

Building (Amendment) Regulations (Northern Ireland) 2023

Consultation Response Form

July 2023

(closing date for receipt of responses is Monday 25 September 2023)

Building (Amendment) Regulations (Northern Ireland) 2023 - Consultation

Overview

Fire safety measures in buildings established through the local Building Regulations contribute significantly to maintaining life safety standards for occupants/residents and firefighters alike, not to mention the contribution they make in terms of property protection.

The proposed consultation contains amendments to uplift fire safety protection measures in a range of buildings. They are mainly focused on residential buildings and in particular domestic multi-residential buildings, to provide assurance and additional safety measures to residents. Some amendments are aimed at assisting the Fire and Rescue Service to ensure they can provide an effective operational response. The intended effect of the proposals is to reduce the consequences of fire through saving lives and preventing injuries.

Why your views matter

The Grenfell tragedy and subsequent Phase 1 report to the Public Inquiry highlighted the potential benefits of some of the items proposed in this consultation - sprinkler usage, wayfinding signage, evacuation alert sounder systems, smoke ventilation systems and secure information boxes to improve resident safety. Sprinklers in particular have been proven to be very effective fire protective measures for saving lives in residential type buildings.

The Department is seeking your views on these matters and the other amendments as proposed to the local Building Regulations through this consultation. Your views will help to inform the development of final policy proposals.

It is not compulsory to answer all of the questions, so you can take part in the consultation even if you do not have views on all of the above issues. The answers you give will inform the development of final policy proposals and legislation, so we would encourage you to take this opportunity to have your say.

Privacy Notice

The Data Protection Act 2018 states that, as a government department, DoF may process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation. In addition to the statutory requirement in the Building Order to consult on building regulations matters there is an expectation of appropriate public consultation on substantive changes to the Building Regulations.

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

Your data will be kept for two years, after which all data will be deleted. To find out how we handle your personal data, please see our [privacy policy](#). When submitting this response you agree to our privacy policy.

All the information you provide will be treated in strict confidence and will not be used to identify you personally. The analysis will be carried out on an anonymous basis under the guidelines of the GDPR.

Where consent has been provided consultation responses will be published on the Department of Finance website, no personal data will be published.

Information will not be passed on to anyone else and will only be used for the purposes of this consultation/survey or if necessary to fulfil legal or regulatory requirements.

Completion of the Response Form

The Department will consider all responses to this consultation received on or before the closing date for receipt of responses which is **25 September 2023**.

Submissions made after this date will not be considered.

We would strongly encourage you to respond to the consultation by completing the survey on the Citizen Space platform, which can be accessed [here](#).

If using this form to respond to the consultation please send it by email to:

info.bru@finance-ni.gov.uk or it may be posted to:

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Please refer to the package of Consultation Documents which outline fully the proposed amendments at –

<https://www.finance-ni.gov.uk/consultations>

For ease of use, questions relating to each aspect of the consultation are referenced by a letter relating to the Part of the Building Regulations that the aspect is considering, for example A1 and A2 are questions on Part A: Interpretation and general; E1, E2 etc. are questions on Part E: Fire safety and TBE1, TBE2 etc. are questions on Technical Booklet E: Fire safety.

Click on the box (or insert an “x”) beside “Yes”, “No” or “No view” as appropriate. It is not essential to give an answer to every question. The last question is completely open to enable consultees to make suggestions or observations on relevant issues that are not addressed by answering the preceding questions.

Please make any comments you might have in the box provided. If you disagree with any of the proposals the Department would be interested to know why you disagree.

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Respondent Details

In order for your response to be considered valid, you must provide the following information:

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Are you responding as an individual?

Or are you representing the views of an organisation?

Please indicate how you wish your response to be handled and, in particular, whether you are content for your response to be published.

If you ask for your response to be confidential, we will still take account of your views in our analysis but we will not publish your response, quote anything that you have said or list your name. If you ask for your response to be regarded as confidential and not to be published, you will be asked to explain to us why you regard the information you have provided as confidential.

To find out how we handle your personal data, please see your privacy policy ([Department of Finance Privacy Notice | Department of Finance \(finance-ni.gov.uk\)](#)). When submitting this response you agree to our privacy policy.

The Department of Finance would like your permission to publish your consultation response. Please indicate if you wish your response to be treated as confidential.

Yes No

If you wish your response to be treated as confidential, please provide your justification for doing so.

We may wish to contact you again in the future, but we require your permission to do so. Are you content for the Department of Finance to contact you again in relation to this consultation exercise?

Yes No

PART A, INTERPRETATION AND GENERAL: QUESTIONS

Part A of the Building Regulations (Northern Ireland) 2012 (as amended) (the Building Regulations) defines certain terms used in the regulations and establishes processes which relate to the application of the regulations.

