

GOVERNMENT BUILDING SAFETY PROGRAMME – EXPLANATORY NOTE

Summary

- Government is acting to support owners and residents of high rise buildings to ensure fire safety in the light of the Grenfell Tower tragedy.
- Landlords are engaging in a checking and testing process for Aluminium Composite Material cladding.
- The testing process is identifying whether the filler material in Aluminium Composite Material submitted for testing is of a type that would meet the limited combustibility requirements of current Building Regulations guidance.
- Landlords have been given advice on the immediate steps they should take and we encourage them to follow that advice.
- We have set up an expert panel to advise us on other urgent steps we should take to improve fire safety and will be issuing more advice imminently to clarify further steps landlords could take to inform their decisions on the cladding systems they have in place, and on checking insulation and other components of typical wall construction.
- We are engaging landlords and industry to examine what more can be done to support necessary remedial work.

Introduction

1. Immediately after the tragic fire at Grenfell Tower on 14 June, it was clear that the façade of that building had created risks to fire safety.
2. It was also clear that many local authorities and other landlords responsible for tower blocks were acting to check the fire safety of their buildings and reassure their tenants. The Government took immediate steps to conduct an audit of high-rise social housing tower blocks across the country, to ensure that any other similar risks were immediately identified and acted upon.
3. This note explains the checking and testing programme that has been set up and is now underway, and the wider steps that are being taken to ensure safety in all relevant buildings, in the light of the early test results. It explains:
 - i) The checking and testing process the Government has put in place to help landlords ensure the safety of residents and other occupants in high rise buildings and the actions landlords have been asked to follow.
 - ii) The immediate action that the Government has recommended to landlords and fire and rescue services in response to a test result.

iii) The further action that is underway to support landlords and councils including working with suppliers to replace cladding and other materials where that is necessary.

4. The Government has been in close contact with local government, housing associations, other public and private sector landlords, fire and rescue services and a number of fire and building safety experts to work through the implications arising from the Grenfell Tower fire for other high rise buildings. It is also engaging wider industry bodies and organisations on next steps and would welcome comments or suggestions on the elements contained in this note. These should be directed to housingchecks@communities.gsi.gov.uk.

i) Checking and testing Aluminium Composite Material (ACM) cladding

5. On Saturday 17th June, the Department for Communities and Local Government convened a group of technical experts to provide advice on the best immediate steps Government could take to help local authorities and other landlords address the fire safety concerns that tenants living in tower blocks similar to Grenfell Tower would undoubtedly have.

6. While it was too early for the full and exact reasons for the speed of the spread of the Grenfell Tower fire to be known, the experts agreed that, from the information available, additional tests should be undertaken urgently on Aluminium Composite Material cladding. On the advice of the experts, the Department wrote to local authority and housing association landlords on 18 June, asking them to

- identify all their residential tower blocks (properties over 18 metres in height¹),
- identify those with aluminium type external cladding and inspect those to establish whether the panels were made of an Aluminium Composite Material, so that they could be submitted for testing through a process being established by the Department,
- provide a wider range of information about their tower blocks, and
- continue checking that they have robust fire assessments for their stock, drawing attention to the Local Government Association's comprehensive guidance, *Fire Safety in purpose-built blocks of flats*.

7. The Department wrote again to all social landlords on 19 June setting out the process they should follow to submit samples of ACM cladding to the Building Research Establishment for testing and the first samples were received and tested on Wednesday 22 June.

¹ The height at which relevant and additional fire safety requirements are triggered in paragraph 12.7 of Building Regulations Fire Safety Approved Document B guidance.

8. The Department has also extended this checking and testing approach to residential tower blocks owned by private landlords and to tall buildings in the public sector, including hospitals and schools.

9. We are aware that there has been some uncertainty about and criticism of the tests being applied to ACM panels at the Building Research Establishment. By the end of Thursday 29 June, 100% of the panels that had been tested did not have the limited combustibility required to meet building regulations guidance. With such a high failure rate, Government, landlords, residents and others naturally want to be sure that the tests are right and accurate.

10. The test was designed and put in place on the advice of the expert group to provide a quick and reliable way to help landlords identify the type of ACM cladding present on their buildings in order to take appropriate action. Annex A to this note sets out in more detail the testing process and how it relates to fire safety and the Building Regulations.

11. In summary, the Building Regulations guidance sets a requirement for external walls on all buildings not to allow fire spread. And it identifies the use of combustible materials in a cladding system – insulation product, filler materials, etc - as a risk to fire spread in tall buildings. The Department's view, supported by expert and legal advice, is that external walls in a tower block can meet the Building Regulations requirement for resisting fire spread in two ways, set out in more detail in Annex A.

- The first is for each individual component of the wall (insulation, filler, etc) to be of limited combustibility, and to each meet set standards for this.
- The second is to ensure that all the combined elements of a wall, when tested as whole system, have sufficient fire spread resistance to meet a set standard.

12. The tests being conducted at BRE are testing only whether the core or filler of ACM panel samples being submitted are of a type that would fail the limited combustibility test for an individual element of a wall in a tall building (the first of the requirements summarised above). It is possible, therefore, that ACM panels that have a core material that is not of limited combustibility, might be safe if installed as part of a whole wall system that meets the second test described above. We are not aware of any such systems having passed the necessary tests but have asked a newly established expert advisory panel to look into this further.

13. We are also aware that some ACM panels are accredited as having a 'Class 0' rating for the surface. But that, in the Department's view, supported by expert advice, is a rating for the surface only and does not cover the limited combustibility requirement for the core or filler material within an ACM panel.

ii) Action landlords should take

14. On 22 June, the Department wrote to all local authorities and housing associations with advice, drawn up by the group of experts we convened on 17 June, on the immediate steps they should take if it is assessed that they have buildings with ACM cladding of the type that would not meet limited combustibility requirements.

15. It includes engaging residents, seeking the support of the Local Fire and Rescue Service and undertaking urgent fire risk assessments, as well as checking physical fire safety measures (such as fire doors, smoke control systems and fire fighting facilities) and building construction components such as the integrity of walls that act to prevent fire spread and the safety of insulation and other materials in the façade of the building.

16. In particular, this advice also reflects emerging findings from the Grenfell Tower fire investigation in relation to the importance of fire doors and smoke extraction, accessibility to the base of tower blocks for fire fighting appliances, and checking insulation materials in the exterior facade.

17. We encourage all landlords with tower blocks with ACM cladding to act on this advice, repeated at Annex B of this note, to ensure the safety of residents.

iii) Further action underway

18. Understandably, local authorities and other landlords want greater clarity on whether ACM panels on their tower blocks could be part of a wider, safe wall system despite having been identified as likely to fail the limited combustibility test for individual wall components. That is a matter which landlords should consider carefully, consulting the original specifications and designs for the cladding, the designers, engineers and contractors who carried out the work, and the building inspectors who certified it.

19. We want to support landlords in this position. So we have drawn together a panel of experts to advise us on further steps which could be taken to improve the safety of tower blocks in advance of further findings emerging from the Grenfell Tower fire investigation and the public inquiry. This panel of experts met for the first time on Thursday 29th June and agreed to consider urgently what further advice or testing could be provided to help landlords conclude whether cladding systems that included ACM panels could be regarded as sufficiently safe. We expect that further advice to be available next week to help landlords consider what further steps they should take.

20. Following its initial meeting on 29th June, the panel concluded that:

“The tests that are currently being conducted are a screening test to identify which ACM panels are of concern. It tests the filler – the core of the panel – to check if it is of limited combustibility (category 1) or not (category 2 or 3). This is in line with the requirement of the Building Regulations guidance. The filler is one element of the overall cladding system.

If the panel core fails the test we would expect the landlord to take the recommended interim fire safety measures issued on 22nd June.

Early next week the Expert Panel will consider whether these panels can be used safely as part of a wider building external wall system, and therefore could remain on a building under certain approved circumstances. If, in the meantime, a landlord chooses to take down and replace cladding, care should be taken to consider the impact that removal may have on the other wall elements, especially insulation, and therefore on the overall fire integrity of the building as well as other Building Regulation requirements.”

21. The expert panel have also been asked to consider whether there is any further practical advice or support that could be offered to landlords to help them check the fire safety of insulation and other materials in the façade of tower blocks.
22. In addition to the work of the expert panel, the Department is engaging further with landlords and industry to examine what further steps can be taken to facilitate remedial action necessary to improve the fire safety of tower blocks.
23. We will report progress with this work on a regular basis.

