Response 59

Respondent Details

	Respondent details
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Position (if applicable)	National Wall Product Manager
Organisation (if applicable)	DuPont (UK) Ltd
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Telephone number	07795127522
Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of the organisation 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/ Resident	
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
b. Should the ban be implemented through changes to the law?	There should not be a ban on any particular product or prescriptive configuration. Systems should be evaluated (tested) to applicable external wall requirements and approved or not based on the results of such testing. Order of material location and depth of air space have a significant impact on the performance of an exterior wall system. Assemblies with the same materials in them may pass or fail based on these considerations. Therefore, a material based ban is inappropriate.

c. If no, how else could the ban be achieved?	The ban should only be applied to assemblies that do not meet applicable performance requirements.

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.	N/A
c. throughout the entire height of the wall, i.e. both below and above 18m?	No
d. to high-rise residential buildings only?	No
e. to all high-rise, non-residential buildings e.g. offices and other buildings, as well as residential buildings?	No
f. Please provide any further information in relation to your answers above.	We do not support a material ban as per our reasoning in Question 3. Applicable assembly performance requirements may need to be different for high-rise vs. low-rise or residential vs. non-residential buildings based on the different risk factors these buildings may present as they currently are. See answer to question 6.

Question 3	**Yes/No/Don't Know**
a/b. 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?	We do not support a material ban per reasoning previously stated.
c. If no, what class should be allowed in wall construction and why?	Again, appropriate assembly requirements must be maintained for building types and by which assemblies can be tested for their performance and approved or not based on such performance.

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	We do not support a material ban as previously stated. We do believe the exterior wall assembly should be tested for its performance with reasonable exceptions as stated below in 5b.

b. If no, what aspects of the wall should it cover?	We do not support a material ban as previously stated. We do believe the exterior wall assembly should be tested for its performance with reasonable exceptions as stated below in 5b.
c. Should a ban also cover window spandrels, balconies, brise soleil, and similar building elements?	We do not support a material ban but rather support appropriate assembly performance requirements.
c. 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?	We do not support a material but rather support assembly performance requirements. We do agree that there are some materials that do not need to be specifically tested as their contribution to assembly performance is not impactful. See our comment to 4b.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	See our answer to 4b. Certain aspects of the assembly have been shown not to have a significant effect on the fire performance of the assembly and therefore should be exempt from assembly testing or considered an acceptable generic addition to any wall assembly. Items such as weather resistive barriers and air barriers with low fuel contribution, sealants, tape, brick, gypsum board and the like should be included and accepted in a generic way to tested assemblies as their location in the assembly may be important to the performance but not the proprietary type of product. We would support special inspections to ensure assemblies are installed as specified and tested. Additionally, new requirements could be put I place to implement a check test regarding the potential heat contribution of materials to determine whether or not these materials would be required to be included in the assembly (system) performance test.
c. If no, what alternative way of achieving the policy aims would you suggest?	See 7b.

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. We do not support a material ban but support reasonable mitigation including assembly improvements if needed and active fire protection systems per 8a comments.
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 support a material ban per previous comments.
c. the ban should not affect projects where building work has already begun?	Yes. Where work is underway and the project is meeting current building requirements. We do not support a material ban per previous comments.

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 BS8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	There is potential for great inconsistencies and negative impact. As previously stated materials are not singularly installed on a building. They are always installed as part of an assembly. Assemblies will perform differently based on many factors not just the materials contained within them. Without appropriate assembly testing it is impossible to ensure that our buildings will provide appropriate fire performance. Banning materials such as air barriers based on one property without considering their location, role, or their interaction with other elements of the assembly is not responsible and could unfairly ban products that are capable of performing quite well in many assemblies.
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?	A noticeable shift has been occurring although there are some products like those used as water resistive barriers for which there are no good moisture management alternatives.
c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?	See comments on 7a & 7b. There could also be a loss of energy efficiency as alternatives do not thermally perform as well.
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
e. Please provide any further comments on the likely impact of this change for	Operating costs and maintenance costs of buildings could go up as the

construction (e.g. supply chains)	alternative products would not perform other functions as well (thermal performance, moisture management, air leakage management, etc.). This could lead to more mould growth, deterioration, indoor air quality issues, thermal comfort issues, higher utility bills, increased greenhouse gas emissions, human health issues, etc.

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 60

Respondent Details

Name	Andrew M Jones
Position (if applicable)	President, Dow UK & Ireland
Organisation (if applicable)	Dow Chemical Company Limited
Address (including postcode)	Station Rd, Birch Vale, High Peak, SK22 1BR
Email address	ajones@dow.com
Telephone number	07800532622
Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of the Company 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	
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
b. Should the ban be implemented through changes to the Building Regulations (i.e through	NO

legislation rather than the Approved Documents)?	
c. If no, how else could the ban be achieved?	a) It is our opinion that a ban is not appropriate. Fire requirements based on large scale system performance to BS8414 (as detailed in BR135) can provide the optimal and alternative way to identify what is acceptable for use and what is not related to cladding systems used in tall buildings. In this way any system containing non-combustible or combustible insulation can be assessed to evaluate its performance in relation to meeting the functional requirements of B4(1) of the Building regulations , namely that 'the external walls shall adequately resist the spread of fire over the walls'. Relying on only small scale tests of material performance is not sufficient as consideration needs to be given to the various layers of the construction and how the products are installed so a system approach is more suitable. Data from the government's test programme https://www.gov.uk/guidance/building-safety-programme indicated that the BS8414 test system was discriminatory in its ability to differentiate fire performance and was able to identify the ventilated façade system (rain-screen, build-up including insulation) which did not meet the current regulatory requirements irrespective of the insulant used. This is referenced in Sir Ken Knight's letter to the Ministry of HCLG (Housing Communities & Local government) committee. https://www.parliament.uk/documents/commons-committees/communities-and-local-government/2017-19-Correspondence/Sir-Ken-Knight-to-Chair-re-oral-evidence-follow-up-letter-02-07-18.pdf b) A ban is not appropriate. The Approved Document B already addresses this item of restricted flame spread. Clarification can be provided therein adjacent to the other guidance c) Please see above

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	Determination of how these buildings are identified (taller than18m or by greater than 10 floors) as in the Hackitt recommendations, also needs to be resolved. See f)
c. throughout the entire height of the wall, i.e. both below and above 18m?	No
d. to high-rise residential buildings only?	See f)
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
f. Please provide any further information in relation to	a) and b) As indicated in 1a)-c) we do not consider a ban appropriate. The Hackitt review demonstrated that there were many elements which need addressing & resulted in 53 recommendations to improve compliance and enforcement.

your answers above	https://www.gov.uk/government/publications/independent-review-of-building-regulations-and-fire-safety-interim-report (Dec 2017) https://www.gov.uk/government/publications/independent-review-of-building-regulations-and-fire-safety-final-report (May 2018) Determination of how these buildings are identified (taller than18m or by greater than 10 floors) as in the Hackitt recommendations, also needs to be resolved. c) As indicated in 2a) we do not consider a ban is appropriate. If imposed then this should apply to the area above 18m (or 10 floors) whichever is chosen as the designation. d) See e) e) As indicated above we do not consider a ban appropriate. Different building types and occupancies have different risks and hence there are different associated fire safety measures which should be considered in this respect and which lead to the conclusion that if imposed any restriction should be limited and commensurate with the risk. f) As indicated in Answer 1c) we do not support a ban and consider it is still possible to have a system containing insulation which is not non-combustible which can meet the performance criteria relating to limited fire spread based on the system testing of BS8414 and performance criteria as outlined in BR135. BRE's website indicates complete external cladding systems which have been tested to BS8414 and have been classified to BR135 https://www.bre.co.uk/regulatory-testing

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?	
c. If no, what class should be allowed in wall construction and why?	We highlight again we do not support the proposal to ban combustible products per se. If it is concluded that there needs to be further clarity on defining what is appropriate for prescriptive performance, then using the European classification - Class A1 is appropriate (non-

	combustible). However in terms of fire performance for this application we support the use of large scale testing namely to BS8414, with classification to BR135 as currently allowed as an alternative to the criteria for materials to be non combustibility or limited combustibility in Approved Document B, to demonstrate performance. We see this to be a necessary and valid assessment for all systems containing combustible or non- combustible products for a façade. Consideration of the government's own test programme from July 2017 indicates that large scale testing can adequately assess the ability of system assemblies to meet requirements for a façade construction with cladding, cavity and insulation with the relevant/appropriate fixings and fittings. https://www.gov.uk/guidance/building-safety-programme

Question 4	**Yes/No/Don't Know**
a. Do you agree that a ban should cover the entire wall construction?	No see d)
b. If no, what aspects of the wall should it cover?	As we indicated we do not support a ban. The construction covered by any measures should concern the external wall (i.e. outer) cladding system only when considering the ventilated façade application. See also 1c) where we also reference Sir Ken Knight's letter to the Select Committee regarding this point about what should be included or excluded.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	No See d)
d. Please provide any further information in relation to your answers above	Re a) As stated earlier we do not see that a ban is appropriate to meet the B4 requirements for the wall construction. This can be satisfied by the use of large scale testing and classification. No system complying with the BR135

	criteria from the BS8414 test has been reported as causing a fire incident in a real building. Re c) Currently these aspects cannot be tested in BS8414 and therefore their performance may need to be evaluated in a different way. This will need to be addressed.

