



Ministry of Housing,
Communities &
Local Government

Government Response to the Consultation on Banning the Use of Combustible Materials in the External Walls of High-Rise Residential Buildings



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November 2018

ISBN: 978-1-4098-5376-3

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Section 1: Introduction

1. The Secretary of State committed to consult on banning the use of combustible materials on 17 May in his Oral Statement to Parliament as part of the Government's response to the publication of Dame Judith Hackitt's
2. The Secretary of State reaffirmed the Government's commitment "*to ban the use of combustible materials on the external walls of high-rise residential buildings, subject to consultation*" during a statement on the Government's response to the Grenfell Tower fire to Parliament on 11 June 2018.
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 consulted separately on such assessments.
5. Following the Grenfell Tower fire there has been much debate about compliance and interpretation of these provisions. The Government heard the concerns of many that combustible cladding is not explicitly banned under statute. The Government further recognised 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.

Section 2: The Consultation

6. This consultation proposed a ban on the use of materials which do not meet class A1 or A2 from use in the external walls of high-rise residential buildings which are 18m or over. The proposed 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.

The consultation considered whether to ban should be limited to:

- Banning Aluminium Composite Material with a polyethylene 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).
7. However, it was considered that the policy intention would be met by applying the ban the whole wall assembly. The consultation complied 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. The consultation ran for eight weeks from 18 June 2018 and closed on 14 August 2018. The consultation documents¹ were available on the GOV.UK website and responses could be returned to the Ministry of Housing, Communities and Local Government by email or post.
 9. This consultation was separate to the consultation on amendments to statutory guidance on assessment in lieu of a test (desktop study) in Approved Document B (Fire Safety).

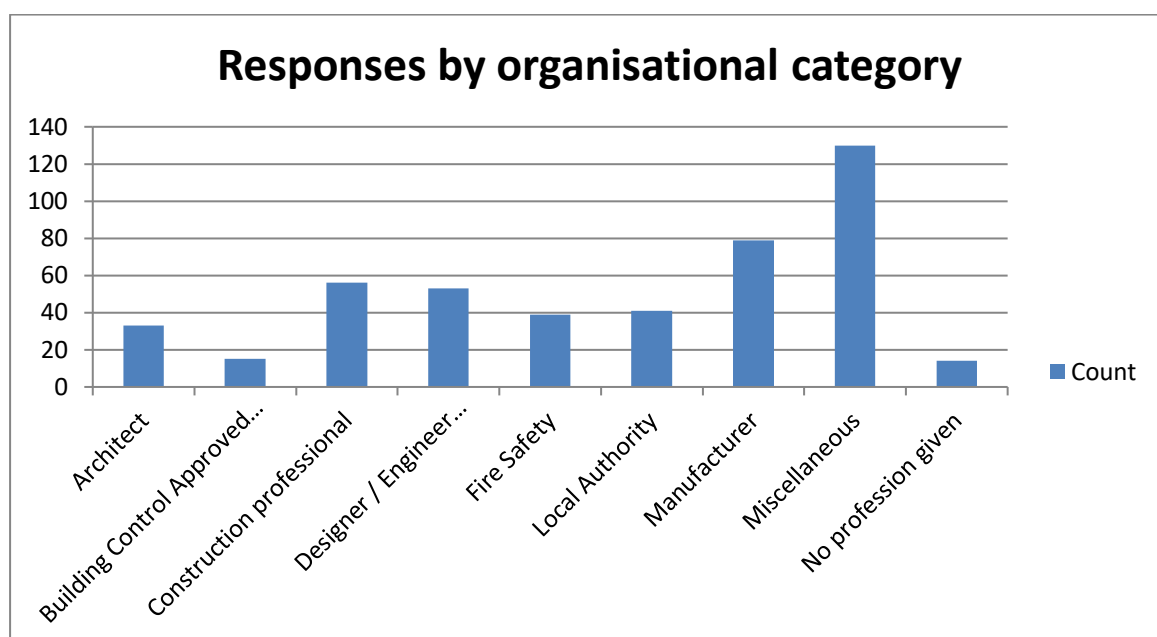
¹ The Consultation proposing the ban of combustible materials was entitled “Banning the use of combustible materials in the external walls of high-rise residential buildings”.

