

## Building Safety Programme Monthly Data Release January 2018 (as at 10 January 2018), England

**Date of next publication:** week commencing 26 February 2018

### Summary of latest figures

- The total number of residential buildings over 18m and public buildings in England on 10 January 2018 where it has been confirmed that Aluminium Composite Material (ACM) cladding is installed or was previously installed was 312. This is an increase of 16 since the last data release, which was based on data from 24 November 2017. All figures in this report are based on information as of 10 January 2018, except where stated otherwise.
- Of those, 299 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 18m. This is an increase of 15 since 24 November 2017.
- Over half of confirmed cases are social housing buildings (managed by either local authorities or housing associations), where there are 168 buildings over 18m with confirmed ACM. Of these, 160 are unlikely to meet current Building Regulations guidance for buildings over 18 m in height.
- In England, 63 local authority areas contain at least one residential building over 18m or public building with confirmed ACM cladding systems that are unlikely to meet current Building Regulation guidance. This is the same number as on 24 November 2017. Of these, 41 contain at least one social housing building, which represents a decrease of one since 24 November 2017.

### Introduction

Following the Grenfell Tower tragedy, the Government has 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 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 remediation of social housing buildings.

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 18m can meet current Building Regulations guidance (on external fire spread). The tests were made available 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 wider wall system fire tests were conducted (to British Standard 8414) in which each of the three main types of ACM was 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.

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



## **Latest Figures – buildings with confirmed ACM cladding**

As of 10 January 2018, 312 residential buildings over 18m and public buildings in England were identified as having ACM installed or previously installed (please note that a number of building owners have now removed ACM cladding). Wherever possible, buildings in this release have been classified as having cladding systems that are similar to those tested by each of the large-scale system tests. This depends on the category of ACM cladding used, as well as the insulation type. Of the 312 buildings, 299 have combinations of ACM and insulation of the types that failed the large-scale tests and are therefore unlikely to meet current Building Regulations guidance.

These figures are not expected to remain static. As more owners of private residential buildings send in samples for testing to BRE we expect the number with confirmed ACM cladding to increase. The Department is also continuously engaging with local authorities and building owners whose buildings have ACM cladding. During that process occasionally new information is discovered that rules buildings out of scope (for example, if they are found to be less than 18m tall), causing the figures to decrease.

The last release, based on data from 24 November 2017, stated that 296 buildings have ACM cladding, of which 284 have cladding systems that the Expert Panel advise are unlikely to meet current Building Regulations guidance. Since then, the total number of buildings with ACM cladding has increased by 16 buildings, and the number that the Expert Panel advise are unlikely to meet current Buildings Regulations guidance has increased by 15. Further information on the changes since the last release by tenure are available on page 3.

The table below shows how the 312 buildings in England with ACM have been classified regarding each of the large-scale systems tests. 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”.

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

Large-scale systems test	ACM cladding category tested	Insulation type tested	Result	Number of buildings with similar cladding system in England on 10 January <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	57
n/a	Category 2	Not in a systems test	Inferred fail	15
<b>Total number of buildings with confirmed ACM in England</b>				<b>312</b>

### Tenure

Table 2 below shows the dominant tenure of each of the 312 buildings with confirmed ACM.

Please note that we are currently processing returns from a recent data collection undertaken with local authorities on the private sector high-rise residential buildings in their areas.

Since the last data release, two housing-association buildings which had previously failed large-scale tests have been confirmed as less than 18 metres tall. Hence, these buildings are out of scope of the relevant building regulations. In addition, one public building that was previously thought to have failed a large-scale test is now confirmed to have passed a test.

There has been an increase of 18 in the number of results in the private sector since the last data release, where 17 additional private-residential buildings and one additional privately-owned student accommodation building have been recorded as having failed a large-scale system test.

