



Ministry of Housing,  
Communities &  
Local Government

# Building Safety Programme: Monthly Data Release

Data as at 22 May 2018 unless otherwise stated  
Coverage: England

## Summary of latest figures (as of 22 May 2018)

- The total number of residential buildings over 18 metres and publicly-owned buildings in England on 22 May 2018 where it has been confirmed that Aluminium Composite Material (ACM) cladding is installed or was previously installed was 323. This is an increase of six since the last data release, which was based on data from 12 April 2018.
- Of these 323 buildings, **311 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 7 buildings since 12 April 2018).
- Of these 311 buildings unlikely to meet current Building Regulations guidance:
  - **159 are social-sector residential buildings**, managed by either local authorities or housing associations;
  - **138 are private-sector residential buildings**, including hotels and student accommodation; and
  - **14 are publicly-owned buildings**, including hospitals and schools.
- In England, 65 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 Regulations guidance. Of these, 38 local authorities contain at least one social housing building, and 42 contain at least one private sector residential building.
- 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 159 social housing buildings judged to have failed large-scale system tests, 67 per cent (107) have started remediation (as of 22 May 2018). Of these, ten buildings have finished remediation work. Data are still being collected on remediation of private sector buildings.

# Building Safety Programme

Monthly Data Release

31 May 2018

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## Date of next publication:

Week commencing 25 June 2018

# 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 3 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 3 for explanation), initial screening tests have been available since June 2017, at no cost to building owners, to identify whether cladding was of “limited combustibility”. 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-sector residential sector landlords and to public sector building owners (for example, for hospitals and schools). During August 2017 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:

- 25 June 2018
- 23 July 2018

# Overview and updates

## Residential and publicly-owned buildings with ACM cladding

**Table 1: Social, public and private sector buildings with Aluminium Composite Material cladding – 22 May 2018**

|  | 22 May     | 12 April   | Change    |
|--|------------|------------|-----------|
| <b>Buildings which have failed BRE test (a+b+c)</b>          | <b>311</b> | <b>304</b> | <b>+7</b> |
| a) Social-sector residential buildings                       | 159        | 158        | +1        |
| b) Private-sector residential buildings                      | 138        | 132        | +6        |
| c) Publicly-owned buildings                                  | 14         | 14         | 0         |
| Other buildings with ACM, but passed BRE test (d)            | 12         | 13         | -1        |
| <b>Total buildings with confirmed ACM cladding (a+b+c+d)</b> | <b>323</b> | <b>317</b> | <b>+6</b> |

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

The number of buildings with 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 has increased by seven since 12 April. This includes an increase of one in social-sector residential buildings and six in private-sector residential buildings, including student accommodation and hotels. There was one social-sector residential building that was previously thought to have passed large-scale tests but has now been identified as having failed the tests.

Note that we are currently working with local authorities to collect data on private sector buildings with ACM cladding. This data will be published in due course. Where local authorities have identified buildings which have ACM cladding but have not been tested by the BRE, they are working with fire and rescue services to ensure that interim safety measures are in place and to ensure that the buildings are remediated to comply with Building Regulations.

## 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.

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 Government's independent 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 3).

Of the 159 social-sector residential buildings that have combinations of ACM and insulation judged to have failed the large-scale tests (Table 1), as of 22 May 2018, 67 per cent (107 buildings) have started the process of remediation. Of these, local authorities and housing associations have reported that ten buildings have finished remediation – including receiving sign off from building control where necessary. This is an increase of three starts compared with the April data release, and an additional three buildings which have completed remediation.

Data on private sector remediation are being collected from local authorities, and will be published in due course.

Work is on-going to ensure that building owners in both the social and private sectors are using a consistent definition in confirming buildings have finished remediation.

# Large scale systems tests

## Classification of buildings

Table 2 shows how the 311 buildings in England which have failed the large-scale systems tests have been classified. A breakdown of samples received and tested by BRE under the testing programme established by MHCLG is at Appendix 1.