(Refer to Section 4 of the Consultation proposals document)

It is proposed to amend Part A of the Building Regulations and in particular regulation 8 (Application to material change of use) so that when a building becomes a 'relevant premises' (as defined under the Fire and Rescue Services (NI) Order 2006) after a material change of use, that building will be subject to the new requirement of regulation 37A. The same requirement will apply to a building containing one or more flats with a storey more than 11m above ground level that is created as a result of a change of use.

Similarly it is proposed to amend Part A of the Building Regulations and in particular regulation 8 (Application to material change of use) so that when a building on the prescribed list i.e. becomes a building containing flats or a building for purpose built student accommodation with a storey more than 11m above ground level or a residential care home, nursing home, children's home, family resident centre due to a material change of use, then that building will be subject to the new requirement of regulation 37B.

The amended Table to Regulation 8 (Application to material change of use) will demonstrate for the existing Cases where the new requirements in regulations 37A and 37B will apply.

A1. *Do you agree with the proposal to require a building which becomes a 'relevant premises' (as defined in the Fire and Rescue Services (NI) Order 2006) or a building containing one or more flats with a storey more than 11m above ground level, due to a material change of use, to be subject to the requirements of new regulation 37A?*

Yes No No view

Comments (if any):

Belfast City Council (BCC) welcomes this new regulation which will ensure the person with responsibilities for fire safety is provided with information on the active and passive fire safety measures incorporated in a building during design and construction.

Case II flats in Table 8 are indicated as not being subject to regulation 37a however regulation 37a will create a mandatory standard for flats in buildings over 11m. No reference is made to this or to the term 'relevant premises' in the notes within Part A which may cause confusion with the application of regulation 37a in a change of use

situation. This requirement will also be applicable for case IV and XII if a 'relevant' premises which is not indicated in the notes or table.

A2. *Do you agree with the proposal to require a building which becomes a building on the prescribed list of buildings in regulation 37B due to a material change of use, to be subject to the requirement of new regulation 37B?*

Yes No No view

Comments (if any):

BCC welcomes this requirement which will protect the citizens of Belfast living in these new residencies. The mandatory requirement for automatic suppression in apartment buildings, purpose-built student accommodation (PBSA) over 11m in height and in care homes will improve the safety and the perception of safety for all occupants in these buildings.

Over the longer-term increased requirements for automatic suppression will help to save lives and reduce injury. As an associated benefit it will also protect property and the impact of fire on the environment.

We would point out that reference to the application of regulation 37b is not referenced in Part A Table 8 and specifically the notes associated with this table. We understand this table should be read in conjunction with the regulations which bring in the requirement however this should be made clear in Table 8 to avoid confusion. Table 8 is the go-to location that designers will use to identify the requirements applying to a change of use. This requirement may not be picked up by designers prior to RIBA stage 4. It is imperative that requirements such as this are considered as early as possible.

PART E, FIRE SAFETY: QUESTIONS

Part E of the Building Regulations sets out requirements in buildings for ensuring adequate means of escape, adequate limitation for internal fire spread to linings and internal structure, adequate limitation on external fire spread and adequate facilities and access for the Fire and Rescue Service.

(Refer to Section 5 of the Consultation Proposals document).

It is proposed to introduce a new Regulation 37A ‘Provision of fire safety information’ to require that adequate ‘as built’ fire safety information is made available to the person responsible for fire safety duties in a building after completion of a project when a building is handed over for ownership/occupation.

The information will be of benefit to the owner/occupier in operating and maintaining the building for fire safety purposes and is seen as a necessary link between fire safety measures installed as part of the design and as-built phase and the occupied phase in the lifecycle of a building.

With this information, owners/occupiers should be able to understand and implement the fire safety strategy of the building; maintain any fire safety system provided and carry out an effective fire risk assessment of the building.

E1. *Do you agree that as built ‘fire safety information’ should be required to be given under Building Regulations to those responsible for fire safety duties in a building not later than the date of completion of the work, or the date of occupation of the building or extension whichever is the earlier?*

Yes No No view

Comments (if any):

The provision of accurate fire safety information would be relevant to those with responsibilities for managing fire safety of a building in occupation. Whilst not prevented by regulation buildings should not be occupied until all work associated with fire safety is complete. There have been calls in the past to require that buildings should not be occupied until Building Regulations completion i.e. all works associated with building regulations compliance are complete.

We consider the best time to provide this information would be between building regulations completion and occupation. In this regard there is an opportunity to include accurate as built information on active and passive fire safety measures and also any cause and effect associated with active systems. The commissioning of active systems and the complete position with regard to cause and effects and the location of all passive fire protection measures may not be fully understood until after completion. We consider that time is required post completion prior to occupation to produce this information to ensure it is accurate and represents ‘as built’ construction and does not simply become a tick box exercise.

It is proposed to apply the new regulation to ‘relevant premises’ as defined under the Fire and Rescue Services NI Order 2006 (FRSNIO) and to buildings containing one or more flats with a storey more than 11m above ground level. ‘Relevant premises’ under the FRSNIO are predominantly all non-domestic buildings.

This requirement was introduced to Building Regulations in England and Wales in 2006 and a similar requirement for fire safety design summaries was introduced in Scotland in 2013. Introducing here will bring NI into line with the existing requirement in other regions.

E2. *Do you agree with the scope of buildings (‘relevant premises’ as defined under the FRSNIO and buildings containing one or more flats with a storey more than 11m above ground level) for the new regulation to apply to?*

Yes No No view

Comments (if any):

BCC would agree with the scope of this regulation however we do consider a list of these premises should be provided in Technical Booklet E. This could be incorporated as an Appendix to assist designers and other relevant persons involved in design and construction having full information on when this regulation applies.

In relation to the wording of regulation 37A (1) i.e. “*This regulation only applies when building work or a relevant change of use creates..*” infers the regulation only applies when the work or change of use ‘creates’ an in scope premises.

Whilst the term ‘building work’ within building regulations is defined to include extensions, alterations etc relating it to applying only in the situation of creating the building is confusing and incorrect. We understand the intent is to apply this to building work which also extends or alters a building not just in the situation of where it is created. A re-wording of this should be considered.

The regulation is worded in a similar way as equivalent regulation 38 for England and Wales which was introduced there in 2006. Responsibility for compliance with this new requirement will fall upon ‘the person carrying out the work’.

E3. *Do you agree with the use of the term ‘person carrying out the work’ in the regulation or do you think a more specific individual should be cited in the regulation and hence responsible for providing this information?*

Yes No No view

Comments (if any):

The person carrying out the works is a term associated with a definition provided in regulation 12 for ‘builder’.

Whilst the builder may have some of the information and knowledge to help formulate a package of relevant information a duty needs to be placed on a person with responsibilities. This feeds into the wider review of fire safety across the UK which has exposed the lack of clear responsibility for fire safety during the design and construction phase.

BCC would recommend that the responsibility to provide this information is clearly laid upon the person fulfilling duties associated with a role carrying overall responsibility for the design/construction phase. It should be the responsibility of this person to organise preparation of this information through the relevant actors involved in the design and construction phase.

It is acknowledged there is a wider piece of work required to define and associate responsibilities to roles for fire safety in NI during design and construction to allow this to happen.

It is proposed to introduce a new prescriptive regulation 37B which will require the provision of suitable automatic fire suppression systems (e.g. sprinklers) in certain types of buildings.

Sprinkler systems installed in residential type buildings can reduce the risk to life and significantly reduce the degree of property damage caused by fire. Evidence has shown that automatic fire sprinklers protect residents from fire, they limit fire spread protecting means of escape for residents, and also protect Firefighters who attend such fires.

E4. *Do you agree that a new prescriptive regulation requiring the provision of suitable automatic fire suppression systems in certain types of buildings should be introduced under regulation 37B?*

Yes No No view
Comments (if any)

BCC welcomes this requirement for automatic suppression systems in apartment buildings, in PBSA over 11m in height and in care homes. The mandatory nature of this requirement ensures these systems must be incorporated in these buildings and cannot be designed out.

Prescriptive requirements bring clarity to all involved as to how compliance must be achieved and BCC are fully supportive of this approach. We would also ask that consideration be given to preventing any application for dispensation or relaxation of this regulation.

BCC would encourage the Department to consider the use of more prescriptive requirements for critical life safety systems and construction details across fire safety regulations which bring more assurance to fire safety.

The new regulation will apply to a prescriptive list of buildings only, including buildings containing one or more flats with a storey more than 11m above ground level; purpose-built student accommodation type buildings with a storey more than 11m above ground level; all residential care homes, nursing homes, children's homes and family resident centres irrespective of storey height.

In relation to adding to this list, there may be a wider piece of work in future to consider a broader range of buildings with a sleeping risk for automatic fire suppression provision e.g. hotels. There may also be some higher risk Purpose Group 5 buildings (Assembly and recreation) which may merit consideration on the list.

E5. *Do you agree with the scope of buildings as proposed for now under new regulation 37B?*

Yes No No view

Comments (if any):

BCC agrees with the scope of buildings currently proposed however we would request that this matter is reviewed further to consider how the scope of this regulation should be widened to create maximum benefit. Additional buildings within purpose group 1 and 2 which contain a sleeping risk would be obvious areas to focus on initially.

BCC would welcome the further piece of work the Department are considering in this area.

A threshold storey height of 11m has been chosen to align with the same requirement in England for buildings containing one or more flats. This height is also consistent with the joint call in March 2019 from the Royal Institute of Chartered Surveyors (RICS), Royal Institute of British Architects (RIBA) and the Chartered Institute of Building (CIOB) on government to require the installation of sprinklers in all new and converted residential buildings, student accommodation and care home buildings more than 11m in height.

Lower trigger heights apply elsewhere in Scotland and Wales and also capture a wider number of building types.

