

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

A consultation paper



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Scope of the consultation

Topic of this consultation:	This consultation seeks views on the proposed ban of combustible materials. The proposal is in line with the Secretary of State's commitment in Parliament on 11 June 2018 to consult on banning the use of combustible materials in the external walls of high-rise residential buildings.
Scope of this consultation:	Building Regulations.
Geographical	These proposals relate to England only.
scope:	
Impact	N/A
assessment:	

Basic Information

Body/bodies responsible for	Ministry of Housing Communities and Local Government (MHCLG)
the consultation:	
Duration:	This consultation will last for eight weeks from 18 June 2018 until 14 August 2018.
Enquiries:	For any enquiries about the consultation please contact The MHCLG Building Regulations team by emailing:
	buildingregsteam@communities.gsi.gov.uk
How to respond:	You may respond by completing an online survey at: https://www.surveymonkey.co.uk/r/VYXQ6Z5
	Alternatively you can email your response to the questions in this consultation to: buildingregsteam@communities.gsi.gov.uk
	If you are responding in writing, please make it clear which questions you are responding to.
	Written responses should be sent to:
	Banning the use of combustible materials in the external walls of high-rise residential buildings, 2 SW, Fry Building, 2 Marsham Street, London, SW1P 4DF
	When you reply, it would be useful if you confirm whether you are replying as an individual or submitting an official response on behalf of an organisation and include: - your name; - your position (if applicable); - the name of organisation (if applicable);

	an address (including past ands).
-	an address (including post code);
-	an email address; and
-	a contact telephone number

Introduction

- 1. On 11 June 2018, during a statement on the Government's response to the Grenfell Tower fire to Parliament, the Secretary of State reaffirmed the Government's intention "to ban the use of combustible materials on the external walls of high-rise residential buildings, subject to consultation". This consultation is seeking views on our proposals to ban the use of certain materials.
- 2. The commitment to consult on banning combustible material was originally made on 17 May 2018 during the Secretary of State's Oral Statement to Parliament on the day the final report of Dame Judith Hackitt's Independent Review of Building Regulations and Fire Safety was published.

Background

- 3. The Building Regulations 2010 (as amended) require that external walls on all buildings adequately resist the spread of fire over the walls and from one building to another (Paragraph B4 of Schedule 1). Statutory guidance in Section 12 of Approved Document B on Fire Safety Volume 2 (Buildings other than Dwelling Houses) sets out two ways that external walls may meet the Building Regulations requirement for resisting fire spread:
 - The first is for each individual component of the wall (surface, insulation, filler, etc.) to meet the required standard for combustibility.
 - The second is to ensure that all the combined elements of a wall, when tested as a whole installed system, adequately resist the spread of fire in accordance with the (British Standard) BS 8414 test.
- 4. This guidance should be read in conjunction with Appendix A of the Approved Document B which outlines how tests should be carried out for the performance of materials, products and structures and establishes the principle of assessments in lieu of tests. The Department has consulted separately on such assessments.
- 5. Since the Grenfell Tower fire there has been much debate about compliance and interpretation of these provisions. Similarly, some have argued that the BS 8414 test is not sufficiently robust. The Government stands by the advice issued by the Expert Panel that wall systems that have met BS 8414 can be considered to be safe if they have been correctly installed and maintained. However, Government has heard the concerns of many that combustible cladding is not explicitly banned under statute.
- 6. Dame Judith Hackitt's review has identified serious failings with the construction industry and the regulatory system and has proposed a radical approach to address them. Reform of the scale envisaged by Dame Judith will take time and the Government, in response to public concern, considers that in addition to longer-

term reform there is also a case for immediate action in relation to external fire spread. Dame Judith also indicates that when choosing between products that are non-combustible or of limited combustibility and products undergoing full-scale system tests, the lower risk option is to use products that are non-combustible or of limited combustibility.

- 7. This consultation complies with the duty on the Secretary of State in section 14 of the Building Act 1984 to consult the Building Regulations Advisory Committee and other representative interests on proposed changes to the substantive requirements in the Building Regulations.
- 8. This consultation is seeking views on our proposals to ban the use of certain materials. We will produce a detailed impact assessment based on the information we receive from this consultation to inform our final policy decision.
- 9. The Government response to this consultation will also take into account any emerging findings from the Public Inquiry into the Grenfell Tower fire.

Proposed Approach

- 10. As noted above, currently there are two ways to demonstrate compliance with Building Regulations requirements in Approved Document B. The second of these the BS 8414 test is well established and has been developed over a number of years under the auspices of the British Standards Institution (BSI). This test method is also recognised in other international jurisdictions. Recent concerns expressed about the test are being considered by the relevant technical committee of the BSI. The Government agrees with the advice of the Expert Panel that systems which have passed the BS 8414 test and have been correctly installed and maintained and therefore meet Building Regulations guidance, provide a safe way to ensure that wall system will resist the spread of fire.
- 11. However, the Government also recognises the concerns that the BS 8414 test does not offer as straightforward a way of meeting the requirements of the Regulations as would a ban on the use of combustible materials. We also note Dame Judith's view that using products which are non-combustible or of limited combustibility is undoubtedly the lower risk option. The Government therefore considers it right to consult on a ban which would as a consequence remove the flexibility offered to cladding design by the BS 8414 test on high-rise residential buildings.
- 12. We are minded to make the change through legislation by amending the Building Regulations to include a specific ban. Failure to comply with the ban would be a breach of the Building Regulations 2010. Those not complying would be open to prosecution in the Magistrates' Court. The Court has powers to impose an unlimited fine. We have considered amending the guidance in the Approved Document B as an alternative to specify what materials should be used, but as the guidance in Approved Documents is not mandatory it would not deliver the policy intention of a complete ban.

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?
 - 13. A ban would also remove the option for developers to use an assessment in lieu of a test (sometimes referred to as a "desktop study") to demonstrate compliance. The Government has recently consulted on restricting or banning the use of assessments in lieu of a test. The results of that consultation will be taken into account in considering the results of this consultation.

Buildings in scope of the ban

- 14. The Hackitt review was focused principally on high-rise residential buildings and concluded that a suitable trigger was buildings of 10 storeys or more. However, we consider that a ban on combustible material should apply to buildings 18m or over in height, which would align with current building regulations guidance. This will prevent having different requirements for buildings of 18m and for buildings of 10 storeys or more. We also consider that to avoid complexity, the ban should apply throughout the entire height of the wall.
- 15. The risk to life from fire is greatest in residential buildings, because they can be difficult to evacuate, which is why they have additional protective measures. High-rise buildings used for other purposes, such as hotels and office buildings have different evacuation strategies and the risks are lower. We therefore consider that the ban should apply to blocks of flats and similar building uses.

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?

Definition of combustibility

- 16. Banning combustible materials requires consideration of what is meant by "combustible" and what materials would no longer be allowed in construction projects if a ban was put in place.
- 17. There are a number of possible classifications for combustibility that would be used (UK classification, European classifications and other international assessments). For some years, the UK has been in transition from British Standard classifications for combustibility to the European classification system. The current guidance in Approved Document B includes reference to both systems in parallel. The Government considers that it would be more straightforward to reference a single system and that this should be the more up-to-date European system.
- 18. The European Classification system for combustibility is set out in BS EN 13501 and classifies construction products from Class A to Class E using a series of tests. Class A materials have the best performance in a fire; Class A is in turn divided into two sub-classes, Class A1 and Class A2¹. We are minded to adopt A2 or better as the acceptable classification under the proposed ban. This is in line with many other EU Member States and in Scotland.

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?

Defining the scope of a ban on "cladding"

19. Cladding is the layering of a number of materials to form the external fabric of a building. In construction, cladding is used to provide a degree of thermal and acoustic insulation and weather resistance, and to improve the appearance of buildings. This can be placed on a building during its initial construction or during a refurbishment.

Class A2, s3, d2 – Products are described as having no significant contribution to fire at any stage. BS EN 13501 sets several thresholds for combustion when tested to EN ISO 1182, or both EN ISO 1716 and EN 13823. One of these thresholds is a maximum heat of combustion of 3MJ/kg. A typical product meeting this classification is plasterboard.

For comparison, Wood has a typical value of 15 MJ/Kg and Polyethylene of around 42 MJ/Kg.

¹ Class A1 - Products are described as having no contribution to fire at any stage. BS EN 13501 sets several thresholds for combustion performance when tested to both EN ISO 1716 and EN ISO 1182. One of these thresholds is a maximum heat of combustion of 2MJ/kg. Typical products meeting this classification include most inorganic materials such as metal, stone, and glass.

