



Framework for Enhancing Fire Safety in Dwellings where concerns arise

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SECTION 1: INTRODUCTION

1.1 PURPOSE OF THIS GUIDANCE

Part B of the Building Regulations sets out the statutory standards for fire safety that apply when a new building is constructed in order to ensure the safety of persons in and about the building. Compliance with the Building Regulations is first and foremost the responsibility of the owners, designers and builders of the building concerned.

In the interests of supporting owners and residents living in developments where concerns regarding non-compliance with fire safety requirements arise, Minister Alan Kelly has directed that a review be undertaken by an independent fire safety expert and to develop a framework for general application in such situations.

This review will -

- Have regard to the typical risk profile faced by residents, their visitors and fire service personnel in and about apartment developments and housing estates;
- Take account of normal hazards and relevant safety management arrangements as well as typical passive and active safety features;
- Outline general advice and guidance which can be used by owners/residents and their professional advisors, to ensure that an adequate level of safety is in place for persons in and about their development. This may include making provision for -
 - Appropriate or enhanced fire detection and alarm measures;
 - Checking that appropriate escape routes from the premises are available and designed in accordance with current standards;
 - Ensuring evacuation plans are rehearsed in each premises in the event of a fire incident.

1.2 SCOPE OF THIS GUIDANCE

This framework document is intended to be used as guidance to occupants/owners of dwellings (houses and apartments) where fire safety deficiencies have been identified, or are a cause for concern. It will also be of assistance to professional advisors, both in developing strategies to improve fire safety and in developing strategies to enable continued occupation in advance of undertaking the necessary works to ensure compliance with the relevant Building Regulations.

This framework is not intended to be applied to any other category of dwelling save for where noncompliance with Building Regulations has been identified, or are a cause for concern.

1.3 STATUTORY PROVISIONS

(Commentary is not legal interpretation)

1.3.1 INTRODUCTION

The Statutory Provisions in respect of fire safety and fire safety in buildings are contained in the following Acts and the relevant Regulations made under the Acts

- Fire Services Acts 1981 & 2003
- Building Control Acts 1990 2014



1.3.2 FIRE SERVICES ACTS 1981 & 2003ⁱ

The Fire Services Acts 1981 & 2003 is the underpinning legislation which identifies the following:

- Responsibilities of Fire Authorities
- Responsibilities of Owners and Occupiers of buildings
- Powers of Authorised Officers
- Enforcement Powers of Fire Authorities

The Fire Services Act 1981 & 2003 require owners/occupiers of premises to ensure that their premises achieve and maintain an adequate standard of fire safety in order to safeguard occupants. This is achieved by ensuring that adequate escape routes, emergency lighting, protection against fire spread, fire detection and alarm systems, furnishings and fittings, fire safety management and training of occupants are provided.

Fire Authorities have no powers of inspection in respect of dwelling houses occupied as single dwellings. The Fire Services Act does however apply to premises providing sleeping accommodation (Apartments).

NOTE: While the Fire Services Act does not prescribe a particular timescale for implementation of improvement works it is generally accepted that, in instances where there is a substantial amount of work involved, these can be undertaken on a phased basis in accordance with the priority attaching to the measure. Pending completion of the works, it is advisable that additional temporary fire safety measures are implemented.

1.3.3 BUILDING CONTROL ACTS 1990 - 2014

The Building Control Acts 1990 - 2014 are centred on the following principal areas:

- Building Regulations (Building Standards) (Part B of the Second Schedule addresses Fire Safety)
- Building Control Regulation & Administration of Fire Safety Certificates
- Powers of Enforcement & Inspection

In the matter of fire safety, the Building Regulationsⁱⁱⁱ requirements are outlined in Part B of the Second Schedule. The Building Control Regulations^{iv} set out the requirements in respect of fire safety certificates.

The Building Control Act was enacted to make provisions for the establishment of Building Control Authorities, Building Regulations and Building Control Regulations. The requirements of the Building Regulations require that buildings are safe in the event of fire. The aims of the fire safety element of the Building Regulations are to provide:

- Means of Escape (Regulation B1): Regulation B1 provides that all buildings to which the Regulations apply are designed and constructed so that there are:
 - o Adequate means of giving early warning of fire; and
 - Appropriate means of escape in case of fire from the building to a place of safety outside the building.
 - The means of escape must be such that they can be safely and effectively used at all material times.



• Internal Spread of Fire (Linings) (Regulation B2):

Regulation B2 addresses the measures to restrict the spread of fire over internal surfaces, such as walls and ceilings. The requirement is that materials used on walls and ceilings must be adequately resistant to spread of flame over their surfaces and, in some cases, that, if ignited, the rate of heat release will be reasonable in the circumstances.

- Internal Spread of Fire (Structure) (Regulation B3): Regulation B3 addresses the measures to limit the spread of fire within the building and to prevent structural collapse due to fire. It requires that:
 - \circ $\;$ In the event of a fire, the building will remain stable for a 'reasonable period',
 - Certain large buildings be subdivided into fire-resisting compartments and/ or be provided with suitable automatic fire suppression systems;
 - Concealed spaces be limited to prevent hidden fire and smoke travel;
 - Party walls be fire resisting particularly junctions
- External Fire Spread (Regulation B4): Regulation B4 seeks to prevent fire spread from one building to another. It requires that external walls provide adequate fire resistance, and that roofs be adequately resistant to spread of flame, to achieve this objective.
- Facilities for Fire Services (Regulation B5) Regulation B5 sets out how to access the building and other measures to assist the fire and rescue service, although, strictly, only measures to ensure safety of life. These measures comprise:
 - \circ $\;$ Suitable access to the building for fire appliances and fire-fighters;
 - In certain buildings (particularly those of significant height above or depth below ground) measures to facilitate fire-fighting, such as fire-fighting stairs, lobbies and, in some cases, lifts, plus fire mains;
 - \circ $\;$ Measures for heat and smoke removal in basements.

