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National Fire
Chiefs Council

The professional voice of the
UK Fire & Rescue Service

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Consultation: '*Review of the ban on the use of combustible materials in and on the external walls of buildings'*
Building Safety Programme
Ministry of Housing Communities and Local Government
4th Floor, Fry Building
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London
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Sent Via Email to: ADBconsultation@communities.gov.uk

22 May 2020

To the Ministry of Housing, Communities and Local Government,

Please find attached the National Fire Chiefs Council (NFCC) response to the Approved Document B consultation paper *'Review of the ban on the use of combustible materials in and on the external walls of buildings'.*

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

In principle, the NFCC supports extending the ban on combustible materials in external wall systems, however we urge caution in ensuring that a ban does not create complacency that issues identified by the Building Safety Programme have been fixed.

NFCC has underlined, banning things is no guarantee that people will follow the rules, and it is our view that much of the combustible cladding on the side of buildings is already banned under the current regime (requirement B4 of the Building regulations states that "the external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and location of the building").

NFCC agree with the description that the design and build process is a 'broken system'. There are many necessary solutions that have been identified, for example, strengthening oversight for construction products, and removing the ability for people to choose their own building control regulator.

Extension of the Ban

NFCC is supportive of the review of the current ban and of the direction to use evidence to qualify the rationale used. NFCC are of the opinion that since the original consultation in 2018 there has been little evidence of a culture change within the building industry which would lead to greater safety in the built environment. It is our opinion that some within the wider industry are not acting responsibly when designing and approving buildings.

For this reason, we recommend that the current review should take this into account when reviewing the ban in order to ensure that any changes or extensions are realistic, workable and able to be enforced by building control approvals bodies. In addition, NFCC advocate that the current building control system is overhauled to ensure that it is robust, independent of client and market influence and has sufficient teeth to enforce appropriate fire safety standards as necessary. Building Control Officers should also be suitably competent to undertake their role. NFCC recommend that the ban is extended in terms of the threshold – and we would have no objection to this being applied across all building heights for specific purpose groups, as discussed below.

Height Threshold

NFCC supports extending the ban below 18m, but rather than relying solely on height, should also take account of the occupancy of a building. Buildings where there is an evacuation strategy which relies on a delay (for example, stay put, phased or progressive horizontal evacuation) should be designed in such a way that fire spread on the exterior of the building should not compromise safety. For this reason, in addition to the proposals in the consultation to expand the definition of relevant buildings, the ban should be extended to encompass hotels, hospitals, care homes, residential accommodation of any height, anywhere where people are likely to be sleeping, and anywhere where people may be incapable of independent escape.

Materials

NFCC is supportive of a review of the materials covered by the ban, to ensure that the requirements of schedule B4 of the Building Regulations are met. We are also conscious that any changes to the ban should be based on evidence and ensure that buildings are constructed safely. The reference to external walls should be clearly defined to ensure that the ban is applicable to the aspects of the building which are relevant (this definition should also make reference to the requirements for insulation and cavity barriers).

The clear aim of this review is to ensure that buildings are built to safer standards in future and NFCC would again like to emphasise that to date, there is little evidence of a culture change within the industry. The focus of this review should be on making people safe and ensuring that they feel safe, and there must be a plan in place to achieve this.

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

Mark Hardingham

Review of the Ban on the use of Combustible Materials in and on the External Walls of Buildings

Question 1	**Respondent Details**
Name	Mark Hardingham
Position (if applicable)	Protection and Business Safety Committee Chair
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Please state whether you are responding on behalf of yourself or the organisation stated above	Responding on behalf of the National Fire Chiefs Council (NFCC)

Question 2	**Select one**
Please indicate whether you are applying to this consultation as:	
Fire and Rescue Authority representative	X

Question 3	
Do you agree that hotels, hostels and boarding houses should be included in the definition of relevant buildings in Regulation 7(4)?	Yes
Please provide evidence to support your answer.	

