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Welsh Government
Consultation – summary of responses

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

July 2019

Mae'r ddogfen yma hefyd ar gael yn Gymraeg
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1. Introduction

This report provides a summary of the responses to the consultation “Banning the use of combustible materials in the external walls of high-rise residential buildings” (opened on 19 July 2018 and closed on 13 September 2018) and is structured around the questions set out in the consultation.

The views reported in this summary are those expressed by the respondents to the consultation and do not necessarily reflect those of the Welsh Government.

Building Regulations

Building Regulations control certain types of building work, principally the erection and extension of buildings and provision or extension of certain services or fittings, chiefly to ensure that buildings meet certain standards of health, safety, welfare, convenience and sustainability.

Compliance with the Building Regulations is the responsibility of the person carrying out the work and the building control system helps to ensure that the required level of performance has been met. The role of a building control body, either the local authority or a private sector Approved Inspector, is to act as an independent third-party check to help achieve compliance. As an alternative to third-party checking by building control, some types of work may be self-certified as being compliant by installers who are registered as a member of a competent person self-certification scheme and have been assessed as competent to do so.

Building Regulations greatly influence how our buildings are constructed and used. As such, they help to deliver significant benefits to society. Regulation can also impose costs on both businesses and individuals. The “functional” nature of the Building Regulations, by having regulation setting out the broad requirement rather than prescribing how it must be achieved, seeks to minimise this cost and also ensure innovation is not hindered. Guidance in the Approved Documents that accompany the Regulations then sets out some of the ways that these requirements can be met although it does not have to be followed if the required level of performance can be shown to be achieved in a different way. This approach provides clarity for building control bodies and industry alike.

2. Consultation Responses - Overview

The respondents

Overall there were 71 responses to the consultation. Respondents who completed the consultation response form were asked to assign their organisation to one of fourteen types identified on the form (including a self designated 'other' option). The table below shows the number of responses received from each sector.

Sector	Responses	%
Builder / Developer	0	0
Designer / Engineer / Surveyor	3	4
Local Authority	15	21
Building Control Approved Inspector	1	1
Architect	0	0
Manufacturer	12	17
Insurer	2	3
Construction professional	1	1
Fire and Rescue Authority representative	4	6
Property Manager / Housing Association / Landlord	3	4
Landlord representative organisation	3	4
Building Occupier	2	3
Tenant representative organisation	0	0
Other interested party (please specify)	25	35

Respondents which fell in the self specified category 'other' were:

- Private Individuals;
- UK's National Fire Safety Organisation;
- Membership Body for Housing Associations;
- Professional Membership Organisation;
- Trade Association;
- Trade Body Representing Developers;
- Industry Body;
- Professional Body;
- Construction Product Manufacturer Trade Association;
- Chartered Institution of Building Services Engineers;
- Independent Housing Standards; and,
- Public Body.

Handling of responses

A standard response form was provided for ease of use, however, where respondents did not use the form, representations have been attributed to the most appropriate question. In addition, certain questions were designed to have three possible answers; yes, no, don't know. Where respondents have not answered with the standard responses proposed, but have clearly indicated a clear position in their answer they have been assigned that response in the statistical analysis. For example where a respondent used the phrase 'I support the

proposal' their response was marked as yes. Where a clear response was not identifiable, answers were marked as 'did not respond' in the statistical analysis with the responses included in the summary of comments. The assigned responses are identified in [annex 1].

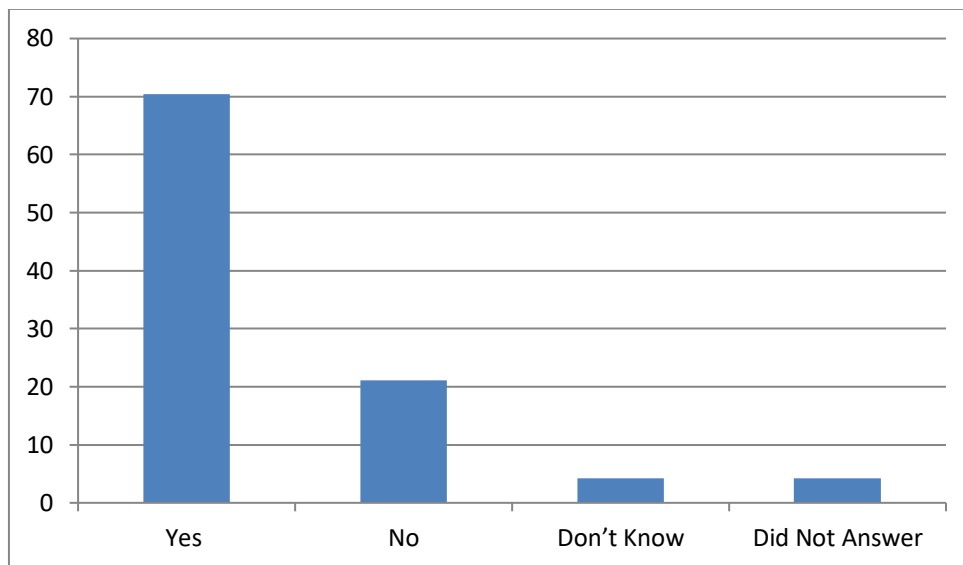
Question		Yes %	No%	Don't know %	Did Not Answer %
1	Do you agree that the ban should apply:				
1a.	Do you agree that combustible materials in cladding systems should be banned?	70	21	4	4
1b.	Should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?	69	18	7	6
1c.	If no, how else could the ban be achieved?	Free text answer			
2.					
2a.	to buildings 18m or over in height?	51	44	1	4
2b.	If no to 2a, what height, higher or lower, should the ban apply? Explain why	7	11	1	80
2c.	throughout the entire height of the wall, i.e. both below and above 18m?	72	17	3	8
2d.	to high-rise residential buildings only?	6	85	3	7
2e.	If no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?	59	24	3	14
2f.	Please provide any further information in relation to your answers above	Free text answer			

Question		Yes %	No %	Don't know %	Did Not Answer %
3a.	Do you agree that the European classification system should be used?	62	15	20	3
3b.	If yes, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?	52	23	10	15
3c.	c. If no, what class should be allowed in wall construction and why?	Free text answer			
4.					
4a.	a. Do you agree that a ban should cover the entire wall construction?	51	31	13	6
4b.	b. If no, what aspects of the wall should it cover?	Free text answer			
4c.	c. Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?	56	18	15	10
4d.	d. Please provide any further information in relation to your answers above	Free text answer			
Question 5					
5a	a. Do you agree that a limited number of wall system components should, by exception, be exempted from the proposed ban?	56	24	13	7
5b	b. If yes, what components should be included on an exemption list and what conditions should be imposed on their use?	Free text answer			
5c	c. If no, what alternative way of achieving the policy aims would you suggest?	Free text answer			
Question 6					
Do you agree that:					
6a	a. the ban should apply to proposed material alterations to existing buildings, including over-cladding?	66	17	8	8
6b	b. the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?	58	24	8	10
6c	c. the ban should not affect projects where building work has already begun on site?	35	39	15	10
6d	d. Please provide any further information in relation to your answers above	Free text answer			

	Question 7	Free text answer
7a	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)?	Free text answer
7b	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?	Free text answer
7c	c. What is the impact of removing access to the BS 8414 for those buildings affected by the ban test likely to be?	Free text answer
7d	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)	Free text answer
7e	e. Please provide any further comments on the likely impact of this change for construction e.g. supply chains	Free text answer
	Question 8	
	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:	Free text answer

3. Consultation responses – brief summary

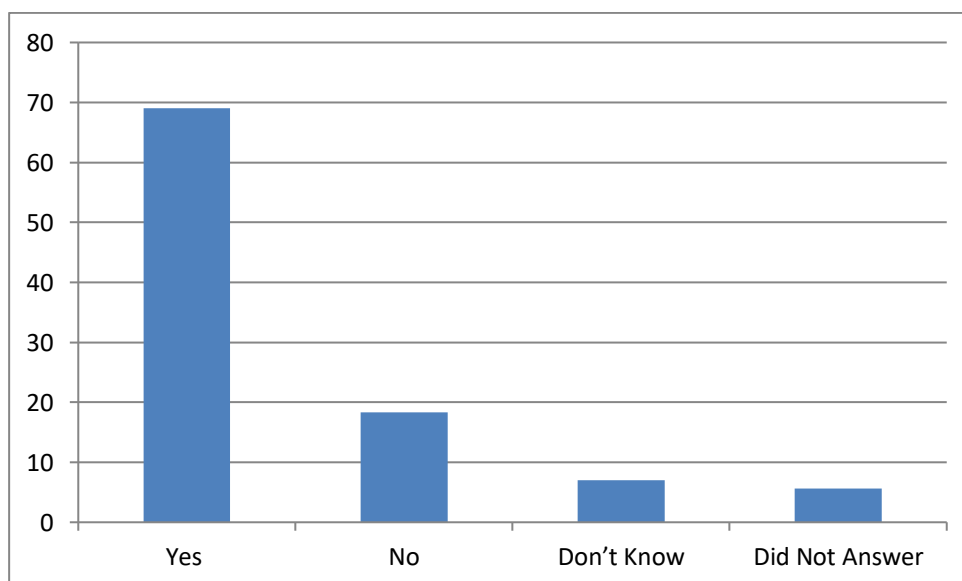
Q. 1a asked if you agree that combustible materials in cladding systems should be banned?



Of those who responded to the question 74 percent agreed that combustible materials in cladding systems should be banned.

Those who did not support the ban on combustible materials were manufacturers, with eight against and four in favour of a ban; and other respondents who fall outside of the listed categories, (e.g trade associations or professional bodies), who responded seven against and 12 in favour of a ban.

Q. 1b asked should the ban be implemented through changes to the Building Regulations (i.e through legislation rather than the Approved Documents)?



Of those who responded to this question 73 percent supported the implementation of the ban through changes to the Building Regulations.

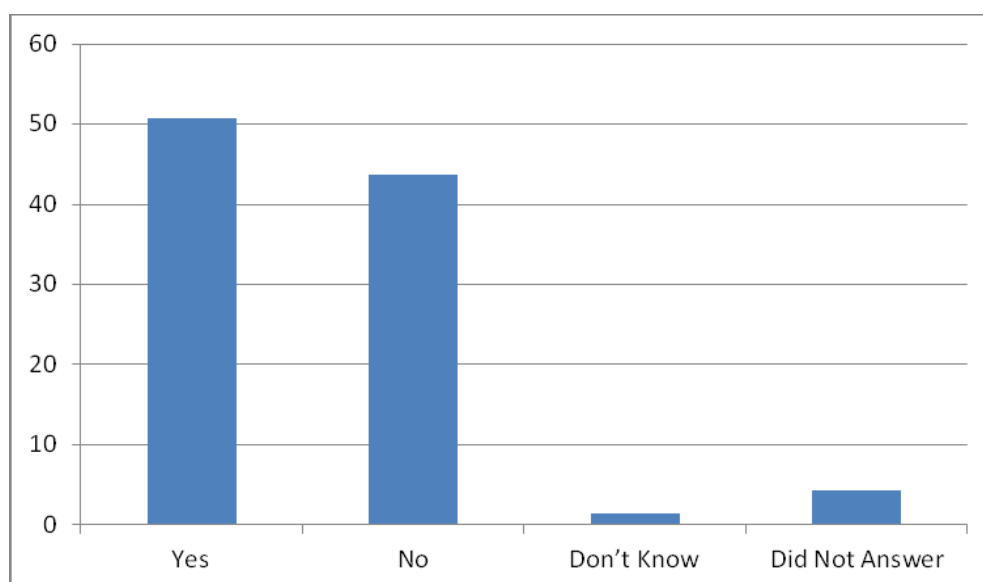
Supplementary responses were also made to this question. Those who supported the ban identified legislation provides a clear understanding of the requirements. Those who did not support a change to regulations considered amendments to the approved documents would allow more flexibility and avoid a stifling of innovation.

Q. 1c asked if no, how else could the ban be achieved?

There was only one other option presented by respondents to achieve the ban; a revision of Approved Document B. Respondents considered the content should be simplified so that it provides unambiguous guidance. Respondents also commented:

- While legislation is an appropriate vehicle for a ban, there will be complementary actions needed by industry and Government as recommended by the Hackitt review.
- Requirements based on large scale system performance provide the optimal and an alternative way to identify what is acceptable for use as cladding for tall buildings.

Q. 2a asked do you agree that the ban should apply to buildings 18m or over in height?



Of those who responded, 53 percent were in support of banning combustible materials in buildings 18m or over in height. A number of respondents provided alternative suggestions on where a ban on combustible materials should apply. These responses are summarised alongside comments made in response to question 2b.

Q. 2b asked if no, to what height, higher or lower, should the ban apply?

A number of respondents proposed the ban on combustible materials should apply to all buildings regardless of height. The reasons provided in support of this position were:

- A number of respondents identified all combustible materials in cladding systems present a threat of rapid external fire spread.

- the setting of a threshold will result in the continuation of the current practice of positioning the occupied floor or building height at just under the threshold level, with the objective to avoid the regulatory burden.
- The height of 18 metres was historically fixed as appropriate as this dovetailed with the deployment of certain fire fighting equipment. This equipment is no longer in use and the rationale for this threshold has been lost.

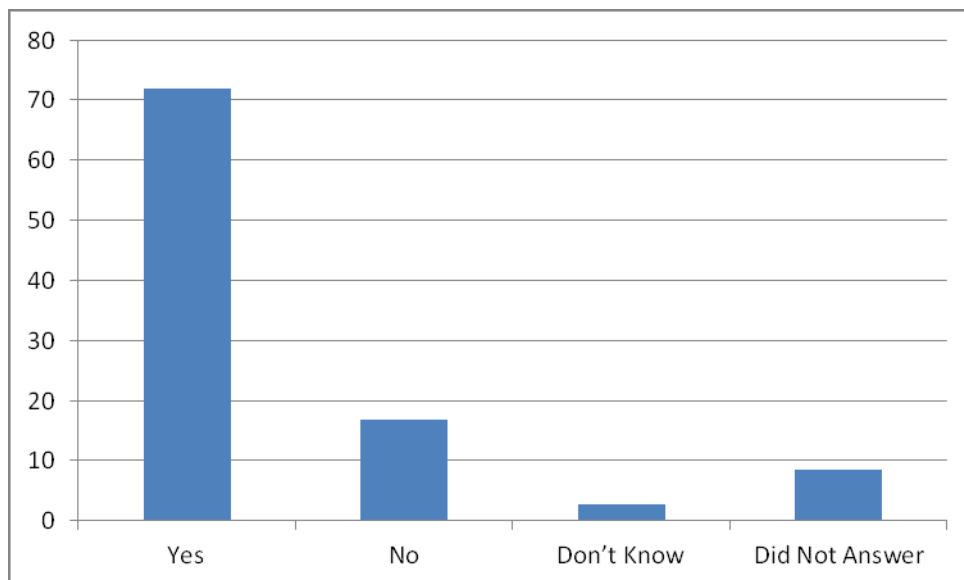
Some respondents considered the threshold should relate to the number of storeys in a building and not a fixed height. Those who proposed such an approach supported their position as follows:

- Three respondents identified 10 storeys, based on the Hackitt Report which identified buildings of 10 storeys or more having the greatest risk of fire and subsequent fatalities where a fire does break out.
- Another respondent considered the appropriate height to be 3 storeys

Two respondents identified the height of the ban should be based on the availability of the escape routes. Where multiple escape routes are in place, the height should be 18 meters, and where a single escape route is in place, the ban should apply over 12 meters.

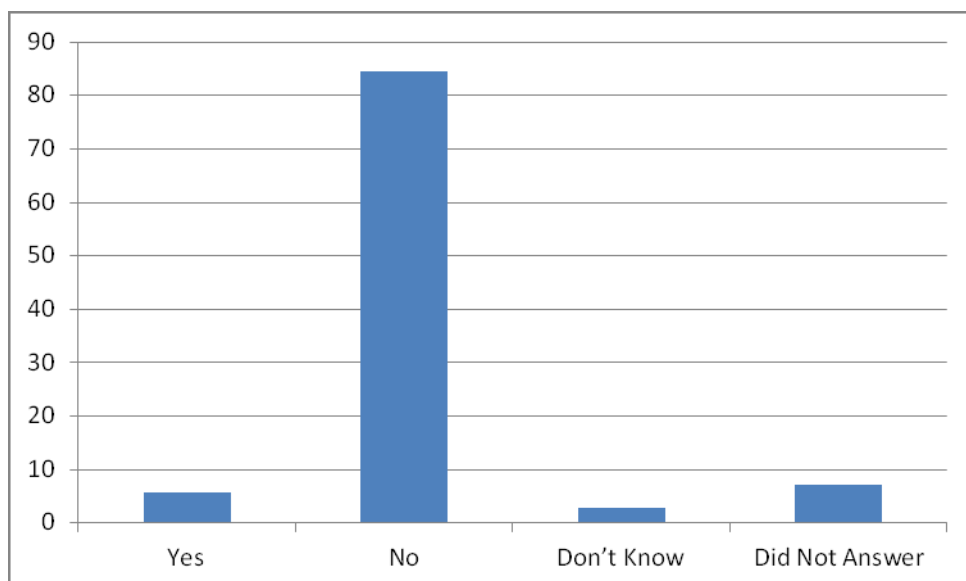
There were also comments made by those who do not support any ban of combustible materials. They commented the continued use of the system test is the only reliable way to ensure building safety.

Q. 2c asked do you agree that the ban should apply throughout the entire height of the wall, i.e. both below and above 18m?



The majority who answered the question supported a ban throughout the entire height of the wall, i.e. both below and above the threshold.

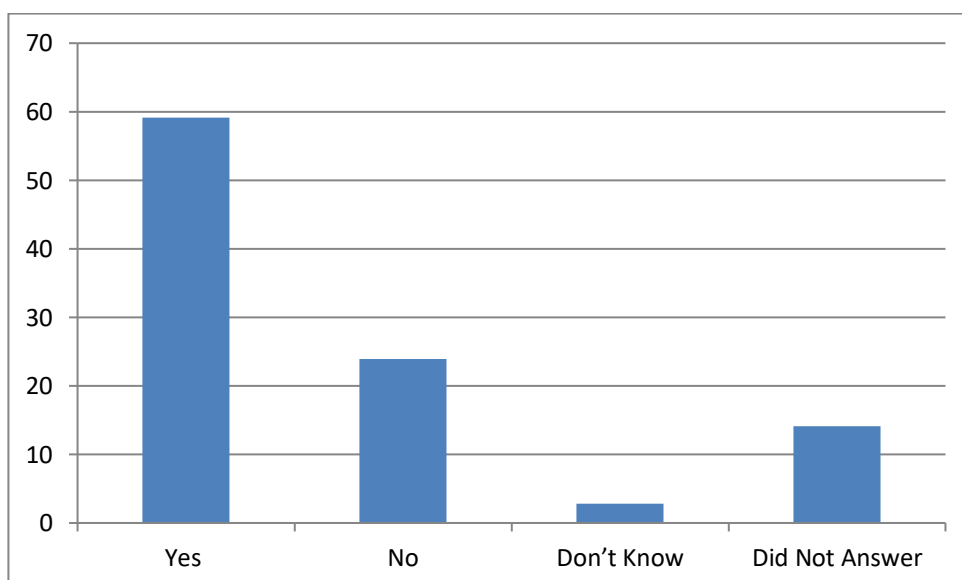
Q. 2d asked do you agree that the ban should apply to high-rise residential buildings only?



91 percent of those who responded did not agree with applying the ban on combustible materials to high-rise residential buildings only. A large number of respondents stated that the ban should be extended to other buildings where occupants are likely to be asleep and/or vulnerable such as hospitals and care homes.

Other respondents did not support the proposal as they did not support a ban on any building. These respondents are in favour of appropriate large scale testing of materials.

Q. 2e asked if no, should the ban apply to high-rise non-residential buildings e.g. offices and other buildings, as well as residential buildings?



69 percent of those who responded consider the ban should apply to high-rise non-residential buildings as well as residential buildings.

In support of their position, those in favour of applying the ban to non-residential high rise buildings commented:

- Regardless of the matters of buildings' height and types of occupancy, the risk of external fire spread from combustible materials in external cladding would make it preferable to extend the ban to all building occupancies.
- In addition to other uses of buildings which are high rise, there are other purpose groups such as care homes, hospitals, hotels, mixed use buildings and similar where it may be appropriate to control the fire properties of the external cladding regardless of height.
- Application of the requirements to all buildings would ensure any future change of use was not compromised by inappropriate use of cladding materials and would ensure continued public safety.

Those who did not support the application of the ban to other high rise buildings commented:

- Any intervention should be focussed on those buildings with the highest risk profile.
- If a ban is introduced this should not include other building groups as generally they pose a lower fire risk, for example: not all these buildings are occupied 24/7 and therefore have different requirements and approaches in respect of evacuation strategy that does not necessitate a ban.
- Some respondents commented that a ban on combustible cladding on any building will not achieve the objective of safer buildings, regardless of height or use.

Q. 2f please provide any further information in relation to your answers above

A number of other comments in relation to the above questions were received and the majority related to what buildings the proposed ban should apply, these included:

- General comments on the need for clarification in respect of where and how the building should be measured to determine if it is affected by the ban.
- External factors (such as distance from the boundary and other manmade and natural obstacles) can prevent full access to the full perimeter of the building therefore assuming that the fire can be put out easily up to 18m is incredible unrealistic and dangerous assumption.

On what buildings the ban should apply, those who wanted to extend the ban to other buildings commented:

- We would also recommend that consideration should be given to buildings and development where fire brigade access to the external façade is restricted (e.g. podium decks, courtyards, narrow access etc.)
- Any ban should affect all buildings over 18m to avoid confusion, reducing ambiguity and complexity surrounding differing performance requirements for only slightly differing occupancies as well as preventing any subsequent issues that may be caused by future changes of use to the building.
- the ban should also apply to office premises as 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.
- the ban should apply to buildings with a "stay in place until" policy. This would pick up many higher risk buildings such as care homes, where assisted escape is

required, whilst removing an artificial distinction between tall buildings of different uses.

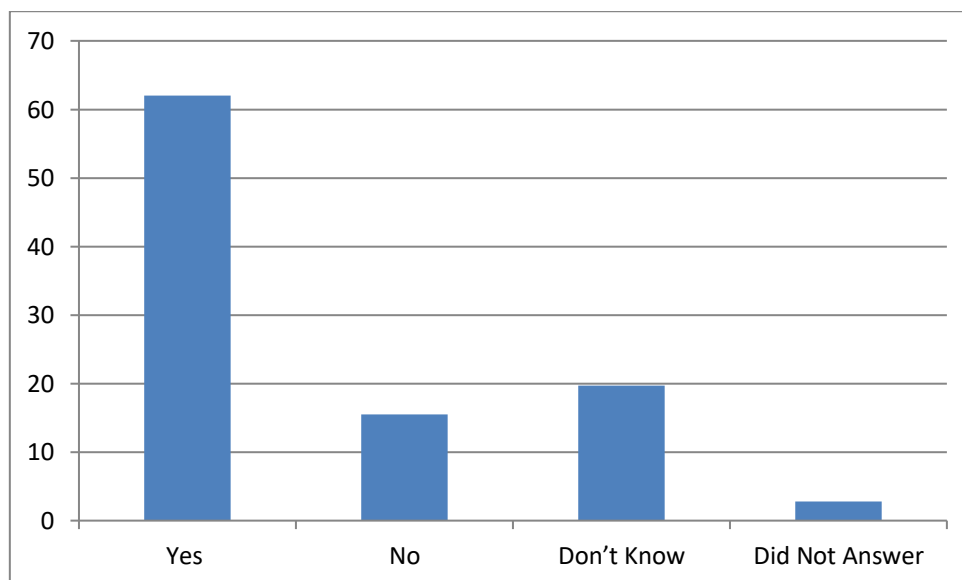
On what buildings the ban should apply, those who wanted to reduce the extent of the ban respondents identified:

- A blanket ban could promote cost cutting and complacency in design and construction, which will not automatically lead to safer constructions / buildings.

A number of respondents commented the proposed ban does not address the issues put forward in the Hackitt review, which demonstrated that there were many elements which need addressing & resulted in 53 recommendations to improve compliance and enforcement.

Some respondents also indicated a ban on any building is not supported 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.

Q. 3a asked do you agree that the European classification system should be used?

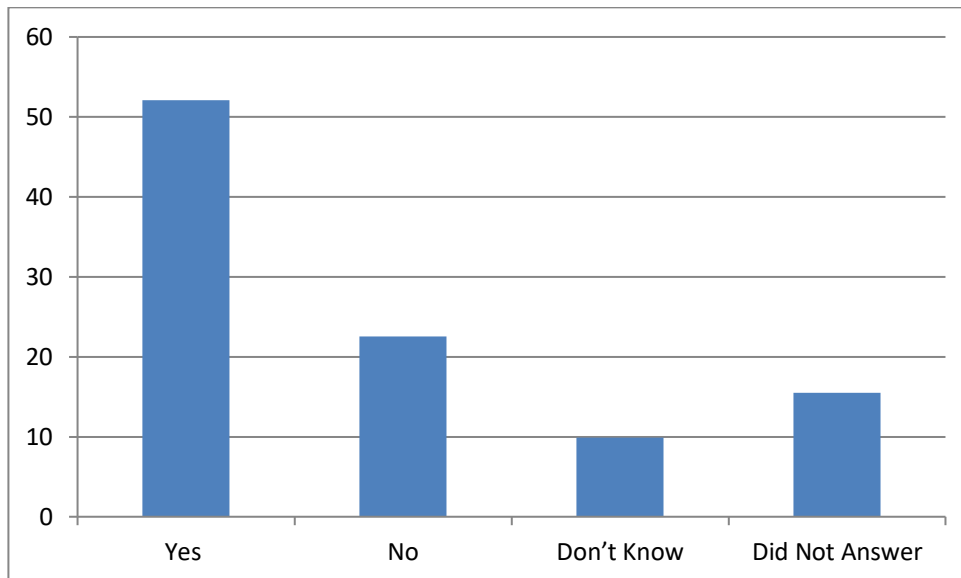


64 percent agreed, 15 percent disagreed, and 21 percent did not know whether the European classification system should be used to define combustibility. Respondents also provided a range of comments on the adoption on the European class system.

- Those in support noted it would be helpful to operate a single classification system in the UK as this would increase regulatory clarity.
- A number of respondents commented over the difficulties associated with adopting the European system. These are:
 - the national classifications “non-combustible” and “limited combustibility” based on BS476-4 and -11 represents a far more rigorous test of performance than European classifications A1 and A2 based on testing to E13501-1 and should therefore be considered the better option
 - With the forthcoming exit of the European Union we will have no influence over future changes to the Euroclass system; and

- The SBI test (BS EN 13823) within the Euroclass system requires mounting and fixing rules to be defined within product standards, but these product standards can take years to be agreed for new products. Therefore this leaves a loophole in the Euroclass system for new products that do not exist in the UK National classification system, for which no mounting and fixing rules are required.

Q. 3b asked if you said yes to Q. 3a, do you consider that Class A2 or better is the correct classification for materials to be used in wall construction?



62% supported, 21% disagreed, and 13% didn't know whether A2 or better is the correct classification for materials to be used in wall construction. If those who do not support a ban (i.e. did not answer yes to question one) are discounted, 66% support, 14% disagree and 12% didn't know whether A2 is the correct classification.

Respondents held diverse opinions in relation to the use of tests including the view that there should be inclusion of a test e.g. BS8414.

Question 3c If no, what class should be allowed in wall construction and why?

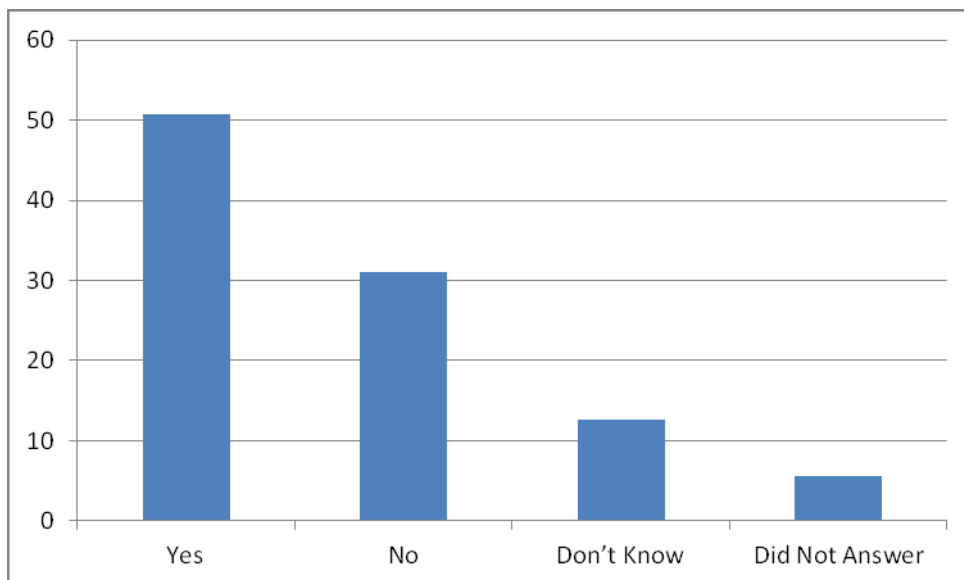
The question sought opinions on what other class of materials would no longer be allowed in construction projects if a ban was put in place. There were four positions expressed, these were:

