



Howler Hot Topics Event November 2024

Fire Safety in Site Accommodation
when located within the building
under construction or refurbishment



→ Background

The Hot Topics event, sponsored by Howler UK and Westgate Global, brought together representatives from leading fit-out contractors, building owners, insurance companies and construction support services. The purpose of this net-working event was to discuss specific fire safety challenges in view of sharing best practices and experience. This whitepaper summarises the discussion points and key takeaways which will hopefully help all responsible parties in understanding and implementing good practice in the world of fire safety on construction projects.

→ Executive Summary

There are two aspects to fire safety during a construction project. The first relates to the protection of life, which is a legal obligation. Amongst the representatives, it was clear that this legal obligation was generally being fulfilled on projects. The second aspect relates to the protection of property, and ultimately livelihoods, and it was around this aspect that most of the conversation revolved. In particular, the requirements of the JCoP were discussed and it was clear that certain requirements were difficult or impossible to achieve due to practical, financial, or time constraints.

It was helpfully explained that the view of insurers is that ‘best endeavours’ is looked for, not a rigid adherence to the JCoP, and a risk-based approach is required when implementing the recommendations of the JCoP. Mitigating measures are often acceptable to insurers, when based on a sound Fire Risk Assessment. Ultimately, a major fire on a project is extremely disruptive at least, and at worst can take a company down. ‘Getting it right’ is simply sound business sense. It is important for contractors to know when they are not able to achieve the recommendations set out in the JCoP, so it can be documented in the Fire Risk Assessment and discussed specifically with their insurer.

*“Getting it
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There were some common themes in the discussions which could be summarised as follows:

1. Early Planning
2. Pro-active Communication
3. Ongoing Collaboration

These topics are explained further below.

A key piece of advice in relation to property protection was: *“Do whatever you would do if you didn’t have insurance.”* As a guiding principle this seemed a fitting conclusion to the day.

Early Planning

- Fit-out projects are unique in a number of areas, not only for their speed but also in terms of their mobilisation and overall project duration. This can mean that insufficient time is available to properly engage with the client and building management in relation to fire safety. Sometimes the project has started before a plan has been even discussed.

It was agreed that education of the client was a key step in the process, and this should start at tender stage. Some clients are simply unaware of their legal duties under the CDM regulations, and there is opportunity to demonstrate a competitive advantage by being the contractor who educates the client. It was also noted that raising intelligent questions for clarification at the tender stage was an effective way to ‘level the playing field’ where the fire safety aspects of the contract were not covered in sufficient detail in the tender documents.



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→ Pro-active Communication & Ongoing Collaboration

In a similar vein, it was clear that poor communication between parties was a frequent cause of frustration and confusion. There are often multiple parties that need to be engaged with, including:

The Client

The best clients are proactive in sharing fire safety information about the building in which works are to take place, but asking the right questions is essential and helps to demonstrate your competence.

Building Management

Proactively meet and communicate your fire strategy with all other interested parties prior to project commencement. This includes the Building Management team, who will very likely have useful input and knowledge of the building. If building works are likely to compromise the fire safety systems, even temporarily, this needs to be planned and co-ordinated.

Other Contractors on site

When there are other contractors working in the same building, collaboration is important to avoid fire strategies or procedures which are not co-ordinated. Ensure mid-project check-ins with other interested parties as things change (e.g. new additional contractors starting on site)

The Fire Brigade

It is always good practice to proactively communicate your fire strategy to the fire brigade even if they don't have time to visit site. They will log the information, and it will better equip them if they do have attend site for a fire. As a final step, ensure that there is a grab bag of fire safety information in reception for the fire brigade so that they have intelligence about the risks on site.

The Insurers

It is always advantageous to talk to your insurers about any proposed mitigations and gain their agreement on what they feel is reasonable.



“The best clients are proactive in sharing fire safety information”

→ The Challenges Discussed

→ 1. Fire compartment for the site accommodation (welfare) - JCoP 13.5

The requirement for a 30 minute, slab-to-slab fire compartment around staff accommodation areas is difficult and costly to achieve in a building which already has a raised floor and services in place, especially on a short-turnaround project.

It was pointed out that welfare accommodation will be vastly different site-to-site and therefore the insurers are likely to accept a risk-assessed approach. The focus needs to be on what extra fire load the works are bringing into the area and how this is managed. Additional automatic detection was suggested as one possible mitigation measure.

In larger site accommodation areas where the fire load is not dissimilar to a normal office, and for longer term projects, there are tested wall-systems which achieve the 30 minute rating required.

→ 2. Fire Brigade access JCoP 13.8 (b)

There is a requirement for the accommodation to be less than 7.5m above or below the site access level. This is to enable the fire brigade to access the area quickly and safely.

Usually, it is also much more convenient to have site accommodation as close to the site level access in any case. However, in the context of a multi-storey buildings where works are taking place on levels above 7.5m, it was suggested that as long as the normal fire brigade access and firefighting arrangements were unaffected by the works (e.g. firefighting lift and dry/wet risers), this would likely be acceptable. Such situations should be shared with both the fire brigade and the insurers.

→ 3. Contractor competency JCoP 6.1 para 7

There has been an increased emphasis on proof of competence since the Grenfell tragedy, and the JCoP has an overarching requirement for the contractor to check and demonstrate the competence of anyone involved in fire safety.

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In some cases, this can be demonstrated through third party accreditation schemes (e.g. BAFE). From the insurer's point of view, it's important that the people who are managing the works are competent - if you are specifying something, do you know what you should be looking for in the first place? More contractors are up-skilling their own management teams so that there is an increased awareness around fire safety. The CHSG run a 5-day risk assessment course which many have used. When using independent fire risk assessors, it is important to check that they have experience in construction fire risk assessments, because they are very different to normal fire risk assessments.