ALUMINIUM COMPOSITE MATERIAL CLADDING SCREENING TEST METHODOLOGY

1. This note describes the methodology employed for the tests of Aluminium Composite Material (ACM) cladding panels currently being undertaken by the Building Research Establishment on behalf of the Department for Communities and Local Government.
2. The Department received advice from a group of experts that three types of ACM panels were on the market (each with a different core material), and likely to have been used in recent works, and that the core of only one of these would satisfy the definition for a material of limited combustibility², as would be necessary to satisfy the guidance for high-rise buildings (over 18m in height) in Approved Document B (Fire Safety) guidance (ADB).
3. Limited combustibility is a term used in the UK and defined in table A7 of ADB against both national and European standards. ADB notes that, for the purpose of ADB, a material that is classified as A2 in the relevant European test standard, EN 13501-1 (or the national standards also set out in table A7), would also be acceptable as a material of limited combustibility. While the surface of a panel may be classified as Class 0, this does not address whether the filler material in the core of the panel meets the definition of limited combustibility.
4. The Building Research Establishment (BRE) was asked to develop a screening test to determine which type of Aluminium Composite Material had been used in the cladding. The screening test is not stricter than those set out in the Approved document. It will show whether the core of the sample provided has flame retardant properties and this provides a high degree of certainty as to the type of panel that has been screened.
5. The equipment and procedures used in the screening tests are based on the BS EN ISO 1716:2010³ test standard. As the purpose of this testing was to quickly and reliably screen the core material within the panel, the full procedures set out in the BS EN ISO 1716:2010 test standard have not been followed as they are unnecessary to determine which type of panel has been submitted for the screening test. These screening tests should not be confused with a formal classification test against this standard.

² Material of limited combustibility is defined in table A7 of Approved Document B. This allows for products to be tested using the procedures given in BS 476-11:1982 or classified A2 using the procedures given in BS EN 13501-1:2007.

³ The BS EN ISO 1716:2010 test standard is one of the suite of standards set out in BS EN 13501-1:2007 used to classify the reaction to fire performance of construction products.

6. The result of the screening test indicates the performance achieved for the core material in terms of three categories which relate to the three types of ACM panel available:

- **Category 1** means that the result is in line with the definitions of materials of limited combustibility (defined in paragraph 3 above).
- **Category 2** means that the result does not achieve the definitions of category 1 but does have some limited flame retardant properties.
- **Category 3** means that the result does not achieve the definitions of materials of limited combustibility and has no flame retardant properties. Commonly, the core in this case comprises polyethylene without the addition of the flame retardants that enable achievement of the Category 2 result.

7. These categories were defined by calibrating the results of the screening test against samples of ACM filler with a known performance.

8. A specific report is being provided for the landlord for each sample tested, accompanied by advice on steps that may need to be taken. For material found to be in Categories 2 or 3, landlords have been requested to take action as set out in the advice note which the Department issued on 22 June, attached as Annex B to this document.

9. We are aware that some landlords have questioned whether an ACM panel's failure to meet the definitions for limited combustibility means in all cases that it is not compliant with the building regulations.

10. To ensure building regulations requirements have been met as regards external fire spread, Schedule 1 Section B4(1) of the Building Regulations 2010 requires that: "The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the building". Approved Document B (ADB) provides guidance on how to meet that requirement. For external wall construction, there are two ways under ADB to achieve this:

Option 1: Ensuring that each individual component of the wall meets the criteria for limited combustibility set out in the ADB paragraphs 12.5 to 12.9; or

Option 2: Ensuring the facade system has met the acceptance criteria in BR 135, in accordance with BS 8414.

11. To date we have not been provided with any evidence that the ACM panels in category 2 or 3 of the screening test have been shown to meet the BR135 Criteria. However, it may be possible for individual materials that do not meet the limited combustibility definitions to be used where they form part of a system that meets the requirements set out in Option 2 above. In order to determine if a specific cladding assembly meets the expected performance, building owners will need to seek

specialist advice from a competent professional who specialises in the fire performance of cladding assemblies.

Annex B

EMERGENCY FIRE SAFETY REVIEW

If it is determined that the insulation within Aluminium Composite Material (ACM)⁴ is unlikely to be compliant with the requirements of the current Building Regulations guidance, it is essential that you **immediately** implement the following interim mitigating measures to ensure the safety of residents, pending replacement of the cladding.

Interim measures recommended by independent panel of experts

Notify Fire and Rescue Service.