Section 3: Summary of Responses

Overview

10. The Government received 460 responses on the proposal to ban the use of combustibile materials in the external walls of high-rise buildings. The following data analysis is from the responses received by the end of the consultation.
11. Of the 460 consultation responses, there were:
 - 185 responses from individuals
 - 258 responses from organisations
 - 3 responses from both individuals and organisations
 - 14 respondents did not declare.
12. Two hundred and ninety-seven responses were submitted via an online form through Survey Monkey and 163 responses were received via email. Hard copies were also taken into account.
13. Respondents were asked to assign themselves to one of 14 broad organisational type categories. Figure 1 below provides a breakdown of the 460 responses by organisational category.

Figure 1: Responses by organisational category



14. This report is structured around the questions set out in the consultation document. Each section includes a quantitative analysis of the responses and a summary qualitative analysis of the views and comments submitted for each consultation question. The question numbers used in this report are consistent with the question numbers on the Survey Monkey form.
15. It should be noted that none of the questions in the consultation received a 100% response. Every percentage given in the tables and text in this report is a percentage of the replies of those who answered the particular question and where responses could be coded into “yes/no/don’t know” out of the possible 460 respondents for consistency, unless stated otherwise.
16. The percentages are based on the full sample, with some of the findings summarised based on targeted analysis of responses from key stakeholders.
17. The percentages have been rounded to the nearest whole number. Some responses have not been included in the “yes/no/don’t know” responses as they were either “don’t know” or not written in a format where we could not identify clearly the response provided.

Analysis

Question 3

(a) Do you agree that combustible materials in cladding systems should be banned?

- 69% of respondents said “yes”
 - 24% of respondents said “no”
 - 1% of respondents said “don’t know”
18. The majority of respondents agreed that combustible materials in cladding systems should be banned. Twenty-four per cent disagreed with this proposal.

(b) Should the ban be implemented through changes to the law?

- 70% of respondents said “yes”
 - 21% of respondents said “no”
 - 3% of respondents said “don’t know”
19. The majority of respondents agreed that the ban should be implemented through changes to the law. Twenty-one per cent disagreed with this proposal.

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

20. A large proportion of respondents proposed alternative approaches to achieve the ban. The majority of respondents said that a ban should be achieved through Building Regulations, testing, and removing the option to use combustible materials in the statutory guidance (Approved Document B) rather than by law. Some respondents went further and recommended for a government body to be set up to assess and approve building plans.
21. Additional recommendations and comments from respondents included:
- Licensing products for use on buildings
 - The need for unambiguous guidance in Approved Document B
 - Systems should be tested in accordance with EN13501-1 (product testing) and 13501-2 (system testing) and criteria should be set accordingly
 - A government body should be set to assess and approve building plans similar to Hong Kong's Buildings Department
 - A ban on all combustible materials will affect insulation
 - Ensure building control inspectors are fully liable if things go wrong

Question 4

Do you agree that the ban should apply:

(a) to buildings 18m or over in height?

- 62% of respondents said “yes”
 - 34% of respondents said “no”
 - 1% of respondents said “don’t know”
22. The majority of respondents agreed that the ban should apply to buildings over 18m or over in height. Thirty-four per cent of respondents disagreed with this threshold.
23. Some respondents queried the relevance of 18m height threshold on the basis that it is predominantly based on an historic figure for fire-fighting equipment. The Government will review this as part of the wider technical review of the building regulations for fire safety set to start in the Autumn.
24. It is noted that some respondents interpreted these questions differently – some have answered “no” as they do not agree the ban should apply to any height and some have answered “no” as they think the ban should apply to all heights.

25. The breakdown of the statistical responses for this question may not be an accurate representation of the views of those who responded to the consultation.

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

- 72% of respondents said “yes”
 - 21% of respondents said “no”
 - 2% respondents said “don’t know”.
26. The majority of respondents agreed that the ban should apply throughout the entire height of the wall. Twenty-one per cent disagreed with this question.

(c) to high-rise residential buildings only?

- 8% of respondents said “yes”
 - 80% of respondents said “no”
 - 2% of respondents said “don’t know”
27. Only eight per cent of respondents agreed that the ban should apply only to high-rise residential buildings. The majority of respondents disagreed; advancing arguments including that there should not be a ban. 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. A number of respondents additionally expressed the view that the policy should apply to all buildings where people are likely to be sleeping.

(d) to all high-rise, non-residential buildings, e.g. offices and other buildings, as well as residential buildings?

- 64% of respondents said “yes”
 - 26% of respondents said “no”
 - 3% of respondents said “don’t know”
28. The majority of respondents agreed that the ban should apply to all high-rise, non-residential and residential buildings, whereas only twenty-six per cent disagreed.

