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Llywodraeth Cymru
Welsh Government

Welsh Government
Consultation Document

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

Date of issue: 19 July 2018

Action required: Responses by 13 September 2018

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

Overview This consultation seeks views on the proposed ban of combustible materials in external walls of high-rise buildings. The proposal is in line with the Minister for Housing and Regeneration's written statement of 23 May 2018 concerning a consultation on banning the use of combustible materials in cladding systems on high-rise residential buildings.
<https://gov.wales/about/cabinet/cabinetstatements/2018/hackitt/?lang=en>

It is proposed to have an 8 week consultation (rather than the traditional 12 weeks). The role played by combustible materials in the Grenfell fire is the subject of significant continuing public concern in part as a consequence of the evidence being provided to the public inquiry. The decision made to consult on banning such materials in the statement made by the Minister for Housing and Regeneration on the 23rd May 2018 reflected that concern and the need for Government to act quickly. Our view is that shortening the consultation period addresses the need for early action whilst allowing consultees sufficient time to respond.

How to respond

You can email your response to the questions in this consultation to: enquiries.brconstruction@gov.wales.

If you are responding in writing, please make it clear which consultation and which questions you are responding to:
Banning the use of combustible materials in the external walls of high-rise residential buildings

Written responses should be sent to:

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

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 post code),
- an email address, and
- a contact telephone number

Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

**Contact
details**

For any enquiries about the consultation please contact the Welsh Government Building Regulations team by emailing:
enquiries.brconstruction@gov.wales

For further information:
Building Regulations
Welsh Government
Rhydycar
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Telephone: 0300 062 8144

General Data Protection Regulation (GDPR)

The Welsh Government will be data controller for any personal data you provide as part of your response to the consultation. Welsh Ministers have statutory powers they will rely on to process this personal data which will enable them to make informed decisions about how they exercise their public functions. Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about or planning future consultations. Where the Welsh Government undertakes further analysis of consultation responses then this work may be commissioned to be carried out by an accredited third party (e.g. a research organisation or a consultancy company). Any such work will only be undertaken under contract. Welsh Government's standard terms and conditions for such contracts set out strict requirements for the processing and safekeeping of personal data.

In order to show that the consultation was carried out properly, the Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. If you do not want your name or address published, please tell us this in writing when you send your response. We will then redact them before publishing.

You should also be aware of our responsibilities under Freedom of Information legislation.

If your details are published as part of the consultation response then these published reports will be retained indefinitely. Any of your data held otherwise by Welsh Government will be kept for no more than three years.

Your rights

Under the data protection legislation, you have the right:

- to be informed of the personal data held about you and to access it
- to require us to rectify inaccuracies in that data
- to (in certain circumstances) object to or restrict processing
- for (in certain circumstances) your data to be 'erased'
- to (in certain circumstances) data portability
- to lodge a complaint with the Information Commissioner's Office (ICO) who is our independent regulator for data protection.

For further details about the information the Welsh Government holds and its use, or if you want to exercise your rights under the GDPR, please see contact details below:

Data Protection Officer:
Welsh Government
Cathays Park, CARDIFF
CF10 3NQ

e-mail:

Data.ProtectionOfficer@gov.wales

The contact details for the Information Commissioner's Office are:
Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF

Tel: 01625 545 745 or 0303 123 1113

Website: <https://ico.org.uk/>

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Introduction

1. On 17 May 2018, the final report of Dame Judith Hackitt's Independent Review of Building Regulations and Fire Safety commissioned by the UK Government was published. In response, the Minister for Housing and Regeneration made the following commitment in her written statement:

“Dame Judith deliberately avoided any reference to specific matters, such as materials in cladding systems. She was right to point out that underlying failures of culture and of the regulatory system may allow unsafe practices and products to persist and those failures will manifest themselves in other ways unless they are addressed head-on. But I cannot ignore the risks and the clear public concern. Subject to a legally-required consultation into this matter, we will move to ban the use of combustible materials in cladding systems on high-rise residential buildings in Wales.”

We have reviewed the proposals contained in the recent Ministry for Housing, Communities and Local Government (MHCLG) consultation in England, 'Banning the use of combustible materials in the external walls of high-rise buildings'. We conclude that the fundamental questions asked and actions proposed are relevant to Wales.

Background

2. 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 13 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 to meet the required standard for combustibility (currently the requirements are set according to either UK or European classifications see paras 14-16).
 - 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.
3. This guidance should be read in conjunction with Appendix A of the Approved Document 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.
4. 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 Welsh Ministers stand by the advice issued by the UK Government Expert Panel that wall systems which have met BS 8414 can be considered to be safe. However, Welsh Ministers have heard the concerns of many that combustible cladding is not explicitly banned under statute.

5. 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 Welsh Ministers, in response to public concern, consider 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 undergoing full-scale system tests, the lower risk option is "undoubtedly" to use products that are non-combustible or limited combustibility.
6. This consultation complies with the duty on Welsh Ministers in section 14 of the Building Act 1984 to consult the Building Regulations Advisory Committee for Wales and other representative interests on proposed changes to the substantive requirements of the Building Regulations.
7. This consultation paper seeks views on imposing a ban on certain materials. We will also produce a detailed impact assessment based on the information we receive from this consultation to inform our final policy decision.

Proposed Approach

8. 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 Welsh Government agrees with the advice of the UK Government 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.
9. However, the Welsh Ministers also recognise 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 limited combustibility is undoubtedly the lower risk option. Welsh Ministers therefore consider 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.

