

# Building Safety Programme

## Monthly Data Release

**27 February 2018 (data as at 16 February 2018 unless otherwise stated)**  
**England**

### Summary of latest figures (as of 16 February 2018)

- The total number of residential buildings over 18 metres and public buildings in England on 16 February 2018 where it has been confirmed that Aluminium Composite Material (ACM) cladding is installed or was previously installed was 314. This is an increase of two since the last data release, which was based on data from 10 January 2018.
- Of these 314 buildings, 301 have ACM cladding systems that the expert panel advise are unlikely to meet current Building Regulations guidance and therefore present fire hazards on buildings over 18 metres (an increase of two buildings since 10 January 2018).
- Of these 301 buildings unlikely to meet current Building Regulations guidance:
  - 158 are social housing buildings (managed by either local authorities or housing associations);
  - 130 are private sector residential buildings, including hotels and student accommodation; and
  - 13 are public buildings including hospitals and schools.
- In England, 63 local authority areas contain at least one residential building over 18 metres or public building with confirmed ACM cladding systems that are unlikely to meet current Building Regulation guidance. Of these, 38 local authorities contain at least one social housing building, which represents a decrease of one since 10 January 2018.
- The remediation of buildings with ACM cladding is a complex process, involving cladding systems and broader fire safety systems for buildings. As such, properly remediating buildings takes time. Of the 158 social housing buildings judged to have failed large-scale system tests, 92 have started remediation. Of these, seven buildings have finished remediation work (an increase of 4 buildings since previously reported). Data is still being collected on remediation of private sector buildings.

### Introduction

Following the Grenfell Tower tragedy, the Government established a Building Safety Programme with the aim of ensuring that residents of high-rise residential buildings are safe, and feel safe from the risk of fire, now and in the future.

This data release gives the number of high-rise residential buildings and public buildings in England with confirmed Aluminium Composite Material (ACM) cladding, and the number of buildings with cladding systems similar to those that have failed large-scale system tests (see Appendix 2 for explanation).

This data release also gives information on the work being done to remediate social housing buildings with confirmed ACM cladding.

On the advice of the expert panel (see Appendix 2 for explanation), initial screening tests were made available in June 2017, at no cost to building owners, to identify whether cladding was of “limited combustibility” as this is one way that buildings over 18 metres can meet current Building Regulations guidance on external fire spread.

The tests were made available at no cost to social and private residential sector landlords and to public sector building owners (for example, for hospitals and schools). Subsequently (during August) a series of large scale wall system fire tests were conducted (to British Standard 8414) in which each of the three main types of ACM were tested with different types of insulation – a type of foam and a type of mineral wool. In the case of Category 2 ACM, a third test was arranged to distinguish between use of PIR foam and phenolic foam.

**The figures in this publication are correct as of the specified dates, but work is on-going to remove and replace ACM cladding systems. This means that the figures may include some buildings that have since removed ACM cladding.**

The Ministry of Housing, Communities and Local Government will publish further data releases during the following weeks commencing:

- 26 March 2018
- 23 April 2018
- 28 May 2018

## Summary of data

### Summary table: Social, public and private sector buildings with Aluminium Composite Material cladding – 16 February 2018

	16 February	10 January	Change
<b>Buildings which have failed BRE test (a+b+c)</b>	<b>301</b>	<b>299</b>	<b>+2</b>
a) Social residential buildings	158	160	-2
b) Private residential buildings	130	126	+4
c) Public sector buildings	13	13	0
Other buildings with ACM, but passed BRE test (d).	13	13	0
<b>Total buildings with confirmed ACM cladding (a+b+c+d)</b>	<b>314</b>	<b>312</b>	<b>+2</b>

These are buildings over 18 metres where ACM cladding has been tested by the Building Research Establishment. Public sector buildings include health and education buildings.

## Overview and updates

### Progress in remediating buildings

The remediation of buildings with ACM cladding is a complex process which the department is committed to ensuring is done properly. Remediation work involves addressing any issues with the exterior cladding system and broader fire safety systems for each building. All of this work takes time and varies considerably depending on the building structure, extent of cladding and existing fire safety systems. For many buildings this is a complex job involving major construction work which needs to be planned, consulted on and carried out carefully. The government has worked with the Industry Response Group and Expert Panel to develop an information note to assist building owners in carrying out remediation work. This can be found at <https://www.gov.uk/government/publications/information-note-for-landlords-and-building-owners-of-tall-residential-buildings-with-acm-cladding>.

For all of those high-rise buildings that have been confirmed as having ACM cladding that does not meet the limited combustibility requirements set out in building regulations guidance, the relevant fire and rescue service has been notified. We have worked with local authorities, housing associations, fire and rescue services and building owners to ensure that immediate steps are taken to make buildings safe and that, longer term, cladding which is deemed to be unsafe is remediated as quickly as possible.