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

**Table 2: Residential high-rise buildings in England with confirmed ACM, by tenure of residents** (please note that a number of building owners have removed ACM cladding)

Tenure	Large Scale Tests					
	Confirmed fail	Inferred fail – category 2 cladding	Inferred fail - category 3 cladding	Total fail	Confirmed pass	Total
Local authority housing	43	0	2	45	1	46
Housing association housing	100	2	13	115	7	122
Public buildings	6	2	5	13	1	14
Private: residential	57	7	31	95	3	98
Private: student residential	21	4	6	31	1	32
<b>Total</b>	<b>227</b>	<b>15</b>	<b>57</b>	<b>299</b>	<b>13</b>	<b>312</b>

### Remediation

We are closely monitoring the remediation progress of all buildings with ACM cladding that require it. Building owners have been given advice on interim fire safety measures they should take pending remedial action being completed. All building owners have also been advised to ensure their local Fire and Rescue Service has visited to complete a fire safety audit of their building, and that they have implemented the recommended interim measures. In line with current building regulations guidance, the clearest routes for achieving compliance for cladding systems on buildings over 18m are: Either all elements in the cladding system should be of limited combustibility, or the whole system, tested in a large-scale test, must pass the BS8414 test classified to BR135 (see Appendix 2). The Expert Panel has also endorsed this approach to ensure that buildings are safe from external fire spread.

Of the 160 social housing buildings that have combinations of ACM and insulation judged to have failed the large-scale tests, as of 20 December 2017, 57 have started the removal of the cladding. Of these, 26 buildings have had all the cladding removed. Of these, nine have started to install replacement cladding and, of these, three buildings have finished the installation of replacement cladding.<sup>2</sup> In the last data release, only one building out of 162 social-housing buildings requiring remediation had finished the installation of replacement cladding, so there has been an increase of two since 24 November 2017. The decrease in the total number of social-housing buildings requiring remediation has decreased by two because two buildings were found to be lower than the 18-metre threshold. Neither of these two buildings had commenced remediation, so the other figures are unaffected by the removal of these two buildings from this data release.

### Latest figures – samples sent for testing at the Building Research Establishment (BRE)

As of 10 January 2018, BRE has received 1,786 samples for testing under the programme established by the Ministry for Housing, Communities and Local Government (MHCLG), of which 625 have been confirmed to be ACM.

<sup>2</sup> This data release only includes changes by exception where the building owner informed the department remediation had completed and does not reflect all work which may be on-going to replace ACM. We are currently considering the frequency for routinely updating remediation data.

The main reason that the number of samples confirmed as ACM by BRE (625) is larger than the number of residential high-rise buildings and public buildings with ACM in England (312) is that the same building can submit more than one sample for testing. It also includes samples from commercial buildings and buildings outside England. The remaining 1,161 samples are untestable. These are mostly cases that could not be tested because they were not made of ACM.

**Table 3: Samples received and tested by BRE under the testing programme established by MHCLG**

<b>All figures as of 10 January 2018</b>	<b>Number of buildings</b>
Samples received by BRE	1,786
Samples tested	625
Sample untestable	1,161

In the last data release, BRE had received 1,702 further samples, of which 604 had been tested and 1,098 were untestable. There has been an increase of 84 samples tested between 24 November 2017 and 10 January 2018.

#### **Location of buildings**

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

The table below shows the number of local authority areas that have at least one residential building over 18m or public building with ACM identified (please note that a number of building owners have now removed ACM cladding). There are 63 local authorities in England with at least one such building within their boundaries. This remains unchanged since the last release.

**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** (please note that a number of building owners have now removed ACM cladding)

All figures as of 10 January 2018	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	<b>15</b>	1	<b>16</b>
Housing association owned housing	26	1	7	<b>28</b>	5	<b>29</b>
Public buildings	6	2	4	<b>12</b>	1	<b>13</b>
Private: residential	23	3	14	<b>31</b>	2	<b>31</b>
Private: student residential	12	4	4	<b>16</b>	1	<b>17</b>
<b>Overall</b>	<b>55</b>	<b>10</b>	<b>23</b>	<b>63</b>	<b>9</b>	<b>63</b>

Note: 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 an LA 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 18m 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 18m.

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.