An Roinn Tithíochta, Pleanála agus Rialtais Áitiúil
Department of Housing, Planning and Local Government

FIRE SAFETY IN COMMUNITY DWELLING HOUSES

CODE OF PRACTICE FOR FIRE SAFETY IN NEW AND EXISTING COMMUNITY DWELLING HOUSES

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An Stiúrthóireacht Náisiúnta um Bainistíocht Dóiteáin agus Éigeandála
National Directorate for Fire and Emergency Management

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Note: The publications, *Guide to Fire Precautions in Community-Based Residences for Mentally Handicapped or Mentally Ill People*, published by the Department of the Environment (1st edition (1989) and 2nd edition (1992)), are withdrawn.

CHAPTER 1
INTRODUCTION

1.1 Purpose of this code of practice

This code of practice is published by the Minister for Housing, Planning, Community and Local Government under Section 18(A) of the Fire Services Acts 1981 & 2003.

This code of practice has been developed by the Department of Housing, Planning, Community and Local Government, the Health Service Executive (HSE), Health Information and Quality Authority (HIQA), Chief Fire Officers Association (CFOA), and non-government organisations (NGO's) specialising in community care, in conjunction with fire safety consultants and architects, to provide guidance for fire safety in community dwelling houses.

This document is designed to provide guidance on fire safety in community dwelling houses with up to six residents, with or without resident carers. These community dwelling houses are generally small in scale. The number of carers required will depend on the needs of the residents.

The intended users for this code of practice are designers, specifiers, property managers and staff working on/in community dwelling houses. Acknowledging the technical detail provided, it is assumed that those using this document have appropriate qualifications and experience.

Providers of community buildings have found that these projects are nearer to residential dwellings in scale. Guidance provided pre-2017 considered these dwelling houses to be 'residential institutional' / 'other residential' (purpose group 2(a) or (b)), which attract more onerous requirements appropriate to larger scale buildings. The application of these greater requirements has posed difficulties for housing providers endeavouring to avail of existing housing stock.

Housing providers wish to provide community dwelling houses with a homely and non-institutional environment. Complying with the requirements for residential institutional buildings tends to create an institutional environment which is not appropriate to these community dwelling houses.

The Government's National Housing Strategy for People with a Disability 2011 – 2016 sets out the framework to support people with disabilities to live as independently as possible within community based settings. The vision, set out in that strategy, is to facilitate access for people with disabilities to the appropriate range of housing and related support services. The services should be delivered in an integrated and sustainable manner, and promote equality of opportunity, individual choice and independent living. This should be achieved within the mainstream housing environment.

Section 0 of Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses provides for a classification of residential building Dwelling house Purpose Group 1(d) – community dwelling house which may have no more than one storey, the floor level of which is more than 4.5 m above ground level, occupied as a group home, under the management of a statutory or voluntary organisation providing supported living and residential services.

These buildings typically have a maximum of three storeys, including ground level. (See table 1)

1.2 Scope of this code of practice

The purpose of this code of practice is to assist persons in discharging their statutory fire safety responsibilities. This guidance concerns itself with fire safety. While this code of practice is aimed primarily at persons having control, such as owners, occupiers and managers, particular aspects of this code of practice, such as those concerning fire prevention and action in the event of a fire, are relevant to staff and maintenance personnel.

Residents should be assessed by appropriate professionals to determine their potential for independent living, and be selected as being capable of living in domestic scale residences, with or without support/supervision. It is recommended that residents should be capable of recognising a fire occurrence / alarm and exiting the dwelling house or have a sufficient level of support to evacuate the dwelling

The assessment should be carried out in respect of all residents occupying or intending to occupy a community dwelling house, and subsequently as required to reflect changes in

need and circumstances, but no less frequently than on an annual basis. Where applicable, staffing levels must be sufficient to allow for evacuation, bearing in mind any disabilities residents may have.

NOTE: High dependency living, for example where bed evacuation or specific evacuation aids are required, is not covered by this code of practice.

1.2.1 Building users

These community dwelling houses will normally be used by:

- children[1],
- people with mental health difficulties[2],
- people with intellectual disability[2],
- people with physical disability[2], or,
- people capable of living without constant support or supervision.

Note 1 Children

Under the Child Care Act 1991 a child is defines as “A person under the age of 18 years excluding a person who is or has been married.”

Note 2 People with mental health difficulties, intellectual disability and / or physical disability:

The Disability Act 2005 states that “disability”, in relation to a person, means a substantial restriction in the capacity of the person to carry on a profession, business or occupation in the State or to participate in social or cultural life in the State by reason of an enduring physical, sensory, mental health or intellectual impairment.

1.2.2 Types of dwelling house covered

The dwelling houses covered by this code of practice are outlined in Table 1.

Table 1	Dwelling house type (existing and new buildings)
1	Single storey community dwelling house
2	Two storey community dwelling house [ground and first floor]
3	Three storey community dwelling house [ground, first and second]
	Buildings with basements are not included under this code of practice.

These dwelling houses would normally be served by a single staircase.

A maximum of eight (8) bedrooms will be accommodated within a dwelling house, with an upper limit of six (6) residents. There is no limit on the number of resident carers, provided the maximum upper limit of eight (8) bedrooms is not exceeded.

This does not preclude dwellings with less than 8 bedrooms operating as a community dwelling house and complying with this code. Considerations other than fire safety may recommend lower limits on the number of persons permissible in a community dwelling house.

1.3 Interpretation

Many aspects related to the suitability of premises are of a technical nature. While this code of practice should be readily understood by the providers of community dwelling house accommodation, many of the recommendations contained in Chapter 3 in particular will need to be interpreted and implemented by suitability qualified and competent persons.

The guidance contained in this code of practice applies to:

- new community dwelling houses (purpose group 1(d)),
- existing dwelling houses being put to use as a community dwelling house (purpose group 1(d)), and,
- existing community dwelling houses (purpose group 1(d)).

Existing community dwelling houses should be the subject of a fire risk assessment, taking into account the recommendations of this code of practice. A methodology such as that outlined in Appendix A should be applied to prioritise and programme any required works or measures.

It is recognised that, as existing community dwelling houses are located in many different building types, a degree of flexibility in the implementation of the recommendations of the code of practice in particular instances may be appropriate. The provisions of the document are an aid to, and not a substitute for, professional judgement and experience.

Where practical difficulty arises in complying with a particular provision of this code of practice, an alternative solution may be utilised, provided an equivalent level of fire safety is achieved. In these instances, compensating measures may be utilised, where it may be possible to offset a shortfall in a particular provision by some other enhanced safety provision. The application of fire safety engineering principles may provide a means of demonstrating that an equivalent level of fire safety is achieved.

A reference to a technical specification is to the latest edition (including any amendments, supplements or addenda) current at the date of publication of this code of practice. However, if this version of the technical specification is subsequently revised or updated by the issuing body, the new version may be used as a source of guidance, provided that it continues to address the relevant requirements.

The diagrams in this code of practice are not drawn to scale. They are intended to illustrate points under discussion, and should not be interpreted in any other way.

1.4 Legal provisions

1.4.1 Fire Services Acts, 1981 and 2003

The primary legislation relating to fire safety in buildings in Ireland is The Fire Services Acts, 1981 and 2003, and the Regulations made under these Acts.

The Fire Services Acts, 1981 and 2003 require persons having control of premises to ensure that their premises achieve and maintain an adequate standard of fire safety in order to safeguard occupants. This may be achieved by ensuring that adequate escape routes, structural fire precautions, emergency lighting, protection against fire spread, fire detection and alarm systems, fire safety management and training of staff are provided.

Section 18(2) of the Fire Services Acts, 1981 and 2003 is quoted as follows: -

“It shall be the duty of every person having control over premises to which this section applies to –

(a) Take all reasonable measures to guard against the outbreak of fire on such premises,

(b) 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,

(c) Ensure that the fire safety measures and procedures referred to in paragraph (b) are applied at all times, and

(d) 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 18(3) places a duty on every person to take reasonable care for their own fire safety and that of others on the premises.

1.4.2 Safety, Health and Welfare at Work Act, 2005.

The Safety Health and Welfare at Work Act, 2005 is also relevant in the context of community dwelling house accommodation being a place of work where this arises.

1.4.3 Health Act 2007 (Care and Support of Residents in Designated Centres for Persons (Children and Adults) with Disabilities) Regulations 2013

The framework for the regulation of residential services for children and adults with disabilities consists of the Health Act 2007 as amended.

The requirements within this framework relating to fire precautions are covered specifically under Regulation 28 (Fire Precautions). It is the responsibility of the registered provider to ensure that their responsibilities under Regulation 28 are met.

Community dwelling houses may be considered designated centres and as such come within the remit of HIQA who monitor and inspect this type of service provision.

1.4.4 Building Regulations, 1997- 2017.

The Building Regulations, 1997- 2017 are supported by Technical Guidance Documents B (Fire Safety) which have been published under Article 7 of the Building Regulations, 1997, for the purpose of providing guidance on how to comply with Part B of the Second Schedule to the Regulations. Responsibility for complying with the Building Regulations rests primarily with the owners, designers and builders of buildings. Local building control authorities are responsible for overseeing compliance with the Regulations and have powers of inspection, and can, where necessary, undertake enforcement action to ensure compliance.

1.5 Application of this code of practice

From a fire safety perspective, the premises should be suitable for its intended use. This means that certain essential fire safety features appropriate to the use of the premises as a community dwelling house should be provided. In addition, a proactive fire safety management policy is required to minimise the risk of a fire occurring and to ensure the safety of residents and staff, as well as others on the premises, in the event of fire.

Based on this two-pronged approach, the guidance is set out in two principal areas, as follows:

- Chapter 2 sets out the requirements for an effective fire safety management policy appropriate to community dwelling house accommodation, and

- Chapter 3 sets out the principal fire safety measures required for all new and existing buildings used as community dwelling houses, for the purpose of complying with the general duty of care under the Fire Services Acts 1981 and 2003.

Compliance with the recommendations in this code of practice will ensure that the premises is suitable for its intended use from a fire safety perspective, and that the essential fire safety features appropriate to the use of the premises as a community dwelling house have been provided.

1.6 Alternative solutions

Nothing in this code of practice is intended to prevent the use of different or superior designs, standards, systems or methods of fire safety, from those detailed in the code, provided that at least an equivalent level of safety is achieved.

The methods used to demonstrate equivalency should be based on fire safety engineering principles and the application of professional judgement.

CHAPTER 2
MANAGEMENT OF FIRE SAFETY

2.1 General

As stated in Chapter 1, persons in control of community dwelling houses have a statutory responsibility to take all reasonable measures to prevent the occurrence of fires and to ensure as far as reasonably practicable the safety of residents, staff, and other occupants, in the event of fire occurring on the premises. The occupants on the premises also have responsibilities in relation to fire safety.

This chapter provides standardised procedures for the development and implementation of a fire safety programme which should be an integral part of the day-to-day management and operation of a community dwelling house.

2.2 Fire safety programme

A fire safety programme incorporating arrangements for the following should be prepared for each individual premises:

- prevention of outbreaks of fire, through the establishment and application of day-to-day fire prevention practices;
- instruction and training of staff on all matters relating to fire safety; (see 2.4)
- emergency fire procedures and evacuation drills;
- provision of fire safety training and instructions to residents;
- inspection and maintenance of fire protection equipment;
- maintenance of the building and its fittings and services;
- maintenance of escape routes;
- liaison with the fire authority and assistance to the fire brigade; and
- keeping of a fire safety register (see appendix C).

A fire safety programme will only be effective if it is implemented in total, and monitored on a regular basis by the persons in control of the dwelling.

Most of the areas covered in this Chapter are matters of good housekeeping. They can generally be implemented without significant cost implication and will result in an immediate improvement in fire safety standards in a premises.

2.3 Fire prevention

Fire prevention measures are a key element in the fire safety management of community dwelling houses. Fire prevention measures help reduce or eliminate the risk of fires occurring. These are essentially items that relate to good housekeeping practices, periodic inspections, and the diligent application of safety rules. The following fire prevention measures are recommended for adoption in the day-to-day running of community dwelling houses.

2.3.1 Rubbish and waste

Combustible waste materials such as waste paper, wrappings, etc. are frequently the materials first ignited in fires. Proper arrangements should be made for collection and removal of waste at regular intervals. Pending removal, rubbish and waste should be stored in suitable containers at a designated location and away from sources of ignition. Staff and residents should be made aware of the importance of keeping all areas of the premises clean and tidy. Rubbish and waste should not be allowed to accumulate in stair ways or escape routes.

2.3.2 Smoking and electronic cigarettes

Smoking and careless disposal of smokers' materials is one of the most common causes of accidental fires. Where permitted, smoking (incl. electronic cigarettes) should be restricted to approved designated areas. It is recommended that "No Smoking" signs be displayed in areas where it is forbidden. Smoking should be prohibited in bedrooms, stores and laundries/utility rooms. In areas where smoking is permitted, suitable ashtrays should be provided. Ashtrays should be emptied frequently into metal bins, and any smouldering material should be extinguished beforehand.

Electronic cigarettes are a potential ignition source. The ignition source can be either from the heating element, the battery within the electronic cigarette, or more often the charging device.

2.3.3 Gas cylinders / cartridges

Liquefied petroleum gas (LPG) cylinders or cartridges should not be utilised or stored inside any building used as a community dwelling house. LPG cylinders should be sited in accordance with Diagram 22 of TGD J-Heat Producing Appliances and IS 813-Domestic Gas Installations.

2.3.4 Electrical appliances

Staff and residents, where appropriate, should be instructed in the correct use of electrical equipment, and to report defective electrical equipment. Defective equipment should not be used. Appropriate repairs should only be carried out by competent persons. Equipment should be switched off when not in use. Residents should be advised as to the correct use of electrical appliances which may be provided in their bedrooms; care should be taken with the use of appliances such as hair dryers, curling irons, etc. The use of multi-socket extension leads should be discouraged.

NOTE: Inspection and testing of the electrical installation in community dwelling houses is dealt with in Section 3.9 of this code of practice.

2.3.5 Kitchens

Good housekeeping practices are essential for fire safety in kitchens. Cookers, extract fans, extraction hoods, filter ducts, and ancillary equipment should be regularly cleaned of oil, grease, and dust. Equipment should be serviced regularly. Gas, oil, and electrical cut-off switches and valves should be provided in clearly marked and accessible areas, situated away from the equipment which they serve.

Occupants, where appropriate, should be instructed on how to prevent fires occurring, by:

- not leaving cooking operations unattended,
- taking care not to overheat fats or oils,
- not over filling cooking pans, and,
- not leaving combustible materials (for example, towels, etc.) over stoves.

2.3.6 Laundry / utility rooms

Laundry / utility rooms pose particular fire hazards, as detailed below.

(a) Spontaneous combustion can occur in compacted fabrics which have been tumble dried. Tumble dryers should have automatic cooling at the end of the drying cycle.

(b) Fabrics should not be over dried and tumble dryers should be unloaded immediately after use and left empty. Tumble dried fabrics should be separated and folded as soon as practical, but, in any case, should be loosened to dissipate heat on being taken from the machine. Ironing equipment should be switched off when not in use.

(c) Smoking should be prohibited in utility rooms.

(d) Fluff or lint, which is extremely flammable, can accumulate in laundries. A programme should be instituted to remove build-up of such materials from appliances and filters.

2.3.7 Room heaters.

The use of open solid fuel fires, stoves, gas inset, or fire effect appliances located within a specifically designated fire place should be subject to a risk assessment of their use. In all cases they should be provided with a suitable fire guard.

Where individual heaters are deemed necessary, they should be subject to a risk assessment and used only in accordance with manufacturer's instructions. The use of LPG naked flame or exposed element heaters is not permitted.

2.3.8 Candles

Candles can be a source of ignition for a fire. Candles should only be used following a risk assessment by the management of a community dwelling house. Place candles, tea candles, and night lights in a suitable heat resistant secure holder. Never leave lighted candles unattended and never place them close to combustible decorations or to curtains. Never put them directly on a combustible surface.

2.3.9 Furniture and fittings

Furniture and fittings should be of a standard that cannot be easily ignited or do not contribute to the rapid spread of fire. The use of flame retardant materials will substantially reduce the fire risk.

Ideally, the use of furnishings, beds and bedding, and synthetic materials which are easily ignited, or have rapid spread of flame characteristics, should be avoided wherever possible.

It should be noted that furnishings treated with flame retardant treatments may have a limited wash life before the effectiveness of the flame retardant is diminished. To maintain the protection, the manufacturer's/supplier's instructions should be complied with. If in any doubt about the flame retardant treatment of any product, advice should be sought from the supplier.

The covering materials of upholstery should be maintained free of cuts and tears, and filling materials should not be exposed. Any defects should be reported, to facilitate repair or removal.

2.3.10 Fire doors

Fire doors are an important part of the fire defence system and should normally be kept closed. The occupants should be made aware of the vital role which such doors play, and of the importance of not propping or wedging them open. Signage on fire doors such as "Fire Door - Keep Shut" signs need not be displayed on each fire door. As part of their training, staff should be made aware of which doors within the premises are designated fire doors. Staff and residents will be responsible for ensuring that all fire doors are kept shut and not wedged open. In situations where swing free door closers linked to an automatic alarm system are fitted, doors may be kept in the open position (see 3.3.5).

2.3.11 Oxygen

Oxygen poses a special hazard. High concentrations of oxygen can cause materials to burn extremely rapidly, and some materials which are not normally considered combustible can burn in an enriched oxygen atmosphere. Oxygen enrichment can occur in clothing, upholstery, or bedding. Oxygen is also dangerous when in contact with grease or oil. Smoking should not be allowed where oxygen is used or stored, and there should be suitable instruction and warning signs. Staff should be aware of the inherent dangers of using oxygen, and be trained in safe handling and use.

Oxygen cylinders should preferably be stored in a secure outdoor location. If stored indoors, they should not be in corridors, stairways or near exit doors or beside any fires, naked lights, oils, or grease. It should be ensured that equipment is not leaking and the storage location is adequately ventilated

2.3.12 Hot works

Adequate fire precautions in the form of method statements should be provided by the relevant contractor when hot works or any other hazardous activity is undertaken.

2.4 Staff training

Staff should receive instruction and training in the fire precautions appropriate to the community dwelling house, as well as in emergency evacuation procedures, and they should be issued with a written copy of individual duties and responsibilities. Staff to whom specific duties have been assigned should be given appropriate instruction and training in those duties.

A record of the training undertaken by the staff should be kept in the Fire Safety Register for each premises.

Staff should receive training and instruction in relation to:

- the fire prevention measures indicated in 2.3,
- the action to be taken on hearing the fire alarm,
- the action to be taken on discovering a fire,
- the evacuation procedure devised for the premises,
- the layout of the building including escape routes,
- the location of fire fighting equipment,
- the location of the main fire alarm control and its operation,
- the procedure for calling the fire service,
- the role of fire doors in controlling fire and smoke spread,
- arrangements for assisting the fire service,
- fire control techniques, including the use of first aid fire fighting equipment, and,
- the procedure for nightly fire safety checks.

Emergency evacuation training of all staff should be carried out at least every two (2) years.

2.5 Fire emergency procedures and evacuation drills

If a fire or fire alarm warning occurs in a community dwelling house, it is imperative to respond effectively by calling the fire service, evacuating the house, and controlling the incident, if safe to do so, until the arrival of the fire brigade. Accordingly, a predetermined plan should be put in place, outlining the procedures to be adopted, as follows:

- a procedure for raising the alarm,
- a procedure for investigating automatic alarms,
- a procedure for calling the fire service,
- an self-evacuation procedure for the residents and staff,
- an evacuation procedure for residents with support / specific needs (personal emergency evacuation plan – PEEP),
- an evacuation procedure for persons other than residents and staff (for example, visitors, or contractors),
- a procedure for fighting the fire, using first aid fire fighting equipment,
- a procedure for reporting to a pre-determined assembly point and informing a designated person(s) of the situation,
- a procedure for accounting for each person on the premises, and,
- a procedure for assisting the fire service, on their arrival.

Residents should be informed of the procedures involving action or participation on their part.

NOTE: Personal emergency evacuation plans (PEEPs) essentially match the needs of the person with a disability to the capabilities of the egress design, and should be regularly reviewed and updated. (See IWA Best Practice Access Guidelines Chapter 8.)

To assess the effectiveness of the predetermined plan and preparatory training given, drills which simulate fire and fire alarm warning should be carried out a minimum of twice per year. One of these drills should take place during the hours of darkness. Staff and new residents should receive induction training on emergency evacuation.

The objectives of drills are generally:

- to familiarise persons in control with their roles,
- to test the availability and effectiveness of staff training,
- to test arrangements for an emergency situation,
- to identify shortcomings in the emergency procedures, and,
- to allow residents to practise self-evacuation.

Each drill should be reviewed afterwards, and procedures revised, if necessary. Drills should be recorded in the Fire Safety Register of each community dwelling house.

2.6 Fire safety instructions

Written instructions, outlining the action to be taken by the occupants on the discovery of a fire or on hearing the fire alarm, should be displayed in a prominent position, and also within any staff bedroom. These instructions should be diagrammatic in form as appropriate. Where appropriate, instructions should be accompanied by a simple floor plan showing schematically the location of exits and alternative storey exits, where provided.

An example of the type of notice required, together with an example of the fire safety instructions to occupants, is given in Appendix B.

2.7 Inspection and maintenance of fire protection equipment

The safety and protection of the occupants in the event of a fire will depend greatly on the reliable functioning of fire protection equipment, such as fire detection and alarm systems, emergency lighting systems, fire doors, and first aid fire fighting equipment. Management should ensure that such equipment is operated and maintained according to the appropriate standards.

All such equipment should be checked on a regular basis. If faults or deficiencies are discovered, they should be noted. Corrective action should be taken as soon as possible, and appropriate steps should be taken to prevent a recurrence. In addition to regular in-house checks specified in the Fire Safety Register, equipment should be maintained and serviced at recommended intervals by competent persons, and a record kept of this work. Maintenance contracts should be arranged with competent companies or persons. (See appendix C)

2.8 Maintenance of the building, fittings, and services

Hazardous situations may develop if the condition of the building itself deteriorates over time. The integrity of walls, doors or floors which are part of fire compartmentation or the protection of escape routes should always be maintained.

The fittings, equipment, and services in the building may cause or contribute to fire. Arrangements should be made for the regular checking of furnishings and fittings, electrical installation and appliances, gas-burning appliances, heating, and kitchen and laundry equipment. A record of these checks, including deficiencies and remedial or maintenance work should be kept in the fire safety register (see 2.11, below).

2.9 Maintenance of escape routes

In the event of a fire, occupants should be able to evacuate the community dwelling house quickly and safely, by way of route(s) protected from fire and smoke, and free from obstruction. This can only be achieved if escape routes are unobstructed, if fire resisting doors are closed during emergencies, and if exit doors are readily available at all times while the premises is occupied. If any obstruction is noticed on the escape route, it should be removed immediately and any necessary steps taken to prevent a recurrence.

Regular inspection of escape routes should be carried out to ensure that:

- escape routes are not obstructed, and are immediately available for use,

- escape routes are adequately illuminated by the main and emergency luminaire. (see 3.3.13),
- exit doors are capable of being readily openable at all times,
- curtains, drapes, or hangings are not placed across or along an escape route in a manner which would impede or obstruct escape,
- floor coverings, rugs, and mats are fixed or laid so that they do not present a trip or slip hazard during an evacuation, and are not used to prop open doors,
- fire resisting doors along escape routes are kept closed at all times unless they are held open with devices linked to the fire alarm system, and,
- external areas at or near exits are kept free of obstructions that might impede an occupants' escape to a place of safety.

2.10 Liaison with the fire authority, and assisting the fire service

It may be appropriate to liaise and consult with the fire authority, with the following objectives:

- familiarisation of the fire service with the premises,
- to ensure the availability of access and appropriate facilities for the fire service, and,
- advice on fire safety matters generally.

2.11 Fire safety register

A fire safety register should be kept as a complete record of all fire safety matters relating to the community dwelling house. This register should be kept at the community dwelling house at all times, be kept up-to-date, and should be available for inspection.. See sample checklist in Appendix D

CHAPTER 3
FIRE SAFETY MEASURES

3.1 Introduction

This chapter describes the principal fire safety measures required for all new and existing community dwelling houses as described in Table 1, in section1.2.2 of this document.

The fire safety measures required for a building to be used as a community dwelling house are principally related to ensuring that, should a fire occur, it will be detected at an early stage, and adequate means of escape are provided for safe evacuation of the premises.

If an outbreak of fire occurs, large quantities of smoke and gases may be produced. Smoke and hot gases, if left unrestricted, may travel considerable distances within a building, and will present a direct threat to life. Visibility also is considerably reduced - affecting the viability of escape routes within and from the building. The spread and development of a fire and its products should, therefore, be limited by the construction elements of the building, such as walls, floors and corridors, until all the occupants have evacuated safely and the emergency services have been alerted.

To reduce the risk of accidental fires caused by faulty building services (such as electrical installations, gas services and heating systems), it is important that these services have been installed to correct standards and have been adequately maintained.

If the emergency services are required, it is important that their vehicles and personnel will be able to gain access to the site and building without undue delay.

3.2 Principal fire safety measures.

Guidance on the principal fire safety measures is set out in the following sections of this chapter.

3.3 Means of escape in case of fire

- horizontal escape routes
- vertical escape routes

3.4 First aid fire fighting equipment

3.5 Internal fire spread (linings)

3.6 Internal fire spread (structure)

3.7 External fire spread

3.8 Access and facilities for the fire service.

3.9 Building services

3.3 Means of escape in case of fire

3.3.1 Introduction

The provisions in this section and section 3.6 are concerned with the measures necessary to ensure reasonable facilities for means of escape in case of fire, and with structural fire precautions necessary to safeguard escape routes.

Dwelling houses will generally have a single escape stairway, and there is a risk that this may become unusable, due to smoke. Protection of the escape route is, therefore, required. Windows, if suitably located and constructed (see 3.3.10), can in some situations provide an alternative means of escape. With increasing height, windows become unsuitable for escape, but may be useful for rescue purposes.

Adequate protection in new build is achieved by compliance with Section 1 of Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses. Existing buildings occupied as a community dwelling house should be provided with a level of protection at least equivalent to that specified in section 1 of TGD B Volume 2.

3.3.2 Escape route

The means of escape provisions consist of horizontal escape routes (corridors) and, in the case of upper storeys, the vertical escape routes (stairways).

The horizontal escape routes are those parts of the escape route, from any part of the building, to a stairway in the case of upper storeys, or to an exit directly from the building to a place of safety.

The vertical escape routes are the stairways that lead from an upper storey to a place of safety outside the building at ground level.

In single storey buildings the means of escape will consist of horizontal escape routes only. Multi-storey buildings will require a combination of vertical and horizontal escape routes.

As a general principle, given the limited size, area and occupancy numbers of these buildings, a single means of escape will be provided from upper floor levels. It is only in larger premises that the distances to the final exit, or the internal layout, is such that alternative escape routes may be required. In such cases refer to the guidance in TGD B.

3.3.3 Travel distance

As a general principle, most buildings falling within the scope of this code will comprise single direction escape by way of horizontal and vertical escape routes. Generally in dwelling houses, the application of travel distance limits is not appropriate. However in the case of community dwelling houses, a limit of 10m travel distance is recommended within individual bedrooms.

3.3.4 Protection of escape routes

Horizontal and vertical escape routes from a building should be provided with fire resisting construction. This principally relates to corridors and escape stairways and applies to the enclosing construction, including walls and doors.

3.3.5 Fire doors

All fire resisting doorsets should be fitted with an automatic self-closing device, capable of closing the door from any angle and against any latch fitted to the door, with the exception of the following:

- fire doors to service ducts or cupboards which are normally kept locked shut,
- doors to toilets, bathrooms and shower rooms

Where a self-closing device would be considered a hindrance to the normal use of the dwelling a free swing type self-closing device to IS EN 1155 operated by the fire detection and alarm system would be acceptable.

All new fire doors installed shall be permanently identified in accordance with the recommendations of Appendix B of TGD B Volume 2, to indicate the period of fire resistance, the manufacturer, year of manufacture, and other pertinent details. Every fire door (i.e. the complete fire door assembly) should be installed in accordance with manufacturer's instructions and should be supported by a fire test report and assessment from an accredited laboratory. This report should indicate that the complete assembly meets the required performance.