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?	To reiterate we do not support a ban but rather prefer for the use of BS8414 to be adopted for all system testing with classification criteria from BR135 irrespective of a product being non-combustible or not. This would enable clear control of performance of façade systems including rain-screen cladding & fixtures and fittings. If a ban were to be implemented there would need to be exemptions for these limited components such as membranes and other products (internal wallpaper and paint, window frames, gaskets and seals, surface finishes and laminated glass) where these are not currently replaceable by limited combustible products (A2 class) or A1 products and where the risk of external fire spread caused by the use of combustible materials would be so minimal that it would be disproportionate to ban their use. Suitable clear criteria would need to be introduced so that any exemption can be well understood
c. If no, what alternative way of achieving the policy aims would you suggest?	As stated in b)

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 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?	YES
e. Please provide any further information in relation to your answers above	A risk based approach is appropriate here and fits with guidance contained in Approved document B. As a result of the recent Hackitt report (interim Dec. 2017 and final May 2018) clarification and simplification will be helpful and is considered necessary. The review highlighted that further development to improve compliance and enforcement will also be needed in this respect to enable assurance of product testing certification and use. Considering the feedback from the Independent Expert Advisory Panel regarding the large number of public buildings which need to be handled and the amount of cladding needing replacement exactly how this is approached is key. As indicated in earlier answers to this response we do not support the proposed general ban. Priority being given to the tall buildings is very logical. It is not clear on the wider consequences of introduction of a ban on work for which orders may have been made and where material has already been sold but where work has not yet started. A risk based approach will enable a logical and systematic assessment of which constructions need to be addressed taking into consideration the evidence the government has gathered in its test programme mentioned earlier. As indicated we do not support a general ban. We support a risk based approach to be followed as the

	implications of such a decision on buildings where work has already begun could be extensive.

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)?	System 5 from the Government MHCLG test programme DCLG BS 8414 test no.5 containing an A2 rain-screen cladding and a combustible insulation that as an assembly met the classification criteria in BR135 and hence the external fire spread requirements (and is currently allowed) would be affected by the proposed change. The BRE website shows the different systems which have passed the BS8414 test and are currently accepted constructions for facades https://www.bre.co.uk/regulatory-testing. However it could be envisaged that any component of the façade wall (e.g. even membranes) could be impacted by the proposed change if classified as combustible when the large scale test is removed and there are no exemptions We consider the large scale test has a role for all systems in being superior to small scale tests in assessing fire performance of façade systems where the role of fixings, fittings and gaps are as important as the individual classification of components.
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?	There is a move towards non- or limited combustible materials in this application. When a full system test is completed to BS8414 and meets the criteria of BR135 then the system can be used in the building. A system test for all systems containing combustible or non- combustible components is the most effective way to assess the façade performance for external spread. If the proposed ban is implemented then it is possible that complete systems which have been deemed compliant under the Building Safety programme (and as they meet the current

	requirements when system tested) could be considered non-compliant. There may be systems built from non- combustible components which are not compliant when tested as a system to BS8414 but would meet the prescriptive material approach.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	The impact of removing the system test of BS8414 is likely to lead to a change to sourcing of a different insulation product. In order to have an equivalent insulation value for compliance with the corresponding insulation regulations this would lead to insulation of much greater thickness being used (perhaps up to twice the thickness). Then there is an associated consequence on the final building construction around the windows, doors and any other relevant features due to this increased thickness. leading to reduced light and other consequences, see e). In addition the extent to which type of buildings are ultimately impacted depends on the final measures of any ban.
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 are not able to answer this question
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	A further consequence of this proposed change resulting in a move to one type of insulation is the likelihood of supply/demand capacity gaps. With a potentially limited supply of the replacement insulant, shortages would be expected to occur through the supply chain including contractors thus impacting construction. A delay in meeting government targets for housing and climate change could then be expected. The use of thermal insulation which is lightweight, highly insulating and with excellent compressive strength ability would no longer be possible

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.	

Response 61

Respondent Details

Name	Mary Wrenn
Position (if applicable)	Director
Organisation (if applicable)	Royal Society of Architects in Wales (RSAW)
Address (including postcode)	Studio 111, The Creative Quarter, Morgan Arcade, Cardiff, CF10 1AF
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Telephone number	02920 228 987
Please state whether you are responding on behalf of yourself or the organisation stated above	On behalf of the Royal Society of Architects in Wales

	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 body

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

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	Yes – The ban should apply to buildings 18m or over in height.
b. 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 – The ban should be applied throughout the entire height of the wall, both below and above 18m.
d. to high-rise residential buildings only?	No – The ban should include all buildings over 18m.
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 apply to all high-rise buildings above 18m in height. The RSAW recommends that a ban applied to all buildings over 18 meters is the only way to ensure safety of residents and building users, and protection of built assets.
f. Please provide any further information in relation to your answers above	The RSAW supports the proposal for a ban on certain combustible materials but believe that additional measures must be considered to further support safer buildings: In addition to the existing requirement for sprinklers/automatic fire suppression systems in all new and converted residential buildings, we strongly recommend the retro-fitting of sprinklers / automatic fire suppression systems and centrally addressable fire alarm systems to existing residential buildings above 18m from ground. **More than one staircase** – In all new multiple occupancy residential buildings, a requirement for at least two staircases, offering alternative means of escape, where the top floor is more than 11m above ground level or the top floor is more than three storeys above the

	ground level storey (as required for commercial buildings).

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	Yes - only the European Classification system should be used, which would remove any ambiguity. It is noted in Approved Document B that *'The National Classifications do not automatically equate with the equivalent European classifications, therefore, products cannot typically assume a European class, unless they have been tested accordingly'.* Within external wall construction, sheathing boards, insulation and outermost cladding products must be certified as meeting European Classification A1 only. In the internal leaf, plasterboard must be certified as meeting European Classification A2-s1, d0 or above (as the RSAW are unaware of any plasterboard products that meet the A1 classification, but there are many at A2 with the additional provision of limited smoke production and no flaming particles/droplets).
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	The RSAW recommends European Classification A1 over A2, to protect against production of smoke ("s" rating) and flaming particles/droplets ("d" rating). A1 will provide clarity to the construction industry, residents and the public. If the government decides to proceed with the ban using the lower classification (A2), the RSAW recommends that this be strictly limited to **"A2-s1, d0".** This would ensure very limited smoke production and no flaming particles/droplets from the products included in the ban. A simple A2 classification would allow unlimited smoke production and unlimited flaming particles/droplets, which would put

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

Question 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 – Several products required in external wall construction cannot be obtained with an A1 or A2 classification.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Internal linings such as wallpaper and paint, gaskets and seals, vapour membranes, damp proof membranes and glazing.

	Glazing should be considered within the overall external wall construction that should “adequately resist the spread of fire” as set by Requirement B4.
c. If no, what alternative way of achieving the policy aims would you suggest?	No – the ban is the only way to achieve this policy aim. The RSAW supports the proposal for a ban on certain combustible materials but believe that additional measures must be considered in order to further support safer buildings: **Sprinklers** – retro-fitting of sprinklers / automatic fire suppression systems and centrally addressable fire alarm systems to existing residential buildings above 18m from ground, to be implemented alongside the existing mandatory requirement for sprinklers/automatic fire suppression systems in all new and converted residential buildings. **More than one staircase –** In all new multiple occupancy residential buildings, a requirement for at least two staircases, offering alternative means of escape, where the top floor is more than 11m above ground level or the top floor is more than three storeys above the ground level storey (as required for commercial buildings).

Question 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 – the ban should be applied to all existing buildings undergoing upgrading, alterations / renovation works, that fall within the scope of material alterations as a consequential improvement.
b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	Yes – The ban should be applied to all new buildings / material alterations to existing buildings, to safe guard life safety.

c. the ban should not affect projects where building work has already begun on site?	Buildings where works have already begun that do not meet the new requirements, should be subject to a risk-based approach to determine if changing products or systems should be required.
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)?	As Question 5B and synthetic polymer insulation products and rainscreen cladding systems with a classification lower than A1.
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?	RSAW's parent body, the RIBA, has recommended discussing the current situation with providers of the full-scale test BS 8414 and with insurance providers to learn how the industry is reacting. RSAW proposes to share with the Welsh Government the outcomes of this research.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Using non-combustible (European class A1) materials only would negate the requirement for testing for buildings above 18m. Buildings below 18m would benefit from an updated BS8414 test procedure.
d. 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 figures in in the impact assessment section of the consultation document appear to be reasonable at the higher level. However, the impact assessment does not consider the impact relative to the value of construction which, in 2016, was £4,793M in new public housing and £30,706m in private new housing (new orders for construction from ONS Construction statistics: Number 18, 2017 edition). The assessed impact of up to £11m per

	year additional cost is only 0.03% of the reported construction value in this sector.
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	The aim of government should be to focus primarily on public safety. However, for the construction industry, the ban itself, demand and delays for A1 products and subsequent increased costs of these products will have an impact on the development economics of buildings over 18m. The RSAW is confident that product manufacturers will develop new innovative products that meet the A1 classification.

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.	

Response 62

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

Building Regulations

Welsh Government

Rhydycar

Merthyr Tydfil

CF48 1UZ

13th September 2018

To whom it may concern,

Please find attached Zurich's response to the Welsh Government consultation on banning the use of combustible materials in the external walls of high-rise residential buildings.

