



Balcony Fire Safety

Risk Management Guidance

Introduction

There has rightly been significant attention and focus on the issues relating to combustible cladding from Government and others in the form of initiatives and changes to building regulations following Grenfell. The work to remove combustible materials and replace them with appropriate non-combustible alternative materials is underway but progress has so far been slow, and the Building Safety Management Programme reported 45 buildings in England identified with ACM cladding systems had still to begin remediation works at the end of 2020¹.

A necessary focus on fire safety has also resulted in a number of Government Advice Notes which includes stricter fire safety measures for balconies within multi-storey, multi-occupied buildings. Balconies are now commonplace in developments and their functionality as part of modern day living has been invaluable for many during periods of national lockdown with strict restrictions on socialising and being outdoors in public. Whilst balconies will be subject to more regular use when warmer weather temperatures allow, associated risks should be taken into consideration all year round.

The issues

Research² has revealed that between 2017 and 2020 a total of 873 balcony fires were recorded by attending Fire Services. The majority of these were concentrated in London (587) whilst other areas of note included Greater Manchester (51), Hampshire (37), Scotland (33) and Kent (20). The top 6 causes are:

- Smoking
- Use of barbecues
- Accidental fires caused by candles
- Accumulated rubbish being ignited
- Arson
- Electrical faults

With the exception of a small proportion of electrical fires, almost all fires were instigated by human error and therefore completely avoidable. This latest research follows a 2016 article on fire safety issues by the BRE (Building Research Establishment)³ Group which evidenced fire incidents between 2010-2015 and highlighted similar concerns relating to behaviour and also construction materials incorporated within balconies.

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962561/Building_Safety_Data_Release_December_2020.pdf

² www.housingmmonline.co.uk/news/balcony-fire-safety

³ www.bre.co.uk/filelibrary/Fire%20and%20Security/FI---Fire-safety-and-balconies-July-16.pdf

Smoking

The breakdown of the causes revealed that smoking was the most frequently recorded by some distance – 420 of the total 873 fires. Whilst Protector discourage the use of smoking materials on balconies it is understood there may be limitations on property managers in terms of their ability to enforce the prohibiting of smoking. Looking deeper, a London Fire Brigade article in 2019 said there was a belief that half of the balcony fires in the two years previous were as a result of **unsafe disposal of cigarettes**.⁴



A discarded cigarette was determined as the most probable cause of fire in student accommodation at The Cube building in Bolton in November 2019 ⁵.

Therefore where an opportunity exists for occupiers to smoke on balconies, it is important to ensure messages are communicated to ensure cigarettes are safely stubbed out and **never** flicked or carelessly discarded.

The Cube, Bolton 2019 - Photo: GMFRS

Decorative screen and floor coverage

Protector has identified additional hazards in relation to balconies during external building inspections which may exacerbate the underlying fire risk. External plastic astro-grass or matting has been observed fixed to timber decking at a number of sites, as well as decorative plastic ivy and bamboo sticks to provide aesthetic coverage around the balcony perimeters. The addition of these products to balconies should be strongly discouraged due to their combustible nature.



Bamboo sticks around balcony



Plastic astro-grass on balcony timber decking

Barbecues

Just as discarded cigarettes have the potential to set fire to items on the ground or balconies below, falling hot embers from barbecues are equally as hazardous. Protector hold the view that barbecue use on balconies should be prohibited where enforceable – this includes all types, all fuels and all sizes

⁴ www.london-fire.gov.uk/news/2019-news/august/enjoy-the-warm-weather-but-don-t-barbecue-on-your-balcony

⁵ www.manchester.gov.uk/media/2118/cube_report_v11_tagged.pdf

of barbecues. To highlight their worried concerns, the London Fire Brigade has written to manufacturers about sales of barbecues marketed specifically for use on balconies⁶.

There can be a tendency for people using barbecues to leave them momentarily unattended, and aided by potentially greater wind speeds at height this can be enough to compound the risks. Furthermore, the introduction of barbecues can lead to storage of other hazardous items on balconies such as portable gas cylinders and ignition enhancers (e.g. lighter fuel).



