

Regulation of  
Health and Social  
Care Services

# Fire Safety Handbook

A guide for providers and staff of  
designated centres

January 2021

## About the Health Information and Quality Authority (HIQA)

The Health Information and Quality Authority (HIQA) is an independent statutory authority established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

HIQA's mandate to date extends across a wide range of public, private and voluntary sector services. Reporting to the Minister for Health and engaging with the Minister for Children, Equality, Disability, Integration and Youth, HIQA has responsibility for the following:

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.
- **Regulating social care services** — The Chief Inspector within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children's special care units.
- **Regulating health services** — Regulating medical exposure to ionising radiation.
- **Monitoring services** — Monitoring the safety and quality of health services and children's social services, and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.
- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland's health and social care services.
- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

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## About the Chief Inspector of Social Services

The Chief Inspector of Social Services (referred to in this handbook as the Chief Inspector) has overall responsibility to register and inspect designated centres in Ireland. The functions and powers of the Chief Inspector are set out in Parts 7, 8 and 9 of the Health Act 2007 (as amended) (from now on referred to in this handbook as the Act).

The Chief Inspector sits within the Regulation Directorate of the Health Information and Quality Authority (HIQA) and is supported in discharging its functions under the Act through inspectors of social services and two support teams:

- Regulation Business Services (RBS)
- Regulatory Practice Development Unit (RPDU).

The Chief Inspector currently regulates designated centres for older people, people with disabilities and young people in special care units.



**Older persons**



**People with disabilities**



**Young people in  
special care units**

The role of the Chief Inspector includes inspecting and registering designated centres through assessing compliance with the regulations<sup>‡</sup> and nationally mandated

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<sup>‡</sup> The regulations are as follows:

- Health Act 2007 (Care and Support of Residents in Designated Centres for Persons (Children and Adults) with Disabilities) Regulations 2013
- Health Act 2007 (Registration of Designated Centres for Persons (Children and Adults) with disabilities) Regulations 2013
- Health Act 2007 (Registration of Designated Centres for Persons (Children and Adults) with Disabilities) (Amendment) Regulations 2015
- Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) Regulations 2013
- Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) (Amendment) Regulations 2016
- Health Act 2007 (Registration of Designated Centres for Older People) Regulations 2015
- Health Act 2007 (Care and Welfare of Children in Special Care Units) Regulations 2017
- Health Act 2007 (Care and Welfare of Children in Special Care Units) (Amendment) Regulations 2018

standards.◇ This is achieved through desktop inspection of information received from the provider about the designated centre, on-site inspection in designated centres and ongoing assessment of compliance by centres with the regulations and national standards.

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— Health Act 2007 (Registration of Designated Centres) (Special Care Units) Regulations 2017.

◇ These are:

- *National Standards for Residential Services for Children and Adults with Disabilities* (2013)
- *National Standards for Residential Care Settings for Older People in Ireland* (2016)
- *National Standards for Special Care Units: November 2014* (published 2015).

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## Introduction to fire safety in your centre



In recent decades, fires in residential centres for older people and people with disabilities in Scotland, Canada, the US and Australia have led to a significant number of fatalities amongst residents. Official reports have determined that many of these deaths could have been avoided with better fire safety management and more active fire awareness in centres.

Fire is a real risk to the safety of people living in designated centres. The risk of injury and death from fire is significantly higher in older age groups and for people with disabilities, due to impaired mobility, cognitive disabilities, frailty and use of medication, amongst other reasons. While the needs of children living in designated special care units are different, they also face significant risks from fire.

The potential impact from fire risk is greatly increased if providers do not mitigate against fire risk, and do not have suitable fire prevention and oversight measures in place in the centre. Experience from other jurisdictions has shown that implementing good fire safety management policies, effective fire precautions and comprehensive staff training will help to protect residents,<sup>‡</sup> and children, staff and visitors from the consequences of fire.

This *Fire Safety Handbook* applies to those designated centres currently regulated by the Chief Inspector of Social Services within the Regulation Directorate of the Health Information and Quality Authority (HIQA).

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<sup>‡</sup> The term 'resident' includes children temporarily living in designated special care units, and children and adults living in other types of designated centre.

The Chief Inspector has produced this handbook to help providers<sup>‡</sup> to meet their fire safety obligations under the:

- Health Act 2007 (as amended) (referred to as 'the Act' from this point on)
- the relevant regulations under the Act
- the relevant national standards related to fire safety, and which are contained in the appendices of this handbook.

It is important to note that providers have obligations under other legislation related to fire safety and building control<sup>1</sup> which are outside of the remit of the Chief Inspector. However, to support providers in the development and implementation of a comprehensive fire safety programme, some of this legislation is referenced in places throughout this guidance. This guidance will not detail all aspects or specifics of other legislation and the provider should ensure their design team or fire safety professional refers to the appropriate legislation.

The handbook is written to assist both existing providers and intended providers to meet their responsibilities under the legislation mentioned above. This may be for the renewal of their registration or for a new designated centre being registered. For the purposes of this guidance a new designated centre may be within an existing building and might not always be within a newly constructed building(s).

We would like to thank the participants from the Chief Fire Officers Association (CFOA), Disability Federation of Ireland (DFI), HSE Estates, National Directorate for Fire and Emergency Management (NDFEM), a directorate within the Department of Housing, Planning, Community and Local Government (DoHPCLG), National federation of Voluntary Bodies (FEDVOL), Nursing Homes Ireland, RQIA and Tusla for their contribution to the development of this handbook.

## Review of fire safety literature

In developing this *Fire Safety Handbook*, the Chief Inspector reviewed relevant literature to identify the experience and learning arising from a number of fatal fires in residential centres in other jurisdictions and other related material. The Chief Inspector also reviewed relevant legislation and explored research into fire safety in

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<sup>‡</sup> Throughout this document, the term 'providers' refers to registered providers or intending providers of designated centres in the Republic of Ireland.

<sup>1</sup> For example the Fire Services Acts, 1981 and 2003 places a duty on "persons having control over a premises".

the residential social care environment.

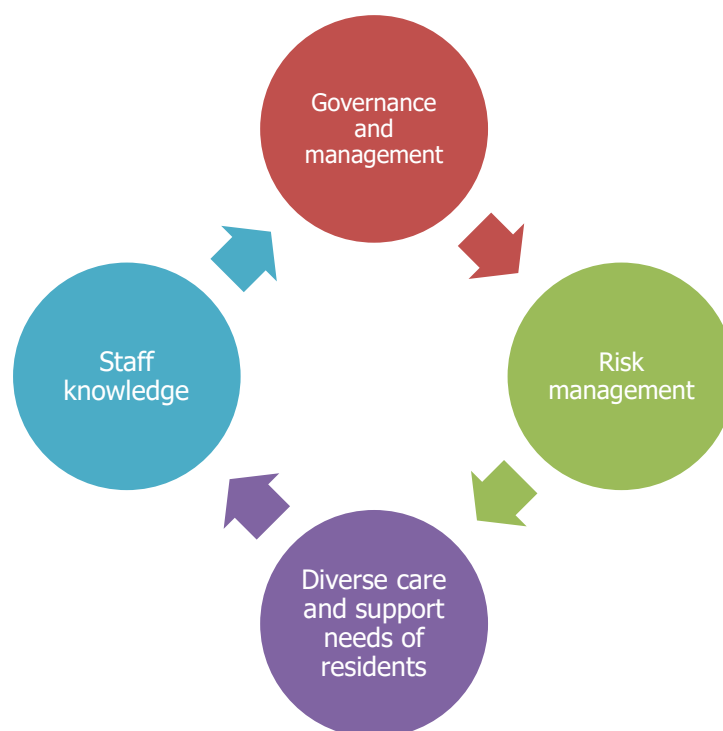
### Key themes from review of literature

Four intrinsically linked key themes central to developing a fire-safety culture in a designated centre emerged from this review of literature:

1. Governance and management.
2. Risk management.
3. Diverse care and support needs of residents.
4. Staff knowledge.

These are shown in Figure 1.

**Figure 1. Four key themes which are central to fire safety in a centre**



The literature review highlighted the need for **comprehensive governance**, management and oversight of fire safety risk in designated centres and **risk management and assessment**. Governance failures, such as inadequately identifying and managing risk in a service, including physical risks and day-to-day practice, have been contributing factors to the cause of a number of fires in residential centres in other jurisdictions.

Another key theme that emerged in the review, and which is directly associated with risk management, is the need for providers to reflect the **diverse and changing**

**needs of the residents** when they are developing a fire safety programme. The research outlined that fire and evacuation procedures cannot be entirely standardised and applied to every scenario or service due to the varied cognitive and physical abilities of residents living in a centre.

The importance of **staff having strong knowledge** of fire safety procedures (such as what to do when they hear the fire alarm go off, including alerting the fire services) and a clear understanding of the risk of fire were among other recurring themes in the literature. The research suggested that it cannot be presumed that staff will know what to do in the event of a fire and, therefore, they must be given adequate training and instruction.

### **The need for a fire safety programme**

Providers are responsible for protecting residents from fire and for complying with the relevant requirements. Therefore, to achieve this, they must develop and implement an effective fire safety programme. The review of literature (see the bibliography at the end of this guidance document and the case studies throughout) shows that management and staff must ensure that:

- there is good governance of fire risk in place
- the risk of fire is assessed regularly
- proactive steps are taken to reduce the risk of fire
- managers and staff are knowledgeable around the risk of fire and know what to do if a fire breaks out
- ultimately, fire safety measures meet the assessed needs and abilities of the residents living in the centre.

### **Next steps for providers and staff of designated centres**

It is vitally important to have good governance and management structures for fire safety in every designated centre. While inspectors of social services do not act as consultants or advisers to individual providers on how to achieve regulatory compliance, this *Fire Safety Handbook* aims to help all providers to:

- comply with their legal obligations
- develop, implement and sustain a fire safety programme
- develop a strong fire safety culture in designated centres

- drive quality improvement.

Due to the technical nature of some requirements, the narrative will also inform providers whenever a competent fire safety professional should be consulted. The handbook should be read in conjunction with your assessment-judgment framework, guidance on the assessment of your designated centre and the *Regulation Handbook*.

Existing providers should consult this handbook whenever they are reviewing fire precautions, which are required under the Health Act 2007 (as amended) regulations. It will help them to self-assess their own fire safety programme and to identify the strengths of such programmes and where improvements are required.

For new providers, the handbook aims to help ensure that they are aware of and will be able to meet the requirements of the regulations and national standards under the Act. It aims to fully inform them in relation to risk management and to help ensure that this aspect of ensuring the safety of residents is ready to be assessed by our inspectors during the registration application.

The handbook will not answer all questions relating to fire safety for each individual designated centre, but it will highlight overarching principles of best practice. However, in some areas, the handbook describes how providers can improve fire precautions in their designated centres to a point that exceeds compliance with the minimum requirements of the regulations.

## **Your notes**

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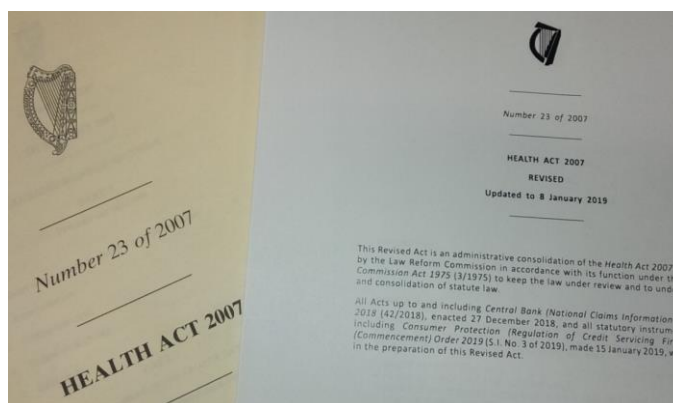
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## Chapter 1. The regulatory framework for fire safety



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### Introduction

This handbook emphasises the difference between compliance with those health and social care regulations made under the Health Act 2007 (as amended), such as managing fire risk on a day-to-day basis, and the building regulations, such as having a fire safety certificate.

Providers of designated centres should comply with those regulations made under the Health Act 2007 (as amended) in relation to fire safety in designated centres. They should thoroughly familiarise themselves with these regulations and continually self-assess themselves against them.

These regulations are the minimum legal requirement which providers must meet in their operation of designated centres. Meanwhile, the national standards for health and social care services are intended to support quality improvement, and providers should strive to meet and exceed them.

### Regulations and national standards relevant to fire safety

While there are specific fire precaution regulations for designated centres under the Health Act 2007 (as amended), an effective fire safety programme will need to be developed and incorporate and reflect many other different regulations made under the Act.

The provider must consider fire safety across all relevant regulations and national standards in relation to fire safety in designated centres and prove compliance with them to the Chief Inspector. This will help to develop a fire safety culture in the centre and improve the safety of life for people living there.



The provider will need to demonstrate ongoing compliance with the relevant regulations and national standards under the Health Act 2007 at all times — and not just at significant stages during the designated centre’s registration cycle, such as during the registration application or registration renewal process.

## Other relevant legislation and guidance

The regulations and national standards under the Health Act 2007 (as amended) which are relevant to fire safety in designated centres are outlined in the appendices of this handbook. In addition, the provider must also comply with all other relevant building control and health and safety legislation that affects fire safety in a designated centre, including the following requirements.

### **Fire Services Acts, 1981 and 2003 amendment**

The Fire Services Act, 1981 and the Licensing of Indoor Events Act 2003<sup>±</sup> set out the duties of anyone who controls a premises, in this case, a designated centre. Under this legislation, such individuals are required to have reasonable fire safety measures and procedures in place at all times to ensure the safety of people on the premises. In particular Section 18(2) of the Fire Services Act places a duty on persons having control over the premises (including all designated centres) to “take all reasonable measures to guard against the outbreak of fire on such premises, and to ensure as far as is reasonably practicable the safety of persons on the premises in the event of an outbreak of fire”.

Section 18(3) of this act also places a duty on every person on such premises, including occupants and visitors, to “conduct himself in such a way as to ensure that as far as is reasonably practicable any person on the premises is not exposed to danger from fire as a consequence of any act or omission of his.”

In the case of a designated centre, the person having control over the premises is the registered provider.

Section 22 of the Fire Services Acts gives powers of inspection to authorised persons of a fire authority. A fire authority may serve a fire safety notice where a building, which constitutes a serious danger to life in the event of a fire occurring, is considered to be a “potentially dangerous building” under the act.

### **Building Control Acts 1990 and 2007**

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<sup>±</sup> Licensing of Indoor Events Act 2003 — S.I. No. 15 (PART 3: Amendment of Fire Services Act 1981).

This legislation enables the development of building regulations and building control regulations. The acts also give powers of enforcement and inspection to building control authorities. In general, building regulations apply to the construction of new buildings or extensions and material alterations to, and changes of use of, an existing building. The following documents give guidance on demonstrating compliance with the fire safety aspects of the building regulations:

- Technical Guidance Document B: Fire Safety (2006)
- Technical Guidance Document B: Fire Safety Volume 2: Dwelling Houses Volume 2 (2017).

Whenever a building is newly constructed, materially altered, extended or has undergone a change of use, the provider should ensure that a registered professional<sup>2</sup> working on its behalf has ensured that the design of the building complies with the building regulations and as such demonstrates compliance with the building control regulations.

### **Safety, Health and Welfare at Work Act 2005**

The Safety, Health and Welfare at Work Act 2005 places a legal responsibility on an employer to ensure the health and safety of employees and any third parties affected by the activities of the employees.

The employer must have measures in place for firefighting and evacuation of all staff and anyone else on the premises.

The employer must also have a risk assessment in place for all potential risks, including fire (in this case in the designated centre) and take steps to reduce or eliminate all identified risks. The risk assessments and control measures should be detailed in a safety statement.



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<sup>2</sup> Code of Practice for Inspecting and Certifying Buildings and Works, Building Control Regulations 2014, published by the Department of Environment, Community and Local Government.

## Guidance documents on fire safety

It is essential that providers, building design teams and their fire safety consultants are aware of the needs and requirements of the intended residents and children who will be living in the designated centre (particularly their evacuation requirements) when designing or planning any works in the centre.

Before starting any works, the provider and design team should review the most relevant fire safety guidance documents, including this handbook. They should ensure that the proposed works have been designed and can be managed to meet the needs of the intended residents and children, and meet all regulations.

The provider should ask the design team for the most up-to-date guidance on fire safety compliance when designing a new centre or when renovating an existing centre. Such guidance should also be consulted whenever providers are reviewing fire precautions in the designated centre.

The bibliography at the end of this handbook may be a valuable resource to the provider, design team and fire safety consultant. They provide in-depth guidance for the design and layout of the premises and on the safe management and operation of the designated centre.

## Code of practice for community dwelling houses

The Department of Housing, Planning and Local Government has published a code of practice for fire safety in new and existing community dwelling houses to assist people to fulfil their fire safety responsibilities for these houses. The code states that these houses can have up to six residents living in them, but there is no limit on resident carers once there are no more than eight bedrooms in the house.

Houses tend to be similar to people's homes in size and layout. Because of the smaller size of community dwelling houses, the fire precautions are different to those required for larger nursing homes or larger residential buildings.

This code of practice should be considered by providers who have one or more houses that collectively make up a designated centre, and which have capacity for six or less residents in each house. It should be read and used in conjunction with, and not instead of, the Health Act 2007 (as amended) and its associated regulations.

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## Key distinctions between the care regulations for designated centres and the building regulations



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## Compliance with regulations under the Health Act 2007 (as amended) versus compliance with the building regulation

Providers cannot rely on an expert opinion of compliance with building regulations or an expert opinion of compliance with a fire safety certificate to prove to the Chief Inspector that the designated centre complies with the separate regulations made under the Health Act 2007 (as amended).

In many cases, a provider will have an opinion of compliance with the building regulations or an opinion of compliance with a fire safety certificate under the building control regulations that was issued by an architect or engineer on the completion of construction works in the designated centre.

The opinion of compliance with building regulations, or a fire safety certificate, usually means that the building has been designed and constructed in line with the building regulations or in line with the requirements of the fire safety certificate granted and issued for the building.

However, neither opinion means that the use or management of the building complies with the regulations made under the Health Act 2007 (as amended), or that its design or layout addresses the complex fire safety needs of existing or prospective residents and children in a designated centre.

Regulations made under the Health Act 2007 (as amended) require providers to undertake a number of specific fire precaution measures in the designated centre. These requirements are outlined in:

- Regulation 28, care and welfare regulations for older people centres
- Regulation 28, care and support regulations for centres for people with disabilities
- Regulation 26(1) of the 2018 designated special care unit care and welfare

amendment regulations and Regulation 26(2) of the 2017 care and welfare regulations.

The provider should refer to the relevant regulations for full text of the regulations. An opinion of compliance with fire safety requirements under the building regulations does not automatically mean compliance with the above regulations 26 and 28. For example, the building control regulations do not relate specifically to the actual management of fire safety in buildings. The building control regulations note that:

“Whilst the provisions of the Building Regulations do not relate to the management of fire safety in buildings, it would be appropriate and prudent to consider the importance of this aspect to the overall fire safety of a building. The guidance contained in this document has been based on the assumption that there will be an adequate level of fire safety management when the building is in use.”

Therefore, if a provider fails to routinely review the ever-changing fire safety needs of residents and children living in a designated centre, the provider will not comply with the fire precaution requirements of the regulations made under the Health Act 2007 (as amended). This will be the case even if the building in which the centre is operating may comply with the fire safety requirements of the building regulations.

So, it is essential that providers are aware of this important distinction and at all times operate the designated centre in line with the care and welfare or care and support regulations. The provider may engage competent fire safety professionals, from time to time, to ensure ongoing compliance with the building regulations, and with the regulations made under the Health Act 2007 (as amended).

## Regulatory framework conclusion

- It is essential that the provider, building design team and fire safety professional take all available and necessary fire precautions to ensure the safety of all residents, children and staff in the centre.
- Providers of designated centres must meet their legal obligations under the Health Act 2007 (as amended) and associated regulations and national standards.
- Ultimately, the provider is legally responsible for ensuring that fire precautions in the designated centre comply with the requirements of all relevant legislation and guidance.

Various sources of guidance are available for providers to use and refer to, as necessary, when drafting plans for a designated centre or when reviewing fire precautions in the centre.

- It is essential that the provider, building design team and fire safety professional are aware of the needs and requirements of residents and children or intending residents of the designated centre.
- The provider should be aware that it cannot rely on an opinion on compliance with the building regulations or with the issuing of a fire safety certificate to show that the designated centre complies with the regulations made under the Health Act 2007 (as amended).
- Due to the technical nature of some of the regulations, the provider may need the advice of a competent fire safety professional to ensure that fire safety compliance is being achieved and is regularly being reviewed.

This chapter has identified specific fire precaution regulations and has directed providers to other relevant regulations and national standards made under the Health Act 2007 (as amended) that must be considered when developing a fire safety culture in designated centres.

Taken collectively, compliance with these regulations makes these centres safer places to live in.

Equally, we are not expecting providers or staff to become fire safety professionals (when needed, these can be consulted), but the Chief Inspector does want to see tangible evidence of ongoing and sustainable compliance with the regulations and standards listed in the appendices of this handbook.

# Part 1

The chapters in this section cover:

- Chapter 2. Governance and management of fire safety.
- Chapter 3. Support and assistance needs of residents and children.
- Chapter 4. Staff members' knowledge and training.
- Chapter 5. Fire evacuation drills.
- Chapter 6. Fire safety risk assessments.

## Chapter 2. Governance and management of fire safety

### Introduction

The provider must have a good fire safety programme in place in the designated centre in order to demonstrate good governance of fire safety to the Chief Inspector. This programme will ensure that the fire precautions taken will at all times minimise the risk of fire in the centre. Case study 1 below shows the potentially devastating consequences of poor governance of fire safety risks in a residential centre for vulnerable people.

#### CASE STUDY 1:

##### Rosepark Care Home: 14 residents died



#### Profile of fire

Rosepark Care Home, Uddingston, Lanarkshire, Scotland (2004) — residential centre for older people. A fire started in a cupboard on the upper level of the premises which contained an electrical distribution board and combustible materials: 14 residents died.

#### Commentary

*Rosepark Care Home: An Examination of the Facts* is based on the findings of a fatal accident enquiry into this fire and was published in 2011 by the then Strathclyde Fire and Rescue in Scotland. The fatal accident inquiry report into the fire by Sheriff Principal Brian A Lockhart had found that a number of fire safety risks had not been identified in the centre's premises prior to the fire.

For example, the centre was required to have overhead self-closing devices fitted to all bedroom doors. The inquiry report found that on the night of the fire, the majority of these self-closing devices had been manually disconnected. This action eliminated their use in slowing the spread of fire and smoke, and management had not identified their removal as a risk.

Voids in the floors allowed the smoke to spread through the floors of the centre. There were no smoke dampers in the centre's ventilation system, and as a result, smoke was allowed to spread directly into an elevator shaft which connected the floors of the centre. The centre had no effective fire barriers in the attic; however,



the fire service report did not indicate if this resulted in the spread of the fire.

None of these deficiencies had been identified as possible fire safety risks. It was estimated that the deaths of 10 residents happened within 11 minutes of the fire alarm activating. We believe both the Sheriff's inquiry report and the Strathclyde Fire and Rescue service's examination report into this fire (see bibliography) are essential reading for providers and managers of designated centres in Ireland.



## The provider's responsibilities

In Ireland, providers have a legal responsibility to ensure the safety of everyone in the centre, and a safe service will not rely on regulators to raise concerns.

To show good governance of fire safety, the provider should have a well-defined and effective fire safety programme and take a proactive approach to implementing it. This programme will ensure that the fire precautions taken in the designated centre will at all times minimise the risk to residents and children, staff and visitors from the risk of fire. Such a programme may include the following items, which are discussed in further detail throughout the chapter:

- governance and management
- fire safety programme, including:
  - policies and procedures
  - risk management policy
  - fire precautions
  - fire safety register
  - the financing of fire safety
  - incident review and records
- getting the advice of a competent fire safety professional.

## Governance and management

To demonstrate good governance, providers should lead on and promote fire safety awareness in their centres. Therefore, fire safety should be included as a standard agenda item for management meetings at entity (provider) and designated centre level.

The promotion of fire safety awareness in staff, the identification and management of fire risks and the provision of a service that meets the needs of residents and children are intrinsically linked and cannot exist independently.

In addition to implementing fire safety in line with relevant legislation, the provider should make sure that its services keep up-to-date with new and emerging practices and technologies relating to fire safety.

The governance arrangements should be suitable for the size and complexity of the service provided. There should be clear lines of authority and accountability at all levels for fire safety, which are identified at individual, team and service levels.

Providers should review fire safety and its consequences on the quality of care and experience of the residents and children and include it in the annual review of the designated centre.

## Fire safety programme

Providers should prepare a comprehensive fire safety programme for their centres, with the aim of implementing related policies and procedures. This in turn will help ensure that everyone in the centre is safe from the risk of fire and that all legal requirements are being met.

A strong fire safety programme will ensure that there is continual improvement in every aspect of fire safety and will help embed a fire safety culture in the service's routines. Providers should formally regularly review the fire safety programme and its implementation in order to verify its effectiveness. These formal reviews should include:

- examining policies, precautions, procedures, changing needs of residents and children, and evacuation procedures
- auditing to comprehensively assess how fire safety precautions are implemented in the premises and implementing actions to improve them

- monitoring fire safety training content and attendance so that providers take a proactive approach to ensuring everyone knows what to do in the event of a fire.

A fire safety management programme will support providers to create an open two-way dialogue where staff are encouraged to discuss fire safety concerns. It should include clear oversight of service contracts, preventative maintenance, repairs to equipment and keeping service records up to date.

However, a fire safety management programme will only be effective if it is fully implemented and monitored by the person in control of the centre. Updates on the programme should be reported on in the centre's annual review, which centres are required to produce under the regulations.

## The elements of a good fire safety programme

### 1. Policies and procedures

Under the regulations, providers must have written policies and procedures on fire safety management and risk management. They must be specific and relevant to the particular designated centre, and be fit for purpose. The provider must make sure that they enable the provision of a high-quality, safe service that meets the needs of residents and children.

Fire safety policies and procedures should be implemented in the day-to-day management of the designated centre and should be reviewed for adequacy. They should be updated on an ongoing basis in line with best practice or as often as the Chief Inspector may require. They should also be readily accessible to all staff, including temporary or agency staff.

### 2. Fire safety management policy

A fire safety management policy is a written plan describing how fire safety will be managed throughout the organisation. It should include how the organisation plans, organises, controls, monitors and reviews fire safety precautions. The policy should reflect all legal requirements, guidance and procedures and be specific to the designated centre.

The policy should also include advice from a competent fire safety professional with the intention of assisting the provider to strive towards reaching and exceeding best practice. In so far as possible, the provisions contained in the policy should not impede the day-to-day independence and lived experience of residents and children.

### 3. Fire safety management procedures

The fire safety management procedures are documents that describe in detail the steps to be taken to implement the above policy. They should include advice from a competent fire safety professional and be specific to the designated centre and not an off-the-shelf template. The procedures should be implemented consistently and reviewed and tested frequently to ensure they remain effective and are in line with best practice.

There should be a clearly defined process in place to make sure that changes in the procedures are communicated to all staff and others working in the centre, and that any additional training required is provided. Providers must make sure that all people working in the designated centre know the procedures to be followed and their specific roles under these procedures.

### 4. Risk management policy

Providers should prepare a risk management policy specific to the designated centre. It should be reviewed, updated and implemented consistently and on an ongoing basis in line with best practice and the changing needs of residents and children or as often as the Chief Inspector may require. A risk management policy that is specific to the designated centre includes arrangements for:

- identifying, recording, investigating and learning from serious or adverse events involving residents or children
- responding to major incidents likely to cause death or injury, serious disruption to services or damage to property.

**Appendix 3** at the end of this handbook provides a quick reference checklist on what should be considered as part of the centre's fire safety management policies and procedures.

## 5. Fire precautions

Fire precautions must be specific to each centre, be implemented consistently and be documented and readily available for staff to use. They should be reviewed frequently and always address current fire safety risks. Fire precautions should manage these risks and reflect the changing needs of residents and ensure they can be evacuated safely and quickly within a safe evacuation time (see Chapter 10).

Where the provider operates more than one designated centre, any learning from one centre should, where appropriate, be incorporated into the reviews of the fire precautions in all its other centres. The provider should readily engage with the various regulatory authorities and incorporate any directions, advice or learning from them into its fire precautions.

In so far as is possible, fire precautions should not unnecessarily reduce residents' quality of life. For example, if they wish, adult residents should be facilitated to smoke tobacco in designated smoking areas and with the appropriate controls in place. In addition, the design and location of fire safety signage should be carefully considered so that they do not create an institutional look in the designated centre or make it less homely.

## 6. Review of fire precautions

It is recommended that fire precautions are reviewed annually or more often if it is considered necessary (see **Appendix 3** for a checklist of what to include in the review of fire precautions). The review report should be incorporated into the annual review of the safety and quality of the services in designated centres, as required by the regulations.

A plan for the implementation of reviewed fire precautions should be prepared, presented and updated at each management team meeting, with concerns and decisions recorded in the minutes of these meetings. The plan should include clearly defined actions and timelines and should clearly identify the people responsible for their implementation.

Any changes in precautions or learning arising from the review should be communicated to all relevant staff.

## 7. Fire safety register

The keeping of fire safety records is an important element of proper fire safety management of a premises (the designated centre). Many local county councils have produced guidance and templates<sup>3</sup> to assist in the keeping of records for specific items. For example, the frequency and standard of servicing and testing of fire safety equipment, such as fire extinguishers, emergency lighting, fire detection and alarm systems and so on, in-house fire safety checks and training records.

## 8. Financing fire safety

Proper governance of fire safety may require funding; therefore, the provider should make sure that adequate funding is allocated annually in order to fully implement the centre's fire safety programme and to ensure the centre operates in line with the fire safety requirements of the regulations. The provider should make sure that funding is available for regular servicing and maintenance.

The annual budget should include a contingency fund for ongoing maintenance, and for addressing any identified fire safety deficiencies and the funding of additional fire safety improvements. The Chief Inspector will not accept a lack of funding as an excuse for compromising the safety of residents, children, staff and visitors.

## 9. Incident review and records

The provider should ensure that there are effective arrangements in place for identifying, reporting, recording, investigating and learning from serious incidents, adverse events and near misses. Adverse events and incidents should be managed and reviewed in a timely manner, with the outcomes of such reviews informing practice at all levels and prompting a review and update of the fire precautions as may be necessary.

Arrangements must include the procedure for the appropriate reporting of notifiable events to the Chief Inspector in the required format. For clarification, any records arising from a fire in the designated centre shall be retained for a period of not less than seven years.

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<sup>3</sup> Many of these are publicly available on the county council websites.

## 10. Other elements of a good fire safety programme

### **Accurate statements of purpose**

The provider must make sure that the designated centre's statement of purpose accurately describes the fire precautions and fire safety procedures in the designated centre.

Any risks that affect specific parts of the centre that cannot be reduced to a satisfactory level should be clearly stated in the statement of purpose as restrictions on the use of those parts of the centre. For example, bedrooms accessed by a single escape stairs which would be unsuitable for high-dependency residents and children.

### **Combined operational review of the centre's design and layout**

Whenever providers are:

- a. designing a new centre
- b. converting an existing building for use as a designated centre
- c. taking over an existing centre or
- d. reviewing fire precautions in the existing centre,

they should ensure that the architect or other designer and the project's fire safety professional are fully aware of the care and welfare requirements of the Health Act 2007 regulations and the changing needs of the current or prospective residents and children. They should also be aware of how other regulations affect the operation of the designated centre on a day-to-day basis.

The provider, in consultation with its design team and fire safety professional, should carry out a combined operational review of the design and layout of the premises, taking into account the day-to-day life and needs of the residents or children living in the centre. The review should consider the most relevant fire safety guidance and codes of practice to assure the provider that satisfactory fire precautions are in place. It should include detailed consideration and planning for evacuating residents or children from their bedrooms to a place of safety. It should also consider the staff and equipment resources that will be necessary to assist with their evacuation.

Any shortcomings should be identified and a plan of action prepared to bring the designated centre into compliance with all applicable regulations.

By combining the views and knowledge of the building's designers (whenever possible), fire safety professionals, provider and management, the operational

review report may form the basis for a preliminary fire safety risk assessment (see Chapter 6) that is specific to the designated centre.

It should also help to make the most of the building's design, maximise inherent fire safety within the centre and reduce operational costs arising from restrictive registration conditions or the deployment of additional staff to implement fire safety procedures.

### **Readily available fire safety documents**

All relevant policies, procedures and precautions should be documented and readily available for staff to use. A sample fire safety document checklist is included in **Appendix 3** of this handbook.

### **Getting the advice of a competent fire safety professional**

The provider is legally responsible for ensuring that fire precautions in the designated centre comply with all relevant legislation and guidance. However, the provider may need the technical advice of a competent fire safety professional<sup>4</sup> to advise on its compliance with such legislation and guidance.

The competent fire safety professional may also assist the provider with preparing a comprehensive fire safety management strategy for the centre. The provider may seek this specialist expertise to assist in:

- assessing fire safety risks in the centre
- advising on suitable building compartmentation throughout the centre
- assessing travel distances for escape purposes
- assessing the safe evacuation times from different compartments in the building
- preparing a fire drill programme and reviewing its implementation

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<sup>4</sup> S.I. No. 635 of 2017 Health Act 2007 (Registration of Designated Centres)(Special Care Units) Regulations 2017 states that a competent person means person who possesses sufficient training, qualifications, experience and knowledge appropriate to-

- a) the nature of the fire safety risk assessment, having regard to the size or hazards (or both) of the building to be assessed, and
- b) relevant health and safety requirements in relation to active and ongoing fire safety management.



- reviewing and advising on fire precautions and procedures, including:
  - fire protection and adequacy of escape routes
  - fire doors and glazed door or wall screens
  - compartment walls, floors and ceilings
  - fire separation of roof spaces
  - cavity barriers in void spaces.

### **What a provider should look for in a competent fire safety professional?**

When engaging a competent fire safety professional, the provider should seek a person who has sufficient training, qualifications, experience and knowledge of:

- fire precautions that are required in designated centres
- health and safety<sup>5</sup> requirements of fire safety management
- the operation of a designated centre
- how the needs of residents and children may affect fire precautions
- the identification and assessment of fire hazards and risks in designated centres.

Fire safety experts should have sufficient experience of assessing similar services in order to enable them to accurately assess the level of fire safety risk in the designated centre.

In addition to their understanding of, and expertise in, fire safety and building regulation compliance, competent fire safety professionals must also thoroughly understand the requirements of the regulations made under the Health Act 2007 (as amended).

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<sup>5</sup> Section 8 of the Safety, Health and Welfare at Work Act 2005 [Act](#) requires employers to obtain, where necessary, the services of a **competent person**. Section 2(2) of this Act defines a competent person. A competent person should possess sufficient training, experience and knowledge having regard to the task and the size or hazards (or both) of the undertaking. Suitability must be assessed in the light of the specific intended functions. The competent person should demonstrate knowledge of current best practice in the sector and be prepared to supplement gaps in training. The appointment of a competent person does not absolve the employer of his or her responsibilities under the legislation.

## **Your notes**

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## Chapter 3. Support and assistance needs of residents and children



### Introduction

Older people and people with disabilities in particular may not be able to respond quickly or at all to an emergency. Adults and children may require assistance due to frailty, reduced or lack of mobility and impaired awareness or understanding. Residents and children may be on medication that can affect their ability to respond in an emergency.

Therefore, providers and managers must consider residents and children's support or assistance needs in an emergency when developing a fire safety programme (as set out in the previous chapter). These case studies demonstrate the importance of ensuring that a centre's fire safety plan reflects the assessed and changing needs of the residents living in a centre.

### CASE STUDY 2:

#### Riverview IRA: 4 residents died



#### Profile of fire

Riverview Individualised Residential Alternative (IRA), Wells, New York, USA (2009) — residential centre for people with disabilities. Fire began in external waste bin: four residents died.

#### Commentary

Riverview IRA had been assessed as having met the fire safety requirements of a residential house. However, a grand jury report determined these fire safety requirements were designed for a domestic family setting.

The report outlined that the fire safety requirements had not been suitable for residential housing for people with disabilities, as they had not been designed to meet their needs. The residents living in the centre had been assessed as needing significantly high levels of support in all aspects of daily living.

## CASE STUDY 3:

### Résidence du Havre nursing home: 32 residents died



#### Profile of fire

Résidence du Havre nursing home in L'Isle-Verte, Québec, Canada (2014) — residential centre for older people/supported living. Fire assessed to have started near the kitchen: 32 residents died.

#### Commentary

Before the fire, Résidence du Havre had been found to be mostly in compliance with various building and fire safety codes. However, compliance had been subject to residents of varying levels of cognitive ability living in certain areas of the centre.

To meet fire safety regulatory requirements, the centre had been split into two sections of 'housing' and 'supervised residence'. Only independent residents could live in the housing section, but on the night of the fire it was found that this was not the case.

The inquiry report found that management failed to monitor residents' safety by failing to ensure they were living in parts of the building appropriate to their needs.



## The provider's responsibilities

When preparing the fire safety programme (as set out in the previous chapter), and deciding on what fire precautions are necessary, the provider must consider in detail the care, welfare, support, assistance and evacuation needs of the residents and children.<sup>¥</sup>

This will require the provider to consider what equipment may be required and how many appropriately trained, experienced and skilled staff it will take to safely evacuate residents and children, within the safe evacuation time, in the event of a fire.

Families should be assured that managers are committed to ensuring that residents and children are safe. Residents and families should feel confident that should a fire or a fire alarm activation occur, there are appropriate measures in place to ensure safe evacuation, if required, and that there is a contingency plan in place for residents and children's continued care.

## Needs of residents and children

The recognition of the diverse needs of the residents and children in any designated centre must be considered when preparing the fire precautions and fire safety risk assessment for the centre.

The varying mobility, cognitive impairment or developmental disabilities of some residents and children will affect the levels of staff, equipment and time required to safely evacuate the designated centre.

An effective system should be in place to inform staff of any changes in the needs of residents and children and any changes in the fire precautions and evacuation procedures.

The Chief Inspector recommends that managers specifically consider a resident's safety and evacuation needs during the pre-admission assessment and when assigning bedrooms to residents and children.

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<sup>¥</sup> Both prospective and current residents.

## Pre-admission assessment

Before being admitted to a designated centre, a pre-admission assessment should be completed to identify the specific evacuation needs of residents and children. This assessment is aimed at ensuring the service has the capacity, capability, experience and facilities necessary to support the residents and children and ensure their safety within the designated centre.

When residents and children are admitted to the centre, the measures required to ensure their safety should already be in place and they should only be admitted when safe to do so. This pre-admission assessment should include the following considerations:

- the residents and children's capacity and mobility
- any wishes from the resident to bring in their own furniture or belongings from their home
- equipment requirements, both in terms of their rooms and equipment required for a safe evacuation from the centre
- the availability of a suitable bedroom in a part of the designated centre that meets the fire evacuation needs of the resident
- any revisions required to the fire precautions for the designated centre.

## Assigning a bedroom to a resident

Whenever possible, residents and children should be consulted with about where they are accommodated within the designated centre. However, providers should clearly communicate with residents, children and their families that bedrooms are primarily assigned based on ensuring residents can be safely evacuated in the event of emergency. These decisions take into account the capacity, care and support needs and dependency levels of residents and children.

In centres where bedrooms are shared, the provider should consider the challenges this may pose in terms of safe evacuation of all residents and children from these rooms. When assigning these rooms, the provider should consider the dependency of all residents and children — not only in the multi-occupancy rooms, but within the particular fire compartment that the multi-occupancy rooms are situated in.

Providers should make a conscious effort to accommodate high- and medium-dependency residents and children in those bedrooms which are either the easiest to evacuate or which are located in a part of the centre where the threat from fire is lowest. For example, this may be on the ground floor beside an exit door or in the smallest building compartment.

## Contracts of care

Contracts of care — which are agreed between the resident and the provider — should reflect the possibility that the resident may need to move bedroom in future if their mobility declines and to ensure their safe evacuation.

In such cases, communication and consultation between the provider and the resident or child is crucial to allay any fears or anxieties.

## Safe evacuation of residents and children

In designated centres, personal emergency evacuation plans (PEEPs) should be prepared for each resident or child to ensure that adequate provision is being made for his or her safe evacuation from the centre.

Personal emergency evacuation plans should be in a suitable format. They should be grouped by building compartment and kept in a secure and discreet location, but one which will ensure that they are readily available for staff if an emergency evacuation is required.

It is recommended that these plans should be reviewed regularly in line with the review of the assessed needs of residents and children or more frequently as care and support needs change. This is to ensure they reflect:

- the current evacuation needs of the residents and children
- current location of the residents' and children's bedrooms
- evacuation procedures
- changes in the layout and use of the building or rooms
- changes in staff and staff skill-mix.

The provider must also consider any restrictive practices in place when assessing the evacuation needs and supports for residents and children. During a shift change or handover, the care staff and fire wardens should be notified of any changes in the evacuation needs of residents and children within each compartment in the designated centre.

Guidance in other jurisdictions suggests that a readily accessible 'grab bag'<sup>6</sup> containing essential information on residents and children would support continuity of care should evacuation and relocation of the residents and children be required. If adopted by providers, these 'grab bags' should be secured and discreetly stored in the centre.

### **Personal emergency evacuation plans**

It is recommended that a personal emergency evacuation plan should include:

- a current picture of the resident and relevant information relating to him or her
- information on the ability of the resident to understand the sound of the fire detection and alarm system going off
- information on the ability of the resident to evacuate out of the building
- a description of the staff assistance they will need, including the number and skills of staff for both daytime and night-time evacuation
- the method of evacuation (wheelchair, walking aids, ski sheets or other evacuation aids) for both daytime and night-time evacuation
- supervision requirements after the evacuation
- the date when the personal emergency evacuation plan was last reviewed.

## **Evacuation aids**

Aside from other considerations, the provider should supply and maintain all necessary evacuation aids and equipment. The provider must ensure that the evacuation method and aids used suit the needs of each resident, the layout of the escape routes and the evacuation procedures for the centre.

Enough evacuation aids must be available, and all staff must be trained in the use of any evacuation aids that they may be required to use. All escape routes should be checked regularly to ensure they are kept clear and are suitable for the type of evacuation aids that may be used and to identify any restrictions along those routes. For example, if a resident is to be evacuated in their bed, providers must ensure that beds will easily fit through all doorways and corners along the escape route (see

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<sup>6</sup> Practical Fire Safety Guidance for care homes' issued by Scottish Ministers in terms of Section 61(2) of the Fire (Scotland) Act 2005, Revised February 2014.



Chapters 9 and 10).

### **Your notes**

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## Chapter 4. Staff members' knowledge and training

### Introduction

The evacuation of the centre, or compartment within a centre, will be a stressful situation for staff, residents and children. However, various reports into fire incidents provide evidence that it cannot be presumed that staff will know what to do in the event of a fire.

The following case studies demonstrate the potentially catastrophic outcomes for residents when staff may lack the necessary knowledge of what to do during a fire and the difference that staff knowledge can make when staff know what to do in a fire emergency.

### CASE STUDY 4:

#### Greenwood: 16 residents died



#### Profile of fire

Greenwood Health Center, Hartford, Connecticut, USA (2003) — residential centre for older people. Only 5 out of 12 staff on duty responded to the fire alarm initially: 16 residents died.

#### Commentary

Inadequate staff response contributed to the loss of life in the Hartford fire, the official report said. The investigation report does not refer to the location of the other seven staff members. At one point, three of the five staff who responded to the alarm were assisting one resident, leaving only two to assist in the remainder of the evacuation.

In general, it was found staff did not follow the fire evacuation procedure on the night of the fire. Lack of staff knowledge of how to react was also implicit in other findings of this report; for example, doors not being closed were the primary factor in the spread of smoke throughout the centre, and staff were not enforcing the smoking policy.

The investigation report found the fire started after a resident had been flicking a

cigarette lighter to see if it worked. The resident had cognitive impairment and a history of self-harm using cigarettes; however, the report found their smoking was not being monitored.

Case studies 5 and 6 below demonstrates the difference that staff knowledge can make when staff know what to do in the event of a fire and when they put that knowledge and training into practice.

## CASE STUDY 5:

### Quakers Hill: 14 residents died



#### Profile of fire

Quakers Hill Nursing Home, Quakers Hill, New South Wales, Australia (2011) — residential centre for older people. The fire was caused by a nurse setting fires in the centre: 14 residents died.

#### Commentary

The coroner's report into Quakers Hill found that there was some deviation from fire safety procedures. Once the presence of a fire was confirmed, staff did not call the fire services. While the fire alarm automatically notified the fire services, due to previous false alarms in the locality only one unit was deployed.

However, the confirmation of a fire would have increased the urgency and number of units to respond. Staff also failed to lead the fire fighters to the fire panel, which may have identified the existence of a second fire.

After the fire, staff were interviewed and it was found that staff knowledge was inconsistent regarding the evacuation of non-ambulant residents, and training did not include practical exercises.

It should be noted, however, that despite some of the deficiencies identified, the coroner's report found that the on-duty staff did follow certain aspects of the procedure, such as closing all the doors. This has been attributed to the saving of residents' lives, particularly in one unit.

## CASE STUDY 6:

### Merrymount Nursing Home: no lives lost



#### Profile of fire

Merrymount Nursing Home, Quincy, Massachusetts, USA (1985) — residential centre for older people: no residents died.

#### Commentary

In contrast, the report into the Merrymount Nursing Home fire stated that the actions of staff contributed to the saving of lives, and thus no lives were lost in the centre.

Once the alarm sounded and the fire was identified, staff called the emergency services to confirm the presence of a fire, closed all doors in the centre and began evacuating residents.



## The provider's responsibilities

To ensure that the evacuation is carried out in an effective and calm manner, providers must ensure staff know exactly what to do and their role in the evacuation. Staff also need to be familiar with the centre's fire safety policies, procedures and fire precautions. This will ensure that they know:

- what to do if the fire alarm is sounded
- how to react to confirm it is a genuine emergency and once confirmed know which residents and children need help to evacuate
- how the evacuation of part or all of the centre will be carried out.

Staff members' knowledge and training in relation to fire risk reduction, fire precautions and fire procedures is of paramount importance to the safety of everyone in the centre. While staff training is key to their knowledge and competence in emergency situations, it is also equally important in their day-to-day

awareness in relation to fire safety in the centre. The review of literature found that providing staff with information on fire prevention and evacuation procedures will support them if a fire occurs. Equally, failings in the adequacy of staff training can have potentially fatal consequences for residents, children and staff themselves.

### Essential documentation for staff if a fire break outs

It is recommended that the following items are included in the fire procedure or separately in a fire safety manual which is available to all staff and is easily retrievable in the event of an emergency:

- floor plans of the premises
- site plan indicating the assembly points and location of hydrants
- the layout of compartment boundaries, fire alarm zones and escape routes
- the locations of:
  - fire doors
  - evacuation equipment
  - oxygen storage
  - ventilation fire dampers (shut off panels in the ventilation ducting to restrict spread of smoke)
  - firefighting equipment
  - break-glass units
  - emergency lights
  - fire-suppression systems
  - utility shut off points
- description of the evacuation aids provided and the facilities required to assist firefighters
- a summary of personal emergency evacuation plans.

The fire safety manual should be supported by a programme of fire safety training for staff, which is discussed further here.



### Training needs analysis

The ability of staff to respond appropriately to a fire will have a direct impact on the survival of residents and children. A training needs analysis should be completed periodically by the provider or their delegate to ensure that staff have the required

fire safety knowledge and skills to react correctly in the event of a fire. Training content should reflect the requirements of the regulations and be subject to ongoing review.

The content should be revised to reflect:

- the changing needs of residents and children
- the design and layout of the designated centre
- changes in the fire procedures and
- changes in staff personnel in the centre.

Training provided to staff should clearly explain the potentially catastrophic danger associated with fire. Ensuring that staff have, through training, the knowledge, skills and confidence in the centre's fire safety procedures is essential for the safety — and if required the evacuation — of residents and children.

Providers should also consider the level of training required for each staff member in the designated centre. Some staff may only require general training, for example catering staff who contribute to fire prevention, but who may also assist with evacuation under the direction of other staff. Other staff may require "specialist" training, such as firefighting, managing fire safety in the centre, managing an evacuation. Many centres use 'Fire Wardens' or a 'Fire Marshal' to fill this specialist role, and ensure a fire warden is allocated to each shift to ensure effective management in the event of a fire.



## What is staff training?

- Staff training is not just about the formal (classroom style) provision of information about fire safety.
- It includes the opportunities for informal training, such as practising a fire drill and evacuation procedure, and being confident about how to respond to different emergency situations.
- The aim of staff training is to make staff confident in their abilities to respond as required if a fire happens in the centre.

Providers should ensure that the person they engage to deliver training to staff is competent to deliver the training in the areas of fire procedures, evacuation techniques and evacuation aids — along with the training that is specified in the regulations.

The provider should ensure that the trainer is familiar with the particular centre and any evacuation aids that will be used in the event of a fire emergency.

Training details, including the content, attendees and dates, should be documented to ensure that there is appropriate oversight and governance of staff training. These records should be retained in an accessible place; for example, in the fire safety register<sup>7</sup>.

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<sup>7</sup> For more information on fire safety register refer to Guidance for fire safety for existing nursing homes, 1996 nursing home guidance and the Code of Practice for fire safety in new and existing community dwellings

## Formal training

Training should be provided to all staff (including the provider or members of the provider entity, volunteers, part-time staff, temporary staff, or any other person who works in the designated centre). Providers must ensure that agency staff are only on duty with staff who have already received formal fire safety training specific to the centre.

The provider must ensure that any staff member who may be required to

- undertake emergency firefighting
- who has specific fire safety duties
- and who has specific evacuation responsibilities,

has received appropriate and adequate training in those responsibilities.

Following such training, the provider must ensure their competency is verified and documented.

## What should be included in formal fire safety training?

The minimum training to be provided is stated in the regulations and specifically includes the following training in all designated centres:

- fire prevention
- emergency procedures
- evacuation procedures or arrangements
- building layout and escape routes
- location of fire alarm call points or fire detection and alarm call points
- firefighting equipment
- first aid
- fire control techniques.

The training requirements in the regulations for different types of designated centres differ in some aspects. For example, the regulations for designated centres for older people and for special care units require that training be provided in the procedures to be followed should the clothes of a resident or a child catch fire.

The special care unit regulations also require training on calling and assisting the fire



service. However, the Chief Inspector advises providers to refer to all the regulations for different types of designated centres to inform their training programmes and ensure they meet the specific needs of residents and children in their care.

The following entries consider in greater detail, the minimum training required by the regulations. The alphabetical listing of training is solely for providers' guidance and does not signify a hierarchical order of entries, as all elements are equally important.

## 1. Fire prevention training



Training should ensure that all people working in the designated centre:

- a. understand that they have a key role to play in fire prevention
- b. understand their fire safety roles and responsibilities and ensure they have the skills to meet those roles
- c. are aware of the fire prevention measures in place throughout the designated centre
- d. can identify fire risks and hazards that they have control over and can take appropriate measures to minimise them
- e. know how to reduce risk when working with or storing highly flammable and explosive substances and bottled or piped oxygen
- f. know how to appropriately store supplies
- g. promote fire safety throughout the designated centre
- h. can safely manage and control designated smoking areas and high-risk areas
- i. show strong awareness of fire safety in their day-to-day work in the designated centre
- j. are provided with a means of routinely reporting fire safety issues and are encouraged to do so.

## 2. Emergency procedures training



Training should ensure that staff working in the designated centre:

- a. know the procedure to be followed in the event of an emergency
- b. can use the fire safety systems in the building
- c. know exactly what to do on discovering a fire
- d. know how to raise the alarm and seamlessly implement the emergency procedure
- e. know who is in charge during an emergency
- f. know the location of fire alarm call points and how they should be activated
- g. know the procedure to be followed in the event of a false alarm
- h. know what to do and where to go upon hearing the fire alarm
- i. can read and understand the fire detection and alarm system panel
- j. can identify where an alarm activation has been triggered (depending on the fire detection and alarm system installed, this may be the zone, compartment or room)
- k. know how to search a building zone to assess the reason for alarm activation
- l. can alert other staff, residents, children and visitors, including (where appropriate) directing them to exits
- m. know the arrangements for calling the fire and rescue services and the procedure to prepare for their arrival, including the location of utility shut off points and hydrants.
- n. can quickly obtain the evacuation plans for each resident and can quickly identify and mobilise the resources required for their evacuation
- o. the location of the fire assembly points and care of residents after evacuation
- p. can stop machines, appliances and processes and isolate power, gas and piped oxygen supplies in the event of a fire where it is safe to do so
- q. understand how behaviour, both theirs and the behaviour of others, can affect the evacuation procedure.

### 3. Evacuation procedures training

Training should ensure that staff know and understand their role in emergency evacuation. Such training should include:

- a. the evacuation strategy for the specific designated centre: whether it is a phased evacuation or an entire premises evacuation
- b. the concept of fire safety compartmentation and its role in the phased evacuation
- c. where the nearest fire compartment boundary is
- d. the procedures to be followed for everyone to reach an assembly point at a place of safety
- e. how to assess the needs of a resident in the event of an evacuation
- f. care of residents following an evacuation
- g. the individual needs of each resident, for example, lifting and manual handling techniques, moving, transferring and responsive behaviours
- h. the procedure to be followed for residents and children who require assistance to evacuate the premises, including making safe any medical equipment, oxygen supplies and so on
- i. know how to quickly and efficiently use any evacuation aids and how to open all emergency exit doors.

### 4. Building layout and escape route training



Training should ensure staff:

- a. are familiar with the layout of the premises and have specific knowledge of all alternative exit and escape routes
- b. can identify and use the most suitable evacuation routes, especially those not in regular use
- c. are aware of any restrictions along escape routes, such as steps, narrow doorways, tight corners, locked doors, any keys required and so on
- d. know where each fire-resistant compartment boundary is located beyond which residents and children must be moved in the initial parts of a phased evacuation

- e. understand the role of fire doors in controlling fire and smoke spread
- f. know the evacuation needs of each compartment and can readily identify the one that requires the highest resources to safely and quickly evacuate it
- g. know the reason for not using lifts unless specifically identified as an evacuation lift
- h. are familiar with the external escape routes and the location of the external assembly point.

## 5. Location of fire alarm call points

Training should ensure that the staff know the locations of the nearest alarm call points, how they should be activated and the procedure to be followed in the event of a false alarm.

## 6. Firefighting equipment training

Training should be provided to ensure that staff who may undertake emergency firefighting can locate and operate all firefighting equipment. The provider needs to verify that the staff assigned to these firefighting roles are competent to carry out them out.

Relevant staff must be trained on the use of specific equipment provided within the designated centre.

## 7. Fire control techniques training

Training should ensure that staff understand the importance of the fire control measures that have been provided throughout the designated centre. Fire control measures include:

- a. the provision of fire doors in bedrooms and corridors and fire risk rooms
- b. the effective fire-resistant compartmentation of the building
- c. limitation on the use of combustible wall and ceiling linings, and
- d. the provision of fire-resisting construction throughout the premises.

Staff should understand the importance of keeping fire doors closed (or closing them) to prevent the spread of fire, heat and smoke and ensure that doors are not wedged open.

## 8. Training in response to the clothes of a resident catching fire

Any conditions that increase the risk of the clothes of a resident catching fire, such as smoking, oxygen treatment, cooking or food preparation, exposure to naked flame and the use of open fires, should be identified and comprehensively risk assessed in line with local risk management policy.

Wherever possible, the risk is reduced to an acceptable level and or risk-reduction measures are put in place to manage it. Residents and children at high risk should be known to all staff on duty. Staff should be trained to ensure that they know what to do should the clothes of a resident catch fire.

### **When should formal training be provided?**

It is recommended that formal training should be provided as follows.

The provider should aim to ensure that each new member of staff has received formal fire safety training appropriate to the centre and the evacuation needs of the residents and children. This should happen as soon as possible when people start their employment or whenever staff are transferred into the centre from another of the provider's services. Where possible a new staff member should not be in charge of the centre<sup>8</sup>, or specific areas of the centre until they have had formal fire safety training.

Refresher training should be provided annually, or more frequently as may be necessary to reflect the changing needs of residents, children's risk assessments and turnover of staff.

Training should be provided when:

- changes have been made to the fire precautions or fire procedures
- changes have been made to working practices and processes or people's responsibilities
- the premises or layout of the centre has changed due to an extension being opened or a unit closing

deficiencies are identified in staff members' knowledge or skills.

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<sup>8</sup> This may not be possible in very small designated centres, such as community dwellings where there is only one person on duty, and emergency cover is required. In this instance a comprehensive informal handover is required and comprehensive and appropriate records are available to support the new staff member in the event of an emergency.

## Informal fire safety orientation

Providers should ensure that new or agency staff always receive a building orientation tour and suitable instruction around the fire procedures in the designated centre before they start working there. They should also receive instruction in the use of the specific evacuation aids, and the specific role they will be required to perform in the event of an evacuation.

Residents and children may also take part in informal fire safety instruction that is appropriate to their cognitive awareness and abilities.

## Chapter 5. Fire evacuation drills



### Introduction

Fire evacuation drills are necessary to test evacuation procedures and strategy, and to show that they will work. This means the scheduling and carrying out of fire evacuation drills are an important part of the governance and management arrangements in place for the fire safety programme. Fire drills should reflect real-life scenarios. Drills also demonstrate that:

- everyone can be evacuated within the safe evacuation time
- staff know the evacuation procedure to be followed
- evacuation is practised to the point where it becomes an automatic response to a fire alarm.

Fire drills should be carried out as often as is necessary. This means the amount of drills will vary from centre to centre, but the threshold is that the provider, managers and staff will be sure that at all times and during all shifts, everyone in the centre can be safely evacuated. This chapter outlines the provider's responsibilities to ensure measures are in place for fire evacuation drills. It directly links to **Chapter 10 Safe Evacuation** which outlines how fire drills are implemented to support safe evacuation.

Case studies 2 and 3 indicate the importance of adequate fire evacuation drills.

## CASE STUDY 2:

### Riverview IRA: 4 residents died



#### Profile of fire

Riverview Individualised Residential Alternative (IRA), Wells, New York, USA (2009) — residential centre for people with disabilities. Fire began in external waste bin: four residents died.

#### Commentary

The official report on the Riverview IRA fire found that fire evacuation drills were inadequate and night-time drills were particularly poor. A key criticism was that the fire drills did not represent realistic scenarios. For example, evacuation was almost always through the main entrance (the same route used on the night of the fire) and residents were always advised in advance by staff if a drill was to occur. This was found to be poor practice, as due to the nature of the residents' disabilities, familiarity with numerous evacuation routes would have reduced possible distress.

The lack of realistic scenarios meant staff could not predict unforeseen scenarios, such as residents re-entering the building — which is unfortunately what happened on the night of the fire leading to the deaths of residents.

The report stated that a full evacuation had never been practised and the assembly point regularly used during drills was not the agreed one detailed in the evacuation procedure.

Finally, the recorded evacuation times fluctuated significantly. As a result, it was suspected that times documented on drill records were not recorded immediately after the drill and thus were not always an accurate reflection of the drill. Internal audits failed to pick up on these issues; however, external review by fire safety professionals had noted problems.



## CASE STUDY 3:

### Résidence du Havre nursing home: 32 residents died



#### Profile of fire

Résidence du Havre nursing home in L'Isle-Verte, Québec, Canada (2014) — residential centre for older people/supported living. Fire assessed to have started near the kitchen: 32 residents died.

#### Commentary

It was unclear how often fire drills had occurred in the nursing home. Some residents stated they had taken part in drills while others said they had not. Drills never took place at night, despite the fact that only one staff member was ever on duty at night-time. The staff member on duty on the night of the fire and a former night-duty staff member said they had never participated in a fire drill.



## The provider's responsibilities

Providers are responsible for ensuring that all residents, staff and visitors to the centre can be safely evacuated during a fire or other emergency situation. To do so within a safe evacuation time, the provider must have a tried and tested evacuation strategy and procedure in place.

Fire drills should be used as a quality improvement tool to identify areas for improvement and learning opportunities for staff and managers. The outcome of each drill should be recorded in a detailed drill report that includes the scenario practiced and its result, including any problems encountered.

The provider should review drill reports to make sure procedures and strategy work, and to identify where they may need to be modified or where additional training may be required.

## Fire drill programme

A fire drill programme — an organised plan of fire drills in the centre to test the effectiveness of staff training, evacuation procedures and fire evacuation strategy — should be developed. Providers may wish to involve the competent fire safety professional in preparing the programme to:

- assist with identifying the most challenging evacuation situations
- advise on measures that may be required to achieve a safe evacuation time
- increase staff members' awareness of the evacuation needs of residents.

The evacuation procedures to be followed should be fully reviewed to ensure they are realistic and that staff can complete them in an emergency. While preparing such a programme, providers should identify and record the most difficult evacuation situations and problems that staff may encounter.

A range of fire evacuation drills should be developed and completed as part of training so that staff can practise these difficult scenarios. Drills should be practiced routinely to the point that occupants can be safely evacuated at all times of the day or night. Ireland's code of practice for community dwellings recommends that fire drills should be carried out at least twice a year. Any revisions to the fire safety programme should be done after the fire drill.

## **Considerations when preparing a fire drill programme**

Fire drill scenarios in the centre should be continually reviewed and revised to reflect changes in the premises, new staff or agency staff and the changing needs of the residents and children. The following should be considered when preparing the fire drill programme for the designated centre:

the size, layout and bed capacity of each building compartment

the evacuation of:

- typical multi-room, multi-occupancy compartments and or
- larger single room multi-occupancy compartments
- largest compartment

evacuation:

- using reduced night-time staffing levels
- using evacuation equipment
- of residents and children with special requirements
- of incapacitated staff

use of escape stairways

fire-containment measures

impact of blocked or narrow escape routes.

## **Fire drills**

Fire drills should be specific to each centre and be fully completed. Management should be clear about their objectives (which are referred to as pre-drill objectives) and should review and get feedback on what worked well and what needs to be improved. If a number of areas need improvement, the drills should be repeated until these issues have been resolved.

Fire drills should be carried out during different shifts to check that the fire procedures will still work with the minimum number of staff that may be on duty, usually at night-time. All staff should participate in fire drills.

## What are pre-drill objectives?

Pre-drill objectives are a description of why the drill is being done and what it is hopes to achieve. Without identifying a pre-drill objective, it is impossible to assess if the drill was successful or not.

The objectives may include:

- reinforcing specific staff training
- familiarising people in control of the evacuation with their roles
- testing the adequacy of the number of staff on duty
- testing the fire procedures
- testing the use of evacuation equipment
- testing evacuation routes
- verifying safe evacuation times, and
- identifying shortcomings in fire safety procedures.

## Can residents and children join the fire drill?

Where practicable, residents and children should be given the opportunity to participate in fire drills and to practise self-evacuation and be made aware of all possible alternative escape routes. The feasibility of involving residents and children who are unable to move about independently, who have reduced mobility, who are acutely unwell or who are likely to become acutely unwell due to their participation in such drills should be considered. Overall, the general welfare of the residents and children should be the main priority.

Each fire drill should be observed by a member of staff not actively participating in the drill and critically reviewed by the provider and management against the pre-drill objectives.



## Preparing a report on the fire drill

Fire drills are a good tool to test and assess if the fire safety procedures are suitable and adequate. They will help to ensure that the procedures can be successfully completed by the number and skill-mix of staff on duty in the centre, while also ensuring the safety of staff, residents and children.

A detailed fire drill report should be completed after each fire drill. It should include a comparison of the drill time with a safe evacuation time, along with the reasons for any variation between the two timelines. It should recommend any measures which need to be introduced in order to reduce the drill time down towards a safe evacuation time.

The drill report should be formally reviewed by the provider and senior management to verify that the fire procedures and strategy will work and to identify and fix problems or difficulties with the evacuation procedures. The review report may identify the need for further training or additional trained, skilled or more experienced staff or equipment as the case may be. Any additional resources required to address any problems raised in the report should be provided.

The drill report, including any problems that occurred during the drill, should be included in the fire safety register. The impact of any problems should be considered as part of the fire safety risk assessment (see Chapter 6).

### **What should be included in a fire drill report?**



A fire drill report should include:

- a. the pre-drill objectives
- b. the fire scenario simulated
- c. the date and time of the fire drill
- d. the safe compartment evacuation time
- e. the actual length of time taken for evacuation of residents and children
- f. a comparison of a safe evacuation time with the actual drill time and reasons for variations between them
- g. the number of residents and children, or simulated residents and children, who were evacuated
- h. the names and the number of staff who actively participated in the drill
- i. evacuation equipment used
- j. any problems or deficiencies identified during the drill
- k. any lessons learnt for inclusion in the fire procedure review
- l. recommendations of any measures needed to reduce the drill time down to the safe evacuation time.

If the simulated compartment evacuation times recorded during drills are slower than a safe evacuation time, then the provider should undertake a root cause analysis to identify the reasons for this. The provider should then take steps to

improve the drill evacuation time to the point where it meets or exceeds a safe evacuation time.

### **What is the drill time?**



Depending on the evacuation strategy in the centre, the drill time is the time taken from when the alert is first raised until either the entire building has been evacuated, or the residents and children have been removed from their room into the nearest adjoining fire-resistant compartment.

The drill time should accurately reflect staffing levels, particularly night-time staffing levels, and should follow the fire procedure.

### **How can the evacuation time be reduced?**



Compartment evacuation times can usually be reduced by a combination of:

- revising procedures
- sub-division of the existing larger fire-resistant compartments into smaller compartments or sub-compartments
- increasing the number and experience or skill-mix of staff on duty
- decreasing the number of residents or children within the compartment
- better management of the dependency needs of residents or children within each compartment
- adjusting the mix of the dependency level of residents and children within each compartment.

Prior to their implementation, each of these measures should be tested in simulated fire drills to find the combination that most effectively reduces the evacuation times in the centre.

## Chapter 6. Fire safety risk assessment

### Introduction to fire hazards and fire risks

#### What are the differences between a fire hazard and a fire risk?



A **fire hazard** is a source, a situation or an unsafe act with the potential to result in a fire.

Examples of fire hazards include:

- ignition sources (for instance, a lit cigarette, a charger or kitchen cooking equipment)
- accumulation of waste that could be subject to ignition (such as lint in a tumble dryer filter)
- disposal of a lit cigarette close to combustible materials, such as tinder-dry grass or bedding material.

A **fire risk** is a combination of:

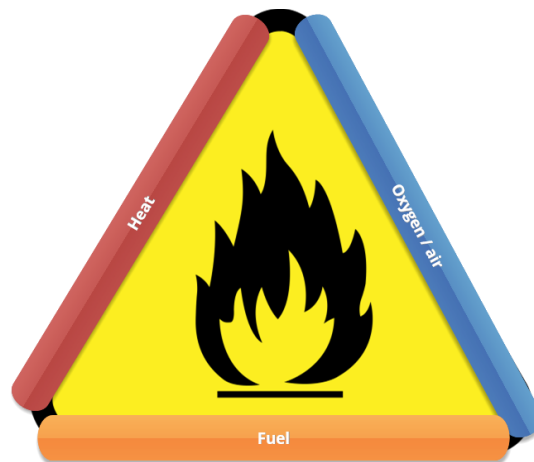
- a fire hazard
- the likelihood of the occurrence of fire and
- the consequences (the number and severity of injuries or fatalities) likely to be caused by a fire.

For a fire to start, it needs three separate components:

- oxygen
- fuel
- an ignition source (heat).

Designated centres will contain multiple sources of fuel that will burn readily, such as paper, clothing, curtains or blinds, cleaning products, flammable bedding, floor coverings, flammable wall linings and timberwork. There may also be several potential sources of ignition; for example, cigarette or gas lighters, matches, electrical installations, electrical equipment, phone chargers, battery chargers and

cooking equipment.



In theory, the opportunity for a fire to start can be removed by simply preventing the three components of the 'fire triangle' (as illustrated) from coming together. However, whenever it is not possible to fully eliminate the presence of the three components in the one place, there is an opportunity for a fire to start; therefore, fire hazards in the designated centre should be identified, managed and documented.

## The provider's responsibilities



A comprehensive fire safety risk assessment should be the starting point for fire safety management in a centre. Without one, providers cannot know the full range of fire safety risks that they need to effectively manage and control with suitable fire precautions. This assessment should be used by the provider to decide on the full range of fire precautions that are required in the centre.

The assessment should identify, assess and risk-rate all fire risks and hazards. In addition to hazards and risks arising from the physical building, the assessment should include risks and hazards arising from the use and management of the centre. For example, the number of staff on duty, fire-resistant compartment sizes and evacuation times, and the abilities and assessed needs of residents and children.

The provider should ensure that the assessment is prepared by a person who is competent to do so



## Fire safety risk assessment

A fire safety risk assessment is a practical exercise aimed at identifying fire hazards and evaluating the fire risks to people arising from them and how to ensure the safety of people in the event of a fire. It will help providers to decide whether or not the fire risk is acceptable without taking further fire precautions. It is an organised and methodical look at:

- a. the designated centre
- b. what activities happen there
- c. the occupants of the building, including:
  - residents and children
  - staff, volunteers and contractors
  - visitors
- d. the potential for a fire to occur
- e. the harm a fire may cause
- f. the existing precautions
- g. fire safety management.

It is recommended that the fire safety risk assessment should be prepared by a person who is competent to do so, such as a fire safety professional, with relevant experience in fire safety design and management. If it is being carried out by a fire safety professional, they should work with input from the provider, managers, care professionals and other staff in the designated centre, and, where possible, residents and children.

The assessment should be informed by the residents and children's assessed needs, with particular emphasis paid to the accommodation, the staff assistance and fire safety requirements of all residents and children (such as how to safely evacuate them). Further information in relation to the support and assistance needs of residents and children is outlined in Chapter 3.

A particular emphasis should be given to ensuring that everyone in the centre is safe and adequately protected at all times from the risk of fire. It should include a time-bound action plan to mitigate against any risks identified and reduce all identified risks to an acceptable level.

The fire safety risk assessment should be aligned with the building design, its approved fire safety certificate (if one was required) and any requirements of the local fire authority. Where the fire safety risk assessment identifies required

alterations to the building, the provider may also have responsibilities under the building control regulations.

The findings of the risk assessment should be incorporated into the overall fire safety programme as outlined in Chapter 2 of this handbook. The assessment should identify all risks, especially those at an unacceptably high level so that they can be reduced to an acceptable level. Preparing the assessment includes the following distinct stages (illustrated in Figure 2 on the following pages).

1. Identify fire hazards or potential fire hazards.
2. Identify the people at risk and the consequence of a fire arising from the fire hazards.
3. Identify the existing fire precautions in place.
4. Rate the likelihood of a fire starting.
5. Rate the consequence of a fire.
6. Rate the risk and decide if the existing fire safety measures are adequate.
7. Where necessary, identify the steps and control measures that will be taken to reduce the risk level or eliminate the hazards to an acceptable level.
8. Implement the measures to reduce risk.
9. Re-rate the risk following the implementation of these measures.
10. Review the risk assessment whenever new hazards are identified or whenever the needs of residents and children change.

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## Fire safety risk assessment report

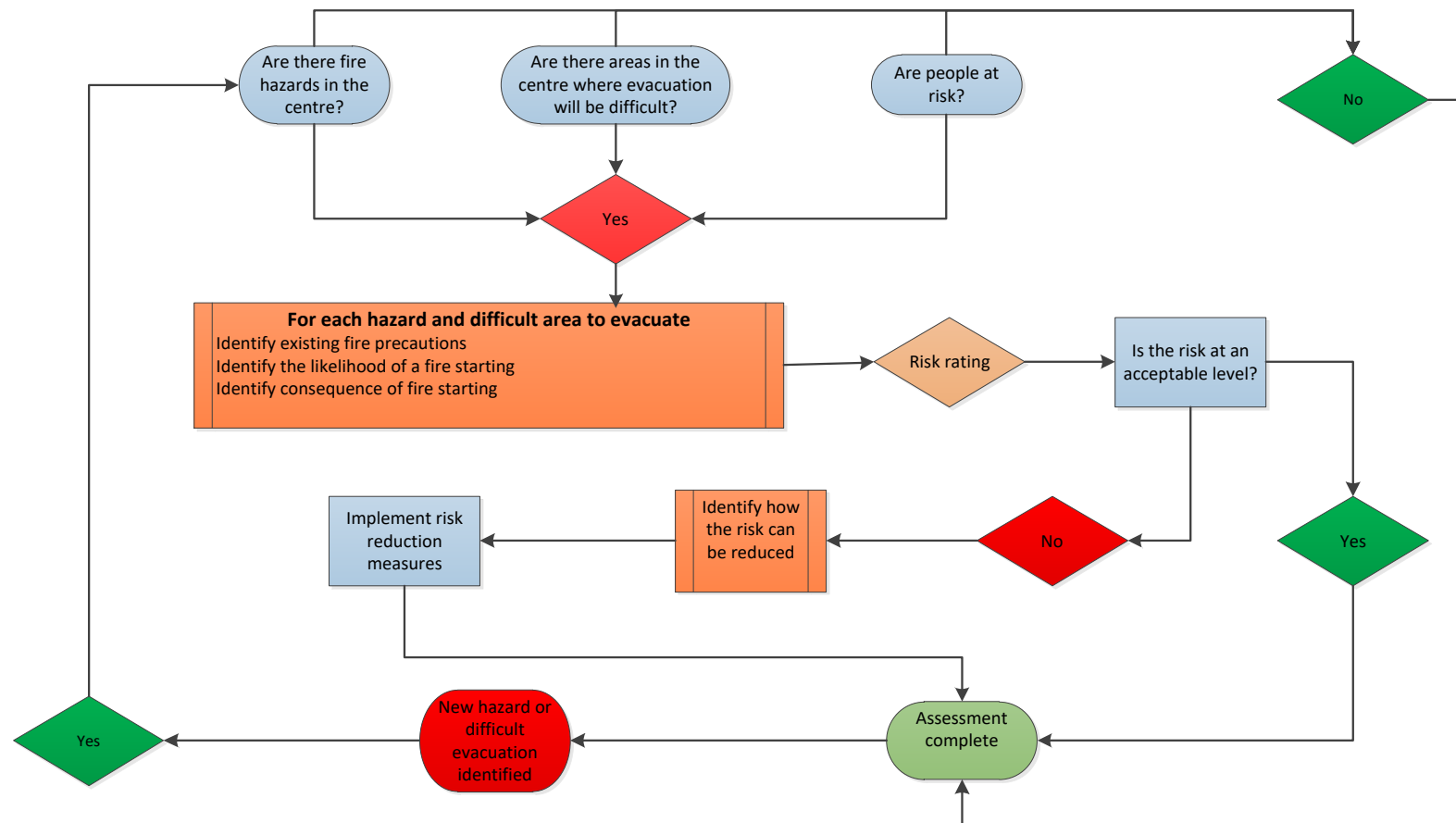
The outcome of the fire safety risk assessment should be presented in a report. This report should categorise hazards and risks related to individuals and the impact on the service provided, as well as corporate risks. It should clearly identify the fire precautions and measures needed to ensure the safety of all people in the centre in the event of a fire starting.

The report should describe the actions taken by the provider and managers to manage identified risks. The report should also record the measures being implemented to eliminate or control the identified risks. The risk assessment should be carried out to a recognised standard such as PAS 79, which your competent fire safety professional can advise you on.

The provider should ensure that recommendations and risk control measures identified in the fire safety risk assessment are implemented. The provider should

prepare and implement a time-bound action plan to monitor the introduction of risk-reduction measures. In some cases, it may be necessary to introduce temporary measures to reduce risks until the risk-reduction action plan has been completed.

Figure 2. Fire-safety risk assessment flow chart



## Fire risk controls and the independence of residents



The provider must ensure that any identified fire safety risks are being actively managed. Therefore, specific plans must be in place to prevent (where possible) and reduce all identified fire risks to an acceptable level. This will help ensure that everyone in the centre is adequately protected from the risk of harm and accidental injury.

However, the provider should be mindful not to overly restrict the quality of life of residents or children through its actions to prevent or reduce fire risks. Providers should ensure the rights and choices of residents and children are not diminished or that there is an increased use of restrictive practices put in place to militate against fire risks.

Measures used to manage risk should be proportionate and not overprotective of residents and children, and should promote people's right to self-determination, social inclusion and opportunities for new experiences.

### Who should carry out the fire risk assessments?

The fire risk assessment should be carried out by a fire safety professional with the competence to assess and advise on fire safety. When engaging fire safety professionals to carry out the assessment, the provider should consider the following:

- Are they competent to conduct the risk assessment and advise on the best actions to take?
- Have they specific training in preparing fire safety risk assessments?
- Are they members of any accredited organisations?
- Have they prior experience of undertaking fire risk assessments in designated centres?
- Are they familiar with the specific evacuation requirements of some residents in the designated centre?

## Reviewing the fire-safety risk assessment

The provider should review the fire safety risk assessment and revise it, if necessary, at least annually, but more often as required, particularly when changes occur within the designated centre that introduce new hazards or increase the risk of current hazards.

Understanding the changing dynamic of designated centres is essential to reviewing and assessing potential fire hazards and fire risks. Providers must continually monitor these hazards and risks to ensure that resources are being used to the best effect to minimise the risk of fire.

The review should include checking the physical fire precautions in place, as well as all fire safety management elements, such as the evacuation procedures. It should take into account any changes in the profile of residents, children, buildings and facilities. It should also consider any learning from fire drills and any adverse events that may have occurred within the designated centre.

### **When should the risk assessment be reviewed?**

A review of the fire safety risk assessment is recommended in the following circumstances:



1. Following changes in the:
  - a. number, care and support needs, or dependencies of residents or children
  - b. work procedures or staffing levels
  - c. significant changes to personnel working in the centre
  - d. use or storage of dangerous substances
  - e. evacuation procedures
  - f. fire precautions in the centre
  - g. fire safety procedures.
2. The introduction of new equipment or building services.
3. Alterations or changes to the building's design or layout.
4. Proposed changes to furniture and fixings.
5. Whenever shortcomings in the fire safety measures or fire precautions have been identified.
6. Whenever new fire hazards have been identified.
7. Before hosting a significant one-off event in the designated centre.
8. After any adverse events within the designated centre.
9. To reflect the outcome of fire drills.

## Conclusion of Part 1

Poor governance of fire safety risks in a designated centre can unnecessarily place residents at risk of harm. Therefore, providers and all staff should always be able to know what the fire risks are in their centres, how to minimise those risks, and what to do in the event of fire alarm sounding or a fire breaking out.

A provider who has put good governance and fire safety management systems in place to ensure a safe, appropriate, consistent and effectively monitored service will not rely on regulators to identify regulatory breaches. A competent fire safety professional may be needed to help providers ensure regulatory compliance.

The diverse and changing needs of residents or children in the designated centre must be considered and reflected in fire precautions and fire safety risk assessments for the centre. Careful planning, regular assessment and review of residents and children's needs and abilities are key to ensuring their safety in the event of a fire or evacuation.

Before their admission to a designated centre, a pre-admission assessment should be completed to identify the specific evacuation needs of each resident. Having considered the evacuation needs of residents and children, the size and layout of the centre, the evacuation procedures and the fire precautions, the provider should supply and maintain all necessary evacuation aids and equipment. All staff must be trained in the use of any evacuation aids that are provided in the centre.

In a fire emergency, staff need to be confident about what to do because uncertainty and hesitation can result in fatalities in the centre. Staff training should be a combination of formal (classroom style) and informal training, and it should be ongoing.

It is the responsibility of the provider to ensure that all residents, children, staff and visitors to the centre can be safely evacuated during a fire and other emergency situation. To achieve this, the provider must have a tried and tested evacuation strategy and procedure in place.

By combining the implementation of the fire drill programme and consulting with staff, the provider should be assured that each member of staff has considered the training provided and is confident, competent and physically able to carry out their specific role in an evacuation.

Whenever the presence of the three components of the fire triangle (oxygen, fuel and an ignition source) cannot be fully eliminated in the one place, a fire can start. Therefore, a fire safety risk assessment is an essential starting point for providers to develop adequate fire precautions and a good fire safety programme in centres.

Without a fire safety risk assessment, providers cannot know the full range of fire hazards and fire risks that they need to proactively manage and control. In addition, in its absence, the provider cannot show the Chief Inspector that adequate precautions have been taken to protect against fire hazards and fire risks.

Providers shall ensure that risk control measures identified in assessments are implemented and that resources are being used appropriately to minimise the risk of fire. Assessments should be reviewed at least annually but more often as may be necessary, particularly when changes in the centre introduce new hazards or increase the risk of existing hazards.

### **Your notes**

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# Part 2

The chapters in this section cover:

- Chapter 7. Reducing the likelihood of fire.
- Chapter 8. Fire detection, alarm and emergency lighting.
- Chapter 9. Means of escape
- Chapter 10. Safe evacuation
- Chapter 11. Restricting the spread of fire
- Chapter 12. Fire and smoke containment
- Chapter 13. Building maintenance
- Chapter 14. Firefighting equipment and alerting the emergency services.

## Chapter 7. Reducing the likelihood of fire



### Introduction

The simplest way of reducing the likelihood of a fire starting is separating combustible material from ignition sources and ensuring equipment and the building is well maintained. Where oxygen is used in a designated centre, the provider should take particular measures to ensure its safe use and storage. Electrical installations and equipment can be a significant cause of fire. For example, **Case study 1** demonstrates the catastrophic events arising from an electrical fire.

### CASE STUDY 1:

#### Rosepark Care Home: 14 residents died



#### Profile of fire

Rosepark Care Home, Uddingston, Lanarkshire, Scotland (2004) — residential centre for older people. A fire started in a cupboard on the upper level of the premises which contained an electrical distribution board and combustible materials: 14 residents died.

#### Commentary

The fire was started by an electrical fault that occurred in an electrical distribution board located in a store room. The fire was intensified due to the large number of aerosols kept in the store room.

In relation to the cupboard where the fire started, the fatal accident enquiry identified that:

- It would have been a reasonable precaution to minimise the storage of

combustible materials in the cupboard.

- In particular, it would have been a reasonable precaution not to store a quantity of aerosols within the cupboard.
- It would have been a reasonable precaution for the doors to the cupboard to have been kept locked shut or at least securely closed.
- It would have been a reasonable precaution to have fitted fire resisting doors to the cupboard.

## The provider's responsibilities

Throughout the designated centre, there will be a number of areas that are at a higher risk of fire than others. For example, kitchens, store rooms, sluice rooms, bedrooms, laundries, switch rooms,<sup>\*</sup> plