



NFCC
National Fire
Chiefs Council

The professional voice of the
UK Fire & Rescue Service

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Sent via email to: buildingstandards@gov.scot

26 September 2018

To the Ministry of Local Government, Housing and Planning,

Please find attached the National Fire Chiefs Council's (NFCC) response to the consultation paper '*Building Standards Compliance and Fire Safety – A consultation on making Scotland's buildings safer for people*'.

The NFCC is the professional voice of the UK fire and rescue services, and is comprised of a council of UK Chief Fire Officers. This submission was put together by a subset of the NFCC's Protection and Business Safety Committee, which I Chair.

The Committee is comprised of protection and fire safety specialists from across the UK. This response was developed in close consultation with Scottish colleagues to ensure a UK wide perspective was incorporated.

The NFCC welcomes this consultation and engagement with the sector to ensure robust regulatory frameworks are in place and continually improved to make buildings safer across the UK.

We trust that the attached submission is helpful.

Yours sincerely,

Mark Hardingham

NFCC Protection and Business Safety Committee Chair



NFCC Response to Building Standards Compliance and Fire Safety – a consultation on making Scotland’s buildings safer for people

Part 1

Question 1.1 Do you agree that the roles and responsibilities of verifiers (including their key activities) must be clearly defined and recorded, including the expected level of resources and skills needed to undertake verification activity, and the actual level?

Yes No Unsure

Please provide any comments below:

This is a key role to ensure a safe and compliant building is achieved. Therefore, it is vital the role is clearly defined and the necessary skills identified to achieve this. This will then allow suitable resources to be provided.

Question 1.2 Do you agree that verifiers must place a greater emphasis on inspection and testing throughout construction and at completion?

Yes No Unsure

Please provide any comments below:

Every Fire & Rescue Service could provide numerous examples where poor construction has resulted unexpected fire spread and premature building failure in the event of fire. The primary responsibility for addressing this obviously lies with the construction industry.

However, one of the key failings is the interaction between contractors installing different elements of construction, sometimes resulting in unintended consequences and failures. Therefore, periodic inspection & testing during the construction process, particularly to check elements of construction that will be hidden in the final building, is vital

Question 1.3 Do you agree that verifiers must place a strong focus on safety critical elements such as structure (for example wall ties, lateral restraint) and fire safety (for example fire protection, fire-stopping, cavity barriers)?

Yes No Unsure

If possible, please provide details of other elements that should be included below:

As commented in 1.2, the particularly vulnerable elements of construction are those that become hidden on completion, such as fire stopping, cavity barriers and wall ties. These are often the safety critical elements of a build. There is often a small

window of opportunity to check to the standard of such construction and priority should be given to these elements. In addition, it must be prioritised to fully test fire fighting facilities as part of the inspection program.

Question 1.4 Do you agree that local authorities should not be able to act as verifier for their own “higher risk” building work due to possible conflicts of interest?

Yes No Unsure

Please provide any comments below:

To our knowledge there has been no issue with local authorities verifying their own building work to date. Although employed by the local authority, verifiers are subject to independent audit by the Building Standards Division, so are already monitored. The practicalities of resourcing verifiers from outside the larger local authorities could be problematic if they were not permitted to verify their own building work.

Question 1.5 Do you agree that local authorities should still be able to act as verifier for their own lower risk work?

Yes No Unsure

Please provide any comments below:

See 1.4.

Question 1.6 Do you agree that the roles and responsibilities of building owners and developers (including their key activities) must be clearly defined within the Building Standards system and recorded including the expected level of resources and skills needed to assure themselves and verifiers of compliance, and the actual level?

Yes No Unsure

Please provide any comments below:

In an ideal world, the role of a verifier would not be needed if the construction work could be relied upon to be compliant at all stages. Clearly defined roles and associated skills and resources would be a key element of this and would be essential to ensure effective project planning and management

Question 1.7 Do you agree that the building owners and developers must, to ensure compliance, place a greater emphasis on inspection and testing throughout construction and at completion, with focus on the safety critical elements?

Yes No Unsure

Please provide any comments below:

As mentioned before, the role of the verifier should not be needed and primary responsibility sits with the developers and building owners to ensure a compliant and safe build.

Question 1.8 Do you agree with the requirement for a Compliance Plan, to be provided by the owner or developer, to demonstrate their approach to compliance from initial design, through detailed design and construction, and leading to their final sign-off and certification of the completed building?

Yes No Unsure

Please provide any comments below:

This would help to determine the responsibilities of all parties and track compliance, with sign off from all parties at each key stage. This document should be retained for future reference.