- A few respondents considered class A1 to be the appropriate category for materials. They considered this would remove all ambiguity in interpretation and application.
- Some respondents considered the category A2 is appropriate if this was further refined than the current AD-B expectation of A2-s3, d2 or better. They recommend restricting the classification to A2-s1, d0, as the current classification allows for high smoke production and flaming droplets.
- A high number (12) of respondents considered a prescriptive approach which relies on the classification of individual products will not achieve the objective of ensuring building safety. They consider design specifications should be tested as systems and not as individual components. This is because it is the way in which the different

components interact that determines how well the system as a whole will perform, not what class they are.

- A few respondents highlighted issues with the adoption of the European standards. Firstly, the European classification system is not necessarily appropriate or applicable for all products in a wall construction, particularly in the context of rainscreen cladding. Secondly, the BS 476 series of tests should be used as they provide a higher performance than the non-combustible Euroclasses A1 & A2.

Q. 4a asked do you agree that a ban should cover the entire wall construction?



Just over a half of respondents who answered the question (54 percent) agreed with the ban should cover the entire wall construction.

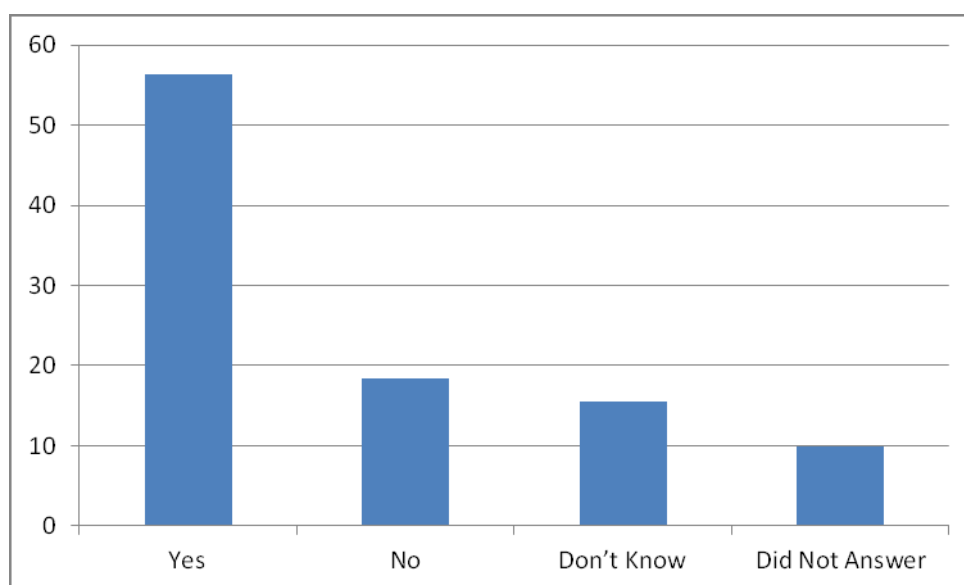
Those in support of the proposal identified it is essential for the term 'entire wall construction' to be defined closely in legislation, in order to prevent avoidance of the proposed ban. Comments made from those who disagreed with the proposal identified it would be extremely difficult to apply a ban to every component in the entire wall construction, for example, there would always be some combustible content such as breather membrane, paint coatings, tape and gaskets etc

Question 4b asked if no, what aspects of the wall should it cover?

This question sought alternative proposals to the ban of combustible materials in the entire wall construction. There were four main responses:

- The most common, with ten respondents suggesting the proposal, was to apply the ban to the external cladding only.
- Local authorities considered all parts of the wall should be subject to scrutiny and appropriate testing.
- A number of respondents identified that there are materials within the wall construction that cannot practically achieve an A1 or A2 rating of combustibility and would need to be considered an exception in the definition of the entire wall construction.
- Some respondents identified that any ban is inappropriate, and that an entire system test is an appropriate method of testing all components of the wall construction.

Q. 4c asked should a ban also cover window spandrels, balconies, brise soleil and similar building elements?



63 percent of those who responded to the question supported the ban on combustible materials also covering window spandrels, balconies, brise soleil and similar building elements. In support of their position, respondents who supported their inclusion in the ban identified:

- These features have the potential to pose a risk in the event of a fire.
- Including them within the ban to such elements would provide simplicity and remove ambiguity.

Respondents also identified the ban should apply to 'living wall' components, and solar panels as these may also contribute to fire spread.

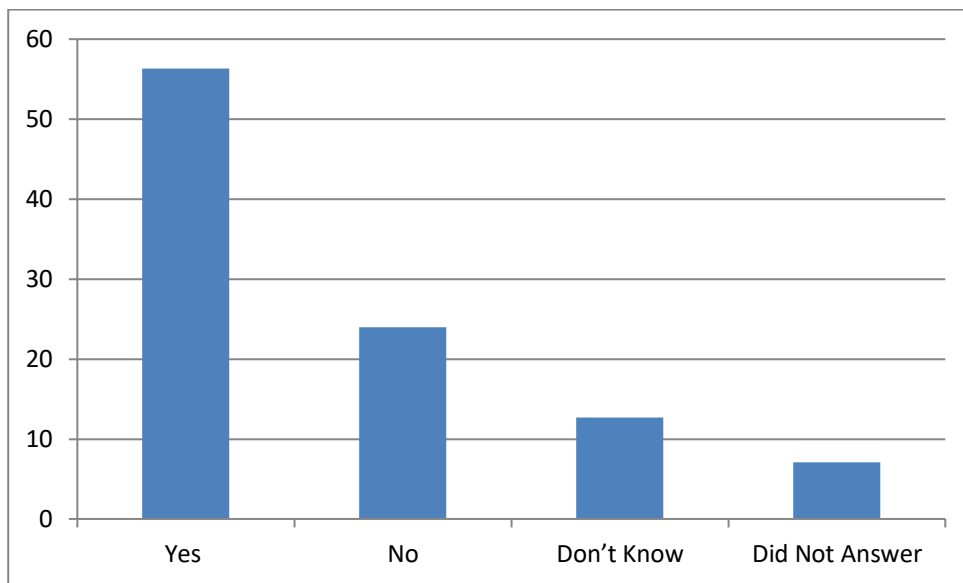
Question 4d asked for any further information in relation to your answers above?

The question provided the opportunity to provide additional comments to the questions 4a to 4c. Those comments which have already been raised in the summary of responses to those question above have not been repeated here. Additional comments raised are summarised below:

- In response to question 4c,
 - Other components which would need consideration as to whether they are included in the ban are winter gardens, green and brown roofs, warm deck terracing.
 - All insulation and building materials from oil based hydrocarbons should be banned in any application where their use could contribute to the release of toxic fumes in the event of a fire. This is because more people die from inhalation of fumes than die from the fire itself.
 - A ban on these relatively small elements of buildings would restrict design flexibility and limit their use in buildings, negating the benefits they bring to buildings, such as brise soleil.