- 20. The proposal is to ban the use of materials which do not meet class A1 or A2 from use in the walls of residential buildings which are 18m or over. The external wall in such buildings is usually separate from the structural frame. The ban would cover the complete wall assembly, including the inner leaf, insulation and the façade or cladding which provides the outermost layer of the external wall.
- 21. There is a wide range of technologies used in the construction of external walls for tall buildings which might not always be considered to be cladding. Each technology presents different potential mechanisms for fire spread.
- 22. We have considered limiting the ban to the following products:
 - Banning Aluminium Composite Material with a polyethelene core.
 - Banning combustible "rainscreen" products (panels used to form the external face of the wall).
 - Banning combustible insulation products (whether behind a rainscreen or otherwise incorporated into a wall).
- 23. However, each of these options would still allow the use of other combustible materials with the potential significantly to contribute to fire spread. This would not meet the policy intention. We therefore consider that for a ban to be effective it should cover more than just the surface of a wall and any insulation materials and instead cover the entire wall construction from the internal face of the wall through to its external face.
- 24. Moreover, there have also been situations where the materials used in the construction of balconies and window spandrels have been implicated in vertical fire spread. We consider that a ban should also include similar components of the external wall/façade and attachments to the external face.

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?

Exemptions

25. If, as suggested above, the proposed ban on the use of combustible materials covers <u>all</u> components of the wall system, we are mindful there may be some components of the wall system that are necessary for the wall to function correctly, and where a Class A1 or A2 product is not available.

We consider that it may be necessary to exempt some components from the ban where:

- there is no practical alternative to using materials that are not Class A1 or A2; 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.

This may, for example, apply to internal wallpaper and paint, window frames, gaskets and seals, vapour membranes, surface finishes and laminated glass.

We would welcome views on how to specify the ban in a way that achieves our policy intent without inadvertently making it difficult or impossible for walls to be constructed.

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?

Application of the ban to existing buildings

- 26. Building regulations set standards for building work which is to be carried out; they do not impose requirements on existing buildings unless the owner chooses to do work which triggers the regulatory regime. This approach means that changes to the regulations and the standards they impose can be amended periodically in line with scientific and technological developments without imposing burdens on existing buildings which are disproportionate to the level of risk. Other legislation, such as the Fire Safety Order, requires that the safety of existing buildings is managed on the basis of regular risk assessments.
- 27. If the building owner decides to carry out work on an existing building and the work falls within the scope of a material alteration as defined in the regulations, then building regulations requirements, including the ban will apply. The work being done must meet the technical requirements of the Regulations and the effect of that work should not make the rest of the building less compliant than before the work was carried out.

- 28. The proposed ban would not apply to existing buildings where no work was being carried out. In these instances, as mentioned above, we consider that a case –by-case risk-based approach to fire safety in existing buildings is most appropriate in line with the advice already issued by the Department and the Expert Panel, and as proposed by Dame Judith in her report.
- 29. The government has developed a building safety programme to ensure fire safety in high-rise residential blocks following the Grenfell Tower fire. Shortly after the fire, an Independent Expert Advisory Panel was set up to advise on measures building owners should put in place to make buildings safe. Owners of buildings clad in unsafe ACM in particular should have regard to the Expert Panel's guidance (and including seeking their own expert advice) and implement interim safety measures as well as plans for permanent remediation.
 (https://www.gov.uk/government/collections/building-safety-independent-expert-advisory-panel). Where remediation work on cladding systems undertaken, the ban, would apply subject to the transitional arrangements set out below.

Transitional Arrangements

- 30. We consider that transitional provisions would also be necessary. The ban would not be applied to work already underway on site.
- 31. Where work had not begun on site but notification of the proposed work had been given to the local authority (i.e. a building notice or initial notice given to or full plans deposited with the local authority in accordance with the regulations) before the ban took effect there are two options:
 - Not to apply the ban, which would mean that some building projects that have not yet started when the ban is introduced would be allowed to continue to comply with existing building regulations (all materials are A1 or A2 or the entire system satisfies BS8414); or
 - To apply the ban which would mean the ban would apply to all future building work from when it is introduced.

We believe there are strong arguments for taking the latter approach and applying the ban to all future building work.

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?

Other Issues

- 32. Other issues will need to be taken into account in considering a ban:
 - It may be more difficult to achieve standards for fabric energy efficiency if certain combustible materials are banned. This may be a particular issue for refurbishments.
 - Introducing a ban may reduce scope for innovation development of certain building materials.
 - Finally, it is essential that systems are properly designed and installed in line with Building Regulations and the Approved Guidance.

