# Submission to Draft Code of Practice for Fire Safety Assessment of Premises and Buildings

*For the attention of the Department of Housing, Local Government and Heritage*

30th March 2021

**General commentary**

Engineers Ireland welcomes the Code of Practice in that it will provide a uniformity of approach. It is noted that the version of the draft Code is Draft XIII dated 16/11/2020, approved for issue on 10/02/2021 and released for public comment on 03/03/2021. The following comments and recommendations are provided for the attention of the Fire Safety Sub Committee under the auspices of the Department of Housing, Planning and Local Government (the Department) considering the content of the draft Code of Practice.

**A1: Miscellaneous improvements :**

**Recommendation : A1/01 :** the various paragraphs of the final draft of the Code need to be annotated with reference numbering.

**Recommendation : A1/02 :** Include Appendix C and D as provided at the end of this submission.

**A2: References :**

The Code mentions a Guide that does not exist in March 2021 : The 'Guide to responsibilities for persons-having-control over premises', by DHLG&H relating to Section 18(2) of the Fire Services Acts 1981 and 2003. Such a document would be most welcome.

**A3: Terms and Definitions:**

There are not yet any Terms and Definitions and such a list should be provided. A potential list of such terms is provided at the end of this submission in our Appendix C at the end of this submission. This ensures the competent person uses the correct terminology when describing a fire rated cavity barrier, fire doors, etc. **Recommendation : A3/01 :** The Code should have a list of terms and definitions as per Appendix C below.

**A4: Methodology :**

**Recommendation : A4/01 :** The Code should clearly state the methodology approach being covered with reference to further more sophisticated methodology.

**Recommendation : A4/02 :** The code should clarify where it fits into the coterie of potential reports that are possible :

- a fire hazards identification report
- a fire risk assessment report
- a fire safety risk assessment report
- a fire engineering assessment report
- a fire safety audit report
- fire safety precautions report

- fire safety hazards assessment report
- a fire safety part of a health and safety risk assessment report

**A5: Recommendation : A7/01 :** The code of practice is not yet a fire risk assessment code but a fire safety assessment code and this needs to be clearly declared (neither is it a fire engineering assessment code).

**A6: Clarificatory Notes to be added :**
**Recommendation : A6/01 :** Consider providing the following clarifications:
This code is a fire risk assessment code or This code is not a fire risk assessment code.
A fire risk assessment will tell the reader what the risks are and what control measures are needed.
A fire safety audit will be a check that the identified control measures (identified in the fire risk assessment) are implemented and to what degree.

**Recommendation : A6/02 :**
It may be necessary to identify categories of fire safety assessment as a result.
Category 1: FSA of a single compartment within a multi-compartment premises.
Category 2: FSA of the storage of flammable / explosive materials in a building or on land.
Category 3: FSA of the common escape routes of a multi-occupancy building.
Category 4: FSA of an entire building including all common areas, all compartments and all
Category 5: FSA of a fire safety system (e.g. a smoke control system installation or a fire detection and alarm installation).

**Recommendation : A6/03 :** The final draft of the Code needs to clearly provide Fire Authorities with a standard methodology for requesting Section 18(6) fire safety assessments.
**Recommendation : A6/04 :** The Draft13 Code does not appear to give consideration to fire safety assessments which may also be requested by other statutory agencies Tusla, HIQA, Insurers, or due diligence FSA's or Fire Risk Assessments. The scope and terms of reference of the Code should be clearly identified within the Scope section to the final Code.
**Recommendation : A6/05 :** The Draft13 Code does not provide fire risk assessors with a standard methodology for carrying out **all types** of FRA's. In its current form, the Draft13 CoP from the DoHPLG will simply be another FRA template to add to the current list of FRA templates e.g. Tusla, HIQA, PAS 79, Insurance FRA's, etc.
**Recommendation : A6/06 :** Whilst it is agreed that the stated purpose of the CoP should be to provide a "*standard methodology for carrying out fire safety assessments",* the draft CoP from the DoHPLG will require considerable drafting if the "*stated purpose"* to *"introduce a recognised national approach"* for carrying out fire safety assessments "*that will provide for clarity and consistency of approach, nationally"* is to be achieved for professional practitioners.

**A7: Fire Hazard Identification and Fire Risk Evaluation :**

**Recommendation : A7/01 :** There should be allusion to Section19 of the Safety, Health and Welfare at Work Act, 2005 as that section supports the intention of the Code and of the Fire Services Acts 1981 and 2003 with respect to Fire Safety Assessment. The assessment required under Section 19 will also frequently inform the assessor as a preliminary step in carrying out a full fire safety assessment.
"*19.—(1) Every employer shall identify the hazards in the place of work under his or her control, assess the risks presented by those hazards and be in possession of a written assessment (to be known and referred to in this Act as a "risk assessment") of the risks to the safety, health and welfare at work of his or her employees, including the safety, health and welfare of any single employee or group or groups of employees who may be exposed to any unusual or other risks under the relevant statutory provisions.*"

**A8: Cautionary notes that may be added into the final Code :**

**Recommendation : A8/01 :** The FSAR[1] may contain some Personal information of the person commissioning the report or author and it would be prudent to include a reference to the DPC (the Irish supervisory authority) for the General Data Protection Regulations (GDPR), and powers related to other important regulatory frameworks including the Irish ePrivacy Regulations (2011) and the EU Directive known as the Law Enforcement Directive.

**Section 2.1 :**

**Recommendation : 2.1/01 :** The Department/Committee should consider omitting the text "to which the Fire Services Acts apply" and amending the text to read: "The guidance in this code of practice will be of assistance to ……The person having control, an owner or an occupier of premises or buildings".

**Section 2.2 Qualified Persons :**

(i) section 2.2 mentions the qualifications 'as being suitable' ?

- membership of a professional body is not a qualification
- which qualifications are suitable ?

**Recommendation : 2.2/01 :** Fire Safety qualifications should be identified as being suitable e.g. Graduate engineering qualifications in fire safety, post-graduate qualifications in fire safety, fire safety educational qualifications meeting at least Level 8 on the NFQ and/or professional qualifications related to construction/industry meeting at least Level 7 on the NFQ with at least 5 years of primarily fire safety construction experience.

**Recommendation : 2.2/02 :** There should be a further suitability provision which clearly states that a person who can demonstrate suitable third level qualification, training, experience and further post-graduate education in fire safety construction should also be considered.

(ii) **Recommendation : 2.2/03 :** a professional person should be defined.

(iii) **Recommendation : 2.2/04 :** a competent person should be defined.

(iv) **Recommendation : 2.2/05 :** a Qualified Competent Person should be defined : There is an opportunity here to provide for the creation of a register of such persons that are allowed to sign off on these FSAssessments.

(iv) **Recommendation : 2.2/06 :** Section 2.2 should be clear as to the scale of the application of the final version of the Code in respect of consideration of assessing a premises :

- within a tenancy's / building's external walls
- throughout the overall building
- Common areas
- Adjacent areas not part of the assessment

(v) **Recommendation : 2.2/07 :** The Department/Committee should consider substituting the word *"must"* for the word *"should"* and amending the text to read: *"The fire safety assessment of a premises or buildings must be carried out by a competent person"*

(vi) The Draft13 Code states that *"a person with appropriate qualifications and experience" and lists 4 categories of third party registered persons.*

Being mindful of some of the lessons learned from the Grenfell Tower fire and of the statements from the Hackitt report :

*"…While there are many competent people working within the system, the lack of a coherent and comprehensive approach to competence can seriously compromise the fire safety of HRRBs* (High Rise Residential Buildings)*, for example, where decisions are taken and/or materials are installed by*

[1] Fire Safety Assessment Report

*people who do not fully understand the implications of how to achieve good quality building work, and the implications of getting it wrong". (Hackitt, 2018); and*

*"…should develop and introduce an enhanced level of competence for fire risk assessors undertaking work on HRRBs".(Hackitt, 2018),* we are conscious of the fact that there is currently no specific legislative provision for fire safety assessments to be carried out by a professional person with specified qualifications. In addition to this, there is no clear career pathway or industry framework in Ireland to becoming a competent fire risk assessor. In some instances, assessments are being carried out by professionals who are not "competent" i.e. persons who do not possess the required knowledge and skills, and who are unable to exercise good judgment in the area of fire safety engineering. *"Being a former Fire Officer"* is not an indication that an individual is competent to carry out a fire risk assessment. Competence does not necessarily depend upon the possession of specific qualifications, although such qualifications might contribute to the demonstration of competence.

The Draft13 Code suggests that if the duty holder (P-I-C[2], owner or occupier) employs a professional with the qualifications that the Draft13 Code considers to be suitable, that the duty holder is employing a competent person; this will not be the case if the professional does not have relevant experience in fire safety and fire engineering.

Whilst it would appear obvious that it would be necessary to engage a third-party accredited fire safety engineer of the highest calibre to conduct a FSA[3] of a premises that is complex or is high risk (e.g. high rise residential buildings), this frequently will not be necessary in circumstances where the premises is non-complex and low risk.

The Draft13 Code could be interpreted to mean that it is only necessary for the fire risk assessor to be a holder of the *"qualifications that are considered suitable"* if they are conducting a Section 18(6) FSA for submission to a Fire Authority.

**Recommendation : 2.2/09 :** A fifth category description should be included that qualifies the above paragraphs.

(vii) There are professionals who are currently engaged in the provision of "suitable and sufficient" fire risk assessments. Whilst many of these professionals may have achieved membership with one of the professional bodies, some of them may have not achieved Chartered status. The implications of the Draft13 Code for this group of professionals requires further consideration and clarification.

(viii) **Recommendation : 2.2/10 :** A single tiered register of fire risk assessor should be established e.g. tier 1 – high risk, tier 2 – medium risk, tier 3 – low risk. Professionals seeking entry onto the register should be members of one of the professional bodies, they should demonstrate an acceptable level of initial professional development, and they should demonstrate an acceptable level continuing professional development. To remain on the register, fire risk assessors must demonstrate how they maintain continuing professional competence in this field of expertise.
(ix) **Recommendation : 2.2/11 :** Fire risk assessments of high-risk premises should only be carried out by companies or sole traders who are third party accredited.

(x) **Recommendation : 2.2/12 :** The Department /Committee should facilitate the establishment a fire risk assessors working group for the purpose of making recommendations as to how the competency of individuals who conduct fire risk assessments should be assessed (Fire Sector Federation, 2020).

**Section 2.3 Fire Safety Assessment Report Overview**

*"The report should also indicate the basis of assessment……" ;* **Recommendation : 2.3/01 :** The term "basis of assessment" needs to be defined within the Code e.g. "to demonstrate compliance with the

[2] P-I-C : Person In Control (person-In-Charge)
[3] FSA : Fire Safety Assessment

Fire Services Acts?", "to demonstrate compliance with Part B of the Second Schedule to the Building Regulations ?" or "to demonstrate compliance with the technical guidance in TGD-B".

*"Recommendations may deal with remedial works";* **Recommendation : 2.3/01 :** The Department/Committee should consider substituting the word *"must"* for the word *"may"* and amending the text to read: *"Where necessary, recommendations must deal with remedial works….".*

*"The guidance in this code of practice deals with assessment of provisions for safety of life from fire; measures that may be necessary to protect against loss or damage to property are outside the scope of this document" ;* This could this be interpreted as implying that demonstrating "compliance with Section 18(2) of the FSActs[4]" is all that is necessary when conducting the FSA ? This could also be interpreted as implying that so as to demonstrate that the building or premises is "safe" that one has only to demonstrate "that the premises or building satisfactorily addresses the criteria set out in Section 19 of the Fire Services Acts 1981 and 2003".
**Recommendation : 2.3/02 :** The Department/Committee should make it explicit that "where Part B of the Second Schedule to the Building Regulations applies to the building and its surroundings, that the fire risk assessor must measure / assess compliance against Part B by reference to the technical guidance in TGD-B".

## Section 3.3 Contents of Fire Safety Assessment Report

**Recommendation : 3.3/01 :** The Code should be more specific as to the contents of a FSA, and the Draft13 Code does not make provisions for the Fire Safety Assessor to clearly outline the scope and extent of their FSA. It is possible that the Fire Safety Assessor will confine their FSA to areas with which they are comfortable, and may fail to adequately risk assess matters with which they are uncomfortable. The Fire Safety Assessor (including their role as a fire risk assessor) should provide detail as to the scope and extent of the FSA.
Section 3.3 talks about assessing the premises/building as suitable for its present use but the terms of a safety assessment could also include being requested to assess the premises for proposed future use, which could entail a material change of use.
**Recommendation : 3.3/02 :** The Code should allude to the implications for the building's fire safety provisions in the event of reference is made to a material change of use.

**Recommendation : 3.3/03 :** Section 3.3 should identify that the FSA should include the "Person having control" over the building or who commissioned the report. (This is noted later on but missing here.)

## Section 3.6 Compliance

*Section 3.6 states "For example, a "stay put" policy may be permitted in other jurisdictions but is not permitted in Ireland and evacuation of buildings is the default policy here".* While this is generally the case it is not absolutely the case across the entire suite of building designs and fire safety strategies. It also gives rise to a wider debate about existing buildings where the means of escape has been designed to comply with codes that are predicated on a "stay put policy" e.g. BS 9991.
**Recommendation : 3.6/01 :** Insert the word generally between not and permitted resulting in "not generally permitted".
**Recommendation : 3.6/02 :** The strategy for facilitating fire brigade access will require flexibility and reference should be made to management of the built environment. [Comment : Very little *"reasonable"* remedial action can the fire risk assessor recommend if the FRA demonstrates that access / egress routes are too narrow to facilitate simultaneous evacuation of the occupants whilst the fire service is attempting to enter the building to provide an intervention.].

[4] FSActs : Fire Services Acts 1981 and 2003

## Section 3.7 Compliance

Section 3.7 mentions the flammable nature of furnishings and fittings. The current Department's Code of Practice is (i) excessively out of date with regard to the referenced standards etc., and (ii) needs to be expanded to cover other types of premises other than its limited list of places of assembly. **Recommendation : 3.7/01 :** No reference should be made to the out of date Code but if considered necessary to add details then only references to risks situations needing to be assessed e.g. combustible furniture, drapes and curtains, mattresses, bed linen, wall, ceiling and floor coverings.

## Section 3.8 Fire Safety Management

Section 3.8 mentions PEEPS, but does not (i) a reference guide for carrying out A PEEP and (ii) does not give any further guidance on what needs to be done (as part of the assessment) to ensure there are proper evacuation plans for e.g. people at refuges etc.? **Recommendation : 3.8/01 :** An explanatory section should introduce what a PEEP is and that a Fire Safety Assessor should review the contents and the adequacy of the premises' system for providing PEEPS.

*"The fire safety assessment should consider the fire safety management of premises, and compliance with section 18(2), including arrangements for……." ;* The duty holder may also want to demonstrate compliance with the SHWWA 2005, Children First Act 2015, Health Act 2007, insurers. The duty holder may want to provide evidence to regulatory bodies or registration agencies (for example, Tusla or HIQA).

**Recommendation : 3.8/02 :** The Department/Committee should consider omitting the words *"compliance with section 18(2)"* and amending the text to read: *"The fire safety assessment should consider the fire safety management of premises, in particular in relation to appropriate procedures, including arrangements for……."*

*"staff training – what to do before, during and after an outbreak of fire or other emergency"*

**Recommendation : 3.8/03 :** The Department/Committee should consider including a list of appropriate syllabus content e.g. Fire Prevention Strategies, Importance of Fire Doors, Theory of Combustion, Classification of Fires, Methods of Extinction, Calling for Assistance, Evacuation Strategies, Procedures, Liaising with the Fire and Rescue Service, Orientation to the Fire Panel, Orientation to the Site Specific Evacuation Plan, Record Keeping, Pertinent Legislation, Routine Testing of Life Safety Systems, Fire Extinguisher Practical Exercises, etc.

## Appendix A:

- A premises is not only a building.
- A premises can be a number of buildings and land.

  **Recommendation : AppA/01 :** In the tick box list in Appendix A, the confusion between premises/buildings should be removed with separate boxes provided for each.

  **Recommendation : AppA/02 :** The Report Summary should include a ProForma Template document rather than just a cover page.

  **Recommendation : AppA/03 :** The Template document should include;
  - Fire hazards
  - Relevant fire safety legislation
  - Lighting system(s)
  - Electrical system(s)
  - Housekeeping
  - Storage of materials (e.g. warehouses)
  - Sleeping risks (residential)
  - Stairs
  - Signage

- Fire Detection and Alarm Systems
- External wall cladding (including rainscreen cladding and combustible decorative cladding)
- Fire Service facilities (hydrants, AOVs, Smoke Shafts, Dry/Wet risers, Fire fighting lift, Fire fighting shafts, Basement mechanical smoke control, etc.)
- Design Documentation
- Testing and Maintenance of systems
- Training records and nature of training
- Etc.

**Recommendation : AppA/04 :** The information captured within the FSA report summary needs to be expanded. The Department/Committee should consider including the following information within the *"Fire Safety Assessment - Report Summary"*.

*Fire Safety Assessment - Report Summary*

**Descriptions of the Building / premises**
Number of floors.
Height of building.
Description of the construction of the building's structure.
Approximate area of each storey's floor.
Has the structure been constructed using combustible materials e.g. timber framed construction.
Description of the roof.
Description of the external walls.
Have the external walls been constructed using combustible materials e.g. timber façade, combustible cladding?

**Competence of the Fire Safety Assessor**
Do you consider this building to be complicated? (If "No", please explain why)
Do you consider this premises to be high risk? (If "No", please explain why)
Is this a purpose group 1d, 2a, or 2b premises?
Is a FSA of this premises within your scope of training, knowledge and experience?
Have you verified that your public liability and professional indemnity insurance will provide indemnification for a FSA of this scope?

**Extent of FSA**
Common parts – non-invasive
Common parts – invasive
Common parts and demised parts – non-invasive
Common parts and demised parts – invasive
Compartmentation

**Detail of the FSA**
Date on which FSA was conducted?
Date of any previous FSA?
Suggested date of review of FSA?
Summary of all relevant fire safety legislation?
Has a review of the fire safety strategy been undertaken?
Have notices or letters from the Fire Authority been reviewed? Where appropriate, narrative comments to be provided.
Has the scope of the work to be carried out been agreed in writing between the duty holder and the fire risk assessor? Narrative details to be provided.
For what purpose is the FSA to be used? Narrative comments to be provided.

**Details of what was Fire Risk Assessed?**

**Occupants**
Purpose group of the premises or building to which this fire risk assessment applies?
Maximum number of occupants at any one time?
Number of sleeping occupants?
Number of disabled occupants?
Number of disabled occupants? Narrative comments to be provided.
Number of lone / remote workers? Narrative comments to be provided.
Has the occupancy type (purpose group) changed since the time of construction? Narrative comments to be provided.

Number of tenants?
Times of occupation?

**Means of Escape**

Has a review of the provisions for means of escape been undertaken?
What is the evacuation strategy e.g. simultaneous, phased, progressive horizontal?
Number of escape stairwells and their width? Narrative comments to be provided as necessary.
Number of storey / final exits?
Direction of opening of escape doors vs number of occupants? Narrative comments to be provided.
Have revolving doors or sliding doors been provided for use as exit doors?
Are suitable fire precautions in place for inner rooms? Narrative comments to be provided as necessary.
Are single direction travel distances reasonable? Narrative comments to be provided as necessary.
Are travel distances reasonable where there is an alternative means of escape? Narrative comments to be provided as necessary.
Extent of coverage provided by the FDAS e.g. L1, L2/L3, L2/L4, or L4.
Is the FDAS remotely monitored?
Has each tenant been provided with control and indicating equipment?
Has heat detection been provided in areas where smoke detection should be provided? Narrative comments to be provided as necessary.
Has smoke detection been provided in areas where heat detection should be provided? Narrative comments to be provided as necessary.
Has the fire detection and alarm system been configured to operate in “Theatre Mode”?
Is a documented fire safety management plan available to outline the policy that is place for the duration that the fire detection and alarms system is configured to operate in “Theatre Mode”? Narrative comments to be provided as necessary.
Details of the cause and effect upon activation of the fire alarm? Narrative comments to be provided.
Is a system in place to send an evacuation signal to every occupant within the building?
Have escape doors been provided with access control?
Does access control default to “unlock” upon activation of the fire alarm and upon failure of the mains power supply.
Have access control override facilities been provided on the escape side of each escape door? Narrative comments to be provided as necessary.
Has emergency escape lighting been provided at all of the points of emphasis? Narrative comments to be provided as necessary.
Has wayfinding been provided at all points where the direction of escape may be unclear? Narrative comments to be provided as necessary.
Have escape routes been free from combustible materials? Narrative comments to be provided as necessary.
Have fire dampers been provided to protect critical means of escape from fire and smoke?
Have escape routes been adequately protected? Narrative comments to be provided as necessary.
Have escape corridors that provided access to alternative escape routes been appropriately sub-divided? Narrative comments to be provided as necessary.
Are the provisions for means of escape adequate? Narrative comments to be provided as appropriate.

**Linings**

Has a review of internal wall and ceiling linings been undertaken?
Are wall and ceiling linings likely to accelerate the rate of fire growth? Narrative comments to be provided.

**Internal Fire Spread**

Is the building / premises provided with an automatic sprinkler system or a watermist suppression system?
Has the kitchen been provided with an automatic fire suppression system?
What is the cause and effect upon activation of the kitchen suppression system? Narrative comments to be provided.
Have an adequate number of portable fire extinguishers been provided? Narrative comments to be provided as necessary.
Have an adequate number of hose reel been provided? Narrative comments to be provided as necessary.
What is the general condition / serviceability of the fire doors? Narrative comments to be provided.
Is a more detailed survey and report on the condition of the fire doors necessary?
Are provisions for ventilating smoke from the escape routes adequate? Narrative comments to be provided as necessary.
Has a compartmentation survey been undertaken?
Have fire stopping concerns been identified?
Will additional intrusive investigation be necessary to establish the extent of fire compartmentation issues? Narrative comments to be provided as necessary.
Have cavity barriers been provided within voids floor, roof, and ceiling voids. Narrative comments to be provided.
Is a fire likely to spread internally beyond the compartment of origin?

**External Fire Spread**

Has a survey of the external walls been carried out? Narrative comments to be provided.

Have external walls been provided with a cavity?

Will additional intrusive investigation be necessary to establish the extent of fire compartmentation within external cavity walls? Narrative comments to be provided as necessary.

What type of insulation has been provided within external wall cavities. Narrative comments to be provided.

Is a fire likely to spread externally beyond the compartment of origin?

**Facilities for the Fire Service**

No of private fire hydrants provided?

Has the building been altered / extended in a manner that has affected the external access available to the Fire Service in terms of ladder access and/or vehicular access ? Narrative comments to be provided in necessary.

Has the building been provided with fire fighting lifts?

Have appropriate provisions been made for fire-fighters switch(es) for high voltage luminous tube signs, PV arrays, etc.

**Fire Prevention Measures**

Is the use of extending electrical leads and adapters adequately controlled? Narrative comments to be provided as necessary.

Is the use of portable heaters avoided as far as practicable?

Are reasonable measures taken to prevent fires as a result of cooking? Narrative comments to be provided as necessary.

Are combustible materials stored appropriately and separated from potential ignition sources?

Is the accumulation of combustible materials avoided? Narrative comments to be provided as necessary.

Is the building provided with lightning protection?

Are “Hot Works” subject to an appropriate permit to work system?

Has a fire risk assessment of process / special fire hazards been carried out?

What controls are in place for process / special fire hazards? Narrative comments to be provided.

Have adequate fire safety signs and notices been provided? Narrative comments to be provided as necessary.

Have gas slam shut valves been provided within the kitchen.

Is a certificate available to demonstrate that the electrical installations have been recently inspected to ensure that the comply with the national standards for Electrical Installations?

Has a slam shut valve been provided at or near the entrance to the boiler room?

Has the boiler room been provided with an automatic fuel supply shut off valve?