- Single respondents made the following comments which cannot be attributed to a specific sub question. They identified:
 - Those with 'minimal fuel source potential' should be exempted from the ban,
 - The size of fire stopping barriers should be increased.
 - There can be loopholes in banning selective products, systems or types of materials. Therefore banning in itself is not enough and there needs to be good legislation, standards and correct policing.
 - The effect on existing buildings should be considered in the introduction of any ban

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



61 percent of those who responded agreed a limited number of wall system components should, by exception, be exempted from the proposed ban.

Both the responses from those who supported and opposed the principle of an outright ban identified that without certain exemptions it would be difficult to build an exterior wall. Exemptions identified by the respondents included:

- Elements within an appropriately sealed cavity wall
- Any breather membrane, breather membrane tape, cement particleboard tape, thermal breaks and gaskets.

Respondents identified the list of exemptions would be difficult to create due to number of individual components that would need to be included and that such components would be subject to change and innovation. This would mean the exceptions would be impractical to implement and police.

A number of respondents identified they did not agree with banning combustible materials and as such did not agree with a proposed exemption list.

Question 5b asked if yes, what components should be included on an exemption list and what conditions should be imposed on their use?

Respondents provided a number of components which should be exempted from a proposed ban. Suggested exemptions are:

- Gaskets, seals, double glazing spacers, clips – assuming they are limited in number, and don't pass through a cavity barrier, thermal breaks (e.g. to extruded curtain wall sections, helping hand brackets, cantilevered balcony systems), or where this is necessary, they have been shown not to propagate flame passage into the adjoining compartment, Fillers to structural lintels over openings meant to limit any thermal bridging
- Cavity trays, DPCs, VCLs / breather membranes (where sandwiched between non-combustible layers), EDPM barriers.
- Wall tie insulation retention clips
- Wall paper / paint finish
- Window frames – though clarity required in terms of cavity closure detail
- windows, balconies, brise soleil, rain water goods, balustrading, glazing, renewable technologies, maintenance cradles, 'green/living' walls, lighting, signage, certain services punctuating the fabric (such as acoustic baffles, water overflow pipes etc
- Elements within cavity walls
- 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

Of the respondents who did not support the principle of a ban on materials commented that all products should have their performance assessed as part of a system within a large scale test appropriate to the building type. Some of those also stated that if a ban were to be introduced it should only cover the external cladding panels in ventilated rainscreens, with all other components exempted.

Q. 5c asked if no, what alternative way of achieving the policy aims would you suggest?

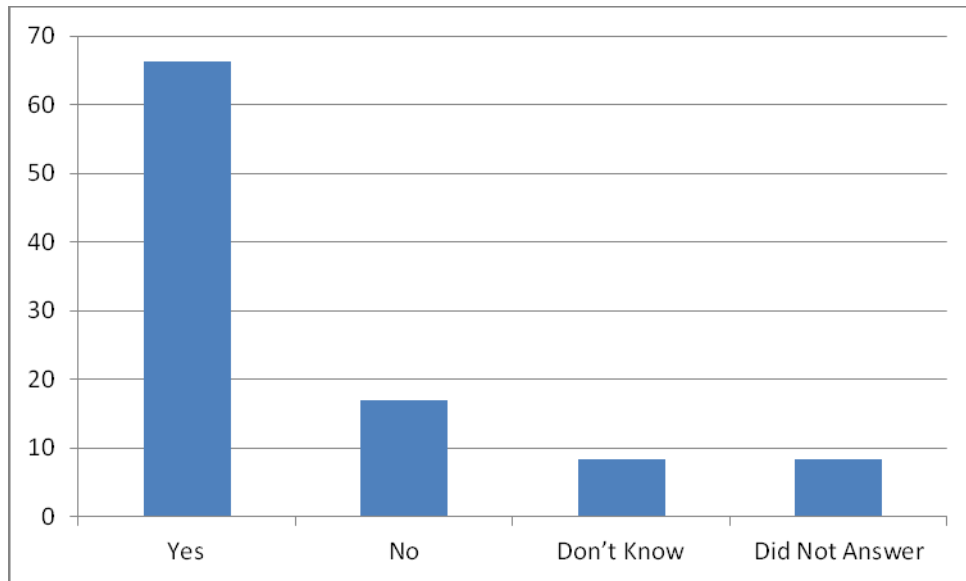
In addition to the suggested policy approach to exempted materials set out in question 5a, respondents were provided the opportunity to identify other means of achieving the policy aim. They responded as follows:

- A number of respondents considered legislation would achieve the policy aim, without specifying what legislative reform would be required.
- In relation to the proposed ban on combustible materials, respondents had differing views as to the extent this should apply. Some respondents considered the ban should apply to combustible outer cladding only, while one respondent considered the ban should only allow fully non combustible insulation products. A number of respondents considered there should be no ban, but all products should be subject to a full scale system test.
- One respondent suggested the legislation should list the items which are included in the ban, as opposed to listing those which are exempt. They considered this approach is preferred as material might be missed in compiling the list of exceptions.
- A number of respondents made reference to the recommendations from the Hackitt

report for addressing better communication, responsibility and competence are the means to secure the policy aims.

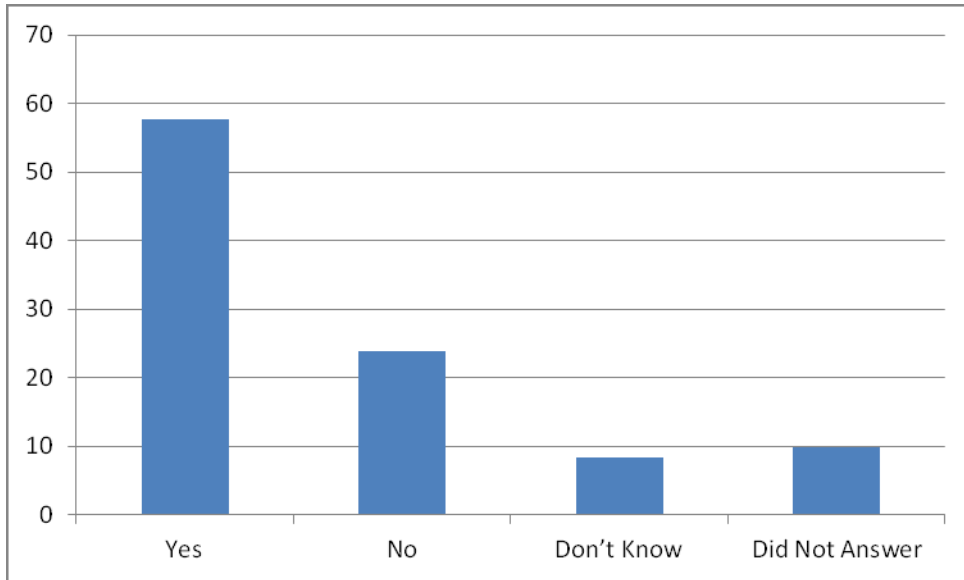
- One respondent recommended that in addition to the ban, additional measures should be considered to improve fire safety. These including retrofitting sprinklers/automatic fires suppression systems to existing buildings and introducing more than one staircase in all new multi occupancy residential buildings where the top floor is more than 11m above ground level.