Zurich Municipal is a leading provider of risk and insurance solutions to Britain's housing associations. We work in partnership with housing associations to deliver risk management strategies and are, therefore, uniquely familiar with the challenges they face, and provide them with the bespoke services they need to not only manage their risks, but also ensure continuity in the event of a major incident, particularly fire.

We welcome the opportunity to respond to this consultation. Indeed, we fully support the proposal for a ban on the use of combustible materials in the external walls of high-rise residential buildings and for this ban to be implemented through changes to the law as a matter of urgency.

However, there are some areas where the policy proposal needs to go further for which we have taken the opportunity to suggest some amendments. In particular, any ban must include all high-rise buildings, both residential and non-residential, to prevent future challenges arising from changes in building use. Moreover, the ban must go beyond the definition of cladding systems and apply to all external wall constructions on buildings over 18m in height. It is essential that the ban extends to all elements comprising the external envelope of the building as this will ensure simplicity and remove ambiguity whilst also minimising the potential for external fire spread beyond the reach of the Fire Service which must be the absolute priority of the ban.

Should you have any further queries, please do not hesitate to get in contact.

Yours sincerely,

A. Whittington

Allison Whittington
Head of Housing – Zurich Municipal

Respondent Details

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Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of Zurich Insurance Plc

	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. However, it is essential that the ban also goes beyond the definition of 'cladding systems' and applies to all external wall constructions on buildings over 18m in height (and height definition to be aligned with guidance in Approved Document B).
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	Yes. This proposal is fully supported. A specific ban through the Building Regulations will remove the opportunity for avoidance through loopholes, such as Approved Documents only presenting

	a single route to compliance with regulatory requirements. Concerns do exist with regard to the timeframe required to implement a change in law. This timeframe must be reduced to the absolute minimum and ensure delays are avoided
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	
c. throughout the entire height of the wall, i.e. both below and above 18m?	Yes. It is essential that the ban is applied to the entire wall height to ensure a fire event impacting at lower level does not negatively affect the level of safety provided to the overall building.
d. to high-rise residential buildings only?	No. To limit on this basis, would lead to future difficulties if a building is subject to change of use, i.e. change from office to residential, or from student accommodation to partial residential type use. Key considerations are associated with sleeping risks, and there remains the challenge of poorly managed/understood procedures in such premises, i.e. stay put, or simultaneous evacuation, regardless of purely 'residential' or other institutional type occupancies, hotels, hostels, student accommodation etc.
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. Further to response 4c, this will help ensure future uses are not limited/future occupancy changes do not result in reduced or inconsistent safety standards. It is absolutely essential that the overall process is simplified to reduce ambiguity and opportunity to weave through compliance with the requirements.
f. Please provide any further information in relation to your answers above	Wherever there are materials available that can perform the function and are non-combustible these materials should be used on all buildings as a priority. This is of particular importance where there is an inability to fight a fire from outside of the property, such as in high rise buildings.

	Whilst we accept that the risk to life is higher within residential buildings there remains an unacceptable risk to occupiers of other premises as well, which could be avoided by adopting the same principles. In recent years there have been a number of examples of high rise office type occupancies being adapted and subject to change of use to residential occupancy. To include non-residential buildings within this approach would assist in ensuring consistency of building fire performance and offer robust future-proofing. It would also assist in reducing ambiguity and complexity surrounding differing performance requirements for only slightly differing occupancies. It is essential to consider that within office premises for example, the risk of rapid fire spread is further exacerbated by large open floor plans, allowing a potential fire in such a premises to not only spread rapidly externally via any external combustibles, but also internally by virtue of the lack of any effective internal sub-division.

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?	The intention must be to achieve a wall construction that offers no contribution to a fire. A2 must be an absolute minimum.
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?	Yes – with exceptions as per 4b.
b. If no, what aspects of the wall should it cover?	The ban should apply to all materials making up the external envelope of the building, however it should not extend to internal finishes, provided such finishes are adequately fire stopped and detailed correctly and that their involvement in a fire cannot spread between floors or to the exterior envelope of the building.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Yes. These are key components of many building facades and can present significant external fire load and opportunity for fire development and spread. By applying a ban to all such elements this provides simplicity and removes any ambiguity. Furthermore, risks associated with living wall finishes, both partial or full elevations, and associated support systems must also be addressed by the ban. We would encourage the government to develop a list of elements to ensure that they fall within the scope of the policy intention.
d. Please provide any further information in relation to your answers above	It is essential that the ban should extend to all elements of the construction to which it can reasonably apply. Absolute minimisation of the potential for external fire spread which is beyond the reach of the Fire Service should be the ultimate goal.

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, any exceptions should be limited in number, and clearly defined.
b. If yes, what components should be included on an exemption list and	Potential components that may need to be exempt from the requirement include:

what conditions should be imposed on their use?	• Wall tie insulation retention clips • Wall paper / paint finish • Window frames – though clarity required in terms of cavity closure detail • Gaskets and seals – need to be defined as per type/nature/size etc The following aspects must also be addressed within the guidance: • Ducts/sleeves through wall systems • Grilles/vents penetrating external wall system/element • Pipework/services that penetrate the external wall system/element • Appropriate means of cavity closure to window/door reveals and perimeter/edge treatment to ensure clarity around allowable materials and detailing An approval process should be instigated to ensure that only products where there is genuinely no alternative are used and that their affect upon the building is minimal.
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?	Yes. Our key concern is that there will be a significant time lapse from now (consultation period) until any ban is formally introduced/made a legal requirement, for schemes to reach on-site stage.

c. the ban should not affect projects where building work has already begun on site?	Ref b. above – Consideration should be given to work that has started on-site, but was notified during the consultation review period – which may be a considerable period and allow a significant number of schemes to be 'allowed'.
e. Please provide any further information in relation to your answers above	Whilst retrospective application of new standards is not a practical solution, it is imperative that the particulars of each building are understood, assessed, minimised and made available to the occupiers of those buildings. Appropriate measures should be enforced based upon expert advice and assessment.

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 fire performance of the wall system remains the key issue that has to be addressed and it is, therefore, essential that all components within the wall make-up are subject to review/consideration. The issue of how robust the BS8414 test is remains a key aspect that requires addressing. A review of the test regime and performance specification/parameters must reflect real-life scenarios, and be reflective of the typical wall make-ups, including such elements as breather membranes, vapour control layers, substrate boarding, ducting/penetration details, cavity closure details/products/materials etc.
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 not able to comment on this question but would suggest that this questions inclusion in the consultation demonstrates that building fire safety performance is not robustly controlled or monitored.
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	No response.
d. How much extra cost would typically be involved in meeting the proposed	No response

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	No response.

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.	

Response 63

Respondent Details

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	Select one
Please indicate whether you are applying to this consultation as:	
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• 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)	Construction Product Manufacturer Trade Association

Question 1	**Yes/No/Don't Know**
a. Do you agree that combustible materials in cladding systems should be banned?	No – we believe that cladding systems should be subject to large scale testing, not prescriptive regulation based on small-scale material tests.
b. Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	No – there should be better regulation, not a blanket ban.

c. If no, how else could the ban be achieved?	We do not believe that banning combustible materials will achieve the objective of adequately reducing fire risk and improving building safety. On the contrary, reliance on prescriptive regulation could increase the risks associated with poor levels of competence, and the prescribed materials would not necessarily work well as part of an overall construction. We have clear evidence that systems containing only so called 'non-combustible' and 'limited combustibility' cladding and insulation have failed large scale system tests, whereas many systems containing 'combustible' insulation have passed. It is the design and interaction between the different elements of a cladding system that determines how well it will perform in a fire. Therefore, it is large scale system testing of the entire external wall construction that will provide an assurance of performance, not individual product classifications that have been arrived at through small-scale laboratory tests on very small material samples. This is clearly demonstrated in the series of BS 8414 tests commissioned by the then DCLG (now MHCLG) in the wake of the Grenfell Tower disaster. There was no difference in performance between the first and second tests – both with PE cored ACMs, the first with 'combustible' PIR insulation, the second with 'non- combustible' stone wool insulation. The test with the non-combustible insulation failed over a minute sooner than the test with the PIR. PIR core steel-faced insulated sandwich panels have successfully been tested to BS 8414 in accordance with BR 135, but under the proposed ban would not be permitted on buildings over 18 metres, whilst other 'non-combustible' systems would fail the test, yet would be permitted without testing. EPIC has been involved in the testing of sandwich panels containing combustible insulation for decades. We have collected case study evidence that long established

	large-scale insurer tests, such as LPS 1181 from the LPCB provide a good correlation with actual performance in a fire. One of these case studies is detailed in question 9 below. Others may be viewed on the EPIC website: www.epic.uk.com/fire-performance/fire-case-studies/fire-research-case-studies/# In addition, there is a wide range in performance of 'combustible' products. For example, 'combustible' thermoset insulation materials char when exposed to fire or heat preventing further fire spread, and they self-extinguish when that fire or heat is removed. By contrast, thermoplastic materials, such as polyethylene, are highly flammable. Grouping products with such a wide range of performance together under one broad heading of 'combustible' is therefore misleading. This distinction was highlighted by Professor Luke Bisby during the presentation of his expert witness report to the Grenfell Public Inquiry: *"The word 'combustible' has received a great deal of attention and use in the media since the Grenfell Tower fire. In reality, for materials that have the potential to burn, by which I mean those materials that are combustible, flammability is a relative rather than absolute property. Depending on the circumstances, therefore, combustible materials can either be more or less flammable, and this distinction is actually very important."* The overall objective would be better achieved through implementing all of the recommendations outlined in the Hackitt Review, including better oversight, improved competency, better testing, labelling and traceability of construction products etc.