Has the boiler room been provided with an automatic fire suppression / extinguishment system e.g. ABC powder?

Is there a documented policy on smoking on the premises?

Are measures in place to prevent fires as a result of smoking adequate? Narrative comments to be provided as necessary.

Is there a documented permit to work system in place for “Hot Works”?

Does the “Hot Work Permit” make adequate provisions for post work fire watch? Narrative comments to be provided.

Is routine “portable appliance testing” carried out?

**Review of the Fire Safety Management Plan**

Is there a Fire Safety Management Plan ?

Is an up to date Fire Register available? Narrative comments to be provided.

Has a fire safety manager been nominated in the fire safety management plan?

Has a documented Fire and Evacuation plan been prepared?

Is the fire and evacuation plan likely to achieve to achieve the objectives listed with the fire safety management plan? Narrative comments to be provided as necessary.

Are regular fire drills undertaken?

Are the outcomes of fire drills being documented?

Is there evidence that deficiencies identified during fire drills are being remedied? Narrative comments to be provided as necessary.

Are escape routes inspected daily?

Have occupants been provided with the opportunity to develop a PEEP (personal emergency egress plan)?

Have PEEP’s assistants been nominated and trained to assist with evacuation?

Are the portable fire extinguishers being routinely serviced and maintained to the latest applicable standard e.g. I.S. 291:2015?

Are hose reels being routinely serviced and maintained to the latest applicable standard e.g. I.S. EN 671-3.

Is the fire detection and alarm system being routinely serviced and maintained to the latest applicable standard e.g. I.S. 3218:2013+A1:2019 ?

Is evidence available to demonstrate that 100% of the fire detection and alarm system is being inspected during a 12-month cycle? Narrative comments to be provided.

Is there evidence that false activations of the fire alarm are being actioned? Narrative comments to be provided as necessary.

Is the emergency escape lighting system being routinely serviced and maintained to the latest applicable standard e.g. I.S.

3217:2013+A1:2017?
Is documentary evidence available to demonstrate that the sprinkler system is being routinely maintained to an appropriate standard e.g. I.S. EN 12845:2015+A1:2019? Narrative comments to be provided.
Is a documented sprinkler impairment plan in place?
Will the sprinkler impairment procedure adequately control the associated risks? Narrative comments to be provided.
Is documentary evidence available to demonstrate that the kitchen fire suppression system is being routinely maintained?
Is documentary evidence available to demonstrate that the kitchen extract system being routinely maintained to an appropriate standard e.g. BESA TR19?
Is evidence available to demonstrate that heating appliances have been recently serviced.
Is documentary evidence available to demonstrate that the fire fighting lifts are being routinely maintained?
Is evidence available to demonstrate that private fire hydrants are subject to routine inspection? Narrative comments to be provided as necessary.
Has the duty holder liaised with fire service to prepare a pre-fire plan?
Is evidence available to demonstrate that in-house fire safety audits are undertaken?
**Does training for those with special responsibilities for fire safety incorporate the following -** Fire Prevention Strategies, Importance of Fire Doors, Theory of Combustion, Classification of Fires, Methods of Extinction, Calling the Fire Service, Evacuation Strategies, Accounting Procedures, Liaising with the Fire and Rescue Service, Orientation to the Fire Panel, Orientation to the Site Specific Evacuation Plan, Record Keeping, Pertinent Legislation, Routine Testing of Life Safety Systems, Fire Extinguisher Practical Exercises, etc?

**Arson Prevention**

Are reasonable security measure in place to prevent arson?
Is a monitored CCTV system provided?
Are static guards employed to secure the site?
Is waste being stored at a secure external location that is remote from the building?
Are there uncontrolled fire loads external to the building? Narrative comments to be provided as necessary.

**Appendix B:**

The format and wording of Appendix B appears to be taken from a previous document developed by a working party for HSE nursing homes.

**Recommendation : AppB/01 :** This content has been evolved and should be updated as attached for Sections B2, B3 and B5.

Fire Safety Risk Assessment

**B2 Identification of Risk Items**

*The assessment is intended to identify those hazards which present a threat to persons in the event of a fire occurrence*.

A hazard is a situation which has the potential to cause harm. In this case the assessment seeks to identify fire hazards with the potential to cause harm to occupants or visitors to the premises or building. Hazards in this assessment method are refered to as risk items.

The risk items will typically be either management issues (e.g. poor housekeeping practices), physical fire protection features which are absent or deficient (for example, breaches of compartmentation), or activities which could give rise to an occurrence of fire (for example, open flame cooking). The identification of risk items is based on assessment against recommendations in relevant guidance as applied to the subject premises or building, having regard to application of professional judgement and common sense to the particular circumstances.

The risk items should be set out in column 2 of Table B2, below – descroibed in words and, where appropriate, reinforced with photgraphic records in column 3 of the item as observed during the survey.

**B3 Evaluation of Risk Items**

*The purpose of the evaluation is to assign a rating to each Risk Item*. This is a subjective exercise in the case of each individual premises, with three sub-steps:

- Assign a (likelihood of occurrence) rating to the risk item
- Assign an (anticipated severity of) impact rating to the risk item
- Assign an overall score to the risk which is a product of the likelihood and impact ratings to give an overall risk rating

The **likelihood** rating is judged by reference to the perceived likelihood of the risk item (by its presence or omission) giving rise to potential ill-effects resulting from fire/smoke, in accordance with the following scoring criteria:

1 Rare/Remote
2 Unlikely
3 Possible
4 Likely
**5** Almost Certain

**Impact** scoring is based on the anticipated severity of the outcome. In scoring impact the risk item is graded from 1 to 5, with 5 indicating the most serious outcome and 1 the least serious outcome. The scoring criteria used are:

1 Negligible harm
2 Minor harm
3 Moderate harm
4 Major harm
5 Extreme harm

**B5 Action Plan**

In the fourth column of the Risk Rating Findings and Recommendations table (Table B3), recommended remedial actions to mitigate or eliminate the risk items are set out. In some instances there may be a short term initial action followed by a longer term, more significant intervention. The objective is to reduce, either immediately or within a reasonable timeframe, the level of risk to a tolerable or acceptable level. **The risk rating in each case is based on assessment of the likely outcome in the absence of implementation of the recommended remedial actions**.