Hotels, hostels and boarding houses provide accommodation for people to sleep in unfamiliar surroundings. For this reason, these types of accommodation have traditionally been designed with a greater degree of fire protection measures, such as fire resistance and fire detection and alarm systems. Escape from these buildings is reliant on these elements working as required; if the exterior walls of the building provide a medium for fire spread that means the internal arrangements are compromised then it means there is an increased risk to the occupants. This would be particularly applicable to buildings where the external wall system extends over the exterior of the means of escape and staircases in the buildings.

This is supported by evidence provided in the fire engineering published document from the British Standards Institution *PD7974 – 6 :2019 Human Factors*, which gives evidence that evacuation times in these types of accommodation can be in the region of 15-40+ minutes depending upon factors such as standard of automatic fire detection and alarm systems and the level of management in the premises.

Variations in staffing and design which the industry is seeking to utilise, highlight further need for these types of accommodation to be included. Whilst it is true that these building

types are often staffed overnight and can have multiple escape routes[1] this is not always the case. Hotels currently exist with no staff on site for large periods, and those few staff (or even a single staff member that are on site may be limited to maintenance/cleaning personnel only on site for a short period of time and who are not intended, or trained for, supporting guests in an evacuation. Additionally, there are tall hotels already built, and several being proposed, which rely upon a single stair and therefore do not have alternative escape routes.

The lines between hotels and residential blocks in terms of design are sometimes blurred, for example in 'aparthotels'. From FRS experience, these designs are sometimes attempting to get the benefit of a residential design (e.g. a tall single stair), but with incompatible solutions for protection of the stair/ventilation and an incompatible evacuation strategy.

Hostels and boarding houses have additional risks in terms of other potential dependencies of occupants which may increase their vulnerability and/or ability to react in a fire situation. While these are often low-rise, tall hostels/boarding houses can and do exist and should therefore be included in the ban.

The extension on the ban to these occupancies would have additional benefits where fires do occur, by slowing the fire spread on the external envelope of buildings which would allow more time for firefighting. It would also ensure that firefighter access inside these buildings would be unaffected for a prolonged period, should there be a need to rescue occupants.

Should any other building types be included within the scope of the ban?	Yes

Please provide details and evidence to support your answer.

As detailed in the answer above, any building where the safety of occupants could be put at risk by fire spreading on the external envelope of the building which could impact the evacuation strategy should be included in the ban. This would be particularly the case for premises employing any form of evacuation strategy which is not a simultaneous evacuation of the building. Hospitals are included in the current ban, but other premises which utilise a progressive horizontal evacuation strategy, such as other healthcare buildings and premises offering residential care should also be included. This is due to the nature of these strategies meaning that the evacuation of the building to outside is the last resort, with the ideal being that residents can be kept in the premises for as long as possible to ensure their safety due to their vulnerabilities.

NFCC are of the opinion that anywhere where people are likely to be sleeping, and anywhere where people may be incapable of independent escape should be included in the ban.

[1] Paragraph 25, MHCLG Review of the ban on the use of combustible materials in and on the external walls of buildings including attachments – a consultation paper

Question 4	
Do you agree that the height threshold of the ban should be reduced to at least 11m and above?	Yes
Is there another lower height threshold that should be considered? Please provide evidence.	

We are not of the opinion that a significant culture change has occurred, and it is our opinion that some within the wider industry are not acting responsibly when designing and approving buildings. There is therefore an argument that as the Building Regulations expectations of limiting external fire spread apply to a building of any height, coupled with an industry that still does not universally act responsibly, that a complete ban on combustible materials on any building of any height may be worth considering.

We continue to see evidence of designs which pay no heed to control of materials outside the current scope of the ban, so we have reservations about its influence of the buildings outside the ban. It appears to be the opinion of some design teams that any materials regardless of their fire performance are appropriate for buildings below 18m in height. Therefore height thresholds in the ban are useful on the one hand because they apply a strict control, but could be counterproductive on the other hand as they may be influential in perpetuating the incorrect position of some in the industry that the materials below this height are uncontrolled (as they are not subject to a ban, nor controlled by guidance in Approved Document B).