Question 2	**Yes/No/Don't Know**
Do you agree that the ban should apply:	
a. to buildings 18m or over in height?	No – a ban 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	A ban should not be applied, as this will not achieve the objective. However, we note that Dame Judith Hackitt's findings were that the greatest likelihood of fire spread and risk of fatalities occurs from ten storeys and above (paragraph 1.3 and Annex C of the report "Building a Safer Future"). Therefore, any tightening of the regulations to improve fire safety, such as universal large scale system testing, should be applied from this height upwards.
c. throughout the entire height of the wall, i.e. both below and above 18m?	No – a ban will not achieve the objective of safer buildings, regardless of height. Also, as noted above, the greatest risk lies from the 10th storey upwards.
d. to high-rise residential buildings only?	No – we do not support a ban, we support large scale system testing.
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 – a ban will not achieve the objective of safer buildings, regardless of height or use. Large scale system testing provides better assurance of performance.
f. Please provide any further information in relation to your answers above	As above, we do not believe that a ban should apply to any type of building. Unsuitable products should be ruled out through rigorous system testing and the proper implementation of the multiple safeguards outlined in Dame Judith Hackitt's recommendations. Issuing a blanket ban on certain materials will not address the issues of communication, responsibility, competence and cost cutting that have been so starkly revealed in the Review. Instead it could lead to complacency and, as already highlighted in Question 1 c, will not necessarily lead to safer buildings. The expert witness reports to the Grenfell Tower Public Inquiry have highlighted the fact that the cladding system that was on that building was not compliant via any

	route in the current regulatory system. Dr Barbara Lane: *"Based on the relevant test evidence submitted to the Public Inquiry, the construction materials forming the rainscreen cladding system, either individually or when assessed as an assembly, did not comply with the recommended fire performance set out in the statutory guidance of ADB 2013 for a building of that height."* Section 2.18.2 p50, Phase 1 Report They have also confirmed the fact that the primary cause of the fire spread by a significant amount was the PE cored ACM cladding. Prof Bisby: "*The primary cause of rapid and extensive fire spread was the presence of polyethylene filled ACM rainscreen cassettes in the building's refurbishment cladding system"* point 14, p3 Phase 1 Expert Report. This is backed up further by evidence of several major fires around the world involving the same cladding, which spread equally quickly, even when the insulation in the cladding system was non-combustible. The expert witnesses to the Public Enquiry, and prominent figures such as Sir Ken Knight have already highlighted the fact that the PE core ACMs were not compliant under current building regulations and guidance and should never have been present on Grenfell Tower. Would 'banning' a broad class of materials really ensure that safer buildings are constructed? Testing PE core ACMs as part of a complete system would quickly have ruled them out as suitable products for that application, whereas other types of 'combustible' products may well have proven to be safe. Indeed, in his letter to Clive Betts dated 2 July 2018, Sir Ken Knight states *"It may therefore be worth considering if the banning of cladding materials might more appropriately be narrowly focused on 'banning' the use of ACM PE (and any similar polyethylene core composite material) on the external face of a building, regardless of height or use of building. Whilst the full scale testing process provides underpinning assurance in all external wall cladding systems…"* He goes on to say *"This approach would still*

	enable combustible insulation to be used, but only if it is proved to be safe in the circumstances of the particular building by completion of the cladding system test of BS 8414 (as amended as necessary as part of the current review) and BR 135 classification." This is a view that we fully support. It is important to distinguish between products that are 'combustible', but which do not easily ignite and which self-extinguish once a fire source is removed, and products which are 'flammable'. For example, PIR insulation is a combustible thermoset material which forms a protective char and prevents further fire spread, whereas polyethylene, which was in the core of the ACMs on Grenfell, is a highly flammable thermoplastic material which ignites easily, melts, drips and causes fire to spread both above and below the source of the fire. Under the current product testing system both types of product are classed as 'combustible', yet their actual performance is vastly different.

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	No – we do not consider that the prescriptive route is the right one to take. The fact is that both A1 and A2 products can contain combustible content. When factors such as density and thickness are taken into account the combustible content can be significant and its impact can lead to BS 8414 tests failing to meet the requirements of BR 135. The only way to demonstrate fire safety performance of a cladding system is through full scale testing.
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	As above we consider that product classifications alone are an inadequate way to assess the safety of a wall construction. The whole system needs to be tested, which then provides the correct classification.
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. Furthermore, as already highlighted, individual product or material classifications are wholly inadequate indicators of how a complete wall assembly will perform in a real fire. The bomb calorimeter test used to assess the combustibility of products in the Euroclass system measures the calorific value of materials (not products) when they get involved in a fire. They do not assess whether products will get involved in a fire i.e. how readily they catch light and how they behave when they do. Combustibility is not the same as flammability. See answer to question 3c above. Similarly, the SBI test although it at least assesses product performance rather than a very small sample of the individual materials making up a product, still does not provide a true picture of fire performance in the context of an application. Large scale system testing is the most effective way of doing this.

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?	No – there should not be a ban, but external wall constructions should be subject to system testing.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	No - but these should also be subject to large scale system testing
d. Please provide any further information in relation to your answers above	See answer to Question 1c and 2f above. In her Phase 1 Report Dr Lane also refers to the *"multiple catastrophic fire-spread routes created by the construction form and construction detailing".* This points to the requirement for better oversight and greater levels of competency recommended by Dame Judith. System testing is the best way to assess overall design performance. Understanding how the different components within a whole wall system will interact and behave

	in a fire is crucial to creating safe constructions. It doesn't matter whether they are classed as 'non-combustible' if the way that they react to a fire causes any kind of failure within the system. For example, materials not burning but shrinking could cause a breach in cavity barriers creating a chimney that allows fire spread.

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 – but all wall system components, not a limited number. They should instead be subject to 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 above, we believe that products should be exempted from a ban on the basis of their tested performance as part of a system. In other words, that every product should be subject to system testing, and should be considered suitable for use on HRRBs on the basis of that, not on the basis of small scale product combustibility classifications.
c. If no, what alternative way of achieving the policy aims would you suggest?	See answer to 5b. We also believe that the recommendations set out in the Independent review of Building Regulations and Fire Safety Final Report 'Building a Safer Future' should be implemented in full. Notably, the recommendations did not include a blanket ban on combustibles. Indeed, in the report Dame Judith clearly states: *"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." Section 10.6 P115* We know that even when the main components of a cladding system are non-combustible they can still fail in the face of a significant fire load. We know that it is how the system is designed and the interaction between the different components that determines whether it will perform well or not. We have evidence that tested and approved systems utilising 'combustible' materials can and do provide

	good levels of fire performance. We therefore strongly recommend that large scale system testing is a far more robust way of achieving 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?	No – the ban should not be applied to any buildings. Alterations to existing buildings should be made using a tested system approach.
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 to any buildings. Alterations to existing buildings should be made using a tested system approach.
c. the ban should not affect projects where building work has already begun on site?	No – there should be no ban, and where work has already begun it should already involve tested systems. However, there may be an issue where non-combustible products are being used that have been shown to fail BS 8414, and remedial action should be taken to address these as soon as possible, regardless of whether or not work has already begun.
e. Please provide any further information in relation to your answers above	Existing buildings undergoing refurbishment or alteration should meet the same standards as new build, but for all the reasons outlined in the earlier answers, banning combustible materials is not the way to achieve this. 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.	Steel faced PIR core insulated sandwich panel systems, high performance PIR and phenolic insulation boards, daylighting panels. The loss of these products could have an impact on structural loading for existing buildings, and on the ease with

sheathing boards or vapour barriers)?	which energy efficiency levels may be improved/met. Steel faced sandwich panels with a PIR core have been shown, not only to pass BS 8414 in accordance with BR 135, but also to 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. EPIC has reports from independent fire consultants on 7 case studies demonstrating that LPCB certified steel faced sandwich panels did not contribute to fire spread in a wide range of scenarios, including internal and external fires, arson, and incomplete buildings. For example, Wharfedale Hospital, Silsden, West Yorkshire: July 2003 The building consisted of three storeys constructed around a quadrangle. A two- storey section bisected the quadrangle to form a triangular piece of land at ground floor level. The building had a steel frame and all floors were concrete, the upper two concrete floors being on steel decking. The first and second floors were clad with 70mm thick PIR Insulated Panels approved by LPCB to LPS 1181 Part 1 2003 as Grade EXT-B. At the time of the fire, the ground floor had a steel framework in place for cladding, but no cladding had been fixed. All steel beams had been coated with an intumescent paint to give a standard of fire resistance of one hour. The premises were still under construction when the fire occurred. At the date of the fire the ground floor was in use as a storage area for building materials. The fire occurred in stored materials (plastics and paints) in the open ground floor of one section of the building. Damage was caused to the steel beams that supported the first floor, the profiled steel sheets that rested on the beams and the concrete floor that had been laid on the profiled steel sheets.