***On completion of the programme of remedial actions, and in line with normal practice, the level of risk should be subject to ongoing periodic review.***

The Draft13 Code makes provisions for the risk rating and prioritising of "remedial works" otherwise referred to as **"risk items"**. Unlike the PAS 79 Standard, the Draft13 Code does not make sufficient provisions for the Fire Safety Assessor to assign a fire risk rating for the **"building or premises"**.

**Recommendation : AppB/02 :** In the overall context of fire risk assessment, the aim of the FSA should be to assign a fire risk rating to the **"building or premises"** and not to fire risk rate individual fire safety deficiencies or **"risk items".**

The risk assessment methodology proposed in the Draft13 Code will assist the fire risk assessor in prioritising the remediation of **"risk items"** i.e. red – immediate or as soon as possible, orange – early or short term, and green – within a limited timeframe. This methodology will not assist the fire risk assessor in arriving at a fire risk rating for the **"building or premises"**.

**Recommendation : AppB/03 :** The Department/Committee should consider making provisions for the fire risk assessor to assign a fire risk rating for the **"building or Premises"** based upon his / her findings e.g. very high risk, high risk, medium risk, low risk, very low risk.

**Recommendation : AppB/04 :** The Department/Committee should consider making provisions for the fire risk assessor to assign a fire risk rating for the **"building or Premises"** after specified remedial works have been carried out e.g. if risk items "1" and "2" are addressed the risk rating for the building will be "low", however if fire risk items "1", "2", "3" and "4" are addressed the fire risk rating for the building will be "very low".

**Proposed Additional Appendices :**

## Appendix C : Terms and Definitions

**Technical Terms and definitions**

For the purposes of this Code of Practice, the terms and definitions given in Technical Guidance Document B and the following apply.

**access room**
room that forms the only escape route from an inner room

**fire safety action plan**
measures, including management procedures, identified in the course of a fire safety assessment that need to be implemented to ensure that the required level of fire safety is achieved or maintained

**alternative escape routes**
escape routes sufficiently separated either by direction and space, or by fire-resistant construction, intended to ensure that should one be affected by fire the other will still be available

**automatic door release mechanism**
device that can be used for holding a door in the open position, against the action of a door closer, andautomatically releasing under specified conditions

**available safe egress time (ASET)**
time available between ignition of a fire and the time at which tenability criteria are exceeded in a specific space in a building

**class A fires**
fires involving solid materials, usually of an organic nature, in which combustion normally takes place with the formation of glowing embers

**class B fires**
fires involving liquids or liquefiable solids

**class C fires**
fires involving gases

**class D fires**
fires involving metals

**class F fires**
fires involving fats and cooking oils

**combustible**
capable of burning in the presence of oxygen

**compartmentation**
subdivision of a building by fire-resisting walls and/or floors for the purpose of limiting fire spread within the building and having the period of fire resistance of the elements of structure in terms of stability, integrity and of insulation (i.e. REI).

**competent person**
person, suitably trained and qualified by knowledge and practical experience, and provided with the necessary instructions, to enable the required task(s) to be carried out correctly

**dead end**
area from which escape from fire is possible in one direction only, or in directions less than 45 degrees apart that are not separated by fire-resisting construction

**dry fire main**
water supply pipe installed in a building for fire fighting purposes, fitted with inlet connections at the fire and rescue service access level, and with landing valves at specified points, which is normally dry but is capable of being charged with water, usually by pumping from fire and rescue service appliances

**emergency escape lighting**
part of the emergency lighting that provides illumination for the safety of people leaving a location or attempting to terminate a potentially dangerous process before doing so

**emergency lighting**
lighting provided for use when the supply to the normal lighting fails

**escape route**
route forming part of the means of escape from any point in a building to a final exit

**escape time**

time from ignition until the time at which all the occupants of a building, or a specified part of a building, are able to reach a place of safety

**evacuation lift**

lift that is so designed and constructed and designated so that it may be safely used for the evacuation of disabled occupants in a fire under the direction of management or fire fighters

**final exit**

termination doorway of an escape route from a building, giving direct access to a street, passageway, walkway or open space, and sited to enable the rapid dispersal of persons
from the vicinity of a building so that they are no longer in danger from fire and/or smoke

**fire audit**

systematic and, whenever possible, independent examination to determine whether standards of fire safety conform to those required in order to achieve the organization's fire safety policy and objectives

**fire damper**

mobile closure or intumescent device within a duct, which is operated automatically and is designed to prevent the passage of fire and which, together with its frame, is capable of satisfying for a stated period of time the same fire resistance criterion for integrity as the element of the building construction through which the duct passes

**fire/smoke damper**

combined fire and smoke damper

**fire door**

door or shutter provided for the passage of people, air or objects which, together with its frame and furniture as installed in a building, is intended (when closed) to resist the passage of fire and/or gaseous products of combustion, and is capable of meeting specified performance criteria to those ends

**fire drill (evacuation drill)**

rehearsal of the evacuation procedure involving participation of the occupants of a building

**fire equipment sign**

safety sign that indicates the location or identification of fire equipment or how it should be used

**fire exposure**

extent to which people, animals or items are subjected to the conditions created by fire

**fire-fighting lift**

lift with fire protection measures, including controls that enable it to be used under the direct control of the fire and rescue service in fighting a fire

**fire hazard**

source, situation or unsafe act with potential to result in a fire

**fire hazard identification**

process of recognizing that a fire hazard exists and defining its characteristics

**fire load**

quantity of heat that could be released by the complete combustion of all the combustible materials in a volume, including the facings of all bounding surfaces

**fire precautions**

physical, procedural and managerial measures taken to reduce the likelihood of ignition occurring and/or to mitigate the consequences if ignition does occur

**fire prevention measures**

measures to prevent the outbreak of fire

**fire procedure**

pre-planned actions to be taken in the event of fire

**fire protection measures**

design features, systems, equipment or structural measures to reduce danger to people and property if fire occurs

**fire resistance**

ability of an item to fulfil for a stated period of time the required load-bearing capacity and/or integrity and/or thermal insulation, and/or other expected duty specified in a standard fire resistance test