Inform your local fire and rescue service fire safety/protection department. Failure to do so may put fire-fighters as well as residents at risk. The fire and rescue service will carry out an urgent inspection with the 'responsible person' to ensure that they are identifying and introducing appropriate interim measures, as set out below. The fire service will carry out a further inspection once the interim measures have been completed:

- Check that the fire risk assessment has been carried out within the previous 12 months and that the recommendations within the action plan of the assessment have been completed; also, confirm that there have been no material changes (to the building, the fire safety measures or the occupancy) that could, potentially, undermine the validity of the fire risk assessment. If no fire risk assessment has been carried out, you must **immediately** arrange for a fire risk assessment to be carried out by a competent person (eg by a person who is listed on a register of fire risk assessors operated by a professional body or certification body, or, preferably, by a company that is certificated by a third party certification body, that is, itself, accredited by the United Kingdom Accreditation Service to operate the certification scheme). Guidance on choosing a competent assessor is here <http://www.cfoa.org.uk/19532>
- Engage with residents to ensure they fully understand the emergency fire procedures in the building, particularly the meaning of "stay put". Ensure that fire procedure notices are accurate.
- Check that, at ground level, or on any balconies, there are no combustible materials (eg storage of refuse) in the vicinity of the cladding. Ensure that there are measures to prevent combustible materials in such locations (eg by

⁴ For the avoidance of doubt; the core (filler) within an Aluminium Composite Material (ACM) is an "insulation material/product", "insulation product", and/or "filler material" as referred to in Paragraph 12.7 ("Insulation Materials/Products") in Section 12 "Construction of external walls" of Approved Document B (Fire safety) Volume 2 Buildings other than dwelling houses. (The important point to note is that Paragraph 12.7 does not just apply to thermal insulation within the wall construction, but applies to any element of the cladding system, including, therefore, the core of the ACM).

temporary barriers or instructions to residents). Instruct residents that they must not have any barbeques on any balcony.

- Check that all flat entrance doors, and doors that open onto escape corridors and stairways, are fire-resisting and effectively self-closing against any resistance of a latch (or, for example, in the case of plant rooms or cupboards, are kept locked shut.) For guidance on these doors, consult the Local Government Association guidance on fire safety in purpose-built blocks of flats - <https://www.local.gov.uk/fire-safety-purpose-built-flats> - but, in general, doors that were deemed to be fire-resisting at the time of construction of the block will be satisfactory. Replace any non-fire-resisting doors (such as non-fire-resisting upvc doors) immediately with doorsets (i.e. doors and frames) that are third party certificated as providing at least 30 minutes fire resistance.
- Check all walls that separate flats, plant and store rooms, etc from escape routes to ensure there are no obvious routes for fire or smoke spread (eg, holes where services, such as pipes and cables, pass through walls).
- Check that any smoke control systems, including associated fire detection systems, are operating correctly.
- Check all facilities provided for fire-fighters, including fire-fighting lifts and dry or wet rising mains. If you have **ANY** concerns you should contact your local fire and rescue service, who will, if they have not already done so, carry out an inspection to ensure functionality.
- Ensure that there is sufficient roadway access and hardstanding for firefighting vehicles attending incidents and to be set up to fight any fire externally.
- Check that insulation or other materials that form the façade meet all relevant standards.

If the building is protected by an automatic sprinkler system (or equivalent fire suppression system) you might not need to take any further interim measures before replacement of the cladding.

If the building is not protected by a suitable suppression system you must consider the need for interim measures. The measures adopted need to be based on an assessment of the risk by a competent person, but the following must, at least, be considered:

- Residents to be advised to ensure all smoke alarms are present and working in their flat; to report concerns about fire safety measures in the building (eg

presence of combustible materials in escape routes) to their landlord and, understand the purpose of any interim measures begin taken.

- Closure of car parks in which a vehicle fire could impinge on cladding.
- Provision of a temporary communal fire alarm system, comprising smoke detectors in circulation areas and plant rooms, and fire detectors (possibly heat detectors, rather than smoke detectors) in conjunction with fire alarm sounders in each flat. This will enable the entire block to be evacuated simultaneously in the event of fire. This option is unlikely to be suitable for tall blocks, in which a large number of people would need to use escape routes at the same time. The system may comprise a wireless system, using radio to link devices.
- Provision of a fire watch by appropriately trained patrolling security officers/wardens.
- In the case of the most serious risk, consideration must be given to moving all residents out of the block until satisfactory remedial work has been done.