1.4 RESPONSIBILITIES

1.4.1 INTRODUCTION

Fire Safety requirements for dwellings are set out in Part B (Fire Safety) of the Second Schedule to the Building Regulations and apply whenever a new dwelling is planned or built, or whenever an existing dwelling undergoes an extension or a material alteration. Responsibility for compliance with fire safety requirements in dwellings is first and foremost a matter for:

- The Owner
- The Designer
- The Builder

Each has different responsibilities but it is essential they each discharge their responsibility fully to ensure the highest level of fire safety within dwellings. Where a dwelling is occupied by a person other than the owner, the occupier has a duty of care to ensure they act responsibly in relation to fire safety arrangements.



Apartments require a Fire Safety Certificate from the local Building Control Authority confirming that the apartment if completed in line with the design submitted to the Building Control Authority will comply with the requirements of Part B (Fire Safety) of the Building Regulations.

In 2014, the Building Control System was revised. The overall objective is to achieve better building construction, in compliance with Building Regulations. This is achieved through

- identification of specific roles and responsibilities,
- statutory certification,
- inspection plans, and,
- lodgement of compliance documents with Building Control Authorities.

In addition, since 1 March 2014, new apartment blocks and new multi-unit housing developments, require a statutory Certificate of Compliance on Completion. The statutory Certificate of Compliance on Completion is signed by the builder and by a registered construction professional and confirms that the development complies with the requirements of the Building Regulations, including Part B (Fire Safety).

It is an offence to occupy or use a building without having a valid Fire Safety Certificate or a valid Certificate of Compliance on Completion in place where such certificates are required.

Local Authorities are not responsible for compliance in privately owned dwellings. However, in their capacity as Building Control Authorities and Fire Authorities have a role in enforcing compliance in accordance with the Building Control Acts 1990 to 2014 and the Fire Safety Acts 1981 and 2003.

1.4.2 DESIGNERS

Designers^v are responsible for the design of dwellings in accordance with Building Regulations. In the case of apartment type dwellings designers must demonstrate to the Building Control Authority that the proposed building will comply with Part B of the Building Regulations. This is achieved by the submission of a Fire Safety Certificate to the relevant Local Authority. It should be noted that dwelling houses are exempted from the requirement to submit an application for a fire safety certificate but designers must design dwellings that comply with the requirements of the Building Regulations.

1.4.3 BUILDERS

Builders are responsible for building in accordance with the Building Regulations. Builders generally construct in accordance with a design prepared by a competent construction professional and they supervise the construction. This includes the selection of materials, methods of construction and execution of works that are required to ensure a compliant building.

1.4.4 OWNERS

Any person who commissions or builds a building for their own use or for use by others has a statutory obligation under the Building Control Act 1990-2014 to ensure that the building is designed and constructed in accordance with the Building Regulations.

Since 1 March 2014, the owner must appoint a competent registered professional (s) to design the building (except one-off houses) and to act as Assigned Certifier during the construction. They also have a responsibility to appoint a competent builder to undertake and supervise the construction. Where the ownership of a building changes the subsequent owner takes on the legal obligations



attaching to ownership of the building subject to any contract or agreement entered into with the previous owner.

1.4.5 OCCUPANTS

1.4.5.1 DWELLING HOUSES

Occupants of dwelling houses must ensure that they understand the fire safety provisions within the dwelling. Occupants of dwelling houses can ascertain the design intent of their building from a professional advisor who will emphasise the general advice in the event of a fire to get out, stay out and call the fire service. This design intent includes ensuring that elements of design are operated correctly (doors are closed and alarm systems are maintained) and that appropriate plans are developed and practiced to ensure safe evacuation from the dwelling house unit in the event of a fire.

1.4.5.2 APARTMENT DWELLINGS

Apartment dwellers must ensure that they understand the fire safety system deployed in design of their apartment (their Designer and Builder or Management Company can provide this). It is important that they ensure all safety systems are adequately maintained. Apartment dwellers must be aware of the content of Schedule 3 of the Multi-Unit Development Act 2011^{vi} which includes details of the safety systems with the apartment block particularly the common areas. As part of an apartment handover the developer should provide the following information over to the building management company:

- Confirmation that the development has been completed and is in accordance with the Building Control Acts 1990 and 2014.
- Any safety file required under any enactment to be maintained by the developer.
- Professionally prepared drawings of the development together with the latest revisions of the drawings of the structure or structures prepared by the design team.
- Professionally prepared drawings showing the services relating to the development, as built.
- Operational and maintenance manuals relating to plant and equipment in the development.
- Maintenance contracts and contracts for the provision of services relating to the development.
- Schedule of plant, equipment and fire protection systems.

1.5 LOCAL AUTHORITIES (FIRE AUTHORITIES and BUILDING CONTROL AUTHORITIES)

Local Authorities (Fire Authorities and Building Control Authorities) are responsible for the administration and implementation of the

- Fire Services Acts 1981 & 2003
- Building Control Act 1990 2014

Building Control Authorities are required to certify that the design of an apartment block complies with the requirement of Part B (Fire Safety) of the Second Schedule to the Building Regulations. Contrary to common public perception, the Building Control Authority is not responsible for compliance with Building Regulations. The Building Control Act clearly places responsibility for compliance on the owner, designer and builder of the building concerned. Moreover, Section 6(4)(a) of the Building Control Act 1990 clearly specifies that where a commencement notice is submitted to a building control authority; the building control authority is not under any duty to any person to



ensure that the building or works to which the notice relates will comply with the requirements of the Building Regulations or be free from any defect.

Building Control Authorities do however have a responsibility for the enforcement of the Building Regulations and under the Act have strong powers to:

- scrutinise proposals and inspect works in progress;
- serve enforcement notices for non-compliance;
- institute proceedings for breaches of regulatory requirements;
- seek High Court injunctions if non-compliance poses considerable and serious danger to the public.

Summary proceedings for serious non-compliance can only be brought by Building Control Authorities within 5 years of the completion of the building concerned.

While Local Authorities are independent in the use of the their statutory powers of inspection, enforcement and prosecution, they do respond to complaints made in relation to the safety of buildings and are generally prepared to use their statutory powers as Fire Authorities and Building Control Authorities to safeguard vulnerable homeowners and residents in any reasonable and appropriate way.

The Fire Services Acts place responsibilities on fire authorities in respect of providing a fire brigade to attend fire incidents in dwellings. A fire authority may give advice in relation to fire safety to the owner or occupier of any premises to which section 18 applies or to any person having control over any premises. Application of the Fire Services Acts by Fire Authorities excludes premises that are a dwelling house occupied as a single dwelling. This in effect means fire authorities have no powers of inspection in respect of single dwellings. The Fire Services Act does however apply to premises providing sleeping accommodation (Apartments).

Section 18(2) if the Fire Service Act places a responsibility on the owner / occupier of a building: It shall be the duty of every person having control over premises to which this section applies to –

- take all reasonable measures to guard against the outbreak of fire on such premises,
- provide reasonable fire safety measures for such premises and prepare and provide appropriate fire safety procedures for ensuring the safety of persons on such premises,
- ensure that the fire safety measures and procedures referred to in paragraph (b) are applied at all times, and
- ensure, as far as is reasonably practicable, the safety of persons on the premises in the event of an outbreak of fire whether such outbreak has occurred or not



SECTION 2: FRAMEWORK GUIDANCE

2.1 INTRODUCTION

The guidance contained within the framework is intended to be of assistance to owners / occupiers of dwellings (houses and apartments) where fire safety deficiencies have been identified; or where concerns regarding compliance exist or arise. Typically, these dwellings include:

- Housing (Single Occupancy)
- Apartments

2.2 FIRE RISK ASSESSMENT

This framework document is intended to be used as guidance to occupants and owners of dwellings (houses and apartments) where fire safety deficiencies have been identified, or are a cause for concern. Details of a proposed methodology are contained in Section 3 of this framework. It sets out a priority of action to reduce the level of risk associated with the deficiencies. The completion of the fire risk assessment will provide details of works necessary to achieve building regulation requirements. The risk assessment will also enable professional advisors to provide specific fire safety practices which could reduce fire risk in the interim. Professional advisors include Registered Architects, Registered Surveyors and Chartered Engineers.

2.3 FIRE SAFETY ADVICE FOR DWELLINGS

In certain cases it may be possible to reduce risk associated with identified fire safety deficiencies by implementing a range of appropriate actions. The following table lists a range of possible actions that can be considered which could reduce risk and improve the level of fire safety and, subject to professional advice and following this Framework, these actions may enable continued occupation in advance of remediation works. It should be noted that implementation of these actions should only be viewed on a short term basis and it will be necessary to have dwellings inspected by a competent professional advisor.

All advice contained in Fire Safety at Home published by the Department of Environment, Community and Local Government should be noted. See Appendix A.



2.3.1 DWELLING HOUSES

Table 1.0 - Table for Dwelling House		
ITEM	ADVICE	
1. Means of Escap	e	
Escape Routes	The term 'Means of Escape' is defined as: <i>Structural means whereby a safe route(s) is provided for persons to travel from any point in a building to a place of safety.</i> In a dwelling house for example the escape route is normally the landing, stairs and hallway (leading to a final exit). These areas should always be kept free from obstruction and should not have any storage within them. A safe assembly point, away from the building, to be used in the event of a fire should be identified.	
Escape Windows	Windows may provide an alternative means of escape or may be used for rescue purposes in dwelling houses of limited height. These windows should be easily openable and should be free from obstruction outside. A professional advisor may consider recommending changing fastening or fitting fastenings which do not require keys.	
Exit Doors	Final exit doors that allow a person to exit the dwelling should be readily openable without the use of a key from the inside to limit the evacuation time in the event of an emergency. Typically in a domestic setting it is common for dwelling houses to be fitted with locks, lockable by keys, on front doors. In this instance, it is advised that where keys are necessary for exiting they should be readily available at all times, kept close to the door and their location known to all of the house occupants. For dwelling houses where deficiencies have been identified, or are a cause for concern, to reduce risk from fire, a professional advisor could consider recommending that front door locks be replaced with fastenings which can be readily operated in the direction of escape without the use of a key.	
Doors	In terms of fire safety, doors may be required (depending on their location) to prevent the spread of fire and prevent the spread of smoke, particularly smoke of a relative low temperature. Therefore it is important for the doors to remain closed to inhibit the spread of fire/smoke through the dwelling. In the case of three-storey houses, a fire resisting stairway enclosure, with fire resisting doors, is typically required. In cases where there is deficiency in the stairway enclosure consideration could be given by a professional advisor to recommending against use of the topmost floor for sleeping, or as habitable accommodation, or at all, depending on the nature of the deficiency.	
Three Storey Premises or Attic Conversions	Note: with regards attic conversions, advice from a structural engineer should be sought in relation to the stability of the roof structure to ascertain whether or not the roof has been compromised in any way with the building of this top most level.	



2. Spread	
Furnishings & Fittings	Furniture and fittings can have a major effect on fire spread and fires often start as result of seats, curtains, etc., being ignited by small ignition sources such as cigarettes, matches, etc. Keeping these ignition sources away from furniture and fittings as well as ensuring that any rips or tears are correctly repaired or sealed will considerably reduce the risk of ignition of these surfaces, and limit fire spread. New furniture should comply with S.I. No. 316/1995 - Industrial Research and Standards (Fire Safety) (Domestic Furniture) Order, 1995 ^{vii} .
3. Fire Facilities	
Fire Detection and Alarm System	A fire detection and alarms system can significantly increase the level of fire safety in a dwelling house. An enhanced system should include interconnected detectors – heat detector in the kitchen, and smoke detectors in the hall, landing, living rooms, utility rooms and bedrooms. An enhanced fire detection and alarm system should be specified by a professional advisor, who should also consider whether detection in the attic space should be provided. Detectors should be tested once a week. For detectors with replaceable batteries, the batteries should be replaced once a year; if the low battery warning sounds, the battery should be replaced right away.
Fire Extinguishers / Fire Blankets	First-aid firefighting equipment should be provided in buildings to be used by the occupants (with appropriate training and where it is safe to do so) in the early stages in the development of a fire. Dry powder extinguishers should be installed in the building and occupants should receive training in how to use them. In addition, a fire blanket should be installed in the kitchen and instruction on its use should be obtained.
Heating System	Heating boilers, fires for heating and other appliances which burn liquid, gaseous or solid fuel can provide a source of ignition for fires in buildings. Where possible, consideration should be given to the elimination of open fires (depending on identified deficiency). It is preferable to use oil or gas fired heating systems that are maintained and serviced regularly. Mobile or portable gas heaters should not be used. As a safe alternative consider using fixed electric convector heaters.
Electrical Systems	Electrical fires can ignite from a faulty appliance or an overloaded socket with extension leads and plugs. The electrical system should be inspected by an electrician. Do not use second hand electrical appliances. All daily use electrical appliances should be in accordance with manufactures instructions (make sure to keep all instruction booklets).