	The intensity of the fire was such that it had removed the intumescent coating to the beams supporting the first floor. Although rated to provide a one-hour standard of fire resistance the intumescent coating resisted the fire for less than half an hour in this fire. The beams had distorted and the concrete floor at first floor level had dipped above the fire. The expansion of the beams had pushed out the supporting columns. The concrete floor above had cracked due to the movement of the beams. The fire played up the external facing of the building, affecting the panels on the first and second floors. It was observed that: • There was no fire spread to the upper floors • There was damage to the external skin of the cladding to the upper floors but no spread in the insulation of the wall panels and no fire spread to the eaves • The exterior facing of the panels to the first and second floors was damaged by heat and smoke In spite of the significant heat generated by this fire (sufficient to damage the intumescent coating and distort the steel beams); the orientation of the cladding panels (directly above the fire); and the fact that fire stopping was not in place; the cores of the panels did not ignite, did not promote fire spread within the core or to the eaves and did not significantly contribute to the products of combustion. The panels on this project are approved by LPCB to LPS 1181 Part 1 2003 as Grade EXT-B. www.epic.uk.com/fire-performance/fire-case-studies/fire-research-case-studies/
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	Apart from the fact that this would not necessarily improve the fire safety of those buildings involved, there would be a

buildings affected by the ban test likely to be?	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 leading to extra cost, 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. 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 engendering one of responsibility and improved standards. The economic impact would be considerable, at a time when the country and the industry is already vulnerable to the effects of Brexit on the workforce, possible withdrawal of international investment in projects and the availability of materials Buildings won't necessarily be safer, and another Grenfell Tower could potentially still happen. It will be much harder for the Government to meet long term carbon reduction targets – these would need to be revised. 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.	

Response 64

Respondent Details

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	Select one
Please indicate whether you are applying to this consultation as:	
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• Local Authority	
• Building Control Approved Inspector	
• Architect	
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• Fire and Rescue Authority representative	
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• Landlord representative organisation	
• Building Occupier	
• Tenant representative organisation	
• Other interested party (please specify)	Chartered Institution of Building Services Engineers

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

CIBSE Response to the Welsh Government Consultation Document

The Chartered Institution of Building Services Engineers, CIBSE, is the professional engineering institution that exists to 'support the Science, Art and Practice of building

services engineering, by providing our members and the public with first class information'

CIBSE members are engineers who design, install, operate, maintain and refurbish life safety and energy using systems installed in buildings. CIBSE members include specialists in fire safety systems and fire engineering. Others, who are belong to the Society of Façade Engineering, a Division of CIBSE, specialise in the design and installation of cladding systems.

CIBSE is unusual amongst built environment professional bodies because it embraces design professionals and also installers and manufacturers and those who operate and maintain engineering systems in buildings, with an interest throughout the life cycle of buildings.

CIBSE has over 20,000 members, with around 75% operating in the UK and many of the remainder in the Gulf, Hong Kong and Australasia. CIBSE is the sixth largest professional engineering Institution, and along with the Institution of Structural Engineers is the largest dedicated to engineering in the built environment. Our members have international experience and knowledge of life safety requirements in many other jurisdictions. We also have members working in London Underground, with considerable experience in the regulations governing sub-surface stations, which are heavily influenced by the requirements introduced following the Kings Cross fire in 1987.

CIBSE publishes Guidance and Codes providing best practice advice and internationally recognised as authoritative. The CIBSE Knowledge Portal makes our Guidance available online to all CIBSE members, and is the leading systematic engineering resource for the building services sector. It is used regularly by our members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

Response submitted by Dr Hywel Davies, Technical Director, on behalf of the Chartered Institution of Building Services Engineers, 222, Balham High Road, London SW12 9BS

hdavies@cibse.org Tel. 0208 772 3629

Question 1

a. Do you agree that combustible materials in cladding systems should be banned? Yes, with some exemptions, set out in answer to Question 5.

Such a ban should be subject to a further review as findings emerge from the Public Inquiry into the Grenfell Tower Fire, as the response to Dame Judith Hackitt's Independent Review of Building Regulations and Fire Safety emerges and as testing regimes develop over time. The industry is also putting in place measures to improve competency of professionals and tradespeople working on higher-risk buildings. In time, a more competent construction workforce could also merit an evolution of this proposed prescriptive approach, which may well be anomalous to a more performance-based approach to fire and life safety.

Requirement B4 of the Building Regulations already limits the materials that may be used on

the external face of a building, so this is a proposal to extend the scope of the existing ban.

b. Should the ban be implemented through changes to the law? (yes or no/ don't know) Yes – through changes to the Building Regulations. A ban can only be delivered by
legislation, otherwise it is only guidance. As noted in the final paragraph of answer 3a, use of combustible materials for external surfaces is already banned.

It should be noted that there over 450 buildings in England clad in material that is not permitted, ie banned, already. Just changing the scope of what is banned alone will not solve the problems – as Dame Judith Hackitt finds in her report, there is a need for much more wide ranging change in the sector for the proposed ban to be genuinely effective.

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

No other mechanism is appropriate. A ban requires legislation, or else it is not really a ban.

Question 2

Do you agree that the ban should apply:

a. to buildings 18m or over in height?

Yes.

b. N/A

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

Yes, the ban should apply to the entire height of the wall.

d. to high-rise residential buildings only?

No, it needs to be wider than this, see notes below.

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.

Reasons for answers to 4d & 4e include the following considerations;

1) Why should people be asked to work in an office or other non-residential building that is clad in material that would not be allowed if it was a residential building? How will that be presented to the public and how will it help to rebuild public confidence?

2) What if the building is subject to a change of use to residential? Given the past year's experience with identifying cladding on existing buildings, it is almost certain that people will then find themselves living in a tower clad in the wrong sort of cladding for a residential building. This scenario demonstrates the importance of Chapter 8 of Building a Safer Future, which calls for full digital records of buildings. Such records will, if adopted and requiring sufficient detail, provide information about the materials used to construct key elements for future reference, but at present there is no system for capturing such information.

3) Requirement B4, which covers prevention of external spread of fire, does not allow it already, and as noted under Q3, this is effectively a proposal to expand the scope of what is already banned under requirement B4.

4) If the office tower is close to a residential tower then there must be consideration to the potential for spread of fire from one building to the other.

e. Please provide any further information in relation to your answers above [free text]

Consideration should also be given to the use, or banning, of combustible cladding on any building above one storey where there is likely to be a gathering of vulnerable people. This includes care homes, schools, hospitals, places of worship, some leisure and recreational buildings, and certain mixed-use developments. Our rational for this is that vulnerable people do not necessarily have the same capacity to escape as those that are more able.

Further work is required to establish whether the 18m height, which is an historic level, is still the appropriate height to impose tighter restrictions. There does not seem to be any rationale for this 18m in terms of modern firefighting practices. There needs to be a proper assessment in conjunction with the Fire Services.

The ban should also be applied to any building where the cladding short circuits a fire floor or a fire wall, although this is arguably already covered by requirement B4.

Question 3

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

Yes, we agree with use of the European Classification system for this purpose.

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

We support adopting a requirement for A2 or better as this is a definition of non or limited combustibility with respect to external cladding.

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?

We probably agree, although the term “entire wall construction” is not defined. Does it include internal finishes? This may not be technically necessary, and it is almost certainly unenforceable on residential property, as it would require control of internal decoration! This will need real clarity over what is covered by the term “entire wall construction”, and cross referencing to existing documents such as AD B para 6.2 and Diagram 12, for example.

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

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

Yes, the ban should cover the building elements listed.

c. Please provide any further information in relation to your answers above.

Question 5

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

Yes, we agree there should be exemptions for a limited number of wall system components. It would be highly impractical for an outright ban on the use of all combustible materials in all elements. Our proposed approach at this point would be for the regulations to have a prescribed list of elements where combustible materials are considered acceptable, and what the maximum permitted quantities of such materials should be.

This list will need to be drawn up on the basis of an assessment of current knowledge and will, effectively, be "an assessment in lieu of test", and so its development will need to be undertaken with great care in the light of the recent proposals to restrict such assessments.

Since a ban is regulatory, then the prescribed list must also be regulatory and not guidance. However, some guidance on the application of the exemptions may be required.

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

We recommend exemptions for elements for which there is no practical alternative to using materials that are not Class A1 and A2. In our view, this would include elements such as double glazing, gaskets, sealants, internal wallpaper and paint.

Also, where the risk of external fire spread caused by the use of combustible materials would be so minimal that it would be disproportionate to ban their use, such as thin narrow members or small discrete non structural fixings or fixing caps.

c. Would you recommend an alternative way of achieving the policy aims stated above?

We recommend that the list of exempted elements needs to be exhaustive and as far as possible not open to interpretation. The policy and detailed list will need to be reviewed and updated regularly to allow for innovation.

There is a strong case for retaining the use of the BS8414 full scale test regime as a means to demonstrate that the inclusion or introduction of an exempted product or component on the list is safe under prescribed circumstances.

There has to be evidence to support the inclusion of ANY item on an exemption list. Evidence requires testing, and whilst BS 8414 has its detractors, it is adopted outside the UK and it is currently undergoing a technical review, so that those who do have technical concerns now have an opportunity to influence the improvement of the testing regime.

The USA and Middle East use the NFPA 285 test and rigidly apply it. The tested system must be installed exactly as tested without exceptions.

Question 6

Do you agree that:

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

Yes - if work on an existing building falls within the scope of a material alteration as defined by regulations, then the ban should apply. However, it is essential to have clarity on what is meant by 'alteration'. It should not cover minor maintenance, where it would run the risk of discouraging repairs in order to avoid a major cost and project, or it would just be flouted.

Any application to existing buildings should be realistic and enforceable, and should work with current triggers for building control intervention.