Question 1.9 Do you agree that the building owner or developer should be required to appoint a competent professional person, with the appropriate experience and qualifications, to act on their behalf in order to assure them of compliance when they submit the completion certificate?

Yes No Unsure

Please provide any comments below:

The failures in construction often occur because of the number of different parties involved. This would be much improved by having a single person responsible for overseeing all work to ensure compliance.

Question 1.10 Do you agree that mandatory pre-application discussions and pre-commencement of construction discussions should be introduced for higher risk buildings?

Yes No Unsure

Please provide any comments below:

There is concern that pre-application/construction discussions will add to the workload. However, applications are often made once construction has started, which makes it difficult to address areas of non-compliance. Experience has shown that consultations where pre-application and construction discussions have taken place significantly reduce the workload later on and allow areas of non-compliance to be addressed on paper before construction starts. This saves time and money and achieves a safer and more holistic design. This process also ensures that all parties are aware of the compliance plan.

Question 1.11 Do you agree that amendments to warrant should differentiate between minor changes, major changes, and staged warrants?

Yes No Unsure

Please provide any comments below:

In order to determine that the correct level of scrutiny is applied to the design change by the verifier and to ensure compliance can be met at a later stage, this change is warranted.

Question 1.12 Do you agree that the construction procedures and guidance should be reviewed and that mandatory notifications are introduced, including notification of progress on higher risk projects?

Yes No Unsure

Please provide any comments below:

Notification of progress would allow programmed inspections to be planned.

Question 1.13 Do you agree that verifiers should carry out ad-hoc (unannounced) progress inspections and be able to require disruptive surveys when mandatory notifications are not made to them?

Yes No Unsure

Please provide any comments below:

Planned inspections should take place at key stages of the stages of the construction. Mandatory notifications will allow this to take place. However, ad-hoc inspections should take place too – especially on higher risk projects – and should it be discovered that mandatory notifications have not been made, further investigations should be made as appropriate. This may include disruptive surveys.

Question 1.14 Do you agree that verifiers should record safety critical building standards non-compliances and feedback at a national level to drive improvements

Yes No Unsure

Please provide any comments below:

Definitely. This would help inform future reviews of relevant regulations and guidance.

Question 1.15 Do you agree that verifiers should be notified of minor changes in design as the project progresses, on the understanding that they are to be covered by an amendment to warrant before the completion certificate is submitted?

Yes No Unsure

Please provide any comments below:

As mentioned in 1.2, it is important that programmed inspections happen at key stages of construction. Notification of minor changes will allow the verifier to assess whether a visit is required.

Question 1.16 Do you agree that the completion certificate for a higher risk building should have sub-sets for safety critical aspects, and be accompanied by as-built drawings and the completed Compliance Plan?

Yes No Unsure

Please provide any comments below:

There are several occasions in England where a building design alters between consultation and completion. Where the Fire & Rescue Service are informed of the completion (which does not always happen), we are not always informed that the completed building has changed from what we believe has been built. Including the as-built drawings on completion will overcome this issue.

These plans, in addition to safety critical sub-sets for completion certificates and a completed compliance plan is essential for the building occupiers who will be using the building in the future to understand how the building was designed and built to ensure the building continues to operate safely. This information also allows the Fire & Rescue Service to prepare suitable operational response plans where appropriate.

Question 1.17 Do you agree that the procedures for the temporary occupation or use of a building should be strengthened, for example, requiring a declaration of compliance and monitoring of the expiry dates?

Yes No Unsure

Please provide any comments below:

There is a risk that the fire safety standards provided in a building only intended to be occupied temporarily may be reduced due to what is 'reasonable practicable' for short term-occupation. However, this temporary occupation may continue indefinitely if not monitored.

In addition, occupants in a building are subject to the same risks whether they are temporary or permanent occupants. Therefore, any building intended to be occupied for any period of time should comply with the relevant fire safety legislation, such as the Fire (Scotland) Act 2005, and consultation should take place accordingly.

Question 1.18 Do you agree that restrictions to the occupation or use of existing buildings should be considered when significant alterations are being carried out to higher risk buildings?

Yes No Unsure

Please provide any comments in the box below:

Experience has shown that buildings are particularly vulnerable during construction as key fire safety measures are absent and escape routes can be temporarily unavailable. Where this construction is taking place in an occupied building, the occupants are obviously at increased risk.

The impact of these alterations taking place must be considered for those continuing to occupy the building and fire risk assessments updated to cover the period of works. This will address whether there is a need to restrict the occupation or use of the building.

Question 1.19 Do you agree that local authorities should be more pro-active in enforcing building regulations and monitor construction regularly?

Yes No Unsure

Please provide any comments below:

As mentioned previously, buildings have been known to deviate from the agreed design, either due to a need to reduce costs once construction has started, a change in client requirements or unintentionally due to the interaction of multiple contractors working on site at the same time. These deviations are frequently unnoticed due to a lack of inspections at key stages. There also appears to be a lack of appetite to pursue enforcement where construction fails to meet the required standards.

Question 1.20 Do you agree that local authorities should have a building standards enforcement policy in place that is based on national guidance?

Yes No Unsure

Please provide any comments below:

As there are 32 local authorities in Scotland is it important that the same enforcement standards are applied across Scotland. Adherence to national guidance will ensure a consistent approach.

Question 1.21 Do you agree that national guidance on building standards enforcement should include what enforcement related actions local authorities should carry out and the level of resources and skills they should have to do so?

Yes No Unsure

Please provide any comments below:

Identifying the resources and skills required to deliver the enforcement policy mentioned in 1.20 is vital to ensure its success.

Question 1.22 Do you agree the penalties and levels of fines associated with serious failures in compliance should be increased?

Yes No Unsure

Please provide any comments below:

Deliberate failures are still occurring. This may be due to a reluctance by local authorities to pursue enforcement action in the first place or because the penalties, monetary or otherwise, are not enough of a deterrent.

PART 2 – FIRE SAFETY IN BUILDING STANDARDS

Question 2.1 Do you agree that the guidance should be developed to make clear that there is more than one way of achieving compliance with the mandatory functional standards?

Yes No Unsure

Please provide any comments below:

It is important that people understand there is more than one way to achieve a safe building, and that guidance documents are guidance only. However, there is a benefit to having all the guidance in one document as one frequent failing is 'cherry picking' of fire safety standards from more than one guidance document.

Question 2.2 Do you agree that the annexes in the Technical Handbooks for residential care buildings, hospitals and enclosed shopping centres should be published separately?

Yes No Unsure

Please provide any comments below:

There are benefits to publishing separate handbooks for different occupancies. They are simpler and cheaper to purchase for those only dealing with one type of premises, and easier to update. However, for those dealing with more than one type of premises or mixed use premises the benefits of collating all this guidance into one document ensures guidance remains consistent and removes the need to purchase multiple documents.

Question 2.3 Do you agree that an additional Technical Handbook for simple domestic detached and semi-detached dwellings (up to 3 storeys) should be introduced as a means of compliance with fire, and all applicable building standards and sections of the Handbooks?

Yes No Unsure

Please provide any comments below:

As discussed in 2.2, this would introduce another guidance document that developers will need to purchase. It is beneficial to keep guidance as simple as possible and any specific guidance for this type of premises could be included as an additional section/annex in the Technical Handbook.

Question 2.4 Do you agree that a national "hub" approach should be developed to share expertise and skills and be responsible for verifying fully performance based "fire safety engineering designs"?

Yes No Unsure

Please provide any comments below:

A national hub would ensure a consistent approach to fully performance based fire safety engineering designs.

Question 2.5 Do you agree that consideration should be given to a certification scheme for fire engineering?

Yes No Unsure

Please provide any comments below:

Fire engineering is too complex a subject to have confidence in a certification scheme at this time. Fire engineering designs submitted for consultation frequently fail to comply with fire safety standards on initial consultation. Standards would need to improve before this approach could be considered.

Question 2.6 Do you agree that the reference to British Standards Reaction to Fire Tests should be removed from the Technical Handbook?

Yes No Unsure

Please provide any comments below:

The most common British Standards for determining fire resistance duration (BS 476 parts 20, 21 & 22) were last reviewed over 30 years ago and are no longer fit for purpose. The option to comply with either the British Standard or the harmonized European Standard gives the option to use a product that is of a lower standard than that which is required by the European Standard. Because of this, the option to comply with the British Standard only should be removed.

Question 2.7 Do you agree that only A1 and A2 materials, using the European Harmonised “reaction to fire tests”, should be required for external walls or insulation exposed in a cavity of a high rise building (domestic and non-domestic) with a storey at a height of more than 11m above ground?

Yes No Unsure

Please provide any comments below:

Please see 2.6

Question 2.8 Do you agree that only A1 and A2 materials, using the European Harmonised “reaction to fire tests”, should be required for external walls or insulation exposed in a cavity of entertainment and assembly buildings, residential care homes and hospitals of any height?

Yes No Unsure

Please provide any comments below:

Please see 2.6

Question 2.9 Do you agree that BS 8414 (and BR135) may still be used as an alternative method of providing evidence to show compliance?