4. Compartment	
Fire Compartmentation & Separation	Restricting the spread of fire and smoke from one location to another is known as compartmentation. It is important to fully separate a building from a neighbouring building. The separating wall should be assessed by your professional advisor and pending the resolution of any compartmentation issues enhanced fire detection is A suitable means of improving fire safety. There should be no penetrations or holes through separating walls. Ensure all walls and ceilings in the building have plasterboard in good condition. Any damages to the plasterboard should be repaired. Anything that penetrates the compartment boundaries must be properly fire stopped with a fire resisting material. A separating wall that consists of concrete block construction, will act as a natural fire resistance so it is important that anything that penetrates this wall must be properly fire stopped.
5. Day to Day Safe	ty / Maintaining Fire Safety
Fire Action Plan	 Prepare a fire action plan which should include the following: Make an escape plan for your home and rehearse it with all residents. Plan at least two routes out in case one is blocked by fire. Have a meeting point in a safe place outside the house. Keep your way out clear day and night and keep the keys to doors and windows nearby. Your professional advisor may consider recommending changing fastenings, fitting fastenings which do not require keys. Keep doors closed to prevent the spread of fire. Know where the nearest phone is to call the fire service. Act fast on activation of the alarm. Know the location of fire extinguishers and fire blanket and how to use them (only use them if it is safe to do so). If you hear the fire alarm, check doors with the back of your hand for heat before you open them. If they are warm, the way might be blocked by fire. Do not introduce naked flames (i.e.: avoid the use of lighters, matches, candles etc.). Notify your neighbours of a fire. If you are in the room where the fire is, leave straight away, together with anybody else, then close the door. Do not stay behind to try to put the fire out. Get out and stay out. Tell everybody else in your home about the fire and get everybody to leave. Close the entrance door and leave the building. CALL THE FIRE AND RESCUE SERVICE.



Maintaining Fire	Undertake checks of the following regularly:
Safety within the	• That doors close properly to prevent spread of fire and smoke
Home	Escape routes are free from trip hazards
	There is no storage in escape routes
	• Escape windows are operational (if applicable)
	• Fire alarm system is operating properly
	• Extinguishers and fire blankets are operational and located in
	appropriate position and available for use
	 Occupants are familiar with the fire alarm system
	 Occupants can use fire extinguishers / fire blankets
	 Occupants know how to call the fire brigade
	Occupants understand the implications of the already identified
	deficiencies
	 Clean your chimney and service your heating system at least once a
	year
	Repair or replace faulty electrical appliances immediately
	• Do a fire safety check before you go to bed every night
	 Close all doors at night
	 Monitor monthly reviews of checks
Day to day safety	Take extra care in the kitchen as accidents while cooking account for over half of fires in homes. Never leave young children alone in the kitchen. Take extra care when cooking with hot oil. Deep fat fryers should be thermostatically controlled; do not use a pan for deep frying. Never leave lit candles in unoccupied rooms or in rooms where children are on their own. Make sure candles are in secure holders on a surface that does not burn and are away from any materials that could burn. Make sure cigarettes are stubbed out properly and are disposed of carefully. Never smoke in bed. Get into the habit of closing doors at night. If you want to keep a child's bedroom door open, close the doors to the lounge and kitchen; it might help to save their life if there is a fire. Do not overload electrical sockets. Remember, one plug for one socket. Keep matches and lighters where children cannot see or reach them. Take care when you are tired. Do not leave the TV or other electrical appliances on standby as this could cause a fire. Always switch it off and unplug it when it is not in use. At Night:
	guard in front of open fires. Empty all ashtrays. Keep your way out completely clear. Close all doors.



2.3.2 APARTMENTS

This section is divided into two tables, the first table (Table 2) is general advice for owners/occupiers of Single Apartments and is limited to the area of the apartment only. The second table (Table 3) gives general advice to Management Companies in relation to the common areas of apartments

Table 2.0 -Table for Owner / Occupiers of Single Apartments		
ITEM	ADVICE	
1. Means of Escap		
Escape Routes	The means of escape within an apartment is (in the majority of cases) the protected entrance hall which leads to the apartment entrance door. To ensure an apartment has an adequate means of escape, always keep escape route (entrance hall) free from obstruction, do not have any storage within the escape route and identify a safe assembly point outside of the apartment that everybody will go to in the event of a fire. Ensure everyone is familiar with the assembly point. Entrance halls should not contain furniture or fittings that would reduce the escape route width, at any point.	
Escape Windows	Windows may provide an alternative means of escape or may be used for rescue purposes in apartments of limited height. These windows should be easily openable and should be free from obstruction outside. A professional advisor may consider recommending changing fastenings, fitting fastenings which do not require keys.	
Exit Doors	Final exit doors from apartments should be readily openable without the use of a key from the inside to limit the evacuation time in the event of an emergency. Typically in an apartment setting it is common for apartment entrance doors to be fitted with locks or to be lockable by way of a key. In this instance, it is advised, that where keys are necessary for exiting, they should be readily available at all times, kept close to the door and their location known to all of the apartment occupants. In apartments where deficiencies have been identified, or are a cause for concern, to reduce risk from fire, a professional advisor could consider recommending that front door locks be replaced with fastenings which can be readily openable in the direction of escape without the use of a key.	
External Stairway	Some apartment developments are provided with external stairways which are a viable alternative means of escape from the buildings upper floors.	
Doors	In terms of fire safety, doors may be required (depending on their location) to prevent the spread of fire and smoke, particularly smoke of a relatively low temperature. Therefore it is important that these doors remain closed to inhibit the spread of fire/smoke through the apartment. Doors should also not be wedged in an open position.	