The expert panel has advised that the clearest way of ensuring an external wall system adequately resists external fire spread is either for all of the relevant elements of the wall to be of limited combustibility, or to use an external wall system which can be shown to have passed a large-scale test conducted to BS8414 classified to the BR135 standard set out in current building regulations guidance (see Appendix 2).

Of the 158 social housing buildings that have combinations of ACM and insulation judged to have failed the large-scale tests (see Summary table), as of 16 February 2018, 58 per cent (92 buildings) have started the process of remediation. Of these, seven buildings have finished remediation – including sign-off from building control and approval from the fire and rescue service that interim measures can be removed. This is an increase of four compared with the last release which showed that three buildings had finished remediation work.

## Large-scale system tests

Table 1 shows how the 301 buildings in England which have failed the large-scale systems tests have been classified.

**Table 1: Descriptions of large-scale systems tests undertaken by the Building Research Establishment (BRE) and the number of buildings with similar cladding systems**

Please see the appendix for an explanation of what is denoted in the tables throughout the release by the terms "pass", "fail", and "inferred fail".

Large-scale systems test	ACM cladding category tested	Insulation type tested	Result	Number of buildings with similar cladding system in England on 16 February <sup>1</sup>
1	Category 3	Foam Insulation	Fail	91
2	Category 3	Mineral Wool	Fail	105
3	Category 2	PIR foam	Fail	9
4	Category 2	Mineral Wool	Pass	13
5	Category 1	Foam Insulation	Pass	0
6	Category 1	Mineral Wool	Pass	0
7	Category 2	Phenolic Foam	Fail	22
n/a	Category 3	Not in a systems test	Inferred fail	61
n/a	Category 2	Not in a systems test	Inferred fail	13
<b>Total number of buildings failed BRE system test</b>				<b>301</b>
<b>Total number of buildings with confirmed ACM</b>				<b>314</b>

<sup>1</sup> Please note that a number of building owners have now removed ACM cladding.

Table 2 shows the dominant tenure of each of the 301 buildings with confirmed ACM.

<b>Table 2: Residential high-rise buildings in England with confirmed ACM, by tenure of residents</b>				
Tenure	Confirmed fail	Inferred fail – category 2 cladding	Inferred fail - category 3 cladding	BRE test fail
Local authority housing	43	0	2	<b>45</b>
Housing association housing	100	0	13	<b>113</b>
Public sector buildings	6	2	5	<b>13</b>
Private: residential	57	7	35	<b>99</b>
Private: student residential	21	4	6	<b>31</b>
<b>Total</b>	<b>227</b>	<b>13</b>	<b>61</b>	<b>301</b>

Note: a number of building owners have removed ACM cladding.

### **Samples sent for testing at the Building Research Establishment**

As of 16 February 2018, BRE had received 1,858 samples for testing under the programme established by MHCLG. Of these, 634 have been confirmed to be ACM.

The main reason that the number of samples confirmed as ACM by BRE (634) is larger than the number of residential high-rise buildings and public buildings which have failed large scale systems tests (301) is that more than one sample can be submitted for testing for the same building. This data also includes samples from commercial buildings and buildings outside of England. Many of the remaining cases could not be tested because they were not made of ACM.

At the time of the last data release BRE had received 1,786 samples, of which 625 had been tested. There has been an increase of nine ACM samples tested between 10 January 2018 and 16 February 2018.

<b>Table 3: Samples received and tested by BRE under the testing programme established by MHCLG</b>	
	Number of buildings
Samples received by BRE	1,858
Samples tested	634
Sample untestable	1,224

## Location of buildings

In England, 63 local authority areas contain at least one residential building over 18 metres or public sector building with confirmed ACM cladding systems that are unlikely to meet current Building Regulation guidance. Of these, 38 local authorities contain at least one social housing building, which represents a decrease of one since 10 January 2018.

Owing to the need to protect public safety, the precise location of buildings identified with ACM cladding cannot be disclosed.

**Table 4: Numbers of local authority areas in England with at least one residential high-rise building, or one public building, with ACM identified after a test at BRE, by tenure**

Large Scale Tests						
	Confirmed fail	Inferred fail – category 2 cladding	Inferred fail - category 3 cladding	Total fail	Confirmed pass	Total
<i>Number of local authority areas in England with at least one result for...</i>						
Local authority owned housing	14	0	1	15	1	16
Housing association owned housing	26	0	7	27	5	29
Public buildings	6	2	4	12	1	13
Private: residential	23	3	17	34	2	34
Private: student residential	12	4	4	16	1	17
<b>Overall</b>	<b>55</b>	<b>9</b>	<b>25</b>	<b>63</b>	<b>9</b>	<b>63</b>

### Notes:

A number of building owners have now removed ACM cladding.

The rows are not mutually exclusive as some Local Authorities have buildings in more than one group. Therefore, the numbers in the "Overall" row are not the sum of the numbers in the rows above. Similarly, the Total column is not the sum of the numbers in the columns to the left, as it is possible for a local authority to have buildings with different test results.