As outlined in previous NFCC responses to government consultations, height thresholds should be accompanied by a number of floors equivalence (e.g. 11m or 4 floors). FRSs continue to see 'gaming' of the system where height thresholds are used for compliance by stealth. There have been multiple recent examples of residential blocks of flats, for example, that have been designed to a height of 17.99m, with minimal consideration for the performance of the external wall materials as opposed to an 18m high building where it would be subject to the ban.

It is the functional requirements of the Building Regulations, e.g. B4 of Schedule 1 to the Building Regulations 2010 that should be complied with when designing a building. These regulations while having regard to the height of the building, apply to any height. Simply refining the ban may therefore do little to drive the industry towards the culture change required to design to meet, and preferably to exceed the functional requirements of the regulations or to exceed minimum expected in guidance; rather than just adhere to a ban.

The ban should be linked to reforms of the building control regime to provide robust independent oversight with sufficient teeth to ensure compliance with the functional requirements of the Building Regulations, not just the prescriptive portion of the Approved Document. Additionally, there should also be a link to the competency requirements for Building Control Officers to ensure that they are able to understand and enforce the requirements of the ban.

If the culture was correct, then there would be less need for a ban. However, as the entire industry has not adopted the required culture change, NFCC recommend that the ban is extended in terms of the threshold – and we would have no objection to this being applied across all building heights for specific purpose groups.

Do you agree that an appropriate research project regarding building risk should be carried out to inform further review of the scope of the ban?	Yes

Please suggest the type of evidence you consider should be included in further review of the height threshold of the ban.

Although we have indicated agreement that further research would be useful, NFCC do not believe that this should be a reason for any delay in implementing the ban for the buildings types and thresholds outlined in our answer to Question 3.

National fire statistics should be considered as a source of evidence; however, we advise caution in over-reliance on these. Whilst the use of combustible wall materials have apparently become commonplace over the recent years, there is little data on the total number of these buildings and the proportion of the entire building stock that they encompass. Therefore, the number of fires in these buildings is difficult to reconcile as a data set.

The views of residents who live in buildings with combustible cladding will be important evidence as they have had first-hand experience of the impact of this situation. Some residents have been exposed to this concern and uncertainty for almost three years and their opinions will be a vital source of information.

Additionally, the results of MHCLG's External Wall Systems data capture exercise may provide indicative information on the potential likelihood that existing building stock comply with the Building Regulations.

Please provide any evidence you believe should be considered in further review of the height threshold of the ban.

The current review of the guidance contained within Approved Document B should be looked at to inform the review of any height thresholds for the ban on combustible materials. Buildings that are reliant on a delay to evacuation, or offer significant fire protection in terms of internal fire resistance should be reviewed to ensure that rapid fire spread over the exterior envelope of a building would not jeopardise the evacuation strategy (e.g. premises such as housing with a stay-put strategy below 18m in height)

Question 5	
Do you agree that metal composite panels with a polyethylene core should be banned from being used in external wall construction of any building regardless of height or purpose?	Yes
If no, why not?	N/A
If their use was to be restricted, do you agree with the proposed definition?	Yes
Please provide evidence to support your answer	
NFCC are unclear about the basis behind the 30% by mass polyethylene limit but trust this is based on scientifically demonstrated research which is applicable for the UK market; we would welcome the publication of this evidence We recommend that in addition to polyethylene, consideration should be given to other materials which might have similar fire characteristics. This may be better represented in terms of scientific characteristics (e.g. calorific value and mass loss rate) for the purposes of stakeholder consultation and regulation.	

Question 6	
Which components, if any, do you consider should be included in the list of specified attachments in Regulation 2(b) and why?	
In addition to those items already listed NFCC suggest consideration is also given to other items attached to a building which have the potential to support fire spread. For example FRS have examples of fire spreading externally and breaching flats on multiple floors where the primary mechanism for this being the burning of PVC downpipe between balconies. Consideration might be given to restricting the use of combustible rainwater systems within a certain distance of potential storage of combustible items such as those on balconies and other external wall openings, such as windows. Similarly, the use of large combustible signs extending over several floors of buildings should be considered for incorporation into the ban.	
Do you agree that solar shading products need to achieve class A2-s1, d0 or A1 in line with the requirements of the Building (amendment) Regulations 2018?	Yes
Do you agree that retractable awnings fitted to the ground storey should be exempted?	Don't Know

If yes what restrictions, if any, may be placed on these?

To allow retractable awning to be exempted there would need to be evidence of control of the such installations by the Responsible Person under the Regulatory Reform (fire safety) Order 2005 (FSO), (or similar control mechanism under any new legislation). While there is an expectation under the FSO that Responsible Persons need to co-operate and co-ordinate, tension can arise where the safety of persons under control of one Responsible Person is impacted by a risk originating from an area under control of a different Responsible Person (as might be the case in the example provided of an awning for a ground floor commercial premises with residential accommodation above, which could be under someone else's control). However, it is appreciated that this might be a difficult restriction for this ban to encompass.

While the products used in construction can be controlled by a ban, the use of balconies themselves and what is stored on them is more difficult. Similarly, whether residents open their windows or should not be impacted by the use of combustible materials below them.

A potential restriction might be that the retractable awnings may be exempted in the case where there is no balcony, or openable windows within a certain distance above. While there is an argument that a retractable awning provides no more risk than other items which potentially could be located at ground floor level, those other items should equally be considered (and mitigated or controlled) via the premises fire risk assessment and are not attached to the building.

Question 7

Which components, if any, do you consider should no longer be included in the list of exemptions in Regulation 7(3) and why?

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

Which additional components, if any, should be included on the list of exemptions in Regulation 7(3) and why?

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

Question 8	
Do you agree that cavity trays should, by temporary relaxation for 18 months, be exempted from the requirements of Regulation 6(3) and 7(2)?	Don't know
If yes, what if any conditions should be imposed on their use?	
NFCC is not best placed to answer this question. Those with more experience and knowledge in this area will be able to provide more comprehensive detail. The decision on the length of relaxation should be informed by the timescale that will be required for research and development of products that are non-combustible for this function. Where the cavity trays in question are installed, they should be protected against the direct application of a flame either externally, or a flame making its way into a cavity (e.g. by way of an air brick).	

Question 9	
Do you agree that laminated glass in balcony construction should continue to have to achieve A2-s1, d0 classification or A1?	Don't know
Please provide evidence to support your answer where possible and discuss specific materials or products.	
NFCC is not best placed to answer this question. Those with more experience and knowledge in this area will be able to provide more comprehensive detail. Further testing of laminated glass would be beneficial. While this may have to be bespoke testing, it will be beneficial to understand how various laminated glazing products perform in conjunction with typical items stored on balconies.	

Question 10	
Do you agree that additional clarification in Approved Document B, that roofing membranes are not required to achieve A2-s1, d0 classification or higher when used as part of a roof connecting to an external wall, is not required?	Don't know
Please provide evidence to support your answer where possible and discuss specific materials or products.	
NFCC is not best placed to answer this question. Those with more experience and knowledge in this area will be able to provide more comprehensive detail.	

If the performance classification of a wall is deemed not to be required at this junction, there should be a limit as to how far those materials extend into the wall (i.e. no further than xx mm).

Note: the wording of this question taken from section 11 of MHCLG Review of the ban on the use of combustible materials in and on the external walls of buildings including attachments – a consultation paper differs from that on page 10.

Question 11	
Do you agree with the proposal of expanding the exemption of the use of water proofing and insulation material from below ground level to up to 250mm above ground level?	Don't know
If yes, what other conditions should be imposed on their use if any?	
NFCC is not best placed to answer this question. Those with more experience and knowledge in this area will be able to provide more comprehensive detail.	

Question 12	
Do you agree with the proposed expansion of classifications required for materials used horizontally to include Class A2fl-s1 and Class A1fl?	Yes
If no, please explain why and provide evidence where possible.	
While we agree with the proposal to incorporate the horizontal classifications, we note that the current tests can account for smoke production but not for flaming droplets. While we appreciate the tests are very different vertically and horizontally and this places limits on what can be determined by the tests, we recommend a method is developed where the flaming droplets can also be assessed and classified for the horizontal applications (this should account for the potential of fires being spread by pooling of droplets which can lead to horizontal spread).	