Q. 6a asked do you agree the ban should apply to proposed material alterations to existing buildings, including over-cladding?



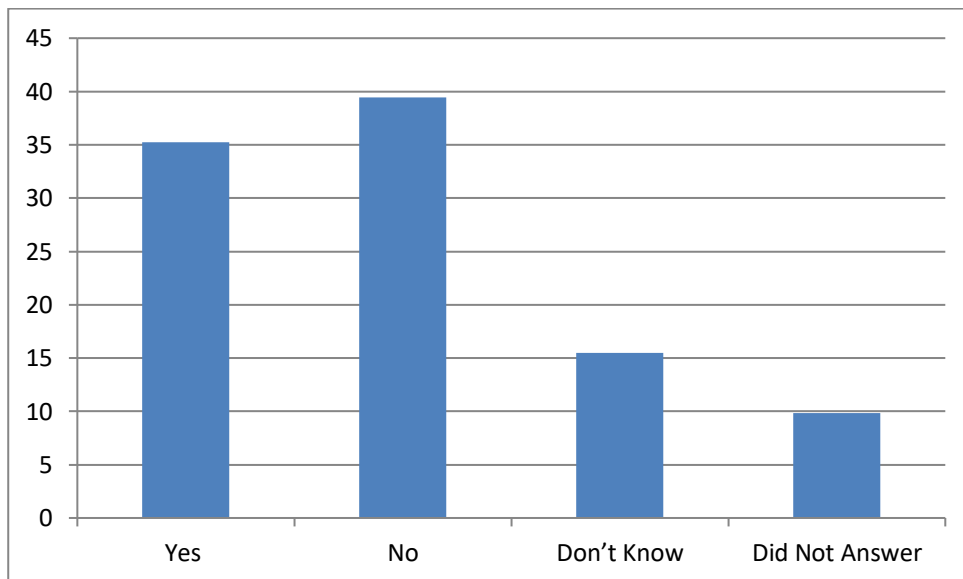
72 percent of those who responded agreed the ban should apply to proposed material alterations to existing buildings, including over-cladding. The responses provided would suggest some respondents misunderstood the intent of the question, and answered as if the question was seeking to retrospectively apply the ban to existing buildings. The statistics may therefore be inaccurate.

Q. 6b asked do you agree the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site?



64 percent of those who responded agreed the ban should extend to projects that have been notified before the ban takes effect but work has not begun on site. A proportion of respondents gave alternative answers including that this should be considered on a “case by case basis”.

Q. 6c asked do you agree the ban should not affect projects where building work has already begun on site?



Of those who responded 39 percent agreed and 44 percent disagreed with the proposal for the ban not to affect projects where building work has already begun on site.

Those who agreed with the proposal identified:

- Projects under construction may have a variety of fire safety measures already integrated into the building design.
- Although work may not have commenced on site, modern methods of construction supports off-site fabrication which may have already been commissioned and it would be unreasonable and impracticable to require a change.

- One respondent agreed with the proposal to limit the ban to projects where work has not started, but only after a risk assessment of the development has been undertaken. Whereas another supporter identified the merit in applying the ban to facilitate future changes of use.

Those who did not support the proposal made the following representations.

- Some respondents disagreed with the principle of a ban, and therefore disagreed with the potential of a ban to affect existing buildings as well as new developments. Of those who had this position, some considered it would be unreasonable to apply the ban to buildings under construction where the building has passed a systems test.
- Other respondents supported the risk-based approach for assessing existing buildings.
- Two respondents identified they did not support the proposal as this would 'allow' buildings to be built with 'unsafe' cladding. One of these respondents identified all steps should be taken to build without combustible cladding regardless of the time of work, and the other identified this exclusion would undermine the objective of the proposed ban.

Question 6d asked for any further information in relation to your answers above

This question provided the opportunity to provide any further information on where respondents considered the ban should apply.

The effect of the proposed ban on existing buildings was considered by a number of respondents. Some considered a risk based approach should apply to these buildings so the particular characteristics of each building can be considered in the application of a ban. Respondents identified the works undertaken have extended the life of existing buildings and without such works would lead to a reduction in building stock. Therefore, financial assistance should be provided to assist in cost of undertaking remedial works.

The application of the ban to buildings which have been notified drew different opinions. Some groups identified that the application may create property blight where higher standards are imposed for developments approved but not commenced, than those which have been approved and commenced. Other respondents identified the manner of modern construction means orders are placed, and even construction started, without any works occurring on site and an amendment to the specification will have both financial and legal implications.

Other matters raised include the need for clear transitional arrangements, with guidance to set out precisely when development is captured. That compliance and enforcement need to be considered alongside any proposed ban. One respondent identified the proposals need to be complemented by a review of the Regulatory Reform (Fire Safety) Order 2005.

Question 7a asked 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)?

Respondents identified a number of different components which could be affected by the proposed change, these included: Sheathing boards, PIR/PUR Insulation boards, Cladding, insulation, brackets, gaskets, vapour barriers and membranes, substrates, battens, finishes and ACM, brick slips, Class B Cladding panels, Gebrik/G-Brick system, Structural glazed systems/infill panels, Timber cladding features used at low-level only, Solar Shading elements, timber cavity barriers, and timber framed windows in which the frame itself forms the closure around windows. In addition a number of respondents considered that the scope of a ban on all combustible materials could be extremely wide-ranging and in theory, all elements of a system could be affected.

A number of respondents who stood behind a performance based and tested system to meet the requirements of BS8414 or BR135, considered this a more robust method of considering performance of products.

Question 7b asked 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?

The majority of respondents identified that they have seen a trend for non-combustible products specified in developments. Some respondents identified concern that such a move may not make buildings safer as the whole system will not have been subject to an appropriate test.

Question 7c asked what is the impact of removing access to the BS 8414 for those buildings affected by the ban test is likely to be?

Respondents identified the following issues with removing access to the BS 8414 test:

- A restriction in the types of façade treatments available.
- Most A1 and A2 insulation products have lower thermal resistance compared to currently used materials. To achieve current thermal efficiency wall thicknesses may have to increase, increasing the overall building footprint or reducing the net area of rooms.
- Potential structural issues due to the greatly increased weight and thickness involved in the use of non-combustible materials.
- The impact on existing buildings which have used systems which have been tested to BS 8414:1 or 2 and achieved a BR135 classification. The ban could cause issues with property blight/loss of value or gaining property insurance, issues over who will pay to reclad existing buildings.
- Unnecessary public fear, worry and stress.
- Very large numbers of buildings affected.
- 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

A number of respondents identified concerns with the BS8414 test itself, where they considered it did not reflect the real life situation in which it will be installed and therefore there are questions over its reliability.

Question 7d asked 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)

Some respondents identified the cost of non-combustible insulation over combustible insulation may add an additional 0.1% to the overall project costs, while other respondents considered the cost to be substantial. A number of respondents considered there would be a wide range of issues leading to extra cost, some of which are hard to quantify.