10. 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. Those not complying would be open to prosecution in the Magistrates Court. The Court has the powers for unlimited fines. We have considered amending the guidance in the Approved Document as an alternative to specify what materials should be used, however as the guidance in Approved Documents is not mandatory it would not deliver the policy intention of a complete ban. This legislative approach was adopted in Wales when we introduced automatic fire suppression systems.

Question 1.

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

11. 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 for external fire spread on external walls.

Buildings in scope of the ban

12. The Hackitt review was focused principally on high-rise residential buildings and concluded that a suitable trigger was buildings of 10 storeys or more. In Wales, our work with existing buildings has focused on buildings 18m or over as this aligns with Part B Approved Document guidance. We therefore consider it consistent that a ban on combustible cladding should apply to buildings with a floor level 18m or over in height. We also consider that to avoid any doubt this should apply throughout the entire height of the wall.
13. The risk to life from fire is greatest in residential buildings. Dwelling fires in Wales account for less than 20% of all fires, but over 80% of fire casualties. That is probably because homes are occupied for longer than most other buildings and contain multiple sources of ignition. In Wales, new and converted residential buildings have, since 2016, been required to install automatic fire suppression (e.g sprinkler) systems. High-rise residential buildings are a particular concern both because of the large number of residents and the difficulty in rescuing them from the upper floors. Other building uses, such as hotels and office buildings generally, have a lower overall risk of fire. We therefore consider that the ban should apply to blocks of flats and similar building uses, such as care homes and student

accommodation. This is consistent with the legislative approach taken in relation to the requirements for automatic fire suppression systems.

Question 2.

Do you agree that the ban should apply:

- a. to buildings 18m or over in height?**
- b. If no, to what height, higher or lower, should the ban apply? Explain why.**
- c. throughout the entire height of the wall, i.e. both below and above 18m?**
- d. to high-rise residential buildings only?**
- e. If no, should the ban apply to high-rise non residential buildings, e.g. offices and other buildings, as well as residential buildings?**

Definition of combustibility

- 14. 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.
- 15. 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. Welsh Ministers consider that it would be more straightforward to reference a single system and that this should be the more up-to-date European system.
- 16. 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 as the minimum acceptable classification under the proposed ban.

Class A1 – Products are described as having no contribution to fire at any stage of the fire. EN13501 sets a threshold of 2 MJ/kg when tested to EN ISO 1716

Class A2 – Products are described as having no significant contribution to fire at any stage of the fire. EN13501 sets a threshold of 3 MJ/kg when tested to EN ISO 1716

Question 3.

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

Defining the scope of the ban on “cladding”

17. 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 enhance the appearance of buildings. This can be placed on a building at the outset during its initial construction or during a refurbishment.
18. The proposal is to ban the use of materials which do not meet class A1 or A2 from use in the walls of 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.
19. There are 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.
20. The ban could be limited to major components e.g.
 - Aluminium Composite Material (ACM) with a polyethylene core
 - Combustible “rainscreen” products
 - Combustible insulation products
21. However, this would still allow other combustible materials to be incorporated into external walls which could have the potential 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.
22. 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 its external face.

Question 4.

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

Exemptions

23. If, as suggested above, the proposed ban on the use of combustible materials covers all 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 5.

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

Application of the ban to existing buildings

24. 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.
25. 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 proposed ban will apply. Building 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.
26. 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 UK Government and their Expert Panel, and as proposed by Dame Judith in her report.
27. In England, the UK 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, the UK Government Independent Expert Advisory Panel was set up to advise on measures building owners should put in place to make buildings safe. In taking forward a similar approach to enhancing building safety in Wales, the Welsh Government endorsed the Expert Panel's guidance to owners of high-rise residential buildings clad in unsafe ACM (including seeking their own expert advice) and the implementation of 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 is undertaken, the ban would apply subject to the transitional arrangements set out below.

Transitional arrangements

28. We consider that transitional provisions would also be necessary. The ban would not be applied to work already underway on site.
29. 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 BS 8414) ; or
- To apply the ban, which would mean the ban would apply to all future building work from when the ban is introduced

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

Question 6.

Do you agree that:

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

Other Issues

30. Other issues will need to be taken into account in considering a ban and on which views would be welcome:
- 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 some 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

31. We are aware that a move to prescriptive regulation in relation to restricting combustible materials in the external wall construction could have impacts beyond fire safety that should be considered.
32. Residential buildings of 18m or over are likely to be most affected by the proposed change. Over the five-year period 2013-2018 the average number of flats completed in Wales was 1413 (22% of all new residential

completions)². High-rise blocks over 18m ranged from 7-18 storeys with 4 or 6 flats per floor. This would equate to a range from 13 to 50 blocks per year. For those buildings which are using external wall systems which have passed a BS 8414 test, but which may include within them elements which are not of limited combustibility, MHCLG in their consultation for England estimate a typical extra building cost of £25,000-£75,000 for a system containing only materials of limited combustibility. This is based on a 15-storey building requiring 1700m² of cladding. Applying these broad estimates of cost above to Wales would suggest an overall annual cost over a BS 8414 system test would be of the order of £0.33-3.30m.

33. Going forward, we believe high rise activity will continue to be centered around the M4 corridor and around the university cities of Cardiff, Newport and Swansea. Of those yet to be built we would expect many, in the short term at least, to be meeting the proposal requirements as developers, in advance of any changes to regulations, act to future proof developments.

Question 7.

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

Next Steps

34. Responses to this consultation will be analysed in September/October 2018 and a Welsh Government Response will follow.

² There is some concern at the way start and completion data is recorded and reported. This may not include all self contained student accommodation