2. Spread	
Furnishings and Fittings	Furniture and fittings can have a major effect on fire spread and fires often start as a result of seats, curtains, etc., being ignited by small ignition sources such as cigarettes, matches, etc. Keeping these ignition sources away from furniture and fittings as well as ensuring that any rips or tears are correctly repaired or sealed will considerably reduce the risk of ignition of these surfaces, and limit fire spread. New furniture should comply with S.I. No. 316/1995 - Industrial Research and Standards (Fire Safety) (Domestic Furniture) Order, 1995viii.
3. Fire Facilities	
Fire Detection and Alarm System	A fire detection and alarms system can significantly increase the level of fire safety in an apartment. An enhanced system should include interconnected detectors – heat detector in the kitchen, and smoke detectors in the hall, living rooms, utility rooms and bedrooms. An enhanced fire detection and alarm system should be specified by a professional advisor. Detectors should be tested once a week. For detectors with replaceable batteries, the batteries should be replaced once a year; if the low battery warning sounds the battery should be replaced right away.
Fire Extinguishers / Fire Blankets	First-aid firefighting equipment should be provided in individual apartments to be used by the occupants (with appropriate training and where it is safe to do so) in the early stages in the development of a fire. Apartments should be provided with dry powder extinguishers and occupants should receive training in how to use it. In addition, a fire blanket should be installed in the kitchen and instruction on how it is used should be obtained.
Heating System	Heating boilers, fires for heating and other appliances which burn liquid, gaseous or solid fuel can provide a source of ignition for fires in buildings. As such, consideration should be given to the elimination of open fires (depending on identified deficiency). It is preferable to use oil or gas fired heating systems that are maintained and serviced regularly. Mobile heaters such as direct radiant electric heating, super-ser gas heaters, room kerosene or paraffin heaters should not be used. As a safe alternative consider using fixed electric convector heaters.
Electrical Systems	Electrical fires can ignite from a faulty appliance or overloading a socket with extension leads and plugs. Have the electrical system inspected by an electrician regularly, do not use second hand electrical appliances. All daily use electrical appliances should be in accordance with manufacturer's instructions (make sure to keep all instruction booklets).



Access Roads	It is important that fire and rescue service access roads to blocks of flats and other residential buildings are kept clear and unobstructed, to allow access by the fire and rescue service and other emergency vehicles at all times. It is the responsibility of all occupants to ensure that they do not park their cars in these roads or allow their visitors to do so, and if they see any vehicles parked there, to report them.
Sprinkler System	Where a sprinkler system is installed it is important that the sprinklers are not painted over, since this can slow their response to a fire.
4. Compartment	
Fire Compartmentation & Separation	Restricting the spread of fire and smoke from one location to another is known as compartmentation. It is important to fully separate a building from a neighbouring building. The separating wall and floor should be assessed by your professional advisor and pending the resolution of any compartmentation issues enhanced fire detection may be a suitable means of improving fire safety. There should be no penetrations or holes through separating walls. Ensure all walls and ceilings in the building have plasterboard in good condition. Any damages to the plasterboard should be repaired. Anything that penetrates the compartment boundaries must be properly fire stopped with a fire resisting material. A separating wall that consists of concrete block construction, will act as a natural fire resistance so it is important that anything that penetrates this wall must be properly fire stopped.
5. Day to Day Safe	ety / Maintaining Fire Safety
Fire Action Notices	 Prepare a fire action plan which should include the following: Make an escape plan for your apartment and rehearse it with all residents. Plan at least two routes out in case one way is blocked by fire. Have a meeting point in a safe place outside the apartment block. Keep your way out clear day and night and keep the keys to doors and windows nearby. Your professional advisor may consider recommending changing fastenings, fitting fastenings which do not require keys. Keep doors closed to prevent the spread of fire. Know where the nearest phone is to call the fire service. Act fast on activation of the fire alarm. Know the location of fire extinguishers and fire blanket and how to use them and only use them if is safe to do so. If you hear the fire alarm, check doors with the back of your hand for heat before you open them. If they are warm, the way might be blocked by fire. Do not introduce naked flames (i.e.: avoid the use of lighters, matches, candles etc.). Notify your neighbours of a fire.



(Fire Action Notices continued)	If you are in the room where the fire is, leave straight away, together with anybody else, then close the door. Do not stay behind to try to put the fire out. Get out and stay out. Tell everybody else in your apartment about the fire and get everybody to leave. Close the entrance door and leave the building. Do not use the lift (unless it is a designated evacuation lift). Do not use a balcony unless it is part of the escape route from the building. CALL THE FIRE AND RESCUE SERVICE.
Maintaining Fire Safety within the building	 Undertake checks of the following regularly: That doors close properly to prevent spread of fire and smoke Escape routes are free from trip hazards There is no storage in escape routes Escape windows are operational (if applicable) Smoke seals on fire doors are in good condition Fire alarm system is operating properly Occupants are familiar with the fire alarm system Occupants can use fire extinguishers / fire blankets Occupants understand the implications of the already identified deficiencies Clean your chimney and service your heating system at least once a year Repair or replace faulty electrical appliances immediately Do a fire safety check before you go to bed every night Close all doors at night Confirm that the management company has checked all active systems in the common areas Monitor monthly reviews of checks
Day to day safety	Take extra care in the kitchen – accidents while cooking account for over half of fires in homes. Never leave young children alone in the kitchen. Take extra care when cooking with hot oil. Never leave lit candles in rooms that nobody is in or in rooms where children are on their own. Make sure candles are in secure holders on a surface that doesn't burn and are away from any materials that could burn. Make sure cigarettes are stubbed out properly and are disposed of carefully, and never smoke in bed. Get into the habit of closing doors at night. If you want to keep a child's bedroom door open, close the doors to the lounge and kitchen; it might help to save their life if there is a fire. Don't overload electrical sockets. Remember, one plug for one socket. Keep matches and lighters where children can't see or reach them. Take special care when you're tired or when you've been drinking. Don't leave the TV or other electrical appliances on standby as this could cause a fire. Always switch it off and unplug it when it is not in use. At Night: Turn off gas appliances. Put out candles and naked flames. Place a spark guard in front of open fires. Empty all ashtrays. Keep your way out completely clear. Close all doors.