**fire risk**

combination of the likelihood of the occurrence of fire and consequence(s) (number and severity of injuries)likely to be caused by a fire

**fire risk assessment**

process of identifying fire hazards and evaluating the risks to people arising from them, taking into account the adequacy of existing fire precautions, and deciding whether or not the fire risk is acceptable without further fire precautions
*Where the fire risk is not acceptable without further fire precautions, a fire risk assessment includes an action plan that sets out reasonably practicable measures to reduce the risk.*

**fire risk assessor**
person who carries out, and documents the significant findings of, a fire risk assessment

**fire safety engineer**
person suitably qualified and experienced in fire safety engineering

**fire safety engineering**
application of scientific and engineering principles to the protection of people, property and the environment from fire

**fire safety induction training**
formal training, normally given verbally to new employees, as soon as practicable after their employment, with the objective of imparting sufficient information on the relevant fire risks, fire prevention measures, fire protection measures and fire procedures in the building to ensure the safety of employees from fire

**fire safety management**
task(s) carried out by a defined individual or individuals with appropriate powers and resources to ensure that the fire safety systems, passive, active and procedural, within the building are working properly at all times

**fire safety manager**
person nominated to monitor and control the management of fire safety

**fire safety manual**
record of all design, procedural and management issues and events that relate to the fire safety of a building

**fire safety objective**
specified (or specifiable) goal intended to be achieved by a fire protection measure(s)

**fire safety policy**
documented strategy that sets the standards of fire safety that an organization is committed to maintaining

**fire safety refresher training**
training given to employees periodically to ensure that they remain adequately aware of the fire risks, fire prevention measures, fire protection measures and fire procedures in the building

**fire scenario**
detailed description of conditions, including environmental conditions, of one or more stages from before ignition to after completion of combustion in an actual fire at a specific location

**fire stopping**
sealing or closing an imperfection of fit between elements, components or constructions of a building, or any joint, so as to restrict penetration of smoke and flame through the imperfection or joint

**fire warden**
individual charged with specific responsibilities in the event of fire, normally involving a check to ensure that a particular area of the building has been evacuated

**ignition**
initiation of combustion

**ignition source**
source of energy that initiates combustion

**inner room**
room from which the only escape route is through another room (*The room that provides the escape route from an inner room is known as an access room).*

**integrity**
ability of a separating element, when exposed to fire on one side, to prevent the passage of flames and hot gases or the occurrence of flames on the unexposed side, for a stated period of time in a standard fire resistance test

**maintained emergency lighting**
lighting system in which all emergency lighting lamps are illuminated at all material times

**mandatory sign**
safety sign that indicates a specific course of action is to be taken

**manual call point**
component of a fire detection and fire alarm system that is used for the manual initiation of a fire alarm signal

**material alteration**
alteration that changes (usually lowering or with the potential to lower) the standard of fire protection originally provided
**means of escape**
structural means whereby a safe route in the event of fire is provided for persons to travel from any point in a building to a place of ultimate safety (without external assistance)
**non-combustible**
not capable of undergoing combustion under specified conditions
**non-maintained emergency lighting**
lighting system in which all emergency lighting lamps are illuminated only when the supply to the normal lighting fails
**occupant(s) especially at risk**
building occupant(s) who, as a result of their physical or mental state, age or location in the building, are at greater risk from fire than an able-bodied, fully alert adult afforded adequate means of escape and other fire precautions, whether on a short-term or long-term basis
**panic bolt**
mechanism, consisting of a minimum of two sliding bolt heads that engage with keepers in the surrounding door frame or floor for securing a door when closed, which can be released by hand or body pressure on a bar positioned horizontally across the inside face of the door
**panic latch**
mechanism for securing a door when closed, with a latch bolt that can be released by hand or body pressure on a bar positioned horizontally across the inside face of the door
**phased evacuation**
system of evacuation in which different parts of the building are evacuated in a controlled sequence of phases, those parts of the building expected to be at greatest risk being evacuated first
**place of relative safety**
place in which there is no immediate danger, but in which there could be future danger, from the effects of fire