## **Appendix 1: Test results by local authority area in which the building is located**

The tables below are grouped by bands for the number of buildings in each area. The bands used are 1-5 buildings, 6-10 buildings, and 11 or more buildings. The buildings included are all either a residential building over 18 metres tall or a public building and have an ACM cladding system corresponding to those tested in large-scale systems tests 1, 2, 3 and 7 (the cases where the systems failed to prevent the spread of fire), or have a cladding system that has been inferred to have failed.

There are 63 local authorities in England with at least one such building within their boundaries. (see table 4: Total Fail column)

Local authorities with fewer than ten high-rise residential buildings (regardless of whether or not they have cladding) have been removed from the tables below, as their inclusion could lead to the identification of one or more buildings with ACM in these areas.

<b>Local authorities with 1 – 5 buildings with a cladding system that failed the large-scale tests in their area (any sector)</b>
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<b>Local authorities with 6 – 10 buildings with a cladding system that failed the large-scale tests in their area (any sector)</b>
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<b>Local authorities with 11 or more buildings with a cladding system that failed the large-scale tests in their area (any sector)</b>
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## **Appendix 2: Explanation of the passes and fails for large-scale systems tests**

**Expert Panel:** The government has appointed an expert panel to provide advice to the Secretary of State for Housing, Communities and Local Government, on immediate building safety measures following the Grenfell Tower fire.

The Expert Panel, chaired by Sir Ken Knight, has been established to recommend to the government any immediate action it thinks that the government should take that will improve public safety and help to identify buildings of concern.

The panel have a wealth of experience in fire and building safety, including testing processes, and are drawing in wider technical expertise as necessary to inform this advice.

**Large-scale systems test:** On the basis of the screening test results, and on advice from the Expert Panel, the government commissioned a series of large scale system tests, testing how different types of ACM panels behave in a fire with different types of insulation. The British Standard test used for the large scale tests (BS8414) is a way of demonstrating that a wall system meets Building Regulations guidance for buildings over 18m. Seven tests were undertaken in priority order, taking into consideration which systems were likely to present most risk, so urgent advice could be provided to building owners.

**Fail:** Any building over 18 metres tall fitted with cladding materials that did not adequately resist the spread of fire on a large-scale systems test.

On the large-scale system tests, the wall systems did not adequately resist the spread of fire over the wall to the standard required by the current Building Regulations guidance and which is set out in BR135. These combinations of materials present a notable fire hazard on buildings over 18 metres.

Based on the test results, the Expert Panel's advice is that they do not believe that any wall system containing an ACM category 3 cladding panel, even when combined with limited combustibility insulation material, would meet current Building Regulations guidance, and are not aware of any tests of such combinations meeting the standard set by BR135.

In the absence of any other large-scale test evidence, it is unlikely that any combination of ACM cladding with fire retardant polyethylene filler (category 2 in screening tests) and rigid polymeric foam insulation would pass the BS8414-1 test, and therefore it would fail to meet current Building Regulations guidance.

**Pass:** Any building over 18 metres tall fitted with cladding materials that adequately resisted the spread of fire on a large-scale systems test.

The wall systems with A2 filler (category 1) passed the test, which means they adequately resisted the spread of fire over the wall to the standard required by the current Building Regulations guidance and which is set out in BR135.

However, the composition of different products from different manufacturers will vary and it is possible that products from different manufacturers may behave differently in a fire. Equally, it is important to note that the materials used may have been fitted or maintained differently, to how the tests were specified and constructed, which can affect the safety of the cladding system.

On the large-scale system tests, the wall system with fire retardant polyethylene filler (category 2) and stone-wool insulation adequately resisted the spread of fire over the wall to the standard required by the current Building Regulations guidance and which is set out in BR135.

However, it is important to note that there are many different variants of this cladding and insulation and it is possible that products from different manufacturers may behave differently in a fire. The composition of ACM panels with fire retardant polyethylene filler can vary between manufacturers. The average of the calorific values of the fire retardant panels used in the test was 13.6 MJ/kg. Building owners with this combination of materials should consult their screening tests to check how their category 2 values compare. A higher value will indicate greater combustibility than the panel used, and vice versa.

Equally, it is important to note that materials may have been fitted or maintained differently, to how the tests were specified and constructed, which can affect the safety of the cladding system. Fixing details and the provision of cavity barriers are also important. Building owners should seek professional advice that looks at the specific circumstances of their building.

**Inferred Fail:** a case where either a building over 18 metres tall has an untested wall system or the building owner has not disclosed details of the wall system. In these cases, the result is inferred from the ACM cladding alone. In cases of category 2 or category 3 cladding, this is inferred as a fail.

If the ACM cladding were category 1, the case would be an **Inferred Pass**. There are no such cases in this data release.