2.3.3 COMMON AREAS IN APARTMENT BUILDINGS

This table (Table 3.0) gives general advice to management companies in relation to the common areas of apartment buildings. Particular attention needs to be paid to the common areas to ensure that they do not pose a risk in the event of a fire. The management company must maintain fire alarms and other fire equipment to achieve the fire safety design intent of the build.

Table 3.0 -Table for Common Areas within Apartments		
ITEM	ADVICE	
1. Means of Escap	e	
Escape Routes	The escape route in the common area of an apartment development is generally the common corridors, lobbies and stairs. To ensure an apartment has an adequate means of escape, always keep escape routes (common corridors, lobbies and stair) free from obstruction, do not have any storage within the escape routes and identify a safe assembly point outside of the apartment that everybody will go to in the event of a fire. Ensure everyone is familiar with the assembly point. Common corridors, lobbies or stairs should not contain furniture or fittings that would reduce the escape route width, at any point.	
Exit Doors	Final exit doors from apartment blocks should be readily openable without the use of a key from the inside to limit the evacuation time in the event of an emergency.	
External Stairway	External stairways should be protected along its length in fire resistant material and special care should be taken in areas adjacent to external stairways as to not compromise the fire protection in an escape route.	
Doors	In terms of fire safety, doors may be required (depending on their location) to prevent the spread of fire and smoke, particularly smoke of a relatively low temperature. Therefore it is important that these doors remain closed to inhibit the spread of fire/smoke through the common areas of the apartment development. Doors should also not be wedged in an open position.	
2. Spread		
Furnishings and Fittings	Furniture and fittings can have a major effect on fire spread and fires often start as result of seats, curtains, etc., being ignited by small ignition sources such as cigarettes, matches, etc. Keeping these ignition sources away from furniture and fittings as well as ensuring that any rips or tears are correctly repaired or sealed will considerably reduce the risk of ignition of these surfaces, and limit fire spread. New furniture should comply with S.I. No. 316/1995 - Industrial Research and Standards (Fire Safety) (Domestic Furniture) Order, 1995ix.	



3. Fire Facilities	
Fire Detection and Alarm System	A fire detection and alarm system can significantly increase the level of fire safety in an apartment. A fire detection and alarm system should be provided within the common/communal areas of an apartment building. There shall be no interconnection between the apartment self-contained system and this common/communal system. This common/communal system should incorporate smoke detection in the common corridors, lobbies and stairs with a head detector positioned in the entrance hall of each apartment. The system should be tested in accordance with the recommendations of I.S. 3218.
Fire Extinguishers / Fire Blankets	First-aid firefighting equipment should be provided in the common areas within an apartment building to be used by the occupants, with appropriate training and where it is safe to do so, in the early stages in the development of a fire. Fire-fighting equipment (in the form of fire extinguishers, fire mains and outlets) and fire safety signs are installed in flats and other residential buildings. It is the responsibility of all occupants to ensure that such equipment is not interfered with, and if any item of equipment is found damaged, to report it immediately. Appropriate fire extinguishers should be installed in the common areas of the building and occupants should receive training in how to use them.
Heating System	Heating boilers which burn liquid, gaseous or solid fuel can provide a source of ignition for fires in buildings. It is preferable to use oil fluid or gas fired heating systems that are maintained and serviced regularly (minimum every twelve months).
Electrical Systems	Electrical fires can ignite from a faulty appliance or overloading a socket with extension leads and plugs. Have the electrical system inspected by an electrician regularly, do not use second hand electrical appliances. All daily use electrical appliances should be in accordance with manufacturer's instructions (make sure to keep all instruction booklets).
Access Roads	It is important that fire and rescue service access roads to blocks of flats and other residential buildings are kept clear and unobstructed, to allow access by the fire and rescue service and other emergency vehicles at all times. It is the responsibility of all occupants to ensure that they do not park their cars in these roads or allow their visitors to do so, and if they see any vehicles parked there, to report them.
Sprinkler System	Where a sprinkler system is installed it is important that the sprinklers are not painted over, since this can slow their response to a fire.



4. Compartment					
Fire Compartmentation & Separation	Restricting the spread of fire and smoke from one location to another is known as compartmentation. It is important to fully separate a building from a neighbouring building. The separating wall and floor should be assessed by your professional advisor and pending the resolution of any compartmentation issues enhanced fire detection is suitable means of improving fire safety. There should be no penetrations or holes through separating walls. Ensure all walls and ceilings in the building have plasterboard in good condition. Any damages to the plasterboard should be repaired. Anything that penetrates the compartment boundaries must be properly fire stopped with a fire resisting material. A separating wall that consists of concrete block construction, will act as a natural fire resistance so it is important that anything that penetrates this wall must be properly fire stopped.				
Building Plant and Equipment	The responsible person (preferably from the management company) should check that the equipment and plant is regularly maintained. Electrical and gas installations are required to be regularly examined by a competent person who, if not qualified, should have authority to engage a qualified person to carry out any investigations and/or repairs deemed necessary for safety reasons				
5. Day to Day Safe	ety / Maintaining Fire Safety				
Fire Action Notices	Prepare fire action plan which should include the following: Make up 'You are here' signs / escape plans for the common/communal areas of the apartment development. The signs should identify at least two routes out of the building if in the event one is blocked by fire. They should also identify the location of any firefighting equipment and a meeting point in a safe place outside the development. Building management to ensure that the common/communal escape routes are clear at all times.				
Maintaining Fire Safety within the building	 Undertake checks of the following regularly: That doors close properly to prevent spread of fire and smoke Escape routes are free from trip hazards There is no storage in escape routes Smoke seals on fire doors are in good condition Fire alarm system is operating properly Occupants are familiar with fire alarm Occupants can use fire extinguishers / fire blankets Occupants understand the implications of the already identified deficiencies Repair or replace faulty electrical appliances immediately Monitor monthly reviews of checks 				



SECTION 3: FIRE RISK ASSESSMENT

3.1 RISK ASSESSMENT METHODOLOGY

3.1.1 IDENTIFICATION OF RISK ITEMS

The first step in the process is to identify those hazards which present a threat to persons in the event of a fire occurring on the premises. A hazard is a situation which has the potential to cause harm. In this case, the assessment identifies fire hazards with the potential to cause harm to occupants or visitors to the building. In keeping with typical Risk Assessment methodology, hazards in this report are referenced as Risk Items. The Risk Items will typically be either management issues (e.g. poor housekeeping practices) or physical fire protection features which are absent or deficient. The identification of Risk Items is based on assessment against the recommendations in the relevant guidance documents as applied to a building having regard to the application of professional judgement and common sense to the particular circumstances.