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

This question cannot be answered simply without a clear definition of "notified". If the project is using local authority building control and falls within scope of the Regulatory Reform Order, then full plans must be deposited and approved: is this "notification"? However, if an Approved Inspector is engaged, then a Building Notice may be used. This means that a building in scope of the ban and the RRO which is being controlled by the LABC service will have to have the full external wall specification checked, but if it is being controlled by an AI there is no formal check, and in the terms of "Building a Safer Future" this looks like self-policing. Is that what is intended? Will it reinforce public confidence?

This also means that there is no unique trigger point for a ban to apply, as a building notice can be submitted well before a detailed specification of the external walls is developed.

When any ban comes into force it should apply to all new buildings that have yet to start on site in the same way. Under current rules that is not feasible for the reasons set out above. It could be argued that buildings over 18m should no longer be allowed to proceed on the basis of a building notice, but that is a regulatory change and would require consultation, and may not be considered to be the most appropriate answer. But there is no current mechanism for requiring an Approved Inspector to submit full plans. So it would appear that if a ban is adopted, then the impact will depend on the Building Control route being used.

For any building project that is near to starting on site, for which the question "has this project been notified before the ban takes effect" is relevant, there is a high probability, bordering on certainty, that Building Control arrangements and contracts are already in place, and costs agreed. A ban would therefore have an impact on those arrangements.

If the objective is for everyone concerned to be assured that buildings in scope of any ban and being constructed after the date of the ban coming into effect do not use combustible materials in the external wall, as currently proposed, then it must be rational for all such buildings in scope to undergo the same level of scrutiny to confirm that they comply. This is evidently necessary since we have over 450 buildings with ACM cladding which does not meet Requirement B4 but has been installed. The drafting of the transitional arrangements for the coming into force of any ban will be difficult. However, the test that might be considered is "is there a good reason why this project should be allowed to proceed in

contravention of the ban coming into force"?

MHCLG needs to be mindful that building design has a long gestation period, sometimes years. Some decisions that will influence the external wall construction may be taken at a very early stage. In particular, use of systems such as cross laminated timber will be a very early decision. The adoption of the ban may have the effect of terminating projects which are at the design stage using CLT. This will require serious attention.

Changing the design of a cladding system on a building after it has been designed will result in considerable reworking, as replacing like for like is not always a viable solution. Again, it may well be that the ban flushes out practices which are not really allowed under the current regulations, but the critical question is not "what is banned" but "can the ban be effectively enforced so that the public can have confidence that it is effective". This is not addressed in the consultation. It may also be one reason why Dame Judith Hackitt was reluctant to recommend further prohibitions on materials used in external wall construction, knowing that there are such issues as enforcement (and sanctions) to be addressed if the ban is to work any more effectively than the regulatory limitations on the use of ACM materials has worked to date.

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

We need to be very clear what "start" means. It cannot mean a site fence is erected or piece of machinery parked on site or "a shovel in the ground". The test should be to ask whether there is any good reason why the ban should not apply.

If we believe that the extension of what is already banned is going to make buildings safer, then every building that is allowed to proceed without compliance with the new rules is, on that argument, less safe. Allowing that to happen requires a justification, which should be based on a third party assessment of what is being proposed. It should be treated in the same way as existing buildings which have inappropriate cladding on them, where a building by building, risk based professional assessment is required.

Legislating to ban combustible materials is the relatively easy part. Formulating robust transitional arrangements and having robust enforcement and compliance and sanctions in place for those who are determined to try not to comply will be far more challenging.

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 BS8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?

The whole system needs to pass the test and the whole system but be identical to that installed on site. Any changes would be deemed as a non compliance. BS 9414 may, subject to the detail, be relevant here too.

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?

CIBSE does not have evidence. However, we do know how many buildings have cladding

which does not satisfy requirement B4. MHCLG must be aware of the stance of private building owners of buildings with this cladding.

c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?

Is the question correctly stated? Should it read "What the impact of removing access to the BS8414 test for those buildings affected by the ban is likely to be?"

BS 8414 is under review, so it may not be appropriate to comment. As with compliance with B4, it is one thing to have a BS8414 compliant system, it is another for that system to be installed in such a way as to be BS 8414 compliant on site. Evidence from removal of non compliant cladding is giving some cause for concern about installation standards on these projects.

d. 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.)

We cannot offer information on this.

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

Before Grenfell this issue was not on the radar. Many buildings have these products on them, but no one was aware that they had them or that they posed a problem. Many building owners know now but some may not still, and some with limited areas of ACM may consider that they need not take further action. ALL existing buildings and those under construction need a risk assessment to establish the presence of ACM. Where it is present it may appropriate to replace the ACM, or some other measures may be needed. Where the result of a risk assessment is that it is established that fire floors or compartments are short circuited, or ACM is near to access openings or on the ground floor action will be required.

Looking at the bigger picture, and taking full account of Dame Judith's conclusions on the systemic nature of the overall problem, we should:

- Identify any and all buildings that have ACM's;
- Identify if fire floors/walls have potential to be short circuited by ACM's;
- Test for combustibility (simple bomb calorimeter test as per Grenfell response);
- Carry out a risk assessment where eg. short circuiting occurs and cladding is combustible;
- Make changes as required by Risk Assessment;
- Require all such activity to be subject to third party scrutiny and approval.

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 65

Respondent Details

Name	Will Atkinson
Position (if applicable)	Policy Manager
Organisation (if applicable)	Community Housing Cymru
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Email address	Will-atkinson@chcymru.org.uk
Telephone number	07557650386
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	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. However, the ban should also be reflected in the Approved Documents as they are the standard reference interface document for confirming suitable specifications.
c. If no, how else could the ban be achieved?	

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?	Although the risk of a fire occurring in non-residential properties is less a risk exists nonetheless. The risk of fire spread from adjacent non-residential properties to residential also exists. If the ban applies to all properties >18m then future change of use issues will be lessened.
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?	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	No

the entire wall construction?	
b. If no, what aspects of the wall should it cover?	All aspects of the wall except the inner face and elements within the wall cavity, where in existence. A ban covering the entire wall construction may prevent the use of limited combustibility cavity wall insulation and timber framed construction in high rise buildings. However, these elements should be contained within a non-combustible outer skin.
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	

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. Elements within any appropriately sealed wall cavity should be exempted. Additionally, elements on the inner face of external walls such as wallpaper should be exempted. However, all outer elements to wall construction should be non-combustible.
b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Elements within cavity walls should be exempted, provided that the cavity is appropriately sealed. Elements on the inner face of external walls such as wallpaper should be subject to existing regulations.
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
b. the ban should extend to projects that	Yes

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	

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)?	Timber components and some types of cavity wall insulation would be affected.
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:	

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 66

Respondent Details

Name	Tim Macdermott
Position (if applicable)	Director of Operations
Organisation (if applicable)	Merthyr Tydfil Housing Association Ltd
Address (including postcode)	11-12 Lower High Street, Merthyr Tydfil, CF47 8EB
Email address	tim.macdermott@mtha.org.uk
Telephone number	01685 352811
Please state whether you are responding on behalf of yourself or the organisation stated above	Merthyr Tydfil Housing Association 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	
• 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)	

Consultation: Banning the use of combustible materials

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 (Le through legislation rather than the Approved Documents)?

Yes

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

Question 2

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?
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?

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?

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

There will need to be a limited number of exempt materials potentially managed through a registered supplier scheme and the use of approved details

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

We need to introduce some sort of prescriptive control like Robust Standard details – where construction types are predetermined by legislation and we get to pick from a list.

d) If no, what alternative way of achieving the policy aims would you suggest?

Consultation closes 13th September 2018

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 67

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	
• 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?	No
b. If no, to what height, higher or lower, should the ban apply? Explain why	Ban should apply to all combustible materials, regardless of height of building
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	[Free text answer]

Question 3	**Yes/No/Don't Know**
a. Do you agree that the European classification system should be used?	Don't Know
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?	[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
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?	
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?	Don't Know
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?	

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?	Don't Know
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	Don't Know

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?	Don't Know
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Don't Know
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)	Don't Know
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 68

Respondent Details

Name	Matt Davies
Position (if applicable)	Senior Industrial Issues Executive
Organisation (if applicable)	British Plastics Federation
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Telephone number	0207 457 5000
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)	Trade Ass.

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)?	NA
c. If no, how else could the ban be achieved?	Combustible materials are controlled already by Regulation B4 (l) (Part B of Schedule 1 to the Building Regulations 2010) guidance as described in Approved Document B.

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	Please see our responses elsewhere in this submission
c. throughout the entire height of the wall, i.e. both below and above 18m?	No
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?	No
f. Please provide any further information in relation to your answers above	NA

Question 3	Yes/No/Don't Know
a. Do you agree that the European classification system should be used?	We do not support a ban. We agree that the European classification system should be used. We consider "Class A2 or A1" to be an appropriate classification for materials used in wall construction, however not the only one. The BS 8414 large scale test should also remain available for use to rate system performance alongside the prescriptive route.
b. If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	As stated above, we consider "Class A2 or A1" to be an appropriate classification for materials used in wall construction, however not the only one.
c. If no, what class should be allowed in wall construction and why?	We do not support a ban, as consideration of individual components and potential restrictions around them may not serve to increase safety. It is important to assess and evaluate based on the evidence of the large-scale assemblies involving a combination of the components. The BS 8414 large scale test should

	therefore remain available for use to rate full system performance alongside the "Class A2 or better" route, to ensure that these system assemblies meet the criteria set out in BR 135 for large scale testing and not just relying on small scale test data for components that don't include aspects of installation such as joints/fixings.