(e) Please provide any further information in relation to your answers above

29. Respondents raised a wide-range of views in relation to the scope of the ban including that there should be an outright ban applying to all buildings regardless of use, the ban should apply to all areas where people sleep, the ban should depend on escape plans, e.g., stay put policy buildings need safer cladding, and depend on risk factors, e.g. the absence of sprinklers or absence of an on premises care taker/ fire warden. It was also suggested that a risk-based approach would be more suitable, i.e. a ban on combustible materials should be considered on buildings below 18m where residents are more vulnerable in case of fire, e.g. hospitals, or care homes.
30. Diverse commentary was received from respondents including that there *“shouldn't be a ban, but particular attention needed on residential buildings over 30m,”* and that *“all buildings have a life risk and people should be protected from fire regardless of if they live on the premise or at work”*. One respondent said that *“cladding should be limited to V-0 (UL 94) for flame spread”*.
31. Additional comments and recommendations made by respondents included the following:
- The limit encourages the construction of heights slightly under 18m, e.g. 17.96m
 - Reference was made to the Scottish consultation threshold of 11m
 - Modern retail and offices spaces are designed to be fully accessible to less able-bodied individuals and therefore travel times and evacuation times are greater for this group
 - The Regulations should minimise complexity and not have multiple tiers
 - Changes of use is common
 - Balconies can cause fire to spread
 - Sustainability of materials should be considered - e.g. timber cannot be used
 - Air pressurise stairwells and ensure more than one stairwell on high rises
 - Toxicity of materials should be considered.

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?

- 58% of respondents said “yes”
- 24% of respondents said “no”.
- 13% of respondents said “don't know”.

32. Fifty-eight per cent of respondents agreed that the ban should use the European classification system and considered class A2 or better as the correct classification. Twenty-four per cent disagreed. It is noted that the question asked during the consultation was in two parts:
- a. Suitability of the European classification system; and
 - b. Suitability of a minimum performance of class A2.

As such some respondents may have intended a positive answer only to the use of the European classification system.

(b) If no, what class should be allowed in wall construction and why?

33. Respondents that disagreed to this question took the view that a higher performance requirement (i.e. class A1) should be required. Some respondents highlighted the use of European classifications.
34. 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, the use of the large-scale test is more appropriate and that materials should be subject to large scale tests rather than small European tests. It was also suggested that the use of the class is misleading and that only products and systems that have undergone rigorous full-scale fire tests should be used.
35. Additional comments made by respondents included the requirement for smoke and burning droplets, toxic fumes, gaskets and other building material to be considered.
36. Respondents also recommended the need for consistency across all regions of the UK, highlighting that there are currently too many systems and complexity. It was further suggested that the issue of classification should depend on systems rather than each material and that the Government should fund the standards. An outcomes-based approach was also recommended as per Dame Judith Hackitt's recommendations as opposed to prescription.

Question 6

(a) Do you agree that a ban should cover the entire wall construction?

- 60% of respondents said "yes".
- 31% of respondents said "no".
- 3% of respondents said "don't know".

37. The majority of respondents agreed that the ban should cover the entire wall, although forty-eight per cent of respondents agreed that a list of components should be excluded. Thirty-four per cent of respondents disagreed.

(b) If no, what aspects of the wall should it cover?

38. Respondents put forward a wide-scope of recommendations and comments in relation to the aspects of the wall that the ban should cover, ranging from a risk-based system to an inclusive ban covering the entire wall construction inside to outside with the exception of certain minor components. Respondents highlighted that some components can only be made from combustible material. The need for consistency was also emphasised and it was stressed that exceptions could be taken advantage of.
39. Suggestions for the aspects of the wall to which the ban should apply included the following:

- From the sheathing board outwards
- Only parts which lead to fire spread/growth
- Exempt parts with no alternatives – e.g. Gaskets
- Exempt elements encased by non-combustible material
- Outer cladding of rain screen
- Insulation
- Only significant coverage of cladding
- Window reveals, cills, heads, roof fascia's and soffits
- Balconies should be included because residents may use them for BBQs or hazardous storage
- Fire can jump, e.g., between balconies
- Apply to openings, e.g. windows and vents
- Windows etc. have glues preventing them from A2
- Exclude parts that won't contribute to fire spread
- Living/green walls contribute to fire spread
- Brise soleil etc. may not cause spread but can contribute to smoke

(c) Should a ban also cover window spandrels, balconies, brise soleil and similar building elements?