Inspection Methodology –

The inspection of the premises (dwelling houses and apartments) will generally be an intrusive one to allow examination of the construction of the building to establish the make-up of walls / floors, the presence of cavity barriers, etc. 'Opening up' works should be kept as small as possible but it is necessary to have a clear picture of the wall and floor construction. Typically, the buildings floors, separating walls, external walls and the chimney flues should be examined. To examine the chimney flue it may be necessary to remove the chimney capping. The builder used to do the opening up works will typically close up the openings after they have been inspected. There may be limitations to the degree to which decorative finishes can be restored.

3.1.2 EVALUATION OF RISK ITEMS

The second step in the process is to rate each Risk Item. This involves three sub-steps as follows:

- Assign an Occurrence Rating to the Risk Item (Likelihood)
- Assign an Impact Rating to the Risk Item (Anticipated Severity)
- Assign an overall score to the Risk which is product of the Likelihood and Impact rating to give an overall Risk Rating

The likelihood rating is judged by reference to the likelihood of the Risk Item occurring in accordance with the following scoring criteria:

- Rare/Remote
- Unlikely
- Possible
- Likely
- 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 severe outcome. The scoring criteria are as follows:

- Negligible harm (Escape Unharmed)
- Minor harm (Minor Injury)
- Moderate harm (Injury)
- Major harm (Major Injury/Death)
- Extreme harm (Multiple Deaths)



3.1.3 ESTABLISHING THE OVERALL RISK RATING FOR EACH RISK ITEM

The product of the two scoring outcomes provides an overall Risk Rating based on the following table:

RISK MATRIX	NEGLIGIBLE (1)	MINOR (2)	MODERATE (3)	MAJOR (4)	EXTREME (5)
Almost Certain (5)	5	10	15	20	25
Likely (4)	4	8	12	16	20
Possible (3)	3	6	9	12	15
Unlikely (2)	2	4	6	8	10
Rare (1)	1	2	3	4	5

3.1.4 ACTION PLAN

The next step in the process is to recommend remedial actions to mitigate or eliminate the Risk Items. The objective is to reduce, either immediately or within a reasonable timeframe, the level of risk. Items are assigned Red, Yellow and Green to indicate the most appropriate sequence in which to address identified deficiencies.

3.1.5 PRIORITY RATINGS FOR INDIVIDUAL ACTION ITEMS

The primary objective in assigning risk ratings is to prioritise those actions necessary to ensure compliance with Part B – Fire Safety – of the Building Regulations. The recommended remedial actions are assigned a priority rating taking account of the overall Risk Rating as follows:

Red Rating (15 – 25):High Risk:Intervention Rating A (Highest priority for remedial action)Amber Rating (6 – 12):Medium Risk:Intervention Rating B (Medium priority for remedial action)Green Rating (1 – 5):Low Risk:Intervention Rating C (Lowest priority for remedial action)

It should be noted that professional judgement is applied when considering the Risk Ratings and certain remedial improvements may be accorded a higher priority than indicated by the Risk Rating alone. For instance, certain desired management improvements may not have a very high Risk Rating but may be recommended for immediate implementation due to being of low cost and practicable to achieve.



APPENDIX A: FIRE SAFETY AT HOME

What to do:

Plan for a safe place in case you cannot get out of the house

- Make sure there is a phone or personal alert in the room to call for help. Make sure there is a window so you can
- either get out or call for help. Stay by the window if you can't get out. Close the door and seal the bottom with towels or blankets to stop smoke getting in.

Call 999 or 112

- Ask for the fire service. Speak calmly and clearly.
- 1
- Give your address and phone number. If you are calling on your mobile, say what county
- you are in. Only hang up when the operator tells you to. ~

Don't:

- Go back into a burning house for any × reason
- x Borrow batteries from the smoke alarm.
- x Have mirrors over fire places with real fires. Your clothes might catch fire if you stand too close to look in the mirror.

Ţ

Prevent fire

FACTS!

Don't

cooker.

them. ×

×

×

x

- On average 46 people die each year in fires in Ireland.
- Fires do not always happen to other people. The next fire could be in your home.



Smoke when you are in bed, tired or on medication.

Leave the room when there are candles burning.

Leave young children alone near an open fire or

X Leave matches and lighters where children can get

Remember:

Be careful when using portable electric, gas or oil heaters.

- . Don't use heaters near furniture, curtains or beds
- Don't leave heaters on when you go to bed.
- . Take care if pets are near the heaters.
- Don't use heaters to dry clothes.





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Detect fire

Smoke alarms give you an early warning of a fire. 82% of fires that kill people are in homes with no working smoke alarm.

- Fit a smoke alarm in every room (except the bathroom and the garage) to protect your home. Fit a heat alarm in the kitchen. Test your smoke alarms at least once a week.

- warning beep

Escape

Know what to do when you hear a smoke alarm so you and your family can get out safely.

- Make an escape plan for your home and practise with everyone who lives with you. Plan at least two ways out in case one way is
- 1 blocked by fire.
- Have a meeting point in a safe place outside the
- Keep your way out clear day and night. Keep the keys to doors and windows nearby. Know where the nearest phone is to call the fire
- 1
- If you hear the fire alarm, check doors with the back of your hand for heat before you open them. If they are warm, the way might be blocked by fire.

FACT!

Over 1,000 people every year attend casualty with burns or scald injuries (HIPE & NPRS Unit ESRI)

Fire safety at home





Fire safety check

A fire safety check only takes a few minutes but it could mean the difference between life and death. Make it part of your routine before you go to bed.

Every night:

- Turn off gas appliances. ~
- Put out candles and naked flames. 1
- Place a spark guard in front of open fires.
- Empty all ashtrays. ~
- Keep your way out completely clear.
- Close all doors.



- Change the batteries every year. Change the battery right away when you hear the 1

- Leave the room when a chip or frying pan is on
- Overload electric sockets one socket, one plug. Use electric appliances that don't work.
- x
- Run electrical appliances from a light socket. Use a heater or the cooker to dry clothes ×
- × Use petrol or paraffin to light a solid fuel stove.

Make sure to:

even for a minute.

- Clean your chimney and service your heating ~ system at least once a year.
- Use a sparkguard with open fires
- Keep your gas cylinder outside, on solid ground ~ and away from anything hot.
- Use a proper holder for candles. ~
- Keep a suitable fire extinguisher and fire blanket in the kitchen.
- Empty ashtrays before you go to bed. Run the contents under the tap before you bin them. Repair or replace faulty electrical appliances
- immediately Do a fire safety check before you go to bed.
- 2 Close all doors at night.





What to do:

- Make sure there is a phone or personal atert in the room to call for help. Make sure there is a window so you can either get out or call for help. Stay by the window if you can't get out.
- Close the door and seal the bottom with towels or blankets to stop smoke getting in.

Call 999 or 112

- Ask for the fire service.
- Speak calmly and clearly.
- Give your address and phone number. If you are calling on your mobile, say what county you are

Only hang up when the operator tells you to. Don't:

- x
- x
- Borrow batteries from the smoke alarm. Have mirrors over fireplaces with real fires. Your clothes might catch fire if you stand too close to look in the mirror.



Prevent fire

Don't:

them

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x

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4

FACTS!

On average 46 people die each year in fires in Ireland.

Smoke when you are in bed, tired or on medication. Leave the room when there are candles burning. Leave young children alone near an open fire or

cooker. Leave matches and lighters where children can get

Leave the room when a chip or frying pan is on even for a minute. Overload electric sockets - one socket, one plug.

Use electric appliances that don't work properly. Run electrical appliances from a light socket. Use a heater or the cooker to dry clothes

Clean your chimney and service your heating system at least once a year. Use a sparkguard with open fires. Keep your gas cylinder outside, on solid ground

and away from anything hot. Use a proper holder for cendles. Kaep a suitable fire extinguisher and fire blanket in the kitchen.

Stand top close to fires or heater Use petrol or paraffin to light a solid fuel stove.

Make sure to:

Fires do not always happen to other people.



Remember:

Be careful when using portable electric, gas or oil heaters.

- . Don't use heaters near furniture, curtains or beds
- Don't leave heaters on when you go to bed.
- Take care if pets are near the heaters.
- Don't use heaters to dry clothes.



Fire safety in flats and apartments



fire safety

Be on your guard a



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Fire safety check

A fire safety check only takes a few minutes but it could mean the difference between life and death. Make it part of your routine before you go to bed.

Every night:

- Unplug all electrical appliances (except fridge freezer).
- Tum off gas appliances. .
- Put out candles and naked flames.
- Place a spark guard in front of open fires
- Empty all ashtrays.
- Keep your way out completely clear
- Close all doors.

- the kitchen. Repair or replace faulty electrical appliances immediately. Do a fire safety check before you go to bed. 2 Empty ashtrays before you go to bed. Run the contents under the tap before you bin them. Unplug all appliances (except the fridge) at night. Close all doors at night.



Detect fire

6

Escape

- v
- Keep your way out clear day and hight. Keep the keys to doors and windows nearby Know where the nearest phone is to call the fire



Fire Safety Review Terms of Reference

Part B of the Building Regulations sets out the statutory standards of fire safety that apply when a new building is constructed in order to ensure the safety of persons in and about the building. Compliance with the building regulations is first and foremost the responsibility of the owners, designers and builders of the building concerned. In the interests of supporting owners and residents living in developments where concerns regarding non-compliance with fire safety requirements arise, Minister Kelly has directed that a review be undertaken by an independent fire safety expert to develop a framework for general application in such situations.

The review will -

- 1. Have regard to the typical risk profile faced by residents, their visitors and fire service personnel in and about apartment developments and housing estates;
- 2. Take account of normal hazards and relevant safety management arrangements as well as typical passive and active safety features;
- 3. Outline general advice and guidance which can be used by owners/residents and their professional advisers, to ensure that an adequate level of safety is in place for persons in and about their development. This may include making provision for
 - a. appropriate or enhanced fire detection and alarm measures;
 - b. checking that appropriate escape routes from the premises are available, designed in accordance with current standards;
 - c. ensuring evacuation plans are rehearsed in each premises in the event of a fire incident.
- 4. Include a case study based on the Millfield Hawthorns estate at Newbridge, Co. Kildare;
- 5. Conclude at an early date, with a report to the Minister on or before 30th January 2016.

The review will be overseen by a Steering Group convened by Kildare County Council in conjunction with the Department of the Environment, Community and Local Government.

Architecture / Building Standards Unit Dept of the Environment, Community & Local Government

22 July 2015



Martin Riordan (Chair) Retired County Manager Cork County Council

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ⁱ (Fire Services Acts 1981 and 2003) Fire Services Act, 1981 Fire Services Act, 2003, Part 3

⁽Building Control Act, 1990) Building Control Act, 1990 (Building Control Act, 2007) Building Control Act, 2007 (Building Control Act 2014) Building Control Act 2014

iii (Building Regulations, 1997 - 2014) Building Regulations

^{iv} (Building Control Regulations, 1997-2015) <u>Building Control Regulations</u>

 ^v (Building Control Amendment Regulations (BCAR), 2014) <u>BCAR Regulations</u>
 ^{vi} (Multi-Unit Developments Act 2011) <u>MUD Act 2011</u>

vii (Industrial Research and Standards (Fire Safety) (Domestic Furniture) Order, 1995) <u>S.I. No. 316/1995</u>