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 see answer in the further information part.
c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	Please see answer in the further information part.
d. Please provide any further information in relation to your answers above	Whilst we agree that the entire wall system should be assessed in terms of fire safety, it is the outright ban on all combustible materials in the wall construction system that we do not support. Instead, we believe that fire performance based on large-scale testing of façade systems to BS 8414 and classification to BR 135 criteria should continue to be permitted. In the wake of the Grenfell Tower tragedy, the seven DCLG-sponsored large-scale tests conducted according to BS 8414 have shown that a combination that included a 'combustible' product does provide sufficient safety by meeting the criteria set out in building regulations guidance BR 135. Moreover, allowing these products in certain façade systems ensures that their other performance benefits can be included in buildings (e.g. superior insulation and light weight properties and long-term integrity in use) Government test example: DCLG BS 8414 test no.5 involves limited combustibility ACM panels (A2 class) with PIR foam insulation. This combination of materials does meet the criteria set out in building regulations guidance BR 135.

	These tests show that consideration of individual components and potential restrictions around them may not serve to increase safety, as it is important to assess and evaluate based on the evidence of the large-scale assemblies involving a combination of the components. These test results also show that adherence to the regulations can ensure fire safety in buildings over 18m in height. These tests, in conjunction with evidence presented by Expert Witnesses to Stage 1 of the Public Inquiry, also report that materials not compliant with the regulations were present on the Grenfell Tower façade – as outlined by Sir Ken Knight in his letter to the MHCLG Select Committee about the consultation. We refer in particular to DCLG Test 1, which was conducted on the specific combination of insulation and cladding used on Grenfell. Dame Judith Hackitt's final report on the Independent Review of Building Regulations and Fire Safety also noted that the regulatory system covering high-rise and complex buildings is not fit for purpose and there is inadequate regulatory oversight and enforcement provisions within the regulations. These findings also show a better audit trail, tighter regulatory system and better enforcement would serve to increase fire safety in high rise and complex 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?	Those that meet the criteria in BR 135 when assembled as a full system façade and tested in large-scale to the BS 8414 standard. In addition, there are other components (e.g. windows, door height windows, balcony doors and vapour membranes) that may require exemptions.
c. If no, what alternative way of achieving the policy aims would you suggest?	We would recommend assuring compliance with the Requirements of the

	Building Regulations with respect to external fire spread, in line with the recommendations laid out in Dame Judith Hackitt's report.

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 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?	Yes
e. Please provide any further information in relation to your answers above	We support the risk-based approach for existing buildings. We agree that the proposed ban should not apply to existing buildings where no work was being carried out, as outlined in the consultation and that a case –by case risk-based approach to fire safety in existing buildings is most appropriate. This is to ensure a commensurate approach is taken related to priorities and the extent of risk once a decision on a ban has been taken. This should help to explain our answers to parts a, b, c and d, in that the restriction is dependent on risk assessment.

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)?	Certain non-A2 Class insulation could be affected by the proposed change. As noted earlier in question 6, DCLG BS 8414 test no.5 involved limited combustibility ACM panels (A2 class) with PIR foam insulation. This combination of materials does meet the criteria set out in building regulations guidance BR 135. If a ban goes ahead such systems, despite passing the BS 8414 test, would not be compliant.
b. In England there are suggestions that since the Grenfell Tower fire, a high proportion of relevant building work is	We do not have that data. We can only refer to the government's own evaluation in its building fire safety programme

already using elements which meet Class A2 or better. What is your experience?	which has taken place since Grenfell and which is available at: https://www.gov.uk/guidance/building-safety-programme
c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Certain façade systems would no longer be compliant, as noted in Part (a) of this question. Whereas, for example, the fire performance of the individual insulation product from these systems is lower than a non-combustible product, they can still meet the BR 135 criteria and have other performance benefits (i.e. superior insulating properties and light weight properties).
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 do not have that data
e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	NA

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 69

Chartered Institute of Housing Cymru 4 Purbeck House, Lambourne Crescent Cardiff Business Park, Llanishen
Cardiff
CF14 5GJ

Tel: (029) 2076 5760

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

CIH Cymru consultation response

The Chartered Institute of Housing (CIH) is the independent voice for housing and the home of professional standards. Our goal is simple – to provide housing professionals with the advice, support and knowledge they need to be brilliant. CIH is a registered charity and not-for-profit organisation. This means that the money we make is put back into the organisation and funds the activities we carry out to support the housing sector. We have a diverse membership of people who work in both the public and private sectors, in 20 countries on five continents across the world. Further information is available at: www.cih.org

In Wales, we aim to provide a professional and impartial voice for housing across all sectors to emphasise the particular context of housing in Wales and to work with organisations to identify housing solutions.

For further information on this response please contact
Matthew Kennedy, policy & public affairs manager
at the above address or email matthew.kennedy@cih.org

General Comments

CIH Cymru welcomes the opportunity to provide evidence as the Welsh Government considers a ban on the use of combustible materials in the external walls of high-rise residential buildings.

Our response is informed by feedback from our members, our knowledge of the housing industry and expertise from our policy and practice teams.

CIH Cymru supports the development of Welsh policies, practices and legislation that aim to address the key housing challenges we face, to improve standards and supply, promote community cohesion, tackle poverty and promote equality. We promote a *one housing system* approach that:

- places the delivery of additional affordable housing at the top of national, regional and local strategies as a primary method of tackling the housing crisis;

- secures investment to ensure the high and sustainable quality of all homes in a sustainable framework;

- improves standards and develops the consumer voice within the private rented sector

- promotes the concept of housing led regeneration to capture the added value that housing brings in terms of economic, social and environmental outcomes;

- recognises that meeting the housing needs of our communities is a key aspect of tackling inequality and poverty;

- ensures that that there are properly resourced support services in place to prevent homelessness and protect the most vulnerable;

- uses current and potential legislative and financial powers to intervene in housing markets and benefit schemes;

- promotes consumer rights & tenant involvement;

- and supports the continued professional development of housing practitioners

Respondent Details

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Email address	matthew.kennedy@cih.org
Telephone number	029 2076 5760
Please state whether you are responding on behalf of yourself or the organisation stated above	Chartered Institue of 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)	Independent Housing Standards

Introduction

The tragedy at Grenfell Tower has rightly driven the work taking place across the UK to review building standards and emergency procedures linked to fire safety. We note the new guidance produced in this area and we welcome Welsh Government's involvement in this process.

It is vital that this activity continues to focus minds on the task of ensuring tenants/communities continue to have faith in the safety of their home. In the following paper we have provided a response to the questions most relevant to the work of our members.

Consultation questions

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

We agree in principle with exploring how a ban on the use of combustible materials in cladding systems of high-rise residential buildings in Wales could improve the overall certainty in the safety of these homes. Whilst we understand why the policy emphasis is placed on banning combustible materials in cladding systems, we believe there are broader considerations, equally important to shaping the policy landscape going forward – we expand on this below.

It is positive to note that consideration has been given to the recommendations arising from the Hackitt review, recommendation 7.10 specifically dealt with the matter of cladding –

"In relation to the testing of cladding materials, there is currently a choice between using products of limited combustibility or undergoing a full system test. Using products which are non-combustible or of limited combustibility is undoubtedly the lower risk option."

"In the new regulatory framework set out by this review and, as set out in Chapter 2, the greater focus required on key safety aspects from the outset means that the use of lower risk materials would be likely to receive approval by the JCA as a robust layer of protection. Where the person undertaking the work chooses the full system testing option, not only must they ensure that the full system is tested but they will also need to ensure that the potential risks are mitigated by ensuring that the system is properly installed and maintained throughout its life cycle, which creates an ongoing and more onerous responsibility beyond supply and installation."

(Dame Judith Hackitt, Building a Safer Future: Independent Review of Building Regulations and Fire Safety, 2018).

We recognise that there has been a lot of discussion and debate on whether the report should have explicitly recommended a ban on the use of combustible cladding. We can absolutely understand why people would want certain materials banned, but we also understand the point made by Dame Judith Hackitt and indeed the London Fire Brigade that a ban might not actually prove effective in the long- term.

There has clearly been an issue with the use of combustible materials, but the problems identified are so far-reaching that the only way to make sure something like this never happens again is to create a new system of regulation, testing and management which increases accountability across the board.

Whilst a ban may prove effective in reassuring the public, we are concerned that its impact would be limited in practice, potentially stifling innovation and narrowing the view of how fire safety is achieved. We believe that a broader understanding of the circumstances surrounding the Grenfell Tower fire should lead the response placing a whole-system approach at the heart of any future approach.

Following the fire at Grenfell Tower, CIH has worked closely with the Chief Fire Officers Association with the aim of raising awareness of fire safety issues across our sector and highlighting practical approaches that could be taken in relation to fire prevention and safety.

We highlighted some really fundamental things that landlords should be doing.

These included:

- Ensuring that fire risk assessment are conducted regularly – by a competent person qualified to undertake the assessment
- Prioritising actions in response to the risk assessment
- Devising a schedule which prioritises remedial work that needs to be done in response to the risk assessment and setting timescales for these
- Working with fire and rescue services to carry out home fire safety checks
- Installing hardwired smoke detectors in all properties
- Consider whether properties are suitable for the retro fitting of sprinklers
- Communicating in different ways to residents the appropriate action to be taken in the event of a fire.