Yes No Unsure

Please provide any comments below:

The standards have been reviewed fairly recently and remain fit for purpose.

Question 2.10 Do you agree fire service activated evacuation sounders should be required in each flat in new domestic buildings which have a storey at a height of more than 18m above ground level?

Yes No Unsure

Please provide any comments below:

Recent events in high rise buildings have highlighted a concern about the lack of an alert for the whole building. The ethos of the stay put strategy is obviously to contain a fire within the flat of origin, removing the need to evacuate the whole building. If the building is built and maintained correctly, this should always be the case. However, there may be extreme circumstances where full evacuation may need to be initiated and the provision of sounders throughout would be a huge benefit in achieving this. It will also provide assurance to the residents.

Question 2.11 Do you agree that two stairways should be required for new domestic buildings which have a storey at a height of more than 18m above ground level?

Yes No Unsure

Please provide any comments below:

The automatic provision of two stairs for all domestic buildings over 18m would be an additional provision for when the other fire safety measures have failed. The current provisions (including the installation of sprinklers in these buildings) are suitable and already include an element of redundancy in the measures provided. As is the common theme throughout this consultation, focus should be placed on ensuring buildings are built and maintained to current standards rather than planning to fail.

Question 2.12 Do you agree that new HMOs used for “care” 24/7 should be included in the list of buildings with a mandatory requirement for automatic fire suppression systems?

Yes No Unsure

Please provide any comments below:

It is recognised that these types of occupants are particularly vulnerable, and where a premises is built as a care home, these measures would be provided, as well as high level of staff support. It is a loophole in current standards that if the premises is primarily built as flats or converted to an HMO – even if the intention is to only house occupants requiring care – sprinklers are not needed. On-site staff are also absent. Therefore, sprinklers are an absolute must for these premises.

The NFCC’s position statement on this matter is as follows: more widespread use of Automatic Water Suppression Systems (AWSS) will be beneficial in nearly all buildings but in particular, NFCC want to see an increase in use of sprinklers in housing for vulnerable persons, care facilities, high rise accommodation, large volume warehousing, factories, car parks and waste and recycling facilities.

Sprinklers are proven to be highly reliable. In 2017 Optimal Economics carried out an independent analysis of the performance of sprinkler systems in the United Kingdom

based on the previous five years' worth of data from the UK Incident Recording System (IRS). The analysis found that sprinklers are 99% effective in controlling and extinguishing fires and also 94% reliable. This means that on 94% of occasions sprinklers will operate as designed and then either extinguish or prevent the fire from worsening on 99% of occasions.

In dwellings they also reduce the fire damage in a dwelling from 18-21m² to under 4m². Specifically in licensed HMOs sprinklers were found to be 100% effective and 89% in sheltered accommodation. In care homes sprinklers have been found to be 100% effective and 96.6% reliable.

These statistics overwhelmingly support that in making sprinklers mandatory in such premises we can have a very high degree of confidence in their performance and therefore be assured that they will contribute to life safety, property protection, business resilience and environmental protection.

Question 2.13 Do you agree that new HMOs with 10 or more occupants should be included in the list of buildings with a mandatory requirement for automatic fire suppression systems?

Yes No Unsure

Please provide any comments below:

Please see 2.12

Question 2.14 Do you agree that new flats should be included in the list of buildings with a mandatory requirement for automatic fire suppression systems?

Yes No Unsure

Please provide any comments below:

The NFCC's position statement specifically on flats is as follows:

In England, the NFCC has recommended that the review of ADB specifies that sprinklers are a requirement in all new high rise residential structures above 18m (or as defined in any revised Approved Document B). Student accommodation should be included in this category of building.

In respect of existing high rise residential buildings, NFCC recommended that where high rise residential buildings currently exceed 30m there should be a requirement to retro fit sprinklers when these buildings are scheduled to be refurbished. Furthermore, NFCC also recommended that sprinklers should be retro fitted where high rise residential buildings over 30 metres are served by a single staircase.

NFCC will support fire and rescue services who are receiving enquiries from, and providing support to local authorities and Housing / Residents Associations, which are committing to install sprinklers in their high-rise stock.

The Optimal Economics report discovered that sprinklers were 100% effective in both purpose built and converted flats.

The NFCC would also like to make the following observations in respect of sprinkler provision in flats.

External Fire Sprinkler Systems on Balconies.

Fires in high rise buildings across the globe have highlighted the need for sprinklers to protect balconies. Fire can often start on balconies or exacerbate vertical fire spread on the outside of a high rise building. As such, sprinkler codes and regulations now feature such requirements. Any revision to building regulations should feature this requirement. There are numerous examples of serious fires that have started on balconies and extended to other parts of the building.

Balcony Coverage is already required in other countries:

Dubai: Sprinklers are required to cover balconies due to referencing the NFPA 13 code in the Dubai Code.

New Zealand: sprinkler standard NZS4541 requires sprinklers over balconies wider than 1.5m.

Norway: Sprinklers have been required in all flats since 2010. This includes sprinklers on balconies. This is particularly relevant as there may be concerns around external sprinkler coverage in colder months.

Australia: Melbourne mandate sprinklers over all balconies.

PART 3 – BUILDING STANDARDS

Question 3.1 Do you agree that protected lobbies need not be provided to shared residential accommodation with only one escape stair?

Yes No Unsure

Please provide any comments below:

n/a

Question 3.2 Do you agree that exempt type 16 of building regulations should be reviewed in respect of the criteria for the erection of a temporary building and the temporary use of a building?

Yes No Unsure

Please provide any comments below:

n/a

PART 4 – AREAS FOR FURTHER CONSIDERATION

Question 4.1 Do you agree with the areas identified for further consideration?

Yes No Unsure

Please provide any comments below:

n/a

Question 4.2 Do you consider there are other areas of the building standards system that require further consideration?

Yes No Unsure

Question 4.3 If Yes above please tell us what they are below.

The definition of a house/dwelling should be reviewed to remove any conflict with the application of the Fire (Scotland) Act. This is a particular issue in dwellings used for the provision of care, bringing them within the scope of the Fire (Scotland) Act but bypassing the enhanced requirements of class 8 for Residential Institutions, including the provision of an automatic fire suppression system.

Consideration should be given to including active fire safety measures into the requirements of Regulation 17 (Continuing Requirements). This is particularly important where these measures are part of an engineered design.

The operating space for high reach appliances (2.12.3) is no longer applicable to modern appliances and should be reviewed.

The Technical Handbook advises a maximum compartment size in class 2 storage building of 14,000m². This may be doubled where an automatic fire suppression system is installed. Considering a number of historical incidents where firefighters have been injured or killed and the increasing risk from these types of premises, consideration should be given to reducing this maximum to 4000m², something much more in line with other European states (e.g. Belgium 5000m² or France 3000m²).

The large scale of these premises make it too difficult and hazardous for the Fire & Rescue Service to effectively and safely intervene in the event of a fire. Some research has already been carried out in conjunction between the NFCC, Fire Brigades Union and Greater Manchester FRS which has evidence to support this proposal. Further research and supporting data could be gained, given more time and resources if necessary.

PART 5- IMPACT ASSESSMENTS

Question 5.1 Are there any proposals in this consultation which impact or have implications on 'equality groups'? Choose from the following options:

Part 1 – Building Standards (Compliance and Enforcement)

Yes No Unsure

Please select only one answer and provide any comments below.

Verifiers:

Building Owner or Developer:

Compliance Plan:
Building standards system:
Enforcement:

Part 2 – Building Standards (Fire Safety)

Question 5.2 Are there any proposals in this consultation which impact or have implications on ‘equality groups’? Choose from the following options:

Yes No Unsure

Structure of building standards and supporting guidance:

Fire safety engineering:

Fire safety engineering:

External walls and cladding:

Escape:

Automatic fire suppression systems:

Question 5.3 Do any of the proposals in this consultation have any financial, regulatory or resource implications for you and/or your business (if applicable)? Choose from the following options:

Part 1 – Building Standards (Compliance and Enforcement)

Yes No Unsure

Verifiers:

Building Owner or Developer:

Compliance Plan:

Building standards system:

Enforcement:

There could be potential implications but this is unable to be assessed without more information.

Part 2 – Building Standards (Fire Safety)

Question 5.4 Do any of the proposals in this consultation have any financial, regulatory or resource implications for you and/or your business (if applicable)? Choose from the following options:

Yes No Unsure

Structure of building standards and supporting guidance:

Fire safety engineering: There could be potential implications but this is unable to be assessed without more information.

External walls and cladding:

Escape:

Automatic fire suppression systems:

RESPONDENT INFORMATION FORM

Are you responding as an individual or an organisation?

- Individual
- Organisation

Full name or organisation's name: Mark Hardingham, Protection and Business Safety Committee Chair responding on behalf of the National Fire Chiefs Council (NFCC).

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The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- Publish response with name
- Publish response only (without name)
- Do not publish response

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

- Yes
- No