Assessment of Impacts

- 33. We are aware that a move to prescriptive regulation in relation to restricting combustible materials in the external wall construction could have a number of impacts which should be considered. These include the costs involved in meeting the proposed standard and the benefits of compliance achieved. Below are some initial insights which will be tested further. The additional evidence gathered through the consultation will inform an impact assessment published alongside the final decision.
- 34. Residential buildings 18m or over are likely to be most affected by the proposed change. We estimate that around 650-850 such projects per annum could be undertaking notifiable building work in relation to façades for new or existing buildings and need to consider this proposed change. Of these projects that are in train or will be constructed, a significant proportion (we estimate at least 70%), have already moved to using A1 or A2 materials². In addition, we estimate that around 200-250 18m or over student accommodation buildings could be affected. It is possible that a number of other buildings may also be affected for example, a small number of residential care homes will be 18m or over.
- 35. Ensuring that façade components are rated A2 or A1 will involve additional construction costs. Initial work has been undertaken to estimate the likely additional construction costs. For example, it is currently estimated that for a 15-storey newbuild³ requiring 1700m² of cladding, a wall system which comprises only materials of A2 will cost an additional £25,000-£75,000 per building over a BS8414 test

² Post the Grenfell Tower fire

³ Based on a reference building design.

- system. This estimate takes into account the exemptions being proposed in this consultation. Further work is underway to refine this estimate and to assess the impact of the proposals on other facade types which are likely to be affected.
- 36. We have undertaken a preliminary high level global cost analysis for implementing the change for new build and refurbishment of residential and student accommodation 18m and over. This suggests an overall annual cost for the proposed policy change of £7.5m-£11m⁴. We will undertake further work on this analysis following the consultation.
- 37. The principal benefit that will derive from the proposals will be to make routes to compliance clearer which reduces the risk of unintentional non-compliance. Further work will also be undertaken to identify and assess other benefits likely to derive.
- 38. Initial analysis suggests that there will be no significant pressures on supply chains as a result of the change. However, we will seek further views during the consultation.

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).

⁴ This is an equivalent annual net direct cost for social and private building developers or owners based on implementing the policy over a 10 year period.

Next Steps

26. The consultation will close on 14 August 2018. Responses to this consultation will be analysed over the summer and a Government response will follow.

Questions

Respondent Details

Question 1	Respondent details
Name	
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	

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

Question 3	Yes/No/Don't Know
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?	[Free text answer]

Question 4	Yes/No/Don't Know
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?	
e. 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 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?	[Free text answer]

Question 6	Yes/No/Don't Know
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?	
c. Please provide any further information in relation to your answers above.	[Free text answer]

Question 7	Yes/No/Don't Know
a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban?	
b. If yes, what components should be included on an exemption list and what	[Free text answer]

conditions should be imposed on their use?	
c. Would you recommend an alternative way of achieving the policy aims stated above?	

Question 8	Yes/No/Don't Know
Do you agree that:	
a. a risk-based approach is appropriate for existing buildings?	
b. the ban should apply to 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?	
e. Please provide any further information in relation to your answers above.	[Free text answer]

Question 9	Free text answer
a. Which wall elements are likely to be affected by the proposed change – i.e. where they would pass as part of a cladding system in a BS8414 test but would not meet the proposed Class A2 or better requirement (e.g. sheathing boards or vapour barriers)?	
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 (e.g. supply chains)	

About this consultation

This consultation document and consultation process have been planned to adhere to the Consultation Principles issued by the Cabinet Office.

Representative groups are asked to give a summary of the people and organisations they represent, and where relevant who else they have consulted in reaching their conclusions when they respond.

Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 2018 (DPA) and the Environmental Information Regulations 2004.

If you want the information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence. In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Ministry.

The Ministry of Housing, Communities and Local Government will process your personal data in accordance with DPA and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

Individual responses will not be acknowledged unless specifically requested.

Your opinions are valuable to us. Thank you for taking the time to read this document and respond.

Are you satisfied that this consultation has followed the Consultation Principles? If not or you have any other observations about how we can improve the process please contact us via the <u>complaints procedure</u>.

Annex A

Personal data

The following is to explain your rights and give you the information you are be entitled to under the Data Protection Act 2018.

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the data controller and contact details of our Data Protection Officer

The Ministry of Housing, Communities and Local Government (MHCLG) is the data controller. The Data Protection Officer can be contacted at dataprotection@communities.gsi.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

The Data Protection Act 2018 states that, as a government department, MHCLG may process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation. There is a statutory requirement in the Building Act to consult on substantive changes to the building regulations.

4. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for two years from the closure of the consultation.

5. Your rights, e.g. access, rectification, erasure

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right:

- a. to see what data we have about you
- b. to ask us to stop using your data, but keep it on record
- c. to ask to have all or some of your data deleted or corrected
- d. to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.
- 6. The Data you provide directly will be stored by Survey Monkey on their servers in the United States. We have taken all necessary precautions to ensure that your rights in terms of data protection will not be compromised by this.

- 7. Your personal data will not be used for any automated decision making.
- 8. We use a third party provider (Survey Monkey) to gather data. Once the consultation has closed, your data will be moved to a secure government IT system.