In existing buildings, where the existing frame/door has been assessed by a competent person and is found to meet the equivalent standard of a 20 minute fire resisting frame / door, it need not be replaced. Where the frame has been assessed as meeting the fire resistance, the door may be replaced with a fire resisting door leaf. All hardware associated with these doorsets must be compatible with a 20 minute fire resisting door assembly.

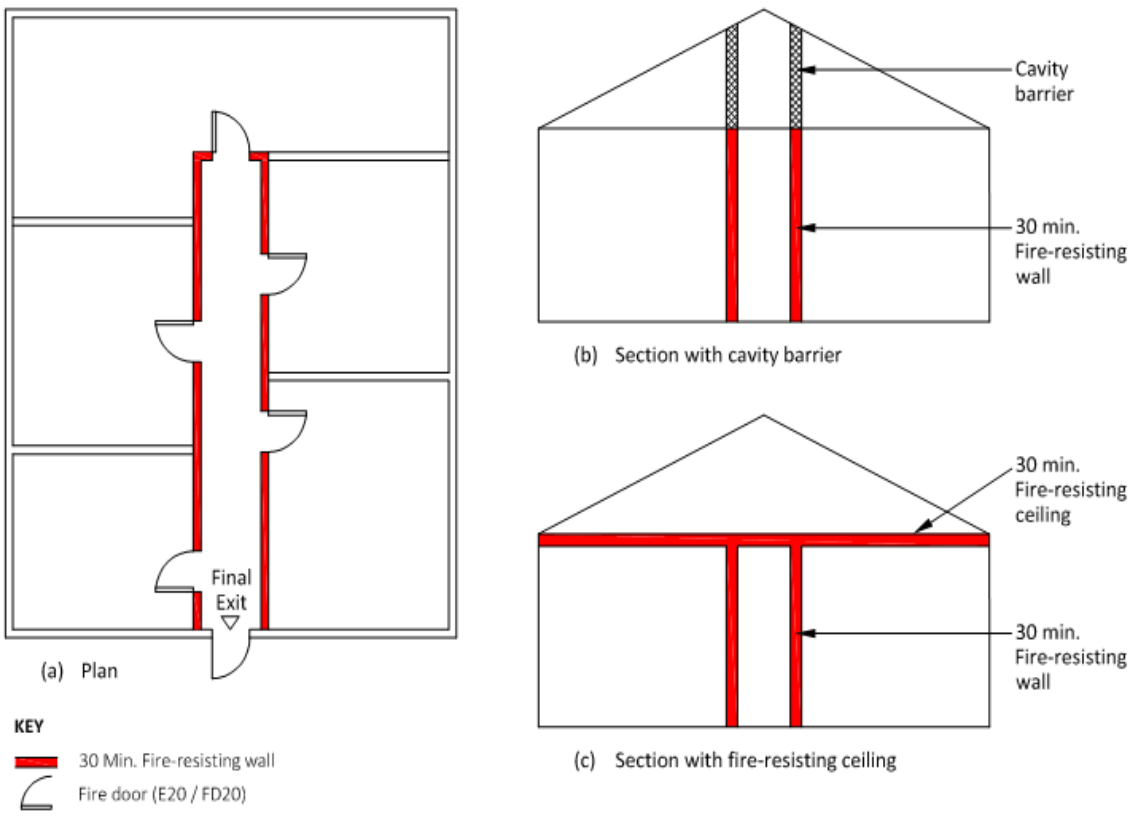
Further guidance on fire doors is given in Appendix B, TGD B Volume 2 2017.

3.3.6 Corridors

All corridors should be constructed as protected corridors. The corridors should be enclosed in minimum half hour fire resisting construction and E20/FD20 fire rated doorsets. (See diagram 1(a))

The fire resistance should be extended vertically into the attic space by the use of fire resisting construction or the provision of cavity barriers above the enclosure to the corridor/stairway (See diagram 1(b)). Alternatively a 30 minute fire resisting ceiling may be provided throughout the dwelling house. (See diagram 1(c)).

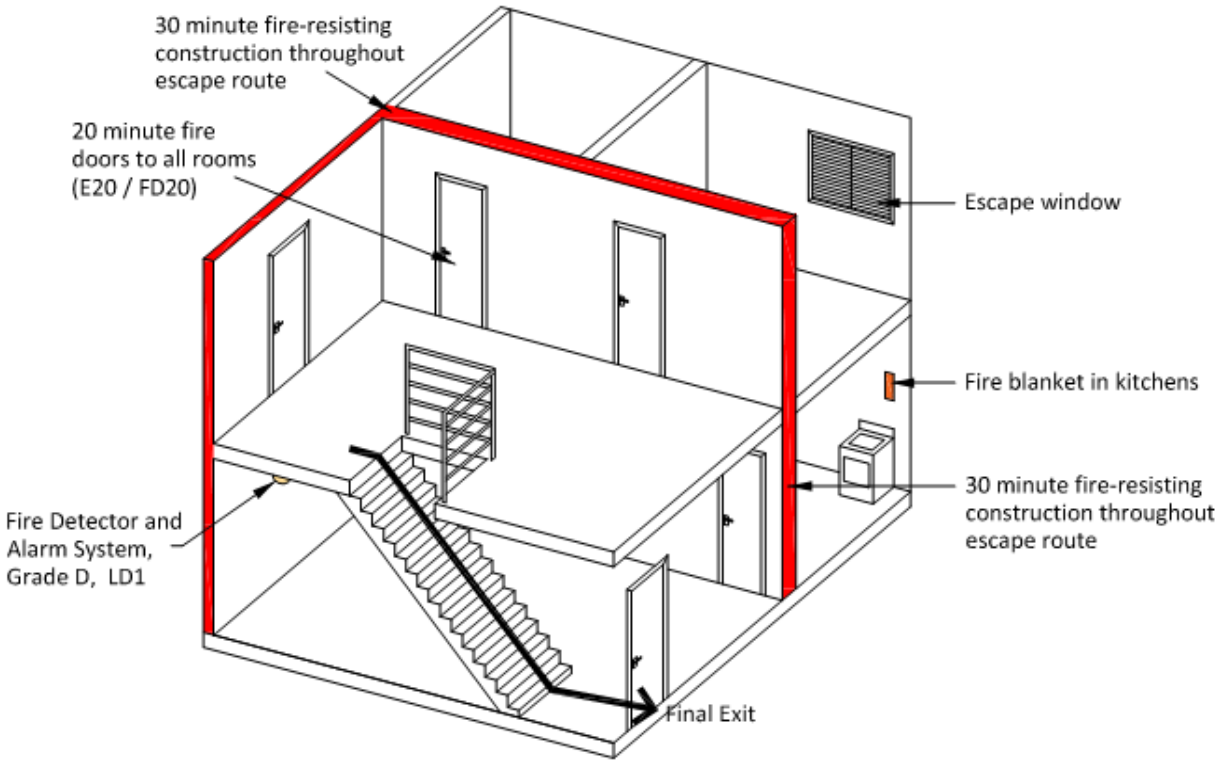
Diagram 1 – Protection of Corridors **Para 3.3.6**



3.3.7 Escape stairs

Escape stairs, and associated hallway / landings, where habitable rooms open directly into the stairway enclosure, should be enclosed in minimum half hour fire resisting construction and E20/FD20 rated doorsets as shown in Diagram 2 below.

Diagram 2 – Protection of Escape Stairs and associated hallways/landings



3.3.8 External stairs

Where more than one escape route is required from a storey, the second route may be by way of an internal or external escape stair. An external stairs should comply with the requirements of TGD B.

3.3.9 Fire resisting enclosure

The fire resisting enclosure to protected corridors, subdivision of corridors, and enclosures to escape stairs, are to be carried full storey height to the underside of the floor or roof above, or cavity barriers are to be installed in the roof void on the line of the fire resisting walls / partitions.

Alternatively, the ceiling throughout the top floor should be constructed to achieve 30 minutes fire resistance rating (integrity and insulation). Access hatches in fire rated ceilings should be $E30S_a$/FD30S rated.

The fire resistance of walls, partitions and ceilings directly below the attic within existing community dwellings should be determined by a competent person, and upgraded where deemed necessary. A risk assessment in accordance with Appendix A should be carried out to determine the priority of the works.

3.3.10 Windows / rooflights

All community dwelling houses (Purpose Group 1(d)) should be provided with windows / rooflights suitable for escape or rescue in accordance with the recommendations of Technical Guidance Document B Volume 2.

Where a risk assessment envisages a security risk in these dwelling houses as a result of these readily openable windows, an audible alarm may be provided to detect if a window has been opened without authority.

3.3.11 Doors on escape routes

Final exit doors should only be fitted with a lock or fastening which is readily operated, without a key, from the side approached by people making their escape.

Similarly, where a secure door is operated by a code, combination, swipe or proximity card, biometric data, or similar means, it should also be capable of being overridden from the side approached by people making their escape.

Electrically powered locks should return to the unlocked position when any of the following occur:

(a) on operation of the fire alarm, or

(b) on loss of power or system error, or

(c) on activation of a manual door release unit (Type A) conforming to IS EN 54-11:2001+A1:2006 positioned at the door on the side approached by people making their escape.

3.3.12 Inner rooms

Bedrooms should not be inner rooms. All rooms that are inner rooms should comply fully with the recommendations of Technical Guidance Document B Volume 2.

3.3.13 Emergency lighting

A minimum of one self-contained emergency luminaire should be provided to corridors, hallways, landings and stairways. The emergency luminaire should;

(a) provide horizontal illuminance on the floor along the centre line of an escape route of not less than 1Lux, and the central band consisting of not less than half of the width of the route shall be illuminated to a minimum of 50% of that value, provide full illuminance within 5 seconds of the failure of the normal lighting supply,

(b) maintain the level of illuminance for not less than 3 hours, and,

(c) be provided with batteries rated for at least 4 years normal operation.

This does not preclude the dual use of a fitting to meet both the artificial lighting needs and that of escape luminaire, provided it meets the above requirements.

If the escape route is not apparent, and, through risk assessment, it is deemed that exit signposting is required, the signposts should be provided in accordance with S.I. 299 of 2007 Safety Health & Welfare at Work (Signs) Regulations 2007.

3.3.14 Fire detection and alarm system

The fire detection and alarm system (FDAS) should be designed to comply with the requirements for a Category LD1 life safety system, as defined in I.S. 3218:2013 -*Fire detection and alarm systems for buildings - System design, installation, commissioning, servicing and maintenance*, and should thus be designed to provide automatic detection and alarm throughout the premises. Smoke detectors should be provided in escape routes, while smoke or heat detectors may be used, as appropriate in other rooms.

Additionally, a fire alarm control switch should be installed in conjunction with the LD1 FDAS, in a position where it is easily accessible, to facilitate testing of the system.

3.4 First aid fire fighting equipment

3.4.1 Introduction

Strategic positioning of portable extinguishing equipment throughout a community dwelling house enhances the fire protection of the building, by enabling an attack to be made on a

developing fire, in its early stages, by suitably trained staff. Portable extinguishing equipment does not of itself offer protection, unless persons are trained in its proper, safe and effective use.

Fire-fighting equipment should be provided, using:

- portable fire extinguishers, and,
- fire blankets.

Given the limited size of the premises to which this code of practice applies, hose reel coverage is not deemed necessary.

3.4.2 Portable fire extinguishers

Portable fire extinguishers should be provided in community dwelling houses, and should be manufactured to an appropriate standard, such as I.S. EN 3-7 : 2004 + A1 2007 : *Portable Fire Extinguishers* or equivalent, and be installed in accordance with the recommendations of I.S. 291 :2015 *: The Use, Siting, Inspection and Maintenance of Portable Fire Extinguishers* or equivalent. They should comply with the following general requirements:

(a) They should generally be located in conspicuous positions, on brackets, stands or purpose-made housings, where they can be readily seen and easily available for use. Where there is a possibility of misuse, they may be located in secured rooms or enclosures, where staff readily have access to them.

(b) The most suitable locations for extinguishers are near to room exits, escape corridors, escape stairways, lobbies and landings; extinguishers should not be positioned away from exits unless they are necessary to cover a particular hazard. Where there is a possibility of misuse, they may be located in secured rooms or enclosures, where staff readily have access to them.

(c) Extinguishers should be readily accessible and available for immediate use at all times, and should be so situated that it is not necessary to travel more than 20 m to reach an extinguisher.

(d) Extinguishers should be mounted so that the carrying handle of large, heavy extinguishers is not more than 1m from the floor, and smaller extinguishers should be mounted so that the handle is not more than 1.5m from the floor.

(e) The operation of extinguishers is affected by temperature, and they should not be exposed to storage temperatures outside the operational range marked on the extinguisher; in particular, extinguishers should not be placed over or close to heat producing appliances.

3.4.3 Fire blankets

Fire blankets may be used to deal with fires involving clothing, or with cooking fires. At least one light duty fire blanket, 1.2m by 1.8m in size, in compliance with I.S. 415: 1988: *Fire Blankets*, should be fitted in each kitchen.

3.5 Internal fire spread (linings)

3.5.1 Introduction

To reduce the risk to people if there is a fire, there is a need to consider how best to control or restrict the spread of fire and smoke. The majority of people who die in fires are overcome by smoke and gases. It is important to ensure that, in the event of fire, the rate of fire growth is restricted in its early stages. Although the linings of walls and ceilings are not usually the first items to ignite in a fire, they can still have a significant impact on the fire development, its spread and growth rate. The spread of fire can therefore be inhibited by paying attention to the lining materials used on the walls and ceilings.

Flame spread over wall and ceilings is controlled by providing for the lining materials or products to meet given performance levels in tests appropriate to the materials/products involved. The extent to which this is necessary is dependent on the location of the linings.

The surface of the walls and ceilings should comply with the classifications indicated in Table 3 below for the different locations.

Parts of the wall linings within any room may be a class lower than that specified in Table 3 above (but not lower than Class 3), provided the total area of those parts in any room does not exceed one half of the floor area, subject to a maximum area of 20m^2 and the area of any one part should not exceed 5m^2 and should be separated from any other such part by a distance of not less than 2m. These variations do not apply to circulation spaces. Circulation spaces should achieve Class 1 (National) or Class C – s3, d2 (European) as a minimum.

Table 3 - General Provisions – Wall and ceiling lining classification

Lining location	Class of Lining	
	National	European
Circulation spaces	Class 1	Class C – s3, d2
Toilets /Bathrooms/shower-rooms	Class 3	Class D – s3, d2
All other rooms	Class 1	Class C – s3, d2

Guidance on new build community dwelling houses is given in Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses. For existing dwellings (that are being put to use as community dwelling houses) and existing community dwellings this guidance would also be appropriate.

3.5.2 Thermoplastic materials

Thermoplastic materials in ceilings, roof lights and lighting diffusers provide a significant hazard in a fire. Burning droplets can rapidly increase the fire growth rate, and the smoke produced is normally dense and toxic, and can produce extremely hazardous conditions.

Windows, roof lights, or lighting diffusers made from thermoplastic material should not be used in protected escape stairs. However, thermoplastic materials may still be used with limited application for some ceilings, roof lights, or light fittings with diffusers, in other areas.

In rooms (not circulation spaces), external windows containing thermoplastic materials should achieve TP (a)(rigid) classification. Internal glazing containing thermoplastic materials, where present, should meet the classification set out in Table 3 above.

Where lighting diffusers are used, they should achieve a classification of TP (a) (rigid) or a classification of TP (b) which should meet the limits set out in Table 2.1 and Diagram 8 of Technical Guidance Document B Volume 2.

3.6 Internal fire spread (structure)

3.6.1 Introduction

Structural fire precautions are required to prevent premature structural failure, and to limit fire spread. Adequate protection in new build is achieved by compliance with Section 3 of Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses. Existing buildings should be provided with a level of protection equivalent to that specified in section 3 of TGD B Volume 2.

3.6.2 Performance requirements

The requirements in respect of internal fire spread (structure) may be met in community dwelling houses if:

(a) the structural elements of the building are capable of withstanding the effects of fire for an appropriate period without loss of stability,

(b) the building is sub-divided by elements of fire resisting construction,

(c) any openings in fire separating elements are suitably protected in order to maintain the fire integrity of the element, and

(d) any hidden voids in the construction are sealed and subdivided to inhibit the unseen spread of fire and products of combustion

3.6.3 Fire resisting construction requirements

(a)The walls (including any glazing) enclosing the entrance hallway, stairway and corridors should be constructed having a minimum of 30 minutes fire resistance incorporating E20/FD20 fire doors. Uninsulated fire resisting glazing (E30) in fixed fanlights is permitted.

(b)Floors should achieve a minimum of 30 minutes fire resistance, with the exception of an existing two storey dwelling, where modified half hour fire resistance rating is acceptable.

(c)Cupboards or storage presses enclosed with fire resisting construction may be included in a protected enclosure. Cupboards and storage presses opening onto a protected enclosure should be fitted with an E20/FD20 fire door (see TGD B Volume 2, Appendix B). The provision of an unenclosed facility, for hanging coats or wet weather equipment, in the entrance hall is permitted.

(d) Semi-detached or terraced houses should have a complete vertical separating wall having a minimum fire resistance of 60 minutes, and constructed in accordance with the relevant recommendations of Section 3 of TGD B Volume 2.

(e) All services that pass through fire resisting construction or fire barriers should be appropriately protected to maintain the integrity of the construction they breach as per the recommendations of Section 3 TGD B Volume 2.

Note: "Modified 30 minute" standard satisfies the test criteria for the full 30 minutes in respect of loadbearing capacity, but allows reduced performances for integrity and insulation.

3.7 External fire spread

3.7.1 Introduction

External walls and roofs should have adequate resistance to the spread of fire over their external surfaces. The spread of fire from one building to another should also be restricted.

Adequate resistance to external fire spread in new build is achieved by compliance with Section 4 of Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses. Existing buildings should be provided with a level of protection equivalent to that specified in section 4 of TGD B.

3.7.2 Performance requirements

The requirements in respect of external fire spread may be met in community dwelling houses if:

(a) the external walls are constructed so that the risk of ignition from an external source, and the spread of fire over their surfaces, is restricted by making provision

(b) for them to have low rates of spread of flame, and in some cases low rates of heat release,

(c) the amount of unprotected area in the side of the building is restricted so as to limit the amount of thermal radiation that can pass through the wall, taking the distance between the wall and the boundary into account, and

(d) the roof is constructed so that the risk of spread of flame and/or fire penetration from an external fire source is restricted, in each case so as to limit the risk of a fire spreading from the building to a building beyond the boundary, or vice versa.

3.7.3 Permitted unprotected areas within external walls

Section 4 of Technical Guidance Document B – Volume 2, recommends that dwelling houses which do not exceed 3 storeys in height and are less than 24m in length (typical community dwelling house) should limit its allowable permitted unprotected areas to those as specified in Table 4:

Table 4 – Permitted unprotected areas in small Dwelling Houses	
Min. distance between side of building and relevant/notional boundary	**Maximum total area of unprotected areas (m^2)**
1.0	5.6
2.0	12
3.0	18
4.0	24
5.0	30
6.0	No limit

For larger community dwellings (where the length is greater than 24m) Table 4.2 of Technical Guidance Document B-Volume 2 should be adopted.

Where the above criteria are not met, it may be necessary to incorporate additional fire resisting construction.

3.7.4 Roof coverings

Section 4.6 of Technical Guidance Document B – Volume 2, limits the proximity to the boundary of those types of roof covering which will not give adequate protection against the spread of fire.

It is recommended that all roofs of community dwelling houses comply with Table 4.3 and Table 4.4 of Technical Guidance Document B – Volume 2.

3.8 Access and facilities for the fire service

3.8.1 Introduction

Buildings should be designed and constructed so as to provide reasonable facilities to assist firefighters in the protection of life and property. Fire brigade vehicle access to the exterior of a dwelling house is required to enable pumping appliances to supply water and equipment for firefighting.

Adequate facilities to assist firefighters in new build are achieved by compliance with Section 5 of Technical Guidance Document B – Fire Safety - Volume 2 Dwelling houses.

Existing dwelling houses being put to use as community dwelling houses should generally be provided with a level of protection equivalent to that specified in section 5.

In the case of a material alteration or extension of an existing dwelling house the access and facilities for the fire service should not be altered in such a way as to reduce the extent or performance of those that existed before the material alteration or extension.

For existing community dwelling houses, access for the fire service should be assessed by a suitably qualified and competent person. Where practical difficulty arises in complying

with requirements for access and facilities, an alternative solution may be utilised, provided an equivalent level of fire safety is achieved (See section 1.3 above). It may be prudent to seek advice from the relevant fire authority.

3.9 Building services

3.9.1 Introduction

Building services, such as electrical, gas and heating, are potential sources of fire, and equipment associated with them should be installed and maintained in accordance with the relevant standards and codes of practice.

The importance of correct installation is emphasised, because these services are often concealed above ceilings and in ducts, and any fire caused by them may remain undiscovered for some time.

3.9.2 Electrical services

Fire can be caused by defective or inadequate installations, or by the use of defective electrical equipment. The electrical installation - comprising wiring, sockets, switches, distribution boards, and other equipment - should be installed, fitted, and maintained in accordance with the Electro-Technical Council of Ireland (ETCI) National Rules for Electrical Installations - ET 101. The completion certificate (where available) for the installation should be kept on the fire safety register.

Existing installations may need to be upgraded. It is important that all replacement, upgrading, extensions, and repairs to the electrical installation are carried out in accordance with the ETCI Rules and an appropriate entry made in the Fire Safety Register. Sufficient socket outlets should be provided for all the electrical appliances in use. Defective installations should be replaced or repaired in accordance with the ETCI Rules.

3.9.2.1 Emergency lighting

Emergency lighting as specified in 3.13 should be regularly inspected, tested and maintained, and an appropriate entry made in the fire safety register.

3.9.2.2 Fire detection and alarm system

The fire alarm system should be inspected, tested, and maintained in accordance with the recommendations of I.S. 3218: 2013, and an appropriate entry made in the fire safety register.

3.9.2.3 Carbon monoxide detectors

Carbon monoxide detectors should be installed in accordance with Technical Guidance Document J.

3.9.3 Gas services

All gas installations, storage tanks, pipe lines, gas burning flues, and other equipment should be installed, fitted, and maintained in accordance with the appropriate standards and codes of practice. A registered gas installer should install and maintain all gas mains and services in accordance with IS 813 Domestic Gas Installations.

All gas installations should be inspected at regular intervals by a registered gas installer and an appropriate entry made in the fire safety register. It is important that all extensions and repairs to the gas installation are carried out in accordance with the relevant codes and standards, and an appropriate entry made in the fire safety register.

3.9.3.1 Gas appliances

All gas appliances should conform to an appropriate standard in use at the time of manufacture. Gas-burning appliances should be installed, fitted, and maintained in accordance with the appropriate standards and codes of practice. Gas appliances should be inspected and serviced at regular intervals and an appropriate entry made in the fire safety register.

3.9.4 Heating systems

3.9.4.1 Space heating

Space heating should preferably be provided by means of a central heating hot water system, using a solid fuel, oil, or gas burning appliance installed to an appropriate standard. Fuel supplies to oil burners should comply with BS 5410: *Code of practice for oil firing*: Part 1 or Part 2, as appropriate and be fitted with a fire valve.

Gas supplies to burners should be fitted with an automatic cut-off valve and comply with the relevant standards indicated in Section 3.9.3 above.

3.9.4.2 Open fires/stoves

Open fires or stoves, if installed, should comply fully with Part J of the Building Regulations, including the requirements for carbon monoxide detectors. They should be properly maintained in safe working order.

3.9.5 Ventilation systems

Where a ducted warm air heating system, or a mechanical ventilation with heat recovery system, or similar, is provided in a dwelling house, precautions should be taken to ensure that it will not contribute to fire spread, or endanger the enclosure to any stairway, particularly with regard to protected stairways. BS 9991:2015 Fire Safety in the Design,

Management and use of Residential Buildings: Section 6, paragraph 35 contains appropriate guidance on these measures.

3.9.6 Portable fire extinguishers

Fire extinguishers should be inspected, maintained, and recharged in accordance with the appropriate standards; fire extinguishers that comply with I.S.EN 3 should be inspected and maintained in accordance with I.S. 291:2015 *Selection, commissioning, installation, inspection and maintenance of portable fire extinguishers* and appropriate entries made in the fire safety register.

GLOSSARY

For the purposes of this code of practice, the following terms and definitions apply

Access room - Room through which passes the only escape route from an inner room.

Access level - A level used for normal access to a building that either incorporates, or leads directly to, a place of safety.

Alternative escape routes - Escape routes sufficiently separated by either direction or space, or by fire resisting construction, to ensure that one is still available should the other be affected by fire.

Basement storey - means a storey which is below the ground storey or, where there is no ground storey, means a storey the top surface of the floor of which is situated at such a level or levels that some point on its perimeter is more than 1.2 m below the level of the finished surface of the ground adjoining the building in the vicinity of that point (however, see Appendix A, Table A2 of Technical Guidance Document B, Volume 2 for concessions where the storey is considered to be a basement only because of a sloping site)

Bedroom - A room within a dwelling, Residential (Institutional) or Other Residential building which is used as sleeping accommodation.

Carer – A person with the appropriate qualifications, skills and experience to provide support to the residents.

Cavity - any space enclosed by the elements of a building, including a suspended ceiling, or contained within an element other than a room, cupboard, circulation space, protected shaft or the space within a flue, chute, duct, pipe or conduit.

Cavity barrier - construction provided to close a cavity or other concealed space against fire penetration or to restrict the movement of smoke or flame within such a space.

Circulation space - a space, mainly used as a means of access or egress, between any room and a final exit door from the building, including corridors, lobbies and stairway enclosures.

Community dwelling house - a dwelling house with a maximum of eight bedrooms which may have no more than one storey, the floor level of which is more than 4.5 m above ground level, occupied as a group home, under the management of a statutory or voluntary organization providing supported living and residential services.

Compartment – A building or part of a building, comprising one or more rooms, a storey or part of a storey, constructed to limit the spread of fire to or from another part of the same building or an adjoining building.

Dead end – An area from which escape is possible in one direction only.

Duct - An enclosed space provided for the introduction or distribution of services in a building.

Dwelling - A house or flat, forming a separate unit of residential accommodation.

Dwelling house - A dwelling that is not a flat (as defined in SI 497 1997).

Emergency lighting - Lighting provided for use when the power supply to the normal lighting fails.

Escape route - A route by which a person may reach a place of safety, and, in relation to any point in a building, a route from that point to a place of safety.

Final exit - The termination of an escape route from a building giving direct access to a street, passageway, walkway or open space, and sited to ensure 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 door - A door, together with its frame and ironmongery, as installed in a building, which is intended to resist the passage of fire and/or gaseous products of combustion, which is capable of meeting specified fire performance criteria for a specified duration.

Fire hazard - the potential for loss of life or injury in the event of fire.

Fire protection - design features, forms of construction, components, systems or equipment in a building, provided to reduce the fire hazard to persons and property by detecting, extinguishing or containing fire.

Fire resisting construction - Construction or elements of construction which are intended to meet specific test criteria under specified fire exposure conditions for a specified duration.

Fire risk - The probability of a fire occurring.

Fire-stopping - A seal provided to close an imperfection of fit or design tolerance between elements, components, or construction, so as to restrict the penetration of smoke and flame.

Flat – Separate and self-contained premises constructed or adapted for residential use and forming part of a building from some other part of which it is divided horizontally.

Habitable room - A room used for living or sleeping purposes but does not include a kitchen having a floor area less than 6.5m^2, a bathroom, a toilet or a shower room.

Ignition source - Heat source or flames which will cause the ignition of combustible materials.

Inner room - A room from which escape is possible only by passing through an access room.

Means of escape - Physical means whereby a safe route or routes is or are provided for persons to travel from any point in a building to a place of safety.

Place of safety - A place, normally in the open air at ground level, in which persons are in no danger from fire.

Protected corridor/lobby - A corridor or lobby which is adequately protected from fire in adjoining accommodation by fire-resisting construction.

Protected stairway - A stairway which is adequately protected from fire in the accommodation through which it passes by fire- resisting construction and discharges through a final exit to a place of safety.

Storey - Any of the parts into which a building is divided horizontally, above or below ground level, but excluding any part of a building situated above the level of the roof or in the roof space, or below the level of the lowest floor, which is intended for the protection of a water tank, or lift motor room, or similar use, and is not intended for, or adapted to be used for habitable purposes, or as a work room, or as a store room.

Travel distance - The 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 fittings.

APPENDIX A - FIRE SAFETY RISK ASSESSMENT METHODOLOGY

RISK ASSESSMENT METHODOLOGY

Introduction

In the case of an existing community dwelling house, a fire risk assessment methodology should be applied to prioritise and program any required works. This appendix is a sample of an assessment method that may be appropriate.

It is recognised that, as existing community dwelling houses are located in many different building types, there will be a need for flexibility in the implementation of the recommendations of this code of practice, in particular instances.

A 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 occurrence.

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 residents, staff, or visitors to the dwelling house. Hazards in this assessment method are referenced as risk items. The Risk items will typically be either management issues (for example, 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 within this code of practice, having regard to the application of professional judgement and experience to the particular circumstances.

The risk items are set out in column 2 of the Risk Assessment Table, (See Table A2 below); they are described in words and, where appropriate, are reinforced with photographic records of the item as observed during the survey.

A 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 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 likelihood of the risk item occurring (and potentially causing ill-effects) 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 are as follows:

1 Negligible harm

2 Minor harm

3 Moderate harm

4 Major harm

5 Extreme harm

A 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:

Table A1 – Risk rating for each risk item

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

A 4 Action plan

In the fourth column of the risk assessment table (Table A2), 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 achieve compliance with this code of practice, either immediately or within a reasonable timeframe.

A 5 Priority ratings for individual action items

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 (early or short term)
Amber rating (6 – 12):	Medium risk: intervention rating B (as soon as practicable)
Green rating (1 – 5):	Low risk: intervention rating C (within a limited time frame)

It should be noted that the application of 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.

Table A2 RISK ASSESSMENT FINDINGS and RECOMMENDATIONS

Risk item number	Risk item description	Photo	Recommended intervention	Impact rating	Likelihood rating	Overall risk rating	Intervention
BUILDING [-----]							
FLOOR LEVEL [-]							
1	Description in words of the unacceptable Risk Item	Photograph illustrating the Risk Item (where appropriate)	Description of remedial action or actions required. In some instances, there may be a short term and a longer term recommendation. In those cases the Consultant is to set out the basis for the 2 stage approach. Columns 5 to 8 are to be colour coded red, amber or green, according to the overall risk rating and as per Table A1 above	X	Y	XY	A, B or C
FLOOR LEVEL [-]							
1							

EXTERNAL ISSUES							
E.1							
FIRE SAFETY MANAGEMENT ISSUES							
M.1							

Table A3 ITEMISED SCHEDULE OF QUANTITIES

Risk Item Number	Recommended intervention	Quantity

FIRE ACTION NOTICE

All community dwelling houses should have in place a fire action notice, which informs staff and residents of the actions to be taken upon discovery of a fire. The fire action notice should be posted in the staff office (if provided) and in an area accessible to residents.

The following are items that may be considered when formulating a fire action notice.

B 1. Raise the alarm

In general the fire detection and alarm system will give early warning of a fire. Even if the system has not been activated, but a fire has been discovered, the alarm should be raised, and the evacuation of the dwelling house initiated.

B 2. Remove people from immediate danger

The primary evacuation route will generally be via the protected stairway or protected corridor.

B 3. Close doors and windows in the immediate area if it is safe to do so

This will help to reduce the spread of smoke and fumes throughout the dwelling. Smoke and fumes are often toxic, and can asphyxiate residents and staff. Smoke and fumes can also obscure vision, affect breathing, and mental and physical reactions.

B 4. Call / ensure the fire service is called

Emergency services contact numbers should be inserted on the notice.

B 5. Assemble at a designated fire assembly point

This should be outside the premises at a pre-designated location identified in the fire action notice.

ACTION IN THE EVENT OF FIRE

(INSERT DWELLING NAME)

IF YOU DISCOVER OR SUSPECT A FIRE

NO MATTER HOW SMALL

	**RAISE THE ALARM IMMEDIATELY**

ON HEARING THE FIRE ALARM

	**LEAVE THE BUILDING BY THE NEAREST AVAILABLE EXIT** **CLOSING ALL DOORS AS YOU LEAVE**
	**CALL 112/999 OR ENSURE FIRE SERVICES ARE CALLED AND INFORM THE PERSON IN CHARGE**
	**REPORT TO THE DWELLING ASSEMBLY POINT**
	(INSERT ASSEMBLY POINT LOCATION HERE)

DO NOT

	**RE-ENTER THE DWELLING UNTIL INSTRUCTED TO BY STAFF OR MANAGEMENT** **DO NOT OPEN DOORS IF YOU SUSPECT THERE IS FIRE ON THE OTHER SIDE**

FIRE SAFETY REGISTER

C.1 Fire safety register requirements

All providers of community dwelling houses should have a record of all the measures taken to ensure compliance with their obligations and responsibilities under fire safety legislation and regulations for each of their community dwelling houses.

A fire safety register should include the following information (which is not exhaustive) to comply with this code of practice.

- Premises details, including the maximum number of residents accommodated, and details of escape routes,
- Address,
- Responsible persons details – the owner / occupier / manager, and any deputies,
- A plan of each floor of the premises on A4 sheets,
- Details of fire safety training provided,
- Fire and evacuation procedures,
- Details of fire evacuation drills – dates, times, description, observations or difficulties encountered, follow-up action,
- Fire fighting equipment – inventory, inspection details, maintenance details,
- Fire detection and alarm system – location of detectors and test point, inspection and maintenance details,
- Emergency lighting – inventory of fittings, inspection details, maintenance details,
- Fire doors – inventory of fire doors, inspection details, maintenance details,
- Electrical installations – completion certificate, where available, details of alterations, details of servicing of appliances,
- Gas installation - certificate of compliance of installation, details of inspections, repairs and alterations, details of servicing,
- Details of all fire incidents and false alarms that occur, and the actions taken as a result.

Building name:
Premises address:
Telephone number:
Fax number:
Email:
Director of services name:
Assigned person name:
Service type:
Number of people on the premises by day:
Number of people on the premises at night:

EMERGENCY NUMBERS

Fire Service, Gardaí 999 / 112
Board Gas 1850 20 50 50
ESB 1850 372 999

C.2 Checklists and schedules

The following lists and schedules refer to the inventory, inspection, testing and maintenance of the building fire protection equipment, as required by the various standards and codes of practice. The main objective is to ensure that all equipment is available, and functions if required in an emergency situation. To achieve this aim, it is important that all checks are conducted as scheduled, and that any defects or deficiencies are remedied at the earliest opportunity.

These forms and associated documentation should be held in a secure location on the premises.

C.2.1. FIRE REGISTER REQUIREMENTS – CHECKS AND MAINTENANCE OVERVIEW

SCHEDULE	WEEKLY CHECKS	ANNUAL MAINTANANCE
FIRE DETECTION AND ALARM SYSTEM	√	√
EMERGENCY LIGHTING SYSTEM	√	√
PORTABLE FIRE EXTINGUISHERS	√	√
FIRE DOOR operation	√	√
HOUSE KEEPING	√	

Weekly checks should be carried out by the designated responsible staff member.

Periodic or annual maintenance inspections and tests should be carried out only by specialist contractors. The contractor should sign the attached inspection report before leaving the building, and the report should be recorded in the fire safety register.

C.2.2. FIRE DETECTION AND ALARM SYSTEM MAINTENANCE

The fire detection and alarm system should be inspected and maintained by a competent person, in accordance with:

I.S. 3218:2013 – Fire Detection and Alarm Systems for Buildings: System Design, Installation and Servicing.

C.2.2A CONTACT DETAILS

PROTECTED PREMISES/AREA ADDRESS			
LOG NUMBER		**COMMENCEMENT DATE**	
RESPONSIBLE PERSON		**From**	**To**
RESPONSIBLE PERSON		**From**	**To**
RESPONSIBLE PERSON		**From**	**To**

SYSTEM DESIGNER	
Name	
Address	
Telephone	
Email	

INSTALLER

Name	
Address	
Telephone	
Email	

SERVICE PROVIDER

Name	
Address	
Telephone	
Email	

MAINTENANCE PROVIDER

Name	
Address	
Telephone	
Email	

C.2.2B INVENTORY OF FIRE ALARM EQUIPMENT

NUMBER OF DETECTORS	AREA OF COVERAGE

Note: An updated drawing, showing all the fire detectors and fire alarm control switch, is preferable.

C.2.2C FIRE DETECTION AND ALARM SYSTEM CHECKLISTS

These checks / tests should be carried out every week by the designated staff member, to ensure that the system is operable under alarm conditions:

A weekly check should be carried out, to:

- Ascertain that the system is in normal operation mode – if not, that any fault indicated is recorded in the fire safety register,
- Ascertain that any fault or warning recorded previously has received attention, and,
- Test the system, by the use of the fire alarm control switch.

FIRE DETECTION AND ALARM SYSTEM WEEKLY CHECKLIST

WEEK.	DATE	INSPECTED BY	DETAILS OF FAULTS	ACTION TAKEN
e.g.	*25/08/14*	*James Dorothy*	*None*	*N/A*
1				
2				
3				
4				
5				
6				
7				

ANNUAL maintenance

Annual maintenance, inspection, and test should be carried out by a competent person and any necessary action taken.

These maintenance, inspections, and tests should be carried out, to ensure that:

- Records in the checklists are noted, and action where necessary is taken.
- The operation of the control switch should be checked.
- A visual inspection should be carried out, to check if structural or occupancy changes have affected the requirements for the siting of detectors.
- Batteries should be replaced, where necessary.
- Any further checks and tests should be made, if specified by installer, supplier or manufacturer.

FIRE DETECTION AND ALARM SYSTEM ANNUAL INSPECTION AND TEST

Overseer:
Address of premise:
Date of inspection and test:
Inspection and test carried out by (contractor name):
Inspection and test carried out by (company name):
Company address:
Telephone number:
I/we hereby certify that the fire detection installation at the above premises has been inspected and tested, and is operating satisfactorily.
COMMENTS

Contractor signature:	Date:
Contractor job title:	
For and on behalf of (company name):	

C.2.3. EMERGENCY LIGHTING SYSTEM

The emergency lighting should be inspected and maintained by a competent person.

C.2.3A CONTACT DETAILS

MAINTENANCE PROVIDER	
Name	
Address	
Telephone	
Email	

C.2.3B EMERGENCY SYSTEM CHECKLISTS

WEEKLY

A weekly check should be carried out to ensure that:

- The indicating lamp in the charging circuit is illuminated.
- Any fault found is logged, and the appropriate actions taken.

EMERGENCY LIGHTING SYSTEM WEEKLY CHECKLIST

1				
2				
3				
4				
5				
6				
7				
8				
9				

ANNUAL MAINTENANCE

Annual maintenance inspection and test should be carried out by a competent person, and any necessary action taken,

.

A function test shall be made by a competent person to ensure that:

- Each self-contained luminaire should be energised from its battery by simulation of a failure of the supply to the normal lighting for its full duration.

- Any further checks and tests should be made, if specified by installer, supplier or manufacturer.

EMERGENCY LIGHTING ANNUAL INSPECTION AND TEST

Overseer:
Address of premise:
Date of inspection and test:
Inspection and test carried out by (contractor name):
Inspection and test carried out by (company name):
Company address:
Telephone number:
I/we hereby certify that the emergency lighting installation at the above premises has been inspected and tested, and is operating satisfactorily.
COMMENTS

Contractor signature:	Date:

Contractor job title:
For and on behalf of (company name):

C.2.4. PORTABLE FIRE EXTINGUISHERS

All the Fire Extinguishers should be maintained and tested in accordance with:

- IS 291:2015 The Use, Siting, Inspection and Maintenance of Portable Fire Extinguishers

C.2.4A CONTACT DETAILS

MAINTENANCE PROVIDER	
Name	
Address	
Telephone	
Email	

C.2.4B PORTABLE FIRE EXTINGUISHERS CHECKLISTS

WEEKLY

An inspection should be carried out to ensure that:

- All fire extinguishers and fire blankets are in their correct locations. If any fire extinguishers and fire blankets are missing, they should be replaced immediately.
- All extinguishers are correctly labelled.

FIRE EXTINGUISHER WEEKLY CHECKLIST

WEEK.	DATE	INSPECTED BY	DETAILS OF FAULTS	ACTION TAKEN
e.g.	*25/08/14*	*James Dorothy*	*One mechanism not working*	*Reported and fixed on 28/09/14*
1				
2				
3				
4				
5				
6				
7				
8				
9				

C.2.4C INVENTORY OF PORTABLE FIRE EXTINGUISHERS

No. of water extinguishers		
No. of foam extinguishers (AFFF)		
No. of CO_2 extinguishers		
No. of dry powder extinguishers		
No. of fire blankets		

NO.	SIZE	TYPE	LOCATION	SERIAL NUMBER
e.g.	*10ltr*	*CO2*	*First Floor Landing*	*WMF-987Y-897-NJH*
1				
2				
3				
4				
5				
6				

ANNUALLY

Annual maintenance, inspection, and test should be carried out by a competent person, and any necessary action taken. Certificates of testing in accordance with IS 291 to be obtained.

PORTABLE FIRE EXTINGUISHERS ANNUAL INSPECTION AND TEST

Overseer:
Address of premise:
Date of inspection and test:
Inspection and test carried out by (contractor name):
Inspection and test carried out by (company name):
Company address:
Telephone number:
I/we hereby certify that the portable fire extinguishers installation at the above premises has been inspected and tested in accordance with IS 291:2015 by me/us, and, to the best of my/our knowledge and belief, complies at the time of my/our test with the recommendations of IS 291:2015, except as stated below:
Details of variation from IS 291:2015

Contractor signature:	Date:
Contractor job title:	
For and on behalf of (company name):	

C.2.5. FIRE DOORS

The fire doors should be inspected, maintained and tested in accordance with:

BS 8214: 2016 Code of practice for fire doors

As part of their training, staff are to be made aware of which doors within the premises are designated fire doors.

C.2.5A CONTACT DETAILS

MAINTENANCE PROVIDER	
Name	
Address	
Telephone	
Email	

C.2.5B INVENTORY of FIRE DOORS

Total number of fire doors

NO.	LOCATIONS
e.g.	*Ground floor – Dining Room*
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

C.2.5C FIRE DOOR CHECKLISTS

WEEKLY

An inspection should be carried out to ensure that:

- All fire doors are operating correctly.
- Every week, fire alarm signals should be used to cause activation of release mechanisms, where fitted, to ensure proper operation. (See C2.2C)

FIRE DOOR WEEKLY CHECKLIST

WEEK.	DATE	INSPECTED BY	DETAILS OF FAULTS	ACTION TAKEN
e.g.	*25/08/14*	*James Dorothy*	*One mechanism not working*	*Reported and fixed on 28/09/14*
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
Etc.				

ANNUALLY

Annual maintenance inspection and test should be carried out by a competent person and any necessary action taken.

The fire resisting doors should be inspected, maintained and tested in accordance with BS 8214: Code of Practice for Fire doors and with BS 7273 where applicable.

All the fire doors should be inspected to ensure that:

- Seals around door are undamaged and in good condition.
- Door leaves are not structurally damaged or excessively deformed or bowed.
- Gaps between the door leaf and the frame are not more than 4mm.
- Hanging devices, securing devices, self-closing devices, and release mechanisms are operating correctly.

FIRE DOOR ANNUAL INSPECTION AND TEST

Overseer:	
Address of Premise:	
Date of inspection and test:	
Inspection and test carried out by (contractor name):	
Inspection and test carried out by (company name):	
Company address:	
Telephone number:	
I/we hereby certify that the fire doors at the above premises has been inspected and tested and are operating satisfactorily.	
COMMENTS	
Contractor signature:	Date:
Contractor job title: For and on behalf of (company name):	

C.2.6. GENERAL HOUSEKEEPING

The control of combustible materials by attention to good housekeeping can reduce the likelihood of fire. Housekeeping inspections should be carried out to ensure there are no combustible materials on or near the escape route, or any items that would inhibit rapid escape.

C.2.6A HOUSEKEEPING CHECKLIST

Weekly

A daily inspection should be carried out to ensure that:

- Escape routes are clear from obstruction.
- Final exit clear from obstruction.
- No rubbish is accumulated within the premises.
- External escape routes are all clear from obstruction.

WEEKLY HOUSE KEEPING CHECKLIST

WEEK.	DATE	INSPECTED BY	DETAILS OF FAULTS	ACTION TAKEN
e.g.	*25/08/14*	*James Dorothy*	*One mechanism not working*	*Reported and fixed on 28/09/14*
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Referenced Standards and Publications

Standards referred to:

I.S. 291: 2015 Selection, commissioning, installation, inspection and maintenance of portable fire extinguishers

I.S. 415: 1988 Fire Blankets

I.S. 813: 2014 Domestic Gas Installations

I.S. 3218: 2013 Fire detection and alarm systems for buildings - System design, installation, commissioning, servicing and maintenance"

I.S. EN 3-7: 2004 Portable Fire Extinguishers - Part 7: Characteristics, Performance Requirements and Test Methods

I.S. EN 54-11: 2001+A1 2006 Fire detection and alarm systems; Manual call points

I.S. EN 1155: 1998 Building Hardware – Electrically powered hold open devices for swing doors – Requirements and Test Method

BS 5410-1: 2014 Code of practice for oil firing installations up to 45kW output capacity for space heating and hot water supply purposes

BS 5410-2: 2013 Code of practice for oil firing installations of 45kW and above output capacity for space heating, hot water supply and steam supply services

BS 7273-4: 2015 Code of practice for the operation of fire protection measures. Actuation of release mechanisms for doors

BS 8214: 2016 Code of practice for fire door assemblies with non-metallic leaves

BS 9991: 2015 fire safety in the design, management and use of residential buildings - Code of practice

Publications referred to:

Building Regulations, 1997 - 2017

Childcare Act, 1991

Disability Act, 2005

Fire Services Acts, 1981 and 2003

Heath Act, 2007

National Housing Strategy for People with a Disability 2011 – 2016

National Rules for Electrical Installations (ET101) (4th Edition, 2008) published by the Electro-technical council of Ireland (E.T.C.I

Safety, Health and Welfare at Work Act, 2005

Safety, Health and Welfare at Work (Signs) Regulations, 2007

Technical Guidance Document B (Fire Safety) Building Regulations, 2006

Technical Guidance Document B (Fire Safety) Volume 2 – Dwelling Houses Building Regulations, 2017

Technical Guidance Document J (Heat Producing Appliances) Building Regulations, 2014