- 64% of respondents said "yes".
- 22% of respondents said "no",
- 5% of respondents said "don't know".

40. The majority of respondents agreed that the ban should also cover window spandrels, balconies, brise soleil and similar building elements. Twenty-two per cent disagreed.
41. Several respondents commented that a suitable test for these products should be developed, and that they should be subject to testing.

(d) Please provide any further information in relation to your answers above

42. See Question 6, Part (b) for responses relating to how the ban should apply to wall construction.

Question 7

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

- 48% of respondents said “yes”.
 - 34% of respondents said “no”.
 - 10% of respondents said “don’t know”.
43. Forty-eight per cent of respondents agreed that a limited number of wall system components should, by exception, be exempted from the proposed ban. Thirty-four per cent of respondents disagreed.

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

44. Respondents provided a range of comments including the view that exemption/conditions would be difficult to enforce and that these will complicate the system and introduce loopholes. Respondents also recommended testing fire propagation and smoke and suggested that there should be a percentage measure (area/weight) rather than a prescriptive list. Respondents also highlighted the requirement for an exemption list/conditions for use otherwise it would not be possible to build a compliant building and that exemptions must not cause a temporary fire risk during construction or contribute to rapid fire spread.
45. Suggestions for exempted components included the following:
 - All items tested by BS8414.
 - Gaskets, seals, aluminium brackets, trims, membranes, thermal breaks, fire sealed cabling, glues/adhesives, timber, curtain walls, spacers, damp

proofing, glazing, washers, nyloc nuts, wall ties, water bars, rain water goods, electrical cabling, cavity trays.

- Solar panels, paints and internal decor/furnishings
- Modern materials, e.g. Rockwool and ZIP panelling
- Intumescent materials

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

- 20% of respondents said “yes”
- 36% of respondents said “no”
- 10% of respondents said “don’t know”.

46. Twenty per cent of respondents said that they would recommend an alternative way of achieving the policy aims. Forty-six per cent said “no” or that they “don’t know”.

Question 8

Do you agree that:

(a) a risk-based approach is appropriate for existing buildings?

- 66% of respondents said “yes”
- 22% of respondents said “no”
- 5% of respondents said “don’t know”

47. The majority of respondents agreed that a risk-based approach should be taken for existing buildings. Twenty-two per cent disagreed with the risk based approach, predominantly for following reasons:

- A number of respondents considered that the ban should apply to existing buildings; and
- A number of respondents considered that the risk-based approach would result in certain materials being permitted on existing buildings but banned on new buildings.

(b) the ban should apply to proposed alterations to existing buildings including over-cladding?

- 73% of respondents said “yes”.
- 15% of respondents said “no”.
- 4% of respondents said “don’t know”.

48. The majority of respondents agreed that the ban should apply to proposed alterations to existing buildings including over-cladding. Fifteen per cent of respondents disagreed.

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

- 66% of respondents said “yes”
 - 18% of respondents said “no”
 - 5% of respondents said “don’t know”.
49. The majority of respondents agreed that 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”.

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

- 26% of respondents said “yes”.
 - 50% of respondents said “no”.
 - 10% of respondents said “don’t know”.
50. Twenty-six per cent of respondents said that the ban should not affect projects where building work has already begun. Fifty per cent of respondents said “no”.
51. This question appears to have been misinterpreted by many respondents. Text comments provided have therefore not been interpreted to be “yes” or “no” answers. The breakdown of the statistical responses for this question may not be an accurate representation of the views of those who responded to the consultation.

(e) Please provide any further information in relation to your answers above

52. A wide scope of feedback was given by respondents including the view that over-cladding is risky, a case by case approach should be taken, a ban might discourage repurposing of buildings into residential stock and that it would be costly for tenants.
53. Respondents also highlighted that it would be expensive to re-specify plans for current projects, that contractual penalties could be applied when changing materials pre/during construction, that developers may rush through plans to submit before ban comes into place and flagged insurance implications. One

respondent said that the ban could “*hurt SME suppliers (would need some form of protection/support/ability to change contract terms or even cancel contracts if they are unable to supply alternative products / comply with the ban).*”

54. Additional comments from respondents included the following:

- There should be further testing of an existing building’s materials
- The question of “*What happens during modifications/refurbishment, e.g. another floor is added?*”
- All new materials meet standards
- Seems nonsensical to start building with flammable materials just because it’s planned
- Should aim to bring all buildings to same standard
- Transitional period
- Independent risk assessment as a minimum
- Greater surveillance from local building control and oversight by the architect
- Changes may affect wall widths

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)?