We believe that these actions in addition to practical measures concerned with the building regulations should be considered as a whole-system approach to driving forward changes that will make a real difference.

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

We believe that lessons can be learnt through the experience of ensuring all new residential dwellings in Wales are now equipped with a fire suppression system. Although, as we highlight below, some challenges remain with this form of safeguard – highlighting the need for robust policy evaluation and support to address shortcomings. As we have emphasised previously, whatever shape this takes, the changes must be embedded in a range of ways, rather than a prescribed list-based approach.

The Technical Guidance was update in January 2016 requiring all new domestic premises to have a fire suppression system installed. A fire suppression system is

defined as an automatic system that controls and extinguishes fires without human intervention. Typically these are sprinkler systems, although other types are available.

In terms of water supply - At this time the water companies in Wales (or serving customers in Wales) will not guarantee a mains pressure suitable for a mains-fed suppression system. Therefore the 2 available system types remaining are:

- Mains fed with in-line booster pump
- Tank fed and pumped

There is a limited market availability of in-line booster pumps at this time, meaning that tank fed systems will be the most common solution. The guidance also includes information on the means of water supply used for systems and the information that should be given to property owners to maintain their systems. We believe that any update to building regulations should be seen as an opportunity to provide further information to property owners and practitioners on all fire safety measure, such as suppression systems and practicalities involved in ensuring their effectiveness.

2. Do you agree that the ban should apply:
a. to buildings 18m or over in height?

We agree with this definition, recognising that it would remain consistent with the definition included in Approved Document B.

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

Based on this being the more progressive and modern version of the classification system we feel that this makes sense.

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

We agree that there should be further exploration on if a ban should cover the construction materials used in the entire wall. However, we also recognise the complexity involved in ensuring all materials meet the standard proposed by the ban. Further research is required to consider the impact on the availability of appropriate products/materials and the feasibility on current developments.

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

We agree with the exemptions proposed.

6. Do you agree that:

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

We agree that this should be the case if a ban is progressed in Wales. Although this should continue to be coupled with robust fire risk assessments once the building is in use and be subject to the ban if future changes fall under the scope of the regulations.

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 70

Respondent Details

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Telephone number	01267246005
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	x
• 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	All parts of a wall construction must be subject

cover?	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**. Carmarthenshire 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't Know

e. Please provide any further information in relation to your answers above	Carmarthenshire 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 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)	
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 71

Respondent Details

Name	Jamie Westcombe
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Organisation (if applicable)	Equality & Human Rights Commission
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Telephone number	02920 447710
Please state whether you are responding on behalf of yourself or the organisation stated above	Equality & Human Rights Commission

	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)	Equality & Human Rights Commission

August 2018

The Equality and Human Rights Commission's response to the consultation on banning the use of combustible materials in the external walls of high-rise residential buildings

Introduction

On 11 June 2018, during a statement on the Government's response to the Grenfell Tower fire to Parliament, the Secretary of State for Housing Communities and Local

Government reaffirmed the Government's intention 'to ban the use of combustible materials on the external walls of high-rise residential buildings, subject to consultation'. A consultation was launched seeking views on proposals to ban the use of certain materials.

Under the EHRC's Following Grenfell project we have responded to this consultation and our response is available to read below.

Question 3
a. Do you agree that combustible materials in cladding systems should be banned?
b. Should the ban be implemented through changes to the law?
c. If no, how else could the ban be achieved?

Our response is yes to questions 3a and 3b. Combustible cladding materials should be banned by taking legislative action, such as amending the building regulations, as the government has proposed in this consultation.

We welcome the clarity and additional public confidence this will bring in terms of the safety of future construction, but much more needs to be done to prevent another Grenfell Tower fire and make all existing high-rise buildings containing combustible cladding safe for residents and other people who access and use them.

However, we wrote to DHCLG about the problems of combustible cladding in existing buildings and to advise them of their responsibilities under human rights law to protect lives in this context, but we have received no response to date. As there is no mention of it in the consultation document, we take this opportunity to remind the government of its positive duty to protect lives under article 2 of the European Convention on Human Rights and schedule 1 to the Human Rights Act 1998 (HRA). This paramount duty requires the state to take appropriate steps within its power to effectively protect the lives of individuals and groups in situations where there is a known real risk to life, or where the authorities ought to have known that.

As we know now, that very situation existed for many years prior to the Grenfell Tower fire. Coroners dealing with the aftermath of fires in high-rise residential buildings, such as the Lakanal House fire in 2009 in which 6 people died, identified the risk of further deaths and what could be done to prevent this in rule 43 reports that were not acted upon by government ministers. Numerous reports by parliamentary committees and other experts also highlighted fire safety risks in high-rise residential buildings containing combustible cladding, but were largely ignored. Fire safety concerns relating to combustible cladding and other features of Grenfell Tower were expressed by Grenfell Tower residents themselves, well before the fire occurred, none of which were heeded.

Unfortunately, over a year after the catastrophic loss of more than 70 residents' lives, many of the very systemic failings that led to the Grenfell Tower fire still exist now, giving rise, in our view, to an ongoing violation of article 2 ECHR/HRA by the state.

Following the Grenfell Tower fire, additional measures, such as employing fire wardens and installing sprinklers, have been put in place in many residential high-rise buildings constructed using combustible cladding, pending longer-term removal that can be carried out when the question of who pays for removal and replacement of such materials is clarified.

Too often, private leaseholders are being held responsible for the full financial costs of removing and replacing combustible cladding throughout high-rise residential buildings under the terms of their lease, where freeholders or developers are not prepared to foot the cost.

Sources of public funding have been identified to remove combustible cladding in high-rise residential buildings occupied by social housing tenants, but the timescales for the remedial work to be carried out is uncertain. Combustible cladding is still present in many other buildings as well, including schools, leisure centres and hospitals. Estimates of the number of buildings affected run into the thousands, with the estimated costs of replacing combustible materials running into many millions of pounds. All those costs stem from the state's failure to provide a building construction and fire safety system that is fit for purpose, consistent with its responsibilities to have appropriate legal and administrative measures in place that effectively protect against real known risks to life under article 2 ECHR/HRA.

Dame Judith Hackitt's Independent Review of Building Regulations and Fire Safety catalogues a multitude of systemic failures for which the state is ultimately responsible. These include: opaque construction rules resulting in widespread use of unsafe construction materials; poor fire safety tests for building products that were not fit for purpose in reliably identifying what was combustible in real life situations; weak and ineffective inspection and regulation by the authorities, some of whom had clear conflicts of interest; lack of public transparency, with little attention given to residents whose lack of power meant their voices were all too easy to ignore.

Some of the possible solutions to these problems have been set out in the Hackitt report and by the House of Commons Housing, Communities and Local Government Committee in its 'Independent review of building regulations and fire safety: next steps' report dated 18 July 2018 (HC555).

While a ban on combustible cladding is welcome, we strongly urge the government to rapidly speed up the scale of progress in addressing the systemic problems that led to the Grenfell Tower fire and which remain in its aftermath.

Question 4. Do you agree that the ban should apply:
a. to buildings 18m or over in height?
b. throughout the entire height of the wall, i.e. both below and above 18m?
c. to high-rise residential buildings only?
d. to all high-rise, non-residential buildings, e.g. offices and other buildings, as well as residential buildings?

We consider the ban must be broad and comprehensive, so we support option d above with the provisos that, first, urgent action is taken to enable combustible cladding to be swiftly removed from existing buildings and, secondly, other urgent reforms to the building construction and fire safety system are undertaken to comply with the state's article 2 ECHR/HRA legal duties, which we summarised in question 3.

Question 5.
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?
b. If no, what class should be allowed in wall construction and why?

We do not have the necessary expertise to advise on which specific classification system should be selected, but what is selected must be much more robust and effective than the current system in reliably identifying combustible wall construction building materials in tests replicating real life situations, which effectively protect people against the risk to their lives.

Question 6.
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?

We support the ban being as comprehensive as possible for the same reasons set out in previous responses.

Question 7.
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. Would you recommend an alternative way of achieving the policy aims stated above?

We do not have the technical expertise to express a view on the limited number of components that should be listed as exempt from the proposed ban or an alternative means of achieving the associated policy aims. Exceptions to the ban must be considered and applied very carefully, if they are to exist at all. The government should always err on the side of caution in terms of protecting lives over the cost and inconvenience to others.

Question 8. Do you agree that:
a. a risk-based approach is appropriate for existing buildings?
b. the ban should apply to proposed alterations to existing buildings including over-cladding?
c. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?
d. the ban should not affect projects where building work has already begun?

For reasons already set out in our response to earlier questions, we do not think any of those options adequately addresses the scale of known problems in terms of adequate and safe housing, so the government's proposed combustible cladding materials ban must apply to existing buildings regardless of whether there are proposed alterations, as well as future building construction.

Question 9.
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)?
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?
c. What the impact of removing access to the BS8414 for those buildings affected by the ban test is likely to be?
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?
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.)
f. Please provide any further comments on the likely impact of this change for construction (eg supply chains).

We do not have the knowledge, intelligence-base or expertise to answer this technical question.

Jamie Westcombe

Uwch Swyddog Cysylltiol / Senior Associate

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Comisiwn Cydraddoldeb a Hawliau Dynol | Equality and Human Rights Commission @ehrc in

Mae'r Comisiwn yn croesawu gohebiaeth yn y Gymraeg ac yn Saesneg/The Commission welcomes correspondence in English and in Welsh

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:**