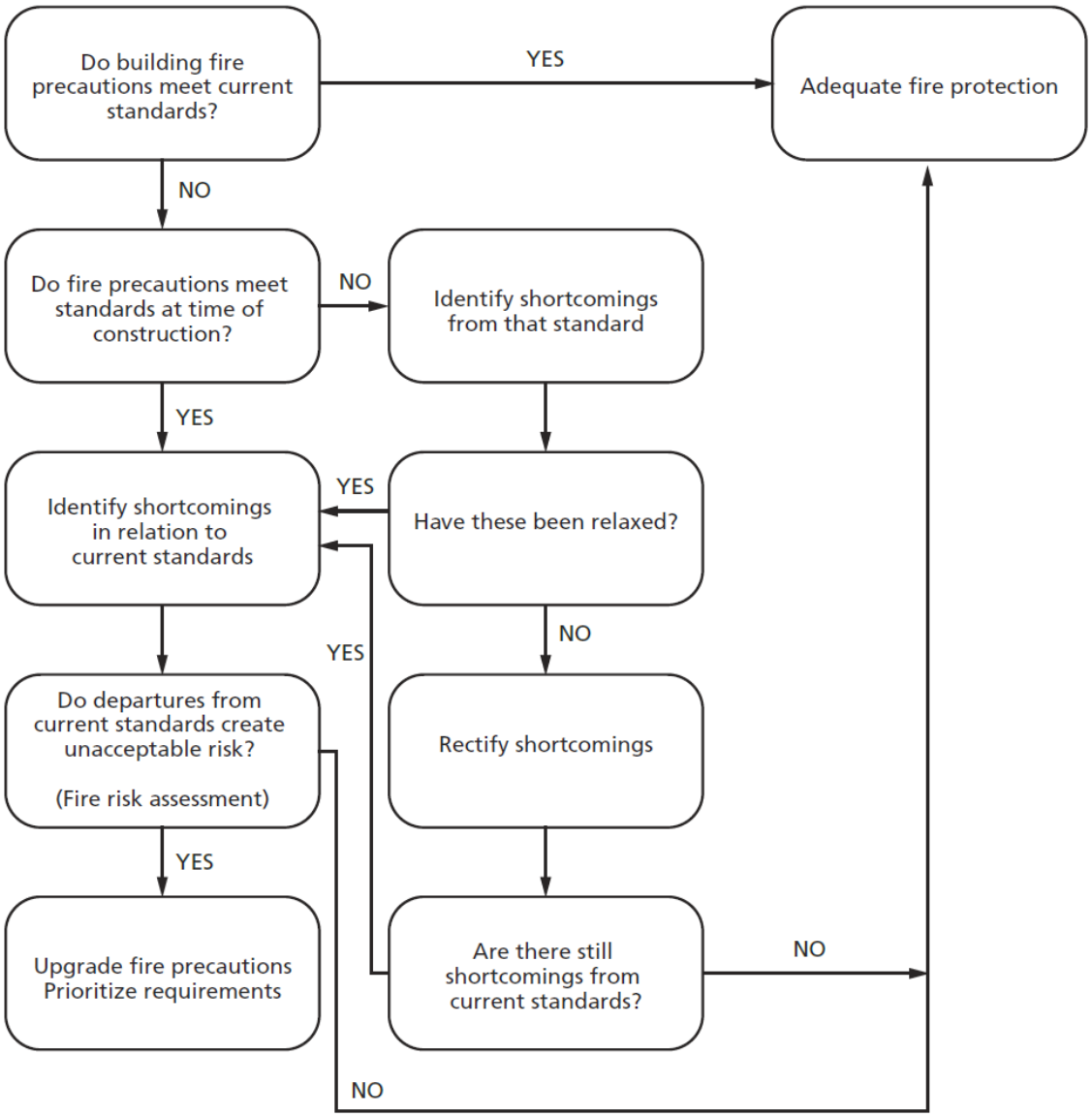
**place of ultimate safety**
place in which there is no immediate or future danger from fire or the effects of fire
**products of combustion**
solid, liquid and gaseous materials resulting from combustion
**protected (corridor, route or staircase)**
corridor, route or staircase enclosed in fire-resisting construction
**refuge**
area that is both separated from a fire by fire-resisting construction and provided with a safe route to a storey exit, thus constituting a temporarily safe space for disabled occupants to await assistance for their evacuation
**smoke damper**
mechanical device which, when closed, prevents smoke passing through an aperture within a duct or structure
**sprinkler system**
a system comprising thermosensitive devices designed to react at a pre-determined temperature by automatically releasing a stream of water and distributing it in a specified pattern and quantity over a designated area
**structural fire protection**
features in layout and/or construction that are intended to reduce the effects of a fire
**third-party fire risk assessor**
independent fire risk assessor, who is not an employee of the person in control, but who is contracted to carry out a fire risk assessment on behalf of a person in control on whom legislation imposes a requirement for a fire risk assessment

**tolerable level (of fire risk)**
level at, or close to, that acceptable to a person in control, taking into account the requirements of fire safety legislation), the nature of the premises, the fire hazards
in the premises, the nature of the occupants, the cost of additional fire precautions and any other relevant factors

**travel distance**
actual distance to be travelled by a person from any point within the floor area to the nearest storey exit, having regard to the layout of walls, partitions and fixings
**voice alarm system**
sound distribution system that broadcasts speech messages and/or warning signals in an emergency
**wet fire main**
water supply pipe installed in a building for fire fighting purposes and permanently charged with water from a pressurized supply, fitted with landing valves at specific points

**circulation space**: the communication routes both within the department/management unit and giving access to other parts of the hospital, and to all necessary fire escape exits;
**fire hazard**: a set of conditions in the operation of a product or system with the potential for initiating a fire;
**fire precautions**: measures which can be taken to reduce the likelihood of ignition occurring and/or to mitigate the consequences should ignition occur. Precautions are considered under five headings, each of which is defined below:
a. **prevention**: precautions to control potential ignition and fuel sources, to ensure that fires do not start; prevention also includes general fire precautions;
b. **communications/alarm and detection**: precautions which inform the occupants and Northern Ireland Fire and Rescue Service when a fire starts;
c. **means of escape**: precautions which enable the occupants of the building to escape to a place of safety away from the effects of the fire;
d. **containment**: precautions which contain the fire to the smallest possible area, and control the threat to life, safety and the extent of property damage;
e. **extinguishment**: precautions, which ensure that the fire can be extinguished quickly and with minimum disturbance to the function of the hospital and damage to its premises.
**fire resistance**: ability of an element of building construction, component or structure to fulfill, for a stated period of time, the required load-bearing capacity, fire integrity and/or thermal insulation and/or other expected duty in a standard fire-resistance test;
**ignition sources**: heat sources or flames which may cause ignition;
**progressive horizontal evacuation**: evacuation of patients away from a fire into a fire-free compartment or sub-compartment on the same level;
**protected shaft**: a shaft which enables persons, air or objects to pass from one compartment to another, and which is enclosed with fire-resisting construction;
**refuge** : a place of temporary safety within a building; this should be adjoining compartment or sub-compartment capable of holding all those threatened, without a significant change in level and from which there is potential for further escape should that become necessary;

## Appendix D: Assessment of existing building Decision Tree flowchart



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**Background to Engineers Ireland**
With over 25,000 members, Engineers Ireland is the voice of the engineering profession in Ireland. Engineers Ireland was established in 1835 making us one of the oldest and largest professional bodies in the country. Members come from every discipline of engineering, and range from engineering students to fellows of the profession.

**Our responsibility is to**
- Promote knowledge of engineering
- Establish and maintain standards of professional engineering and engineering education
- Provide opportunities for Continuing Professional Development (CPD)
- Maintain standards of professional ethics and conduct
- Ensure that professional titles are granted to qualified candidates
- Act as the authoritative voice of the engineering profession in Ireland

**Our Vision Statement**
Engineers Ireland: a community of creative professionals delivering sustainable solutions for society.

**Our Mission Statement**
Engineers Ireland is an institution that enables the engineering community progress their professional development and make a sustainable impact on society, advocates for the profession, quality assures education and encourages the future generations of engineers.