Question 13	
Do you agree that Regulations 7(2) and 6(3) should be amended to reference the current BS EN 13501-1 standard?	Yes
If not, please explain why	
N/A	

Question 14

Please provide any additional evidence on costs, risks and benefits which should be considered in an assessment of impacts of this consultation

NFCC is not best placed to answer this question on costs. Those with more experience and knowledge in this area will be able to provide more comprehensive detail.

With regard to additional benefits that should be assessed as part of the impacts of the consultation. The experience of residents in buildings with combustible cladding forming part of the external wall system has been well documented in terms of the negative impacts of not feeling that they are safe to live in their own home. The benefits of extending the ban to encompass all such occupancies would lead to positive safety impacts for occupants of future buildings.

The effect on safety would also extend to those needing to fight fires in future as they would be able to plan operational tactics with more certainty and respond more effectively to incidents.

Also, the extension of the ban as NFCC have recommended would have additional future benefits in that there would hopefully be lesser need for public sector resources to be involved in extensive remediation programmes. The present culture has meant that significant additional public resources (from FRSs and others) have been consumed in response to inappropriate building materials being used on buildings, including £1.6bn of Government funding for remediation.

Are you aware of any particular equalities impacts for these proposals? How could any adverse impact be reduced and are there any ways we could better advance equality of opportunity or foster good relations between people who share a protected characteristic and those who do not? Please provide evidence to support your response.

Vulnerable communities are disproportionately affected by fire and feel its affects most acutely. Fire protection has the single biggest benefit for those in the community who are less able or unable to self-evacuate from a building, as proper fire protection measures should mean they are safe to stay in a building where there may be a fire in another compartment. The proposal to extend the ban on the use of combustible materials is likely to make buildings safer and decrease the likelihood of fire spread on the external surface of buildings. This will increase the chance that it will be safe to stay in a building where a there may be a fire in another compartment and allow building evacuation policies such as ‘Stay-Put’ or ‘progressive horizontal evacuation’ to be applied more effectively.

In response to the consultation on the Technical Review of ADB, NFCC have previously called for greater protections in approved guidance to meet the needs of vulnerable persons across the built environment. Relying on evacuation as a sole safety strategy building design could discriminate against disabled and vulnerable people. Evacuation strategies must ensure equity in terms of disabled and vulnerable people and consider individuals’ rights to not incur any further deterioration in their health and to maintain their dignity during this process. A review of the current guidance for the Building Regulations

should consider all options, such as additional use of evacuation lifts and a review of the use of refuge areas. Increased use of evacuation lifts should be considered as these would not only benefit an aging population, but also higher rates of obesity and other vulnerabilities which prevent people from safely going down stairs in an evacuation.

Some recent fires in buildings lower than 18m in height have resulted in total building failure. The research and evidence support the view that sprinklers would have extinguished or suppressed these fires in most cases[2] and where they did not, they would certainly have provided residents and firefighters with additional protection, and significantly mitigated damage[3].

For existing buildings, NFCC believes the following points would advance equality of opportunity between people who share a protected characteristic and those who do not

• NFCC supports automatic fire suppression systems (AFSS) as being significantly beneficial in all existing sleeping risk buildings, including high-rise residential buildings regardless of overall building height

• Mandatory requirement to retrofit AFSS in all high-rise residential buildings over 30m that are served by a single staircase (regardless of future refurbishment)

• Mandatory requirement to retrofit AFSS where buildings currently exceed 30m (when these buildings are scheduled to be refurbished)

• Mandatory requirement to retrofit AFSS in all residential buildings with a storey of 11m (or 4 floors) and above, on a risk assessed basis. This requirement should be tied in with the proposals for a Safety Case regime whereby persons responsible for buildings have to justify the safety of all building occupants (which would include accounting for vulnerable persons and building deficiencies, such as lack of compartmentation).

[2] Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis from Fire Service Data May 2017

[3] Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom: An Analysis from Fire Service Data Incidence of Deaths and Injuries in Sprinklered Buildings: A Supplementary Report March 2019