**Table 2: Descriptions of large-scale systems tests undertaken by the BRE and the number of buildings with similar cladding systems**

See Appendix 3 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 22 May |
|---|------------------------------|------------------------|---------------|---|
| 1   | Category 3                   | Foam Insulation        | Fail          | 90  |
| 2   | Category 3                   | Mineral Wool           | Fail          | 105   |
| 3   | Category 2                   | PIR foam               | Fail          | 9   |
| 4   | Category 2                   | Mineral Wool           | Pass          | 12  |
| 5   | Category 1                   | Foam Insulation        | Pass          | 0   |
| 6   | Category 1                   | Mineral Wool           | Pass          | 0   |
| 7   | Category 2                   | Phenolic Foam          | Fail          | 24  |
| n/a   | Category 3                   | Not in a systems test  | Inferred fail | 68  |
| n/a   | Category 2                   | Not in a systems test  | Inferred fail | 15  |
| n/a   | Category 1                   | Not in a systems test  | Inferred pass | 0   |
| <b>Total number of buildings failed BRE system test</b> |                              |                        |               | <b>311</b>  |
| <b>Total number of buildings with confirmed ACM</b>     |                              |                        |               | <b>323</b>  |

Table 3 shows the dominant tenure of each of the 311 buildings that have failed the BRE system test with confirmed ACM cladding. When the insulation of the building is not known or is an unusual type, the case is listed as an “inferred fail” (see Appendix 3 for more information).

**Table 3: Residential high-rise buildings in England with confirmed ACM, by tenure of residents**

| Tenure                            | Confirmed fail | Inferred fail – category 2 cladding | Inferred fail - category 3 cladding | Total      |
|-----------------------------------|----------------|-------------------------------------|-------------------------------------|------------|
| Local authority owned housing     | 43             | 0                                   | 2                                   | <b>45</b>  |
| Housing association owned housing | 101            | 0                                   | 13                                  | <b>114</b> |
| Publicly-owned buildings          | 6              | 2                                   | 6                                   | <b>14</b>  |
| Private: residential              | 57             | 9                                   | 40                                  | <b>106</b> |
| Private: student residential      | 21             | 4                                   | 7                                   | <b>32</b>  |
| <b>Total</b>                      | <b>228</b>     | <b>15</b>                           | <b>68</b>                           | <b>311</b> |

Note: a number of building owners have removed ACM cladding, but these are still included in this data.

## Location of buildings

In England, 65 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, and 42 contain at least one private sector residential building.

Precise address details are not published. However, occupiers of these buildings should have been notified by their building owner or other responsible person.

**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 BRE result for....</i> |                |                                     |                                     |            |                |           |
| Local authority owned housing  | 14             | 0                                   | 1                                   | 15         | 1              | 16        |
| Housing association owned housing  | 26             | 0                                   | 7                                   | 27         | 4              | 29        |
| Publicly-owned buildings   | 6              | 2                                   | 5                                   | 13         | 1              | 14        |
| Private: residential   | 23             | 5                                   | 18                                  | 35         | 2              | 35        |
| Private: student residential   | 12             | 4                                   | 5                                   | 17         | 1              | 18        |
| <b>Overall</b>   | <b>55</b>      | <b>11</b>                           | <b>29</b>                           | <b>65</b>  | <b>9</b>       | <b>65</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 2 sets out BRE test results by local authority in which the building is located.

## Appendix 1: Samples received and tested by BRE under the testing programme established by MHCLG

As of 22 May, BRE had received 1,988 samples for testing under the programme established by MHCLG. Of these, 669 have been confirmed to be ACM.

The main reason that the number of samples confirmed as ACM by BRE (669) is larger than the number of residential high-rise buildings and public buildings which have failed large-scale systems tests (311) 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 (e.g. brick, stone).

At the time of the last data release BRE had received 1,947 samples, of which 657 had been tested. There has been an increase of 12 ACM samples tested between 12 April 2018 and 22 May 2018.

|   | <b>Number of buildings</b> |
|---|----------------------------|
| Samples received by BRE                           | 1,988                      |
| Samples confirmed as ACM (tested)                 | 669                        |
| Samples confirmed as non-ACM materials (untested) | 1,319                      |



## Appendix 2: 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 publicly-owned 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 65 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 3: Explanation of the passes and fails for large-scale systems tests

**Expert Panel:** Following the Grenfell Tower tragedy, the government appointed an independent Expert Panel to provide advice to the Secretary of State for Housing, Communities and Local Government on immediate building safety measures.

The Expert Panel, chaired by Sir Ken Knight, was established to recommend to the government any immediate action it thinks is necessary to improve public safety and help identify buildings of concern.

The panel has a wealth of experience in fire and building safety, including testing processes, and is drawing on 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.