Question 7e asked for any further comments on the likely impact of this change for construction e.g. supply chains

The following issues were identified by respondents:

- Respondents identified a wholesale ban on combustible materials will make it extremely difficult to obtain non-combustible insulation across the entire construction sector. This also generates a monopoly for a specific sector with little or no market competition in place, which could lead to shortages and price rises across the supply chain. However, in contrast other respondents identified many countries already ban or restrict combustible materials for high-rise buildings, and in their experience, supply chains, product innovations, and other elements of the construction value chain naturally adapt to the legal and regulatory requirements in any given market.
- It would hamper the industry's ability to innovate and to find optimum solutions across a wide range of buildings.
- Reduce the ability to meet the Government's already ambitious targets for carbon reduction.
- It risks creating a culture of complacency instead of stimulating one of responsibility and improved standards.

Question 8 asked for any related issues which we have not specifically addressed.

Respondents also raised the following other points to the consultation:

- Policy changes should be aligned across Scotland and England to aid industry in a consistent approach.
- The ban should extend to all high-rise and high-risk buildings, such as hospitals and care homes, schools, hotels and sports arenas, where there may be challenges in exiting the premises regardless of their height.
- A key emphasis needs to focus on how regulations can be enforced and penalties applied where there is evidence of non-compliance.
- If a ban is imposed, how will Government respond to occupants who feel their building is not safe if it is not altered to meet the ban? This could bring with it potentially huge retrospective costs which the Government would need to meet if such a building was originally built or refurbished to an agreed set of standards.
- A ban would introduce all kinds of complexities and bring with it a whole set of unintended consequences. It would send out mixed messages to insurers and to mortgage providers. How will the Government address any costs needed to redesign and re-specify products?

4. Consultation responses – Government response

Our final policy approach takes into account the responses received to the consultation and advice received by The Building Regulation Advisory Committee Wales.

Types of buildings

The consultation proposed that the ban would apply to blocks of flats and similar building uses as these present the greatest risk to life as they contain sleeping risk. The majority of respondents agreed with the proposal. Therefore, the ban will apply to all new residential buildings over 18m.

Further advice received proposed that hospitals, including private hospitals, be included in the scope of the ban. Therefore, the ban will apply to all new hospital buildings over 18m.

The ban will apply to these buildings where building work is being carried out, including extensions, changes of use and material alterations. The ban applies to buildings in scope that are more than 18m in height, where the height of the building is measured from the lowest ground level adjoining the outside of an external wall to the finished floor surface of the top occupied storey.

The risk presented by low-rise building is different than in high-rise buildings. The trigger height for buildings within scope can be explored in further detail during the wider review of fire safety following the Welsh Government response to the Hackitt report and the Building Safety Expert Group's Roadmap.

Performance requirement

Respondents identified A2 or better of The European Classification system for combustibility (BS EN 13501) be taken forward. There was support for a change to the sub classifications for smoke and droplets and therefore the ban will limit materials to products achieving a European Classification of Class A1 or A2-s1, d0 when tested in accordance with BS EN 13501-1:2018 which is in line with many other EU member states.

Exemptions

The ban will apply to all elements of the external wall construction from the outer to the inner faces. The majority of respondents also agreed that some exemptions would be required for components where non-combustible alternative are currently not available.

The products included on the exempted list are those products for which a Class A1 or Class A2-s1, d0 does not exist or is not readily available.

Attachments

We consulted on including significant attachments such as balconies and brise soleil in the ban. Consultation responses supported this, and we are proceeding on that basis.

Implementation

The ban will be implemented through changes to the Building Regulations and we consider transitional provisions are necessary to allow the industry to adapt. There is evidence that a

majority of projects are already applying restrictions on the amount of combustible materials used in their external walls and therefore the transitional period will be limited.

The policy will apply to any buildings undertaking buildings works unless the buildings works have started on site or an initial notice, building notice or full plans has be deposited and work has started on site within a period of eight weeks.

Annex 1

Assigned responses were made for the following:

Question 1	Question 2	Question 4	Question 6	Question 7	Question 8	Question 10
30 yes	30 No	30 Yes	30 Yes	29 No	30 Yes	30 Yes
35 don't know	35 Yes	34 No	33 Yes	30 No	33 DNA	35 Don't Know
38 yes	37 No	35 Yes	35 Yes	35 No	34 Yes	36 Yes
39 no	38 Yes	36 Yes	38 Yes	38 No	36 Yes	39 No
41 yes	39 No	38 No	39 No	39 No	37 DNA	44 Yes
43 yes	43 Yes	39 No	41 Yes	43 No	38 Yes	45 No
44 no	44 No	43 No	43 Yes	44 No	39 No	47 No
45 no	47 No	44 No	44 No	45 No	40 No	48 Don't Know
47 no	48 No	45 No	45 No	47 No	41 DNA	57 Yes
48 no	50 Yes	47 No	47 Don't Know	48 don't know	42 Yes	58 Don't Know
54 yes	51 DNA	48 No	48 No	50 No	43 Yes	59 No
58 no	54 Yes	49 No	56 Yes	58 yes	44 No	61 Yes
61 yes	55 No	57 Yes	57 Yes	60 No	45 No	63 No
62 yes	57 Yes	58 No	58 Yes	61 No	47 No	64 Yes
63 no	58 No	61 Yes	61 Yes	62 No	48 No	68 Yes
64 yes	59 Don't know	63 No	62 Yes	63 No	50 Yes	69 Yes
69 don't know	61 Yes	69 Yes	63 No	64 No	54 DNA	
70 yes	62 Yes		64 Yes		56 Yes	
71 yes	63 No		70 Yes		57 Yes	
	64 Yes				58 No	
	65 Yes				61 Yes	
	68 DNA				62 Yes	
	69 Don't know				63 No	
	71 yes				64 Yes	
					65 Yes	
					70 DNA	

Question 11	Question 13	Question 15	Question 17	Question 20	Question 21	Question 22
30 No	15 DNA	35 Yes	29 Don't Know	30 Yes	30 No	29 No
34 Yes	30 No	37 No	30 No	36 Yes	36 Yes	30 No
35 Yes	35 Don't Know	38 Yes	35 Don't Know	37 No	37 no	33 Yes
37 Yes	38 Yes	39 No	39 Yes	38 Yes	39 No	34 No
38 Yes	39 No	41 Yes	42 DNA	39 No	41 Yes	35 Yes
43 no	41 Don't Know	43 Yes	43 No	41 Yes	44 No	37 Yes
44 No	43 Yes	44 No	44 Don't Know	43 Yes	45 No	38 No
47 No	44 No	45 Don't Know	45 Yes	44 Don't Know	47 No	39 No
49 Yes	56 Don't Know	47 Don't Know	47 Yes	45 No	48 Don't Know	43 No
51 No	58 No	48 Don't Know	48 Yes	47 No	56 Yes	44 No
55 No	59 No	50 Yes	50 Yes	48 Don't Know	58 yes	45 Yes
57 Yes	60 No	51 DNA	58 yes	58 Don't Know	59 NO	47 Yes
58 No	61 No	52 yes	59 Yes	61 Yes	61 Yes	48 Don't Know
59 No	62 Yes	56 Yes	61 Yes	63 No	62 Yes	50 No
61 Yes	63 No	58 No	62 Yes	64 Yes	63 No	56 Don't Know
62 Yes	64 Don't Know	59 No	63 Yes	70 Yes	64 Don't Know	57 Don't Know
63 No	69 Don't Know	60 No	64 Yes		70 Yes	58 No
64 Yes		61 Yes	65 Yes			59 Yes
68 Yes		62 Yes	69 Yes			61 Don't Know
		63 No				62 Yes
		64 Yes				63 No
		68 Don't Know				64 Don't Know
		71 Yes				69 Yes