Damage following balcony fire in Brighton September 2019



Timber clad balcony – close-up evidence of the fire spread

Hoarding

Hoarding of large quantities of combustible materials and waste by individual occupiers within their own accommodation or balcony can present a risk to the occupiers themselves, and can also present a risk of fire spread to affect other occupiers within a building⁷. Combustible items such as mattresses, electrical appliances, glass vessels and wooden garden furniture and even motorbikes can end up stored on a balcony, which can significantly increase the fire load.

Consider the potential of when two highlighted issues crystallising: a cigarette discarded from above lands on a balcony below which contains various combustible stored items. The opportunity for a fire to start and spread rapidly would be considerable.



Balcony with overhanging combustible items stored



Balcony with combustible items and gas barbecue

⁶ www.london-fire.gov.uk/news/202-news/may/don-t-be-the-cause-of-a-balcony-blaze-warn-firefighters

⁷ www.cfoa.org.uk/download/67392

Other Hazards

In addition to the issues above, it is important to maintain an awareness of other outdoor furniture and accessories appearing on balconies such as garden chairs, patio heaters, sheds and fire pits which also increase the risk of fire.

As the warmer months approach, the manufacturers and retailers of these items may be selling them at affordable prices and occupiers may not be aware of the dangers of using or storing them on their balcony.



Patio heater on a balcony



Shed stored on a balcony

Identification

Improving balcony fire safety requires committed collaboration from all stakeholders – building owners/managers and occupiers alike. Accurate assessment of the balcony risks within a property portfolio by a competent person will identify those incorporating combustible materials within their construction, as well as highlighting any potential exposures from any of the hazards outlined above. Additionally, any risks arising from balconies should also be considered as part of a building's fire risk assessment.

The Government Advice Note referenced above highlights the following key points:

- Balconies made with combustible materials are a potential source of rapid fire spread on the external wall of buildings and the design of balconies should not assist fire spread along the external wall
- Building owners/managers should ensure they understand the materials used in the construction of balconies to understand fire spread risk and to help identify any appropriate mitigating actions
- Removal and replacement of any combustible materials used in balcony construction is the clearest way to prevent external fire spread from balconies
- Fire risk on balconies can be increased when used for storage – Building owners/managers may wish to communicate with occupiers to develop their understanding of the dangers

For those planning for new developments, a new British Standard for the design of balconies and terraces, BS8579, was published in August 2020. The standard responds to various different interpretations of construction standards and provides guidance with an aim of unifying ideas relating

to balcony and terrace design. The standard is applied across the UK, however some differences may still remain between countries.⁸

Next Steps

Proactive next steps require a commitment to ensure that the focus for fire safety is not confined to external cladding challenges alone but also incorporates other important risk factors including balcony fire safety practices.

Protector strongly recommend that smoking and the use of barbecues on balconies, where enforceable, is prohibited. The figures above illustrate their role in balcony fires and progress towards eliminating them would have a significant positive impact on the number of fires.

Appropriate measures should be taken to maximise the fire safety of balcony areas and all relevant information relating to the construction, fire risks and building policies/rules should be clearly communicated to its occupiers.

This could include periodic reminders as part of newsletters about particular hazards which may increase at certain times of the year such as the potential for barbecue use during the summer months. Channels of communication work in both directions so; ensure there is a clearly defined process for occupiers to raise identified concerns and to bring to the attention of the appropriate people who can escalate for action.

Targeted campaigns are another method of educating occupiers to improve behaviours and to encourage them to make take fire safety into consideration when using their balcony spaces. Careless behaviour such as flicking a cigarette from a balcony could have potentially disastrous consequences.

Further information and guidance on this subject is available from:

- The Health and Safety Executive - <https://www.hse.gov.uk/>
- The Fire Protection Association - <https://www.thefpa.co.uk/>
- Building Research Establishment <https://www.bre.co.uk/page.jsp?id=3773>



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⁸ www.sapphire.eu.com/industry-news/bs8579-the-new-standard-for-balcony-design