## Appendix 4: Voluntary compliance with the Code of Practice for Statistics

[The Code of Practice for Statistics](#) was published in February 2018 to set standards for organisations in producing and publishing official statistics and ensure that statistics serve the public good.

Whilst MHCLG's Building Safety Programme Data Release is not National Statistics, the principles of transparency of high-quality analytical outputs to inform decision making and the public underpin this data release.

|   |   |
|---|---|
| <p><b>Trustworthiness:</b><br/>trusted people, processes and analysis</p> | <p><b>Honesty and integrity (T1):</b> The Building Safety Programme Data Release is managed by professional analysts in MHCLG – this involves design of data collection tools, checking of provided data, and analysis. All work is undertaken by professionally qualified and experienced data analysts - professional members of the Government Statistical Service or Government Social Research, where all staff have Personal Development Plans focussed on their long-term professional development (<b>Professional capability – T5</b>).</p> <p><b>Independent decision making and leadership (T2):</b> The work is governed by the Analysis and Data Directorate in MHCLG, accountable to MHCLG's Chief Analyst and Head of Profession for Statistics.</p> <p><b>Orderly release (T3):</b> MHCLG pre-announces the publication week for this data release.</p> <p><b>Transparent processes and management (T4):</b> MHCLG has robust, transparent, data-management processes.</p> <p>All data are provided by local authorities, housing associations, the NHS, Department for Education (DfE) and the Building Research Establishment (BRE). Responsibility for the data lies with the data provider - as such only data either provided by BRE following testing or data verified by local authorities, housing associations, the NHS or DfE are published.</p> <p>Currently, we are not publishing information on private sector buildings provided by local authorities as the quality of this data is not clear.</p> <p><b>Data Governance (T6):</b> MHCLG uses robust data collection and release processes to ensure data confidentiality. <a href="#">A published privacy notice</a> clearly sets out why data are collected, data sharing, and the legal basis for processing data. This is consistent with the General Data Protection Regulation.</p> |
| <p><b>High quality:</b><br/>robust data, methods and processes</p>        | <p><b>Suitable data sources (Q1):</b> Data originates from a number of sources outside the control of MHCLG: local authorities, local Fire and Rescue Services, housing associations, NHS, DfE, BRE. Data are triangulated, where possible, and data are always verified by these bodies – who are ultimately responsible for the quality of their data. Where the quality of data is unclear, it is either not published or quality issues are highlighted.</p> <p>At present, the dataset on all tall buildings remains incomplete. Work is in hand to address this over the coming months.</p> <p><b>Sound methods (Q2):</b> Data collection tools and processes are robustly designed and tested prior to use, learning lessons from previous Building Safety Programme data collections and best practice from across the government analytical community.</p> <p><b>Assured Quality (Q3):</b> All data are quality-assured prior to publication.</p> <p>As the quality of data improves, it is our intention to publish further data on the safety of tall and complex buildings.</p>   |

|   |  |
|---|--|
| <p><b>Public value:</b> supporting society's need for information and accessible to all</p> | <p><b>Relevance to users (V1):</b> The nature of building safety means this data release is of high value to the public, to residents of tall buildings and building owners/developers. However, the data release balances disclosure control (risks of disclosing individual buildings) with informing the public and keeping people safe.</p> <p><b>Accessibility (V2):</b> Given the immediate nature of building-safety issues, and the need to develop interim solutions and longer-term remediation, data from the Building Research Establishment are shared with Fire and Rescue Services and Local Authorities once MHCLG are aware of issues.</p> <p>Officials and Ministers also use the data prior to publication to monitor progress and develop timely interventions. This enables immediate action to be taken. Therefore, the data may be used for operational purposes before publication in this data release.</p> <p><b>Clarity and Insight (V3):</b> Complex data are clearly explained in the Data Release – see Appendix 2 for definitions of key terms. Where insight and interpretation are offered, these have been verified with local authorities, Building Research Establishment and other knowledgeable bodies.</p> <p><b>Innovation and improvement (V4):</b> This data release series started in December 2017. As the quality of data improves, it is our intention to publish further data on the safety of tall and complex buildings.</p> <p><b>Efficiency and proportionality (V5):</b> Burdens on data providers have been considered, and MHCLG has worked to minimise the burden. Given the nature of building safety, MHCLG feels the current burden on data providers is appropriate. Given issues of public safety, only aggregate level data are published. Hence, further analysis of primary data is not possible.</p> |
|---|--|