55. Respondents took the view that wall elements including the following would be affected by the proposal:

- Insulation, balconies, cladding, sheathing, openings and ventilation, vapour barriers, plastics, adhesive tapes, curtain walling, (cross laminated) timber, air bricks, windows, etc. – essentially, all parts of the wall would be affected
- Thermal breaks to balconies, balcony decking, component coatings, balcony bitumen membranes
- Balconies are mostly Class B & C, suppliers would be affected

(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?

56. Responses to this question ranged from suggesting that elements that do not meet the proposed requirement are currently widely used for money saving reasons and also because some combustible components are difficult to avoid (e.g. vapour barriers, thermally broken structural connections, etc.), to the view

that there is some shift towards Class A2 and above materials already, particularly in regards to insulation.

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

57. Responses to this question ranged from the view that removing access to the BS8414 test would restrict flexibility in design and choice of materials, slow down building and create a loss of confidence. Respondents further stated that BS8414 is necessary but not adequate, that there is no alternative to the test and that there is no outcome-based means for compliance with the loss of BS8414. It was also highlighted that although costs would be increased, it was still necessary.

(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?

58. Respondents to this question took the view that all high-rise buildings would be affected.

(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)

59. A wide-ranging response was received to this question. A number of respondents considered that the new requirements would result in 10-30% costs increase. Some respondents suggested that there would be high costs implications, whereas a number of respondents believed that there would be little impact.
60. Additional comments in relation to this question raised the view that there was no consensus on costs and that the extra costs would be dependant on the building. It was also suggested that the extra costs would affect house prices, mortgage availability and insurance and that the new requirements would result in “value engineering” to minimise costs.

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

61. Respondents made wide-ranging suggestions as to the likely impact of this change for construction, including that the change would promote innovation

and jobs in safer materials and a new qualification for surveyors/inspectors. However, some respondents highlighted that the change would result in limited creativity in architecture and the requirement for toxicity regulations.

62. Responses also raised the view that the change would result in thicker walls and loss of floor space, an impact on build times and the carbon footprint. The issue of insufficient testing facilities and the prohibition of desktop studies was also emphasised.
63. Respondents raised diverse opinions on the issue of compliant materials including the view that *“production capacity of compliant materials may hit their limit, i.e. supply and demand issues, ameliorated by a long lead time/transition period”*. It was also suggested that the change may result in only one type of compliant produce giving a monopoly and that potential “safe” materials could have side effects (e.g. mineral wool could be a carcinogen).

Section 4: Government Response

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

Types of buildings

65. The consultation proposed that the ban would apply to blocks of flats as these present the greatest risk to life. The majority of respondents agreed with the proposal. Therefore, the ban will apply to all new residential buildings above 18m in height.
66. There was also strong support for the policy to be extended to include places where occupants are vulnerable and/or where people sleep. The ban will therefore also apply to new dormitories in boarding schools, student accommodation, registered care homes and hospitals above 18m.
67. The ban will also apply where building work is being carried out, in line with the definition of building work in the Building Regulations, including changes of use and material alterations.
68. The ban on the use of combustible materials in buildings applies to buildings in scope that are more than 18m in height. The height of the building is to be measured from the lowest ground level adjoining the outside of an external wall to the finished floor surface of the top occupied storey.
69. The risk presented by low-rise building is different than in high-rise buildings. The trigger height for all the buildings within the scope of the guidance can then be explored in further detail during the technical review of Approved Document B which the Department has committed to carry out.

Performance requirement

70. 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 :2007+A1:2009 which is in line with many other EU member states.

Exemptions

71. The scope of the policy includes all elements of the wall construction from the outer to the inner faces. However, it was agreed by the majority of respondent

that some exemptions would be required for components where non-combustible alternative are currently not available.

72. The exemptions are based on the collation of responses provided during the consultation. The products included on the list include products for which a Class A1 or Class A2-s1,d0 does not exist or is not readily available. Further guidance will be provided in the statutory guidance (Approved Document B) where necessary.

Implementation

73. The ban will be implemented through changes to the Building Regulations. We consider that transitional provisions are necessary in order to allow the industry to adapt. However, there is evidence that a majority of projects are already applying restrictions on the amount of combustible materials used in their external walls.
74. As such 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.

Attachments

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