high-rise non-residential buildings, e.g. offices and other buildings, as well as residential buildings?

a. No. The setting of a threshold at 18 metres will result in the continuation of the current practice of positioning the occupied floor at just under 18m, with the objective of avoiding the regulations and thereby saving expenditure on the enhanced fire safety measures which are applicable in the area above 18m. Moreover, for reasons mentioned below, there is no compelling reason why the banning of combustible materials in cladding systems should not extend to premises below 18m, as those combustible materials present a safety threat of rapid external fire spread in premises which fall below 18m, too.

b. The height of 18 m was historically fixed on as appropriate because it dovetailed with the deployment of certain fire-fighting equipment. Such equipment is no longer in use, and the setting of the threshold of the height of premises at 18m has thereby lost its historical rationale.

As abovementioned, the use of combustible materials in cladding systems present a safety threat of rapid external fire spread in premises of any height; and consideration should be given to banning them, irrespective of the height of a building.

c. As rapid external fire spread could result from the use of combustible materials in cladding systems, the banning of such materials should be extended to all external walls, both below and above 18m.

d. No. Regardless of the matters of buildings' height and types of occupancy, the risk of external fire spread from combustible materials in external cladding would make it preferable to extend the ban to building occupancies additional to residential use, particularly to hospitals, care homes, and education establishments.

e. Yes. It is acknowledged that the lack of sleeping in certain premises such as those put to office use will make the persons occupying them less vulnerable than in premises used for residential purposes. However, there will still be a residual risk of rapid external fire spread which could compromise their escape to a place of safety in a margin of safety.

If a ban on the use of combustible materials in cladding systems in all occupancies is not to be introduced, then a ban should, as a minimum, extend to premises where vulnerable people stay and sleep, such as Hospitals and Care Homes.

Question 3.
a. Do you agree that the European classification system should be used?
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?
c. If no, what class should be allowed in wall construction and why?

a. No

b. Please see answer 3c

c. We are of the opinion that A2 should be further refined than the current AD-B expectation of A2-s3, d2 or better. This classification allows for high smoke production and flaming droplets and we recommend that these aspects should be further controlled. We recommend consideration is given to restricting to A2-s1, d0. (where; **s1** structural element may emit a **very limited** amount of combustion gases and **d0** burning droplets or particles **must not** be emitted from the structural element *emphasis added).*

As per our response to the MHCLG's recent UK Government consultation, we have stated that whilst we are recommending A2-s1, d0, we do so on the basis that we also recommend that the proposed rating is subjected to large scale testing and analysis, and that the testing regime should be amended to include pass/fail criteria which specifically account for smoke production and flaming droplets.

This is to ensure it is suitably robust in achieving the aim of restricting fire spread and therefore is an appropriate standard to adopt.

Question 4.
a. Do you agree that a ban should cover the entire wall construction?
b. If no, what aspects of the wall should it cover?
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?

a. Yes. To extend the ban to the entire wall construction, it will be essential for this term to be defined closely in legislation, in order to prevent avoidance of the proposed ban.

In considering a definition, the contents of paragraphs 21 and 22 in the Consultation Document provide some assistance: the wall construction should extend to **"**more than just the surface of a wall and any insulation materials and instead cover the entire wall construction from the internal face of the wall through to its external face."

b. N/A

c. As combustible materials in relation to some components of the external wall/façade and attachments to the said external wall have the potential for rapid vertical fire spread, the ban should extend to the use of combustible materials in relation to items like balconies, and window spandrels. Other relevant matters relating to the external wall/façade and attachments to its external face, and which require control, include the following-

- items such as 'green wall' or 'living wall' components have which have contributed to rapid fire spread; and
- extensive use of solar panels attached to the outside of a building, some of which extend to the full height of a tall residential tower.

Question 5.
a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban?
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?
c. If no, what alternative way of achieving the policy aims would you suggest?

a. Yes

b. Fixings, membranes (as long as it can be demonstrated that these will not contribute to fire spread).

c. Legislation will be the central way of achieving the policy aims. This would be pivotal in addressing what Dame Judith Hackitt referred to as a "broken system". It would be complemented with the recommended efforts of government and industry identified in her report, and this would need to continue to be emphasised.

As shown by historical changes in behaviour connected with public safety brought about by legislation, such as the Health and Safety at Work Act 1974, legislation would

be the main impetus of changing behaviour about safety in relation to the fabric of buildings as regards fire spread.

Question 6.
Do you agree that:
a. the ban should apply to proposed material alterations to existing buildings, including over cladding?
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?
c. the ban should not affect projects where building work has already begun?

a. Yes, there will however, remain a range of buildings which will contain external cladding with combustible materials, which will be unaffected because they are not subject to material alterations.

For existing buildings, we suggest the risk based approach should consider both the building itself (for example buildings with a single stair) and the vulnerability of residents (for example a care home).

This is sector risk well understood by fire and rescue services so we would be prepared to assist in the development of any risk based approach. This needs to be unambiguously communicated to ensure everyone is assessing the risk in the same way.

We suggest existing buildings with systems that have previously passed a full scale test (BS8414/BR 135 classification) should not be required to make alterations.

b. Yes

c. No all projects should be considered

Question 7.
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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test is likely to be?
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which

meets the current requirements? (Please provide any further details)
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains

NFCC is unable to answer all the elements of this question and will leave 7 d, e, to those with more information than ourselves to pass comments.

a. NFCC is not best placed to answer this question so those with more experience and knowledge in this area will be able to provide more comprehensive detail.

However, one material we do recommend is considered is timber items such as timber cavity barriers, and timber framed windows in which the frame itself forms the closure around windows. These are used in some designs at the moment and careful consideration should be given to if these are intended to be banned or will be so unintentionally.

b. Our members have noted on occasion that this is happening

c. NFCC is not best placed to answer this question so we will leave to those with more information than ourselves. However, we consider that if the consideration isn't given to control of materials below 18m, then we recommend that wall systems should still be subjected to full system fire testing using the appropriate test, and inspected on site to ensure correct installation.

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 39

Respondent Details

Name	[redacted]
Position (if applicable)	
Organisation (if applicable)	
Address (including postcode)	
Email address	
Telephone number	
Please state whether you are responding on behalf of yourself or the organisation stated above	

	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	x
• Insurer	
• Construction professional	
• Fire and Rescue Authority representative	
• Property Manager / Housing Association / Landlord	
• Landlord representative organisation	
• Building Occupier	
• Tenant representative organisation	
• Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	No – It is our view that large scale testing should be used to assess the suitability of cladding systems and not small scale material testing.
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No – We do not support a wholesale ban but instead improvement to current regulation
c. If no, how else could the ban be achieved?	We do not agree with a ban on materials per se as this will not achieve the desired result of reducing fire risk within cladding systems constructed on high risk residential buildings

	(HRRB). We say this as we believe that the performance of a cladding materials specified for a building should assessed as part of a system and be subjected to an appropriate large scale test. For HRRB we feel that the BS 8414 series using the BR 135 assessment is the most appropriate test and assessment method. There is a vast amount of evidence available that show systems designed with so called 'combustible' materials pass the above assessment and that systems made up of solely 'non-combustible' components, as described in the proposed ban consultation, have failed the criteria. Therefore a blanket ban of combustible materials, and the reliance of very small scale component testing rather than appropriate large scale testing of the entire wall assembly would potential increase the fire risk. We feel that using a large scale system test assessment (BS 8414) together with the recommendations contained within the Dame Judith Hackitt report (namely, tighter supervision, improved competency, product labelling and traceability etc.) would provide a more robust solution for the overall objective.

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No – We do not support a ban as we feel this will not achieve the objective of safer buildings, regardless of height.
b. If no, to what height, higher or lower, should the ban apply? Explain why	We do not support a ban as we feel this will not achieve the objective of safer buildings, regardless of height.
c. throughout the entire height of the wall, i.e. both below and above 18m?	No – We do not support a ban as we feel this will not achieve the objective of safer buildings, regardless of height.
d. to high-rise residential buildings only?	No – We do not support a ban instead are in favour of appropriate large scale testing for the building type.
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	We do not support a ban as we feel this will not achieve the objective of safer buildings, regardless of height.
f. Please provide any further information in relation to your answers above	As described above we do not agree with a ban on any material. However support the use of appropriate large scale testing on systems, targeted on the building type in question (e.g. for HRRB – BS 8414, LPS1181 for other building types). Small scale clarification on a material will not solve the problem and will result in systems constructed without communication, responsibility, competence which has been identified by Dame Judith Hackitt as the prime areas to be addressed. A blanket ban could promote cost cutting and complacency in design and construction, which as previously mentioned will not automatically lead to safer constructions / buildings

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	No – We do not support the prescriptive small scale material test and would recommend large scale system testing
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	

c. If no, what class should be allowed in wall construction and why?	The European classification system as it currently stands is not necessarily appropriate or applicable for all products in a wall construction, particularly in the context of rainscreen cladding. We would support the retention of European and British Standard methods for classification of surface spread of flame and recommend appropriate large scale testing for HRRB (i.e. BS 8414)

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	No – we do not agree that there should be a ban
b. If no, what aspects of the wall should it cover?	It is our view that entire wall construction should be assessed via large scale testing and not small scale material testing of individual components.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	No - However these should also be subject to large scale system testing.
d. Please provide any further information in relation to your answers above	Large scale system testing is the only way to assess the total construction and interaction with materials, whether are using 'non-combustible' or 'combustible' or a combination of both. This will result in the best way to create safe constructions.

Question 5	**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 – However these components should be instead subjected to large scale testing as a complete system
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	As mentioned above, we believe that all products should be exempted from a ban and their performance assessed as part of a system within a large scale test appropriate to the building type (e.g. BS 8414 from HRRBs).
c. If no, what alternative way of achieving the policy aims would you suggest?	Instead of a blanket ban on certain components within the building façade, we believe that the recommendations from the Dame Judith Hackitt report are implemented for HRRB, which address the current issues of communication, responsibility, competence and strongly recommend that large scale system testing is a far more robust way of realising this and provide a

	platform to achieving the policy aims.

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	No – the ban should not be applied whatever the building type. Alterations to existing buildings should be made using constructions that have followed and been assessed through a large scale system test.
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	No – the ban should not be applied whatever the stage the building is at. Work on buildings at this stage within a project should use constructions that have followed and been assessed through a large scale system test
c. the ban should not affect projects where building work has already begun on site?	No – the ban should not be applied whatever the stage the building is at. Work on buildings at this stage within a project should already be using constructions that have followed and been assessed through a large scale system test. However, there may be an issue where non-combustible products are being used that have been shown to fail BS 8414. Hopefully these should be small in number.
e. Please provide any further information in relation to your answers above	As described above existing buildings undergoing refurbishment or alteration should be subject to the external cladding system being assessed to BS 8414 similar to that of a new build. Good design, properly tested solutions, clear oversight and high levels of competency in carrying out the work are what is required. The same should apply to projects in progress, notified, or at planning stage.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	Steel faced PIR core insulated sandwich panel systems acting as one component facades (no cavities) or constructed as a backing wall with a rainscreen and cavity system. Also steel faced profile sheeting using 200 micron plastisol external finishes, used as external faces of site assembled systems or rainscreens. Steel faced sandwich panels with a PIR core

	have been shown, not only to pass BS 8414 in accordance with BR 135 , but also together with steel finished plastisol systems have met the requirements of large-scale insurer tests such as LPS 1181 and FM 4881, and to have had that performance assessment proven in real fire case studies. Plastisol finishes have a proven track record of performance, which is recognised in ADB, such as included in section 12.6 Diagram 40 and Appendix A table A5
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	Not Known
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Apart from the fact that this would not necessarily improve the fire safety of those buildings involved, there would be a significant number of unintended consequences, including: • Potential structural issues due to the greatly increased weight and thickness involved in the use of non-combustible materials. • Unnecessary public fear, worry and stress. • Loss of property value. • Increased insurance premiums for existing buildings, or property becoming uninsurable. • Supply shortages. • Greatly reduced choice. • Issues over who will pay to reclad existing buildings. • Very large numbers of buildings affected. • Significantly increased costs of construction/ refurbishment. • Harder to meet required levels of thermal performance. • Unknown system performance. • Stifling innovation and growth. • 'Banning' materials will not necessarily stop people from using them. It is better to improve competency and oversight. • Over-regulation, and particularly over-prescription could severely limit the viability of construction for lower risk buildings, stifling growth and preventing the industry from meeting demand.

d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	There would be a wide range of issues, some of which are hard to quantify. For example: – • Limits to the maximum thickness of non-combustible insulation materials available and that is practical to apply • Weight and thickness reducing available space, affecting existing structures and increasing ancillary costs • Impact on speed of build • Increased carbon footprint • Logistics, more deliveries required to site • More health and safety implications, design limitations • Unsustainable removal of perfectly good systems • Economic impact on a large number of construction product manufacturers. • Stalling of projects
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	There are already long lead in times for non-combustible products. There is a real risk of supply shortages leading to projects being delayed or even shelved. With the current lack of clarity around changes to the Building Regulations for mid-low risk buildings we are seeing a conservative view being taken and 'non-combustible' product being specified which effect a wider building stock and will further emphasise the issues listed below It would create a non-competitive environment which, coupled with materials shortages could lead to significant price increases. It would severely hamper the industry's ability to innovate and to find optimum solutions across a wide range of buildings. It risks creating a culture of complacency instead of stimulating one of responsibility and improved standards. The economic impact would be considerable with possible withdrawal of international investment in projects and the availability of materials

	Buildings won't necessarily be safer without means of assessing whole system performance. It will be much harder for the Government to meet long term carbon reduction targets. There would be further setbacks meeting energy efficiency targets and tackling fuel poverty. It does not achieve the policy objective.

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here: ✓**

Response 40

Dear Sir/Madam

On the 19th of July the Welsh Government launched a consultation on "Banning the use of combustible materials in the external walls of high-rise residential buildings" I attach The Concrete Centre's response to the consultation paper setting out our opinions on the extent of any such ban.

The Concrete Centre is part of the Mineral Products Association, the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries. With the recent addition of British Precast and the British Association of Reinforcement (BAR), it has a growing membership of 480 companies and is the sectoral voice for mineral products. MPA Membership is made up of the vast majority of independent SME quarrying companies throughout the UK, as well as the 9 major international and global companies.

It covers 100% cement production, 90% of aggregates production, 95% of asphalt and over 70% of ready-mixed concrete production and precast concrete production.

Each year the industry supplies £20billion worth of materials and services to the Economy and is the largest supplier to the construction industry, which has annual output valued at £144billion. Industry production represents the largest materials flow in the UK economy and is also one of the largest manufacturing sectors.

Our key observations are as follows:

We support the ban on combustible material in cladding systems of certain types of buildings however, we believe that this should be implemented via improvements to Approved Document B (AD B) rather than changes to the law itself. We note that the consultation discusses two routes of satisfying the current AD for buildings over 18m, the use of non-combustible materials or the use of testing to BS8414. We note that there is a third route which is to follow the construction approach in Diagram 34 of the AD. We believe that construction following Diagram 34 effectively satisfies the non-combustible definition but current material tests would not reflect this. Therefore we believe that the Diagram 34 approach should be retained, this is particularly important given the large stock of existing high rise housing built in the 60's and 70's that used this form of construction.

In determining the buildings to which the ban should apply we believe that the key criteria should be the escape strategy rather than limitations on height.

We believe the ban should cover the whole wall construction including structure where it forms part of the wall. We also believe that for high risk buildings a review of the use of combustible material for any structure should be carried out. Where minor components of cladding are not readily available in non-combustible materials they should be exempt from the ban however, rather than being prescriptive over what components these are, we would recommend placing a limit on the total volume of combustible material in the cladding.

Further detail to these observations is included in the attached completed form. If you require further information please contact myself:

Tony Jones
Principal Structural Engineer
MPA The Concrete Centre
Email: tjones@concretecentre.com
Tel 07796611583

Or

Alternative:
Jenny Burridge
Head of Structural Engineering
MPA The Concrete Centre
Email: jburridge@concretecentre.com
Tel 07870179754

Yours sincerely

Tony

Tony Jones
Principal Structural Engineer
MPA The Concrete Centre
Email: tjones@concretecentre.com

Gillingham House, 38-44 Gillingham Street, London, SW1V 1HU

Tel 0207 963 8000 **Web** www.concretecentre.com **Mob** 07796611583 **Tw** @concretecentre and @thisisconcrete

Respondent Details

Name	Tony Jones PhD CEng FICE FIStructE
Position (if applicable)	Principal Structural Engineer
Organisation (if applicable)	The Concrete Centre
Address (including postcode)	Gillingham House, 38-44 Gillingham Street, London, SW1V 1HU
Email address	tjones@concretecentre.com
Telephone number	07796611583
Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of The Concrete Centre

	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	
• Tenant representative organisation	
• Other interested party (please specify)	Industry Body

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	Yes
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No
c. If no, how else could the ban be achieved?	The Approved Document B (AD B) needs to be significantly simplified and clarified such that the use of non-combustible material is the only means of compliance with the AD for the relevant buildings. The current law (regulation B4) clearly requires construction to resist the spread

	of fire and does not appear to need significant revision. A change to the Regulations and hence the law would remove the option of demonstrating compliance with B4 by an alternative route. Including such a prescriptive requirement within the B4 regulations would be contrary to the conclusion of the “Independent Review of Building Regulations and Fire Safety” where more outcome based regulation is recommended. Including these prescriptive requirements in the law could have unintentional impacts on current buildings, undergoing a material change, where replacement of combustible materials would be disproportionately expensive, e.g. those currently satisfy B4 by using details as in Diagram 34 of AD B. A change in the Law would also limit future innovation in this area. By changing the AD, the route to compliance with anything other than non-combustible materials would place the onus on the design team to demonstrate compliance with the regulations. This approach will also allow a risk-based approach for existing structures. We also note that there is over 50 years of experience of HRRB’s with combustible insulation between two substantial concrete skins. The concrete protects the insulation from heat and limits the availability of oxygen for any combustion of the insulation. We are not aware of insulation protected in this way contributing significantly to any fire. We believe that the composite material would satisfy the intentions of a A2, “..products that will not, or not significantly, contribute to the fire,…” (BS EN 13501-1:2007+A1:2009 section 5.2) but that the current testing regime is not applicable to this type of material. In lieu of a review of the testing routes to demonstrate A2 compliance we recommend that a route to compliance like that in diagram 34 of the AD B is maintained.

Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No
b. If no, to what height, higher or lower, should the ban apply? Explain why	Whilst height and use are important parameters so is the fire escape plan. If active systems and stair capacities were adequate for all occupants of a tall residential building to simultaneously escape in a relatively short period of time, then the risk to occupants, of a fire spreading via the cladding, would be low. Conversely if a commercial building relied on occupants staying in place, whilst fires elsewhere were fought, those occupants would be at risk due to fire spreading via the cladding. We recommend that the ban should apply to buildings with a "Stay in place until" policy. This would pick up many higher risk buildings such as care homes, where assisted escape is required, whilst removing an artificial distinction between tall buildings of different uses. It would also remove an artificial step change in risk from a building of 17.9m high to one 18.1m high.
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes
d. to high-rise residential buildings only?	No
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	See response to 2b.
f. Please provide any further information in relation to your answers above	Whilst height and use are important parameters so is the fire escape plan. If active systems and stair capacities were adequate for all occupants of a tall residential building to simultaneously escape in a relatively short period of time, then the risk to occupants, of a fire spreading via the cladding, would be low. Conversely if a commercial building relied on occupants staying in place,

	whilst fires elsewhere were fought, those occupants would be at risk due to fire spreading via the cladding. We recommend that the ban should apply to buildings with a “Stay in place until” policy. This would pick up many higher risk buildings such as care homes, where assisted escape is required, whilst removing an artificial distinction between tall buildings of different uses. It would also remove an artificial step change in risk from a building of 17.9m high to one 18.1m high.

Question 3	**Yes/No/Don’t Know**
a. Do you agree that the European classification system should be used?	Yes
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	Yes
c. If no, what class should be allowed in wall construction and why?	

Question 4	**Yes/No/Don’t Know**
a. Do you agree that a ban should cover the entire wall construction?	Yes
b. If no, what aspects of the wall should it cover?	
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Yes
d. Please provide any further information in relation to your answers above	In paragraph 18 of the consultation it is stated that the cladding is usually separate from the structural frame. This is not always the case, e.g. Cross Laminated Timber (CLT) and concrete panel systems. In addition, it is not unusual for the structural frame to be within the façade make up. As such Q6(a) should include banning any

	combustible structure within the Wall. Further to this, noting that the DCLG England report "Analysis of fires in buildings of timber framed construction, England, 2009-10 to 2011-12" concluded that "Fires in dwellings of timber frame construction experienced on average more damage than dwellings of no special construction"; and that in section 1.23 of the Dame Judith Hackitt's review of building regulations it is stated that "the use of non-combustible materials throughout the building" as providing inherently higher levels of protection, there should be a similar review of combustible materials for the structure of all high risk buildings

Question 5	**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
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	It is accepted that there are a number of minor components within cladding systems that either cannot, or cannot economically, be constructed from Class A1/A2 materials. Rather than specify particular elements, which could potentially lead to manipulation of the rules, it would be more logical to limit the mass of such materials. This is the approach adopted by TfL in the LU document 1-085 "Fire performance of materials" which is applied to sub-surface stations.
c. If no, what alternative way of achieving the policy aims would you suggest?	See answer to 5b. above.

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	No.
b. the ban should extend to projects that	No

have been notified before the ban takes effect but work has not begun on site?	
c. the ban should not affect projects where building work has already begun on site?	Yes
e. Please provide any further information in relation to your answers above	Under Q6(a) We note that there have been calls for banning of combustible material in existing buildings. This ignores the fact that there are fire safe forms of cladding that contain combustible materials and have been in use for over 50 years. As an example, concrete cladding panels, including encapsulated insulation, have been used for at least the last 50 years. In many cases this insulation would not satisfy the non-combustible classification. As this material is between two connected concrete skins it is protected from contributing significantly to a fire and would be virtually impossible to replace without demolition. Given the number of residential buildings built in the 60's and 70's using this approach such a ban would lead to a significant worsening of the housing shortage for no apparent fire safety benefit. In keeping with the construction practice of the time, the original Grenfell tower edge beams were insulated panels* containing an insulation material between an inner and outer skins. Whilst the insulation material is not known, polystyrene was a popular material of use at the time. None of the expert reports for the public inquiry discuss this material as contributing to the fire. * https://www.grasart.com/blog/lancaster-west-estate-an-ideal-for-living The ban should apply to new materials used on existing buildings however existing materials within the building fabric should be subject to a risk assessment that also considers the ease of replacement. Under Q6(b) start on site is not an appropriate point to define the start of the

	ban. Projects involving prefabrication / design for manufacture may start both design and fabrication of component before the project starts on site and would be unfairly penalised by such a rule. Normally it is regulations at the time of granting planning that would apply. However, any projects that do include combustible materials should be subject to a risk assessment regardless of whether they have started on site. Such a risk assessment may need to be supplemented by further testing, e.g. to BS8414. Under Q6(c) see comments on (b) above, building work may well start prior to work on site.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	Cladding complying with the current Diagram 34 method for masonry construction will be affected. This includes concrete sandwich panels which due to the need for rigid insulation in the fabrication process use insulation materials that do not meet Class A2 or better. As noted in Q3(c) we believe that sandwich panels, as a composite material, do meet the intention of A2 but current materials testing is not appropriate to demonstrate this.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	We are aware of projects where insulation not complying with A2 has been replaced (prior to construction) with compliant insulation. However we are also aware that Concrete Sandwich panels are still being used where the insulation sandwiched between two skins of concrete does not comply with Class A2. However, in the projects of which we are aware, openings in the panels (e.g. for windows) have an area of non-combustible material around the window, to further protect the non-A2 insulation that is present behind the cavity closer.
c. What is the impact of removing access	Whilst the removal of the BS8414 route

to the BS 8414 for those buildings affected by the ban test likely to be?	does not directly impact the use of sandwich cladding panels, the removal of the Diagram 34 method of compliance would impact use in their current form, and indirectly BS8414 could not be used to demonstrate their inherent safety.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	Indications are that the extra cost per square metre of concrete sandwich panel is more than double the upper value suggested in the paragraph 32 of the consultation. This is because of the limited number (currently only 1) suppliers of Rigid insulation complying with A2. This material is less thermally efficient and requires a wider cavity, this in turn requires a more substantial structural connection between the two leaves. This cost estimate excludes any cost associated with loss of floor area. As discussed in our response to Question 1(c) we believe that this form of construction achieves the intention of A2 even if the insulation material is not of limited combustibility and therefore the additional cost is not justified.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	-

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 41

Respondent Details

Name	B.S Turner
Position (if applicable)	Director of Technical Policy
Organisation (if applicable)	LABC
Address (including postcode)	66 South Lambeth Road, London. SW8 1RL
Email address	barry.turner@labc.co.uk
Telephone number	020 7091 6860
Please state whether you are responding on behalf of yourself or the organisation stated above	Organisation

	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	
• Tenant representative organisation	
• Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	**Yes** but all materials used in construction should be considered in relation to risk and eliminating that risk or reducing to manageable levels. As identified in later questions it is not possible to eliminate all combustible materials in an external wall.

b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	**Yes**

c. If no, how else could the ban be achieved?	[Free text answer]
Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	**Yes**
b. If no, to what height, higher or lower, should the ban apply? Explain why	
c. throughout the entire height of the wall, i.e. both below and above 18m?	**Yes** Any change in law or guidance should relate to the entire height of the building, not just that portion over a limiting boundary.
d. to high-rise residential buildings only?	**No**.
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	Other use classes have different risk criteria which should be taken into consideration when determining what construction materials can be employed. Application of regulations to future change of use may be compromised by inappropriate use of cladding materials.
f. Please provide any further information in relation to your answers above	[Free text answer]

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	**Yes**
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	**Yes**

c. If no, what class should be allowed in wall construction and why?	[Free text answer]

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	**Don't Know**. The consultation acknowledges that a ban or restriction cannot cover the entire wall construction.
b. If no, what aspects of the wall should it cover?	All parts of a wall construction must be subject to scrutiny and appropriate testing. Composite components must be subject to test in appropriate circumstances. Tests involving encapsulated materials that may in themselves not satisfy a test of combustibility should be appropriate, relevant and the materials be unambiguously specified and recognisable.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	**Yes.** Any restrictions should cover these elements
d. Please provide any further information in relation to your answers above	[Free text answer]

Question 5	**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.**
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Where there is recognised difficulty in providing a component that meets any restrictive requirement, it should be shown by suitable test that that component does not contribute to the spread of fire or compromise the construction in terms of fire safety.
c. If no, what alternative way of achieving the policy aims would you suggest?	

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	**Yes.** Safety of existing buildings should not be compromised, however, if a risk based approach is suitable for existing buildings it should be sufficiently robust to be equally acceptable for new construction.

b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	**Yes.** LABC have experienced introduction of changes in legislation many times in the past, where developers will submit applications before a deadline in order to avoid meeting new or more onerous requirements. To be effective any change must be applied to any work not substantially commenced and fully approved.
c. the ban should not affect projects where building work has already begun on site?	Don' know
e. Please provide any further information in relation to your answers above	LABC are conscious of a risk of 'property blight' where higher standards are imposed for developments approved but not commenced, with a lesser standard for developments under construction or recently completed.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Paragraph 4 of this consultation states "*The The Welsh Ministers stand by the advice issued by the UK Government Expert Panel that wall systems that have met BS 8414 can be considered to be safe"* It would therefore be considered unreasonable and unethical to change this position without further evidence.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	

Please provide any further comments on the likely impact of this change for construction e.g. supply chains	

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 42

Respondent Details

Name	Robert Lynbeck
Position (if applicable)	Executive Director - Operations
Organisation (if applicable)	Newport City Homes
Address (including postcode)	Newport City Homes, Central Office Nexus House Mission Court, Newport, NP20 2DW
Email address	Robert.Lynbeck@newportcityhomes.com
Telephone number	+441633227620
Please state whether you are responding on behalf of yourself or the organisation stated above	Newport City Homes

	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	Yes
• Landlord representative organisation	
• Building Occupier	
• Tenant representative organisation	
• Other interested party (please specify)	

Dear Sir/Madam,

I detail below the response from Newport City Homes to the consultation paper "Banning the use of combustible materials in the external walls of high-rise residential buildings".

Question 1.

a. Do you agree that combustible materials in cladding systems should be banned? **YES**
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)? **YES**
c. If no, how else could the ban be achieved? **N/A**

Question 2.

Do you agree that the ban should apply:
a. a. to buildings 18m or over in height? **YES**
b. If no, to what height, higher or lower, should the ban apply? Explain why. **N/A**
c. throughout the entire height of the wall, i.e. both below and above 18m? **YES**
d. to high-rise residential buildings only? **NO**
e. If no, should the ban apply to high-rise non residential buildings, e.g. offices and other buildings, as well as residential buildings? **The ban should also apply to similar non-residential buildings such as offices because ultimately the risks are the same in the event of a fire.**

Question 3.
a. Do you agree that the European classification system should be used? **YES**
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction? **YES**
c. If no, what class should be allowed in wall construction and why? **N/A**

Question 4.
a. Do you agree that a ban should cover the entire wall construction? **YES**
b. If no, what aspects of the wall should it cover? **N/A**
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements? **YES**

Question 5.
a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban? **N/A**
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use? **N/A**
c. If no, what alternative way of achieving the policy aims would you suggest? **N/A**

Question 6.
Do you agree that:
a. the ban should apply to proposed material alterations to existing buildings, including over cladding? **YES**
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site? **YES**
c. the ban should not affect projects where building work has already begun? **YES**

Question 7.
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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)? **N/A**
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience? **We are proposing to use an ACM A2 product which achieved a pass during the BRE large scale tests.**
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test is likely to be? **N/A**
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please

provide any further details) **Due to the commercial sensitivities around this issue costings can be provided once the contract we have recently let is complete.**
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains
In the short term possible delays in manufacturing to reach demand however, over time this would be less of an issue as manufacturers increased production of suitable products.

Robert Lynbeck
Executive Director - Operations

Telephone:	+441633227620
Address:	Newport City Homes, Central Office Nexus House Mission Court, Newport, NP20 2DW
Website:	www.newportcityhomes.com

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 43

Respondent Details

Name	Paul Scott
Position (if applicable)	Head of Business Fire Safety
Organisation (if applicable)	North Wales Fire and Rescue Service
Address (including postcode)	NWFRS, Coast Road, Rhyl. LL18 3PL
Email address	paul.scott@nwales-fireservice.org.uk
Telephone number	07787 578380
Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of organisation - NWFRS

	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	x
Property Manager / Housing Association / Landlord	
Landlord representative organisation	
Building Occupier	
Tenant representative organisation	
Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	Yes. NWFRS believes that no system of cladding should endanger the lives of occupants of that building.
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	Yes, changes to building regulations would be the preferred route. NWFRS believes that a change to legislation is key to ensuring a clear understanding of the requirements. A combination of Building Regs and RRO would give FRS powers to address dangerous cladding systems in existing buildings.

c. If no, how else could the ban be achieved?	[Free text answer]
Question 2	Yes/No/Don't Know
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No. Combustible materials used in a cladding situation will present a risk of rapid spread of fire, regardless of the building's height. NWFRS believes that the ban should apply to all buildings, irrespective of height or use.
b. If no, to what height, higher or lower, should the ban apply? Explain why	For the reasons above NWFRS believes that the ban should apply to all buildings, regardless of height.
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes, through the entire wall height
d. to high-rise residential buildings only?	No. As previously stated ban should be applied to all buildings.
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	As previously stated ban should be applied to all buildings. This will assist in preventing anomalies arising should a change of use of building occur.
f. Please provide any further information in relation to your answers above	[Free text answer]

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	Yes .
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	NWFRS would prefer to see A1 considered as the minimum standard though it is recognised that this would severely limit the choice of building

	materials available.
c. If no, what class should be allowed in wall construction and why?	Consideration should be given to a BS8414 test being required to ensure compliance

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	Yes, the entire wall and all of its component parts should be covered by the ban
b. If no, what aspects of the wall should it cover?	
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Yes. A number of features on the external wall of a building have the potential to pose a risk in the event of a fire and the ban should be extended to cover these.
d. Please provide any further information in relation to your answers above	

Question 5	**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?	No, though we do recognise that without exemptions it would be difficult to build an exterior wall.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	NA
c. If no, what alternative way of achieving the policy aims would you suggest?	We would wish to see a sample wall tested, with exempt materials, to confirm performance. (BS8414)
Question 6	Yes/No/Don't Know
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	Yes, however this would leave the potential for buildings not subject to material alterations to remain in their current condition.
b. the ban should extend to projects that have been notified before the ban takes effect but	Yes

work has not begun on site?	
c. the ban should not affect projects where building work has already begun on site?	No all steps should be taken to build without a combustible cladding, regardless of the time at which building work commenced.
e. Please provide any further information in relation to your answers above	[Free text answer]

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	NWFRS does not have the technical knowledge to comment on Q7.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

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Response 44

Respondent Details

Name	Dean Buttle
Position (if applicable)	Sales Director
Organisation (if applicable)	EcoTherm Insulation Ltd
Address (including postcode)	Burnt Mills Industrial Estate, Harvey Rd, Basildon SS13 1QJ
Email address	d.buttle@ecotherm.co.uk
Telephone number	+447825273138
Please state whether you are responding on behalf of yourself or the organisation stated above	I am responding on behalf of EcoTherm Insulation Ltd.

	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	X
Insurer	
Construction professional	
Fire and Rescue Authority representative	
Property Manager / Housing Association / Landlord	
Landlord representative organisation	
Building Occupier	
Tenant representative organisation	
Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	No, we do not agree that combustible materials in cladding systems should be banned. We do not believe that this will achieve the objective of ensuring fire safety in higher risk residential buildings, or indeed in any kind of building. We are concerned that a blanket ban on combustible materials could lead to fire safety becoming a tick box exercise instead of a properly thought through and implemented design and construction process. As Dame Judith Hackitt notes on page 115 of the Review of Building Regulations and Fire Safety: "*Regulatory frameworks that are overly reliant on prescription may fail to provide the expected level of safety, because if this assumption is incorrect, the output will be compliant with the prescription, but not safe.*"

	This concern is heightened by the fact that we have seen evidence of systems constructed using non-combustible materials which have failed the performance criteria set out in BR 135 and which would therefore be considered unsafe by the governments own criteria following the tragic fire at Grenfell Tower, yet under the current 'linear route to compliance under Approved Document B, paragraphs 13.6 and 13.7 and under the proposed ban would automatically be deemed to comply (and by implication be safe). We believe that the only way to be assured of a materials fitness to be used as part of a cladding system is to test it as part of that system in a large-scale test. This is because it is the way in which the different components interact that determines how well the system as a whole will perform, including elements such as cavity width, number and type of fixings etc, not what is essentially a very basic product classification. This is backed up by the fact that many systems which include combustible elements have been successfully tested to BS 8414, meeting the rigorous requirements of BR 135, and have been used extensively on buildings all over the country. It would be unreasonable to take the position that these buildings should now be considered unsafe, again in contradiction of government guidance issued following the Grenfell Tower disaster, which has consistently and most recently in July 2018, and in the preamble to this consultation said that: *"The Government's independent Expert Panel has advised that the clearest way of ensuring an external wall system adequately resists external fire spread is either for all of the relevant elements of the wall to be of limited combustibility, or to use an external wall system which can be shown to have passed a large-scale test conducted to BS8414 classified to the BR135 standard set out in current building regulations guidance"* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727809/Building_Safety_Data_Release_-_July_18.pdf We have been unable to find any evidence of a major, publicly reported fire where BS 8414 tested systems have been a contributing factor. By comparison there have been several significant fires worldwide involving polyethylene filled ACM rainscreen cassettes (PE cored ACMs), including: The Address, Dubai; The Torch, Dubai; Tamweel Tower, Dubai; The Lacrosse, Building Melbourne; Saif Belhasa, Tecom, Dubai; Al Tayer Tower, Sharjah; Polat Tower, Istanbul; Grenfell Tower, London. Note that some of these buildings featured non-combustible insulation. The use of the term 'combustible' is unhelpful, as the performance of products which fall under this heading varies widely, and the test methods to which they are subjected are limited, only assessing the calorific value of a small sample of the material and **not** how easily it will catch fire, nor how it will perform as part of a system. As Professor Luke Bisby noted in his evidence to the Public Inquiry *"Depending on the circumstances therefore, combustible materials can either be more or less flammable, and this distinction is actually very*

	important". For example, thermoset insulation materials (such as PIR foam boards) char when exposed to heat/fire and self-extinguish when that heat/fire source is removed. Professor Luke Bisby's Phase 1 Expert Report to the Grenfell Inquiry found that "*The primary cause of rapid and extensive external fire spread [on Grenfell Tower] was the presence of polyethylene filled ACM rainscreen cassettes in the buildings refurbishment cladding.*" We fully agree that flammable products such as PE Cored ACMs should not be used in high-rise residential buildings, and note that in fact they would not be considered compliant under the current regulations. We believe that the best way to achieve the overall objective of ensuring fire safety in buildings is by implementing the recommendations in Dame Judith Hackitt's Review of Building Regulations and Fire Safety in full, to create a truly outcomes based regulatory framework (p7). We recognise that the cultural shift that this would entail will take time. Introducing large scale system testing of all products, whether classed as combustible, non-combustible or of limited combustibility, would be a relatively straightforward interim measure to ascertain their suitability as part of an external cladding system, and would ensure a more scientific and approach to achieving fire safety performance than an outright ban of a very broad class of materials.
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No - We do not agree with the proposed ban.
c. If no, how else could the ban be achieved?	We do not believe a ban should be implemented, but improvements to the current system could be enacted through revised guidance in Approved Document B, following the current consultation.

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No. We do not agree that combustible materials in cladding systems should be banned. However, we do believe that more rigorous regulation should be applied to buildings over 10 storeys in height, in line with Dame Judith's statement in paragraph 1.3 that *"the likelihood of fire is greater in purpose-built blocks of flats of 10 storeys or more than in those with fewer storeys and, particularly after the fire at Grenfell Tower, the rate of fatalities is also greater in such buildings".*
b. If no, to what height, higher or lower, should the ban apply? Explain why	We do not agree that there should be a ban at any height, but that there should be a tightening of the regulation through wider system testing, improved competency, greater oversight and tougher sanctions for those involved in the design, construction, inspection and maintenance of buildings over 10 storeys.
c. throughout the entire height of the wall, i.e. both below and above 18m?	No. We do not agree that combustible materials in cladding systems should be banned. Moreover, we note Dame Judith's findings in Appendix C of the Report that that there is little difference in the rate of fatalities in purpose-built blocks of flats with up to nine storeys. The greatest risk of fatality is at 10 storeys and upwards, so this is where the focus for tighter regulation should lie.
d. to high-rise residential buildings only?	No – we do not agree that a ban should apply in the first instance. However, Dame Judith's Report states in paragraph 1.3 that residential properties have the highest risk factor and, as highlighted in the answer to 4a above, those over 10 storeys are most at risk. Therefore, higher risk residential buildings (HRRBs) should be the priority for any measures that are decided upon following this consultation. Since new buildings can be designed to incorporate fire safety measures from the start, it is the refurbishment of existing buildings that should receive this attention.
e. If no, should the ban apply to high-rise non- residential buildings e.g. offices and other buildings, as well as residential buildings?	No - we do not agree that any ban should apply. If additional measures are to take place, these should be focussed on those buildings with the highest risk profile, i.e. existing HRRBs.
f. Please provide any further information in relation to your answers above	

Question 3	Yes/No/Don't Know
a. Do you agree that the European classification system should be used?	Don't know. It would be helpful to operate a single classification system in the UK. The national classifications "non-combustible" and "limited combustibility" based on BS476-4 and -11 represents a far more rigorous test of performance than European classifications A1 and A2 based on testing to E13501-1 and should therefore be considered the better option in terms of assessing fire performance in general. However, as highlighted above, these are a wholly inadequate indication of product performance in the context of a full cladding system/wall construction. Furthermore, the impact of Brexit will mean that the UK will have no influence or control over any future development of the Euroclass Standard, which is a concern.
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	No, we believe that it is the performance of the wall construction as a system rather than the material classification that matters. See also the answer to 3a above, which sets out other concerns about the European classifications.
c. If no, what class should be allowed in wall construction and why?	We believe that a prescriptive approach which relies on the classification of individual products will not achieve the objective of ensuring building safety. Only products which pass full system tests should be permitted in their tested combination, regardless of their combustibility classification. This is because it is the way in which the different components interact that determines how well the system as a whole will perform, not what class they are.

Question 4	Yes/No/Don't Know
a. Do you agree that a ban should cover the entire wall construction?	No - We do not agree with a ban. Furthermore, it would be extremely difficult to apply to the entire wall construction. There would always be some combustible content such as breather membrane, breather membrane tape, cement particleboard tape, mineral fibre binder found in 'non-combustible' insulation, paint coatings, tape and gaskets etc. Consideration also needs to be given to the impact that the size of a cavity and how it is ventilated can have on fire spread within a cladding system. In short, we believe it would still not achieve the desired objective of ensuring fire safety.
b. If no, what	We believe that any ban should be limited to PE cored ACMs, which have been proven to be a significant contributor to fire spread in known fires and

aspects of the wall should it cover?	fire tests. This could also be extended to other combustible external cladding panels, but should be subject to large scale system testing to ascertain actual performance.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	No, we do not believe that a blanket ban on combustible content would be appropriate. However, we do believe that all components of the external wall of a building should be subjected to fire testing.
d. Please provide any further information in relation to your answers above	

Question 5	**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?	Don't know We do not agree with a ban, so could not agree with exemptions. This proposal would also be difficult to implement and to police, with the sheer number of different individual components involved, each with different performance characteristics dependent on manufacturer. It could also stifle innovation and potentially create an unhealthy trading environment.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	We do not believe that there should be exemptions, but that products should be permitted on the basis of their performance as part of a fully tested system, and on that basis alone.
c. If no, what alternative way of achieving the policy aims would you suggest?	We believe that testing a cladding system as a whole, regardless of whether it contains combustible or non-combustible products, provides an effective way of delivering safe buildings and offers demonstrable performance to reassure residents. The implementation of the recommendations in Dame Judith Hackitt's Review of Building Regulations and Fire Safety over time would also help to address the shortcomings in the current system and achieve the policy aims stated above.

Question 6	**Yes/No/Don't Know**

Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over- cladding?	We do not believe that an outright ban should be applied, but we do believe that existing high-rise buildings are the highest priority for remedial works and that only tested systems should be used.
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	No - we do not believe that a blanket ban should be applied, but that a risk-based approach which considers all elements of a buildings' fire safety engineering should be followed to find the best solution for each individual building, with tested systems forming part of that solution.
c. the ban should not affect projects where building work has already begun on site?	No – we do not agree that there should be a ban. Furthermore, we refer back to our answer in question 3a, in which we pointed out that it would be unreasonable to take the position that buildings with systems that have been successfully tested to BS 8414 which contain combustible materials should now be considered unsafe. This would be in clear contradiction of current government guidance, which is being acted upon in good faith. It is also unhelpful to create fear and uncertainty in residents living in those buildings, and to unnecessarily increase the burden of costs for those already carrying out remedial work
Please provide any further information in relation to your answers above	Note that a whole system fire engineering approach to all buildings, existing and new is advocated in Dame Judith's Report, and we fully support this view.

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement	A wide range of wall elements could be affected by the proposed change, including high performance insulation, which has been proven to pass the requirements of BR 135 as part of a system tested to BS 8414. Crucially, products meeting A2 Class or better requirement have been shown to fail the performance criteria of BR 135 yet would not be required to undergo any further testing either under the consultation proposal or under the current regulatory system.

(e.g. sheathing boards or vapour barriers)?	
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	We have noted an increase in demand for products which meet Class A2 or better, and we are concerned that there is an assumption that these products create inherently safe systems, when we know that this is not necessarily the case.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Undermining public confidence both in existing buildings with BR 135 compliant systems, and in government guidance which to date has cited BS 8414 as an indication that the system is safe. Potentially unsafe buildings because they have untested systems. Structural impact on existing buildings in terms of the additional weight and thickness of non-combustible products. Limited design choice and increased difficulty meeting other regulatory requirements. Possible supply shortages and projects stalling. Devaluation of existing properties with BS 8414 tested systems. Increased cost of remedial work. Stifling innovation and ability to meet demand.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	Not known, although the current estimates being proffered appear to be on the low side and should be based on several more realistic building models in terms of scale and situation, including the cost of dealing with existing buildings. Note that it is not just the cost of the materials themselves, but also the structural implications because of the greater thickness and weight of non-combustible/limited combustibility materials that needs to be accounted for.
e. Please provide any further comments on the likely impact of this	In summary: Increased costs Limited choice Structural issues for existing buildings

change for construction e.g. supply chains	Supply issues Projects stalling Public concern over existing buildings Potential legal challenges over who pays for further remedial work Property devaluation Insurance premium increases/buildings becoming uninsurable Economic impact of a non-competitive market Lack of innovation Health and wellbeing impacts (thicker walls = less natural light) Increased carbon footprint Difficulty of application – there will still be combustible elements Large number of proven products adversely affected Knock on effect different types/heights of buildings Untested systems leading to unsafe buildings Objectives not achieved

Question 8	**Free text answer**
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:**

Response 45

Respondent Details

Name	[redacted]
Position (if applicable)	
Organisation (if applicable)	
Address (including postcode)	
Email address	
Telephone number	
Please state whether you are responding on behalf of yourself or the organisation stated above	

	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	X
Insurer	
Construction professional	
Fire and Rescue Authority representative	
Property Manager / Housing Association / Landlord	
Landlord representative organisation	
Building Occupier	
Tenant representative organisation	
Other interested party (please specify)	

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	No. This question should be specific to the external cladding layer. We believe regulations should be applied based on the system performance. Performance based standards are already available to test against, either BS8414 or BR135.
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No.
c. If no, how else could the ban be achieved?	Approved Document B is the channel for any regulatory changes to be implemented. The findings of the Hackitt report once implemented will also address the main failings in the construction sector.

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No. Detail in the Hackitt report supports the appropriate use of non-combustible material as low risk.
b. If no, to what height, higher or lower, should the ban apply? Explain why	The Hackitt report also mentions building heights 10 storeys or above, which may be a better definition than the 18m rule?
c. throughout the entire height of the wall, i.e. both below and above 18m?	No. The Hackitt report also mentions building heights 10 storeys or above, which may be a better definition than the 18m rule? Whatever decision is made it needs to be clearly defined with no ambiguity.
d. to high-rise residential buildings only?	No. If a ban is introduced, should it be in place only for refurbishment works of existing buildings? New buildings will always be designed and built with the latest fire protection systems in place.
e. If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	No. Because there is already sufficient guidance in Diagram 40 in Volume 2 Approved Document B. Other building types may also have different evacuation strategies and therefore be a lower risk.

f. Please provide any further information in relation to your answers above	To avoid any confusion Volume 1 Approved Document B may benefit from incorporating a graphic similar to diagram 40 'Provisions for external surfaces of walls' in ADB Volume 2. Due consideration may need to be given to future buildings change of use, if requirements across other purpose groups differ.

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	No. We believe it should still be possible to test against our national classifications. Testing of 'non-combustible' or materials of 'limited combustibility' to BS476 – Parts 4 and Parts 11, provides a higher
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	
c. If no, what class should be allowed in wall construction and why?	Design specifications should be tested as systems and not as individual components. In a ventilated rain screen/façade system the cavity can often play a key role which would not be picked up by individual product testing. It is essential that regulations should remain around a system based performance utilising BS8414 or BR135

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	No
b. If no, what aspects of the wall should it cover?	Any ban should concentrate on materials that are specific to the outer most layer of the external cladding on the building, any flat surface. The ACM material on Grenfell Tower was clearly the most significant contributor to the external fire spread on the building. Similar fires have been observed internationally with the ACM material causing rapid fire spread.

c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	These types of material may benefit from some type of reform in terms of regulation. A determination of performance may be necessary, but the BS8414 test is probably not suitable for these building elements.
d. Please provide any further information in relation to your answers above	

Question 5	**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?	While we do not support a ban, should it be introduced, it should concentrate on materials that are specific to the outer most layer of the external cladding on the building, any flat surface.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Modern facades rely on many different materials for them to fully function. If membranes, window systems, gaskets and vapour barriers are banned, will there be suitable and alternative materials available to replace them? And how will they be tested and enforced?
c. If no, what alternative way of achieving the policy aims would you suggest?	Have the tested performance of the external system or wall element proven against BS8414 or BR135

Question 6	**Yes/No/Don't Know**
Do you agree that:	
a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	No. The merits of each building should be addressed on an individual basis.
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	No. New projects that have not yet started on site may have other forms of fire protection in place, sprinkler, alarms etc.
c. the ban should not affect projects where building work has already begun on site?	Yes. New projects already under construction may already have the latest fire detection and suppression systems to be installed during the construction phase.
e. Please provide any further information in relation to your answers above	

Question 7	**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 BS 8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	The majority of components within a wall facade system could be impacted. We stand behind a performance based and tested system to meet the requirements of BS8414 or BR135. Whether combustible or non-combustible claddings are installed they often are joined to the supporting structure with aluminium brackets – which would be the weak link in a severe fire in either system.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is already using elements which meet Class A2 or better. What is your experience?	We are led to believe there has been a recent shift in specification of some non-combustible or limited combustible materials. However, this does not immediately make buildings safer, as incorrect installation can still happen.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	To achieve thermal performance targets may require much thicker build-up of wall construction, up to twice the thickness. Additional fabric weight may require additional structural frames increasing project cost, programme and materials. It may be harder to reach energy targets that we are already committed to achieve through the Energy Performance of Building Directive. A thicker building fabric can create deeper window reveals which impacts natural light into the building.
d. How much extra cost would typically be involved in meeting the proposed new requirements (for buildings 18m or over) against a building which meets the current requirements? (Please provide any further details)	N/A (We are unable to support this question with sufficient data).
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	If there was a move to demand an insulation material with A2 minimum performance, can the sector manufacturing this material satisfy the demand for the product requirements nationally and/ or globally? This would also give an unfair monopoly to one sector, with little or no competition. Some board insulation materials are capable of achieving industry leading thermal performance therefore helping meeting Energy Performance Building Directive

Question 8	Free text answer
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	

Responses to the consultation will be made public, on the internet or in a report. If you would prefer your response to remain anonymous please tick the adjoining box.	**Please tick here:** ✓