E6. *Do you agree with the height threshold of 11m for buildings containing one or more flats and purpose-built student accommodation as proposed under new regulation 37B?*

Yes No No view

If you disagree, state the height threshold you think it should be and your reasons why.

Comments (if any):

Statistics highlight that between 1 Jan 2017 to 31 Dec 2022 there were 6 fire related fatalities in apartments out of a total of 39 and none of these fatalities occurred above the second floor. 33 of the fatalities occurred in lower rise residential occupancies and at lower levels. However, these statistics do not take into consideration the impact a fire may have and the potential for a high fire fatality loss in buildings at height.

It is acknowledged that height is the UK wide trigger for application of requirements relating to automatic suppression and in this regard we have neither information to back up the chosen trigger height or to refute it.

We would encourage however a further review in relation to extending the scope of this regulation to other buildings containing a sleeping risk taking into consideration fires fatality and casualty statistics. Any increase in scope should be targeting those more at risk.

Our Building Control Service have previously provided information to the Finance Committee through Building Control Northern Ireland in a letter dated 22nd February 2021 which outlines areas for improvement. One of those areas was in relation to sprinkler provision in timber externally and internally framed buildings of any height. We understand this letter has been passed to the Department.

It is proposed to apply new requirement 37B to all (irrespective of height) care homes, nursing homes, children’s homes and family resident centres as defined by the ‘Health & Personal Social Services (Quality, Improvement & Regulation) (Northern Ireland) Order 2003’. These terms will be grouped under the definition for ‘residential care premises’.

E7. *Do you agree with the definition of residential care premises being adopted in building regulations for the application of new regulation 37B?*

Yes No No view

Comments (if any):

Given the level of vulnerability and the difficulties in undertaking an evacuation in a fire situation within these facilities BCC welcomes the introduction of a mandatory requirement for the installation of automatic suppression in all these premises.

There have been several incidents across the UK over the last decade in care homes which have resulted in multiple fire fatalities and non-fatal fire casualties in low rise buildings. Many of the facilities constructed in NI would be low rise (three storeys or less) and therefore it would be appropriate not to attach a higher height threshold as a trigger in these buildings.

BCC has no issue with the definition being proposed for residential care premises and would agree with the scope.

Introducing a prescriptive requirement for the installation of automatic fire suppression systems (e.g. sprinklers) in certain types of buildings here for the first time is likely to require a period of time of adjustment for the industry. It is proposed to have a transitional period of 6 months between the requirement being made and it coming into operation.

E8. *Do you agree with a transitional period of 6 months?*

Yes No No view

If you disagree, state how long the transitional period should be and your reasons why.

Comments (if any):

BCC agrees with the transitional period of six months to allow industry adjustment.

TECHNICAL BOOKLET E, FIRE SAFETY (TBE); QUESTIONS

Part E of the Building Regulations sets out fire safety requirements in relation to buildings.

(Refer to Section 6 of the Consultation Proposals document and consultation version Technical Booklet E).

Alongside the technical requirement changes to Part E legislation, a number of changes to Technical Booklet E (TBE) are proposed. The Department is issuing a consultation version of a TBE indicating the proposed changes as part of this consultation (see paragraph 3.3 of document C2 'Consultation proposals'). The amended TBE will provide guidance on demonstrating compliance with the new Part E requirements 37A and 37B. It will also contain revisions to Section 2 to amend provisions for fire alarms in dwellings and smoke ventilation from the common escape routes of medium/high-rise buildings containing flats. Revisions to Section 6 will include amended and new provisions for firefighter safety for Facilities and Access for the Fire and Rescue Service.

The new guidance to regulation 37A in Part E will be placed in a new Section 7 'Fire safety information' of TBE.

The guidance gives 'essential information' for simple buildings and more detailed 'Additional information for complex buildings'. The amount and degree of information required will depend on the individual circumstances of the building concerned.

TBE1. *Do you agree with the proposed guidance in Section 7 of the consultation version TBE for 'fire safety information'?*

Yes No No view

Comments (if any):

BCC considers that section 7 provides clear guidance on the detail required for inclusion within any report or documentation to be provided to the person with fire safety duties to meet the requirements of regulation 37 A (2).

The new guidance to regulation 37B in Part E will be placed in a new Section 8 'Sprinklers' of TBE. It is aimed at providing guidance for sprinklers as one way to satisfy the automatic fire suppression system requirement of regulation 37B.

The guidance gives general information on sprinklers; makes reference to design standard BS 9251 "*Fire sprinkler systems for domestic and residential occupancies. Code of practice*" for residential buildings and BS EN 12845 '*Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance*' for non-residential buildings.

Guidance for water supplies and pumps for non-residential sprinkler systems designed and installed to BS EN 12845 is also provided.

TBE2. *Do you agree with the proposed guidance regarding sprinklers given in Section 8 of the consultation version of TBE?*

Yes No No view

Comments (if any):

BCC agrees with the proposed guidance and the reference to the relevant standards for detailed design and installation requirements. We would point out however in relation to the references that sprinklers should be extended to common areas only where they are not deemed sterile, BS EN 12845 and BS 9251 both call for sprinklers to be provided in all parts of the premises, so applying the exemption in TBE makes those sprinkler systems non-compliant with these standards.

In addition, it would be helpful if more guidance could be provided on the acceptability of the alternative established fire suppression systems referred to in paragraph 8.4.

The Department intends to revise the contents of Section 2 of TBE as a whole, as part of the next phase of changes to Part E and TBE. However, as part of this package of changes now, it is proposed to uplift the current requirement in TBE for fire alarm provision in dwellings.

Currently TBE requires a fire alarm system of Grade D Category LD2 to BS 5839-6 with smoke alarm or alarms in the principal habitable room and a heat alarm in each kitchen. This is currently more onerous than ADB1 in England and Wales, in line with the Technical Handbook in Scotland but less onerous than the standard set in Technical Guidance Document B in Republic of Ireland.

It is proposed to require smoke alarms in every habitable room in a new build dwelling or a dwelling created as a result of a material change of use. (Smoke alarms in circulation routes and heat alarms in kitchens will also still be required).

The proposal should benefit all occupants but particularly those who may be elderly/vulnerable/asleep and tend to react slower. Where available time for evacuation is critical, earlier warning and increased audibility levels of the alarm throughout the dwelling should enhance occupant safety.

Habitable room will be defined in TBE as *“any room in a dwelling other than a kitchen, utility room, bathroom, shower room, dressing room or WC”*.

TBE3. Do you agree with the revised provisions for installation of smoke alarms in all habitable rooms as part of automatic fire detection in new dwellings?

Yes No No view

Please provide any evidence in support to your answer.

Comments (if any):

BCC welcomes the extension of smoke alarm coverage in new dwellings to all habitable rooms and consider the potential benefits in terms of reduced fire fatalities and non-fatal fire casualties will vastly outweigh any theoretical disadvantages.

The dramatic fall in fire related fatalities in the late 1970s across the UK was largely attributed to the widespread use of smoke alarms around that time. Following the introduction of requirements within Building Regulations in the 1990s there has been limited change to the coverage required whilst the cost has continued to fall and the benefits have continued to be evidenced in terms of fire fatality rates.

With increased use of portable charging devices, an aging population and changes to statistics around risks associated with room of fire origin this would be a timely introduction with limited cost implications to industry.

In relation to the level of fire alarm system required in an existing dwelling when it is subject to an extension and/or alteration, with the exception of a roofspace conversion to habitable accommodation in a dwellinghouse, TBE does not specify the level of provision.

The coverage of fire alarm system required when an extension and/or alteration occurs will depend on the starting fire alarm provision in the dwelling prior to the extension and/or alteration. Under existing provisions in TBE, it is unlikely for instance that an existing system would have the appropriate level of detection to alarm a new habitable roofspace storey. However, an existing system may be adequate to provide appropriate level of detection to an extension and/or alteration which creates a new habitable room on the same storey. This will of course change if the proposal to alarm all habitable rooms in a dwelling is adopted.

The intention of the new guidance in TBE is to bring clarification to the issue of fire alarm provision when a dwelling is extended and/or altered.

TBE4. *Do you agree with the new guidance in relation to fire alarm provision in dwellings subject to an extension and/or alteration work?*

Yes No No view

Comments (if any):

BCC has two issues with the proposal. Firstly, we consider that detection should be required to warn the occupant of fire in a room with a final exit created by an extension. An occupant of that room may be unaware of a fire in the adjoining part of the dwelling and therefore will not receive any alert to evacuate the dwelling in a fire situation. If this room is a bedroom and the occupant is sleeping, they may be overcome by toxic gases before being able to make their escape.

Secondly the standard being stipulated requires full house coverage which would seem onerous in the case of an extension where it is the extension and its impact on the existing house that is being considered. This same standard would also be applicable to roofspace conversions.

We would also point out that no guidance is provided regarding the standards required for alterations which is included in the heading. An interpretation of this could be that this is a standard for the situation where a new room is created by alterations however no standard is provided otherwise for alterations or for the situation of retrofit which currently causes much confusion.

In paragraph 2.24B reference is made to smoke alarms being installed in accordance with paragraph 2.23. Consider replacing with 'automatic fire detection' as per the requirements of 2.23 which includes smoke and heat alarms.

In paragraph 2.24A (a) spelling mistake 'proivided'

Also proposed as part of this package of changes to Section 2 of TBE is to clarify the smoke ventilation requirements in the common escape routes (lobbies/corridors/stairways) of buildings containing flats.

The new provisions will provide for external wall smoke vents or smoke shafts as a means to achieve natural smoke ventilation from common escape routes in blocks of flats and make reference to BS EN 12101-6 '*Smoke and heat control systems – Part 6. Specification for pressure differential systems*' as the document to use for the designing of mechanical smoke control systems that use pressure differentials.

BS EN 12101-2 :2017 '*Smoke and heat control systems. Natural smoke and heat exhaust ventilators*' will also be cited as the standard for natural smoke ventilators.

TBE5. *Do you agree with the amended guidance regarding smoke ventilation from the common escape routes in buildings containing one or more flats as inserted in TBE?*

Yes No No view

Comments (if any):

BCC welcomes a review and update of the smoke ventilation requirements for apartments specifically the clarifications regarding the standard for smoke vents, the operational protocols for AOV's and the design recommendations for smoke shafts. Since the last revision of BS5588 Part 1 this is an area where there has been significant change in design codes, and these design standards are continuing to evolve. We would however have some comments with regard to the detail of the recommendations to help ensure they are fully understood by designers and Building Control Departments and that no ambiguity exists.

Small buildings with no storey more than 11m above ground level and with a single stair

Proposed paragraph 2.34D provides a standard for stairwell vents in a common lobby approach situation which includes an alternative to landing vents at 2.34D (ii). This paragraph states the alternative is to provide an openable vent at the top of the staircase. This is similar wording to BS9991 which is typically interpreted by many fire engineers and designers as at the 'top landing'. The wording within BS5588 Part 1 'over the stair' reflects the difference in vent efficiency between wall mounted vents at each landing which are impacted by wind direction and a single vent over the stair which is impacted less. We consider this to be a poor choice of words 'at the top of the staircase' and should be replaced with over the stair. In addition, no mention is made of the ability in a common lobby situation for buildings under 11m to extend travel distance in the common lobby to 7.5m from 4.5m with the introduction of an AOV. In this regard it should be clearly stated which recommendations of BS5588 Part 1 each additional recommendation is replacing.

In paragraph 2.34D (b) for the situation of a single stair building with no common lobby there is a note to say the maximum travel distance in the communal areas should be 4.5m. This same note is provided in BS9991 and currently causes much confusion as there is no clarity as to where this common area travel distance restriction needs to be applied or indeed the reasons. In this regard a diagram would be essential to explain this requirement.

Also, in paragraph 2.34D(b) the reference to 'at the top of the stair' should be replaced with 'over the stair' to avoid the confusion discussed above.

No detailed information is provided on the operation of manual vents recommended in 2.34D (b) as is the case in BS5588 Part 1.

The last paragraph of 2.34D states 'The smoke control strategy given in (a) should not be used with an open plan flat layout design'. It is not clear what strategy can or should be used and this should be clarified.

Buildings with a storey more than 11m above ground level and served by a single stair

In paragraph 2.34 (G) (b) (iii) reference is made to vents being fitted with a fire and smoke damper with further reference to paragraph 4.44 which is related to general ventilation ductwork. It is not clear how this relates to vents into a smoke shaft for smoke control.

In relation to the recommendations regarding the operation of vents into a smoke shaft at 2.34 (G) (b) (iv) there is no indication if manual override should be provided or is not permitted. This is currently an area of confusion.

2.34H recommends that a smoke vent should be provided to the top storey of the stair. This should be 'over the stair' to ensure this is not interpreted as vertical vent at the top landing which may be more susceptible to wind direction. It is not clear if this is a recommendation for both situations of lobby venting (shaft or wall mounted vents).

The operating procedure discussed at 2.34J is not related by reference to either of the options for lobby ventilation (shaft or wall mounted vents). The operating protocol is at variance with the operating protocol for the shaft scenario which requires three vents to open and this is dealt with in detail at 2.34 (G) (b). It is therefore assumed this is related to the lobby venting arrangement associated with 2.34 (G) (a). To avoid confusion this should be clarified. If a general point is to be made regarding AOV's being activated by smoke detectors this could be separated out.

Multiple stair buildings

The smoke ventilation for multiple stair buildings is indicated at 2.34 K as being the same as single stair buildings with the exception that vents to the exterior may be activated manually. Both BS5588 Part 1 and BS9991 have arrangements where external vents are required as AOV's. In BS5588 Part 1 this would be within lobbies or corridors where a dead end exists and in BS9991 this would be in all situations

within lobbies or corridors. It is not clear why this is replacing the ventilation arrangements in BS5588 Part 1.

Smoke control of common escape routes by mechanical ventilation

Whilst BS5588 Part 1 does provide guidance and recommendations on the situations where pressurization can be used and how this impacts design there is no mention in guidance regarding the use of mechanical smoke extraction. More commentary about the use of smoke extraction would be helpful if there is to be reference to the standards for this.

General

- It is difficult to fully understand the recommendations without diagrams.
- It would avoid confusion by referencing these recommendations for smoke ventilation in TBE against BS 55588 Part 1 diagrams for clarity and also make clear which recommendations in BS5588 Part 1 these new paragraphs in TBE are replacing. It will not be clear to designers or Building Control how much of the smoke control recommendations in BS5588 Part 1 still apply or should be applied.
- There are no recommendations regarding balcony or deck approach and therefore an assumption is made that the arrangements in BS5588 Part 1 is still relevant.
- We would draw the Departments attention to a smoke control association guidance document – ‘Guidance on smoke control to common escape routes in apartment buildings’. This document provides a critical analysis of recommendations contained in both ADB and BS9991 which some of the recommendations proposed for TBE are based.
- There is no reference to BS EN 12101 Part 2 in Appendix C to establish the benchmark for this requirement.

A series of changes are proposed for Section 6 ‘Facilities and Access for the Fire and Rescue Service’ of TBE. The changes and new provisions are aimed at assisting firefighters in their daily operations of firefighting and search and rescue.

It is proposed to require Purpose Group 5 (PG5) buildings (Assembly and Recreation) which have a storey 900m² or more in area at a height of 7.5m or more above fire and rescue service access level to have a firefighting shaft. All buildings irrespective of Purpose Group with a storey more than 18m above fire and rescue service access level require a firefighting shaft. PG 4, 6 and 7a buildings with a storey 900m² or more in area at a height of 7.5m or more above fire and rescue service access level already require a firefighting shaft.

A firefighting shaft is a protected enclosure containing a firefighting stair and firefighting lobby. If a lift is provided, this may or may not be a firefighting lift. These features are provided to assist attending firefighters in their operational duties.

TBE6. *Do you agree with the proposed change in guidance to require all Purpose Group 5 buildings which have a storey 900m² or more in area at a height of 7.5m or more above fire and rescue service access level to have firefighting shaft provision?*

Yes No No view

Comments (if any):

BCC support this change and do not have any further comment to make.

To address safe penetration distances for firefighters, it is proposed to amend the design provisions for locating firefighting shafts and protected stairways. The amended guidance will require every part of each storey in a building more than 18m above fire and rescue service vehicle access level (or 7.5m where applicable), to be no more than 60m from a fire main in a firefighting shaft. In addition the guidance will require where sprinklers are not provided, the distance from any part of a storey should be no more than 45m from a fire main in a protected stair/shaft.

Distances are to be measured suitable for laying a fire hose.

TBE7. *Do you agree with the amended guidance so that the maximum distance from any point on a storey to a fire main in a firefighting shaft is 60m and in addition, where sprinklers are not fitted, the distance should be a maximum of 45m to a fire main outlet in a protected shaft (not necessarily a firefighting shaft)?*

Yes No No view

Comments (if any):

Paragraph 6.3A deals with hose distances to firefighting shafts (FFS) for storeys over 18m and 7.5m. This covers FFS's required under paragraphs 6.3 (a) and (b) but with deletions there does not appear to be any requirement in relation to maximum hose distances for basements which require a FFS by paragraph 6.3 (c) and (d).

6.3 A also states that protected stairways should be located within hose laying distances. No explanation or rationale has been provided as to why protected stairways have been included in addition to FFS's.

It would appear from the changes that additional FFS's are not required beyond 2000m² as per the current TBE. No commentary is provided on this within the consultation document however the new guidance on FFS provision will see the number dictated by hose laying distances alone. In relation to this, paragraph 6.3B (b) recommends a limit to hose lengths to 45m where no sprinklers are installed. In the text this hose length limitation is related to protected shafts with a fire main. The proposed document also states this does not imply that the protected shaft needs to be a firefighting shaft. Given that a protected shaft does not typically contain a fire main nor is it provided with the same level of protection or facilities as a FFS (passive fire resistance, firefighting lobbies, ventilation etc) it is not clear how relating hose laying distance to a protected shaft with a fire main installed for buildings that are not sprinklered is achieving an increased level of safety to fire fighters.

In general terms it is difficult to fully understand the requirements without diagrams. These would help to clarify the requirements regarding the use of protected shafts in lieu of FFS's to achieve compliance for access for fire and rescue service. In addition some clarification is needed on the FFS provision in basements as discussed above.

From research into required flow of water through a dry fire main, it is proposed to amend the design provisions in TBE to restrict the use of a dry fire main to a storey height of 50m above fire service vehicle access.

The proposed change in guidance from the existing 60m storey height to 50m will ensure a building with a storey over 50m above fire service vehicle access level should be provided with a wet fire main. All other buildings where fire mains are provided can fit a wet or dry fire mains.

TBE8. *Do you agree with the amended guidance to set a storey height limit of 50m above fire service vehicle access level for provision of a dry fire mains?*

Yes No No view

Comments (if any):

BCC support this change and do not have any further comment to make.

From research into buildings not fitted with a fire main, it is proposed to amend the design provisions in TBE in order that the effective hose penetration distance from the fire and rescue service vehicle (pump appliance) is 45m to reach all points within each individual dwelling (for blocks of flats) and dwellinghouses. This will replace the existing guidance of 45m to reach the individual dwelling entrance door.

TBE9. *Do you agree with the amended guidance so that a pump appliance can gain access, so that the effective hose penetration distance can reach to within 45m of all points within a dwellinghouse/flat? (for buildings not fitted with a fire main)*

Yes No No view

Comments (if any):

BCC support this change and do not have any further comment to make.

Although rare, there may be occasions when the Fire and Rescue Service require to evacuate the fire floor and in extreme cases, other floors or the entire building during an incident in a building containing flats. Currently under such circumstances, the Incident Commander instructs firefighters to knock on the doors of the flats and advise the occupants to vacate the building when it is safe to do so.

The proposal is to require an emergency evacuation alert system for buildings containing flats (Purpose Group 1a buildings) with a storey more than 18m above ground level. The system will have a sounder in each of the flats but will not be linked to the smoke and heat detection/alarm system within the individual flat. The system should provide the fire and rescue service with an option to initiate a change in evacuation strategy via an alarm.

A new Standard for such a system has been published by BSI – BS 8629: 2019 ‘Code of Practice for the design, installation, commissioning and maintenance of evacuation alert systems for use by Fire and Rescue Services in buildings containing flats’ which is proposed to be referenced in the guidance.

TBE10. *Do you agree with requiring an emergency evacuation alert system to be installed in buildings containing flats with a storey more than 18m above ground level?*

Yes No No view

Please advise if you think this threshold is not appropriate and why.

Comments (if any):

BCC support this change and believe this facility will allow the Fire Service or those with responsibilities in relation to the management of an evacuation, alert residents of the need to do so. Whilst we understand the operational decisions and the procedures around this are complex this facility will provide a quick and efficient way to allow this decision to evacuate to be communicated to all occupants.

Consideration should be given to the provision of such a facility in buildings below 18m.

There have been instances where firefighters have faced problems identifying floors and individual dwellings during an incident where the wayfinding signage perhaps could have been clearer.

It is proposed to implement a recommendation from the Grenfell Public Inquiry that wayfinding signage be present in all high-rise residential buildings. This proposal will go further than the Inquiry’s recommendation and introduce a requirement for it in all Purpose Group 1a multi-occupied residential buildings with a storey more than 11 m above ground level.

Wayfinding signage is relatively straightforward and inexpensive to introduce and will support Fire and Rescue Service operations and make an important contribution to building safety.

TBE11. *Do you agree with the new requirement for wayfinding signage in buildings containing flats with a storey more than 11m above ground level?*

Yes No No view

Please advise if you think this threshold is not appropriate and why?

Comments (if any):

BCC support this proposal to provide wayfinding for fire and rescue personnel in taller buildings.

In relation to the trigger height for the scope of this regulation we consider that any selection of building height will be arbitrary. Given the purpose of this requirement is to help firefighters quickly establish what floor they are on in smoke filled situations this is likely to be more of an issue in taller buildings. The height of 11m will typically include building over 4 storeys which would seem generally appropriate.

Secure Information Boxes (or Premises Information Boxes) are a recognised method through which building owners / managers and occupiers can provide information to the attending Fire and Rescue Service. Currently, there is no statutory requirement to have them installed in multi-occupied domestic residential premises, their use is voluntary.

When they are installed, there are benefits for the Fire and Rescue Service in terms of their response to incidents as the boxes provide fire-fighters with readily accessible information about the building. The information may include floor plans with the location of key firefighting equipment; a single page building plan with the location of key firefighting equipment and contact details for the person in charge of the building.

TBE12. *Do you agree with the new requirement for a secure information box in buildings containing flats with a storey more than 11m above ground level?*

Yes No No view

Please advise if you think this threshold is not appropriate and why?

Comments (if any):

BCC support this change and do not have any further comment to make.

IMPACT ASSESSMENT

The Department has published a Consultation Regulatory Impact Assessment (RIA) as part of the consultation documents and welcomes further evidence to inform a final stage RIA.

(Refer to Consultation Regulatory Impact Assessment – Document C4)

IA1. *Do you agree with the assumptions, costs and impacts set out in the consultation stage RIA?*

Yes No No view

Comments (if any):

Belfast City Council has no evidence to verify the cost assumptions but agree that the social, economic and environmental benefits of the changes especially those relating to sprinkler protection in residential buildings and the increased coverage for smoke detection in dwellings are difficult to fully establish.

We also agree that to follow Option 1 which would involve no changes will leave our fire safety standards lagging well behind other parts of the UK and ROI. In this regard we would concur with the Option 2 proposal to implement the changes to Part E and TBE to ensure resident safety and keep Northern Ireland in line with other parts of the UK and ROI.

GENERAL COMMENTS

The Department encourages consultees to respond on any aspects of the proposals, therefore the last question is completely open to enable consultees to make suggestions or observations on relevant issues that are not addressed by answering the preceding questions.

G1. *Please set out any additional comments you have below.*

Comments (if any):

NEXT STEPS

The consultation will close on 25 September 2023. Responses to this consultation will be analysed and the Department response will follow.