→ 4. Fire Exits JCoP 13.7

The fire exit from accommodation should be a protected escape route giving 30-minutes protection and should lead directly to open air.

Again, this requirement is around ensuring that people can get out of the building safely and quickly. In the context of an occupied multi-storey building, it may be acceptable if the occupants of the accommodation area are able to access a protected escape within the reasonable distance. Widely accepted safe travel distances in a medium risk situation are 18m if there is only one direction of travel to a safe exit, and 45m if there is more than one exit route available.

→ 5. Protective coverings on escape routes JCoP 10.1, 10.2 and 10.6

There are specific fire safety requirements for protective coverings used on escape routes, to reduce the fire load in the escape routes. These requirements typically exclude traditional protection methods such as timber. At least one escape stairway must be kept free of protective coverings.

Contractors have found these requirements easier to meet as more fire rated products have become readily available. Some of the products can be used multiple times which means they are no longer more expensive than the traditional methods of protection. ImpactBoard was mentioned as one successful option.

<https://www.protection.co.uk/products/impact-board-FR>

“There are specific fire safety requirements for protective coverings”

→ 6. Fire alarm systems JCoP 13.9, 13.13 and 13.14

Fire alarm should be designed and installed to BS 5839-1 and alarms should be interfaced with a site alarm with the same tone.

The insurance view on this section, was again pragmatic – ultimately, we need to be able to warn people in enough time to get out of the building safely. Compliance with BS 5839-1 is easier to achieve nowadays with more radio-link options available on the market, but again the value of a competent fire alarm designer and installer was reiterated. Competent fire alarm designers can be found on the BAFE Fire Safety Register.

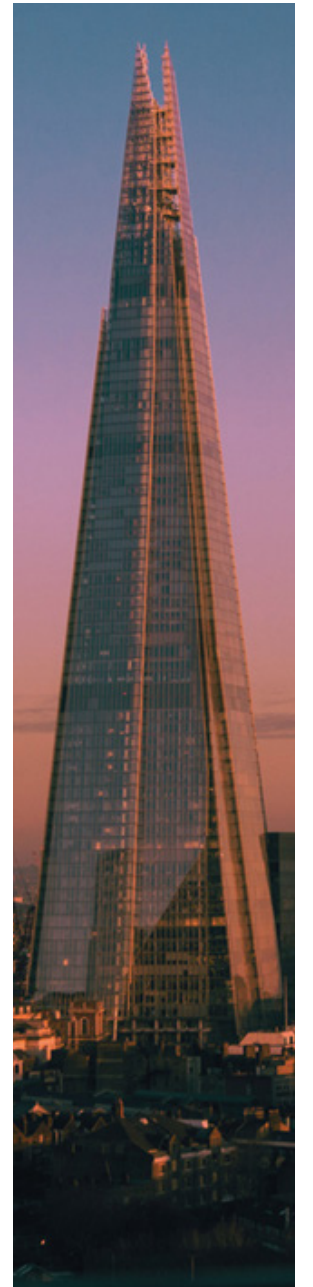
<https://bafe.my.salesforce-sites.com/wb/wbCompanySearch>

Contractors have found that standardisation of fire alarms across sites can make it easier for staff and sub-contractors.

→ 7. Evacuation strategy and cause & effect HSG168 para 88

When working in occupied or shared buildings, the evacuation strategy must be coordinated with the main building evacuation strategy. The escape routes must be able to accommodate all those evacuating the buildings, and any cause and effects on the fire alarm system should be remain in place.

It was confirmed that the building management team are responsible to co-ordinate the evacuation strategy including communicating with the fire brigade. Their knowledge of the building puts them in the best position to perform this important task. It is therefore important that the contractor works closely with the building management team in producing their evacuation strategy including the cause and effect of the temporary fire alarm system. It is usually possible to have a link between the building fire alarm and the temporary fire alarm, but this can be problematic if there are false alarms within the construction zone. For this reason, a manual interface is often preferred.



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→ 8. Lithium battery fires JCoP 20

Charging of electric vehicles should only take place within the building if there is a 60 minute fire compartment.

It was explained that this section of the JCoP was introduced to raise awareness around the risk of lithium-ion batteries. Since fighting lithium-ion battery fires is so challenging, the most effective precaution that can be taken is to ensure that the charging takes place in an area where fire cannot spread rapidly, hence outdoors, away from buildings is always the first choice.

Older electric plants and equipment may not use this technology and is therefore less risky, however, consideration of the best place for charging to take place is still important.

It was recognised that it is often poor-quality batteries or adapted charging equipment that is the main cause of fires. Contractors are finding that strict controls on equipment coming onto site, and education of staff and sub-contractors around the risks of poor quality batteries and chargers is beneficial. Contractors have found that a simple toolbox talk to all site operatives to raise awareness on the difference between a CE mark for "Conformité Européenne" and CE for "Chinese Export" is helpful in identifying potentially low-quality batteries and chargers.



→ Howler UK and Westgate Global would like to extend our thanks to the participants for their helpful insights and shared experiences. It is in this spirit of collaboration and co-operation that together we can make things better.

References

→ Joint Code of Practice 10th Edition
<https://www.thefpa.co.uk/advice-and-guidance/freedocuments?q=joint%20code%20of%20practice>

CDM Principal Designers Appointment
<https://www.hse.gov.uk/construction/cdm/2015/principal-designers.htm>

BAFE Fire Safety Register
<https://www.bafe.org.uk>

Construction Health & Safety Group (CHSG)
<https://www.chsg.co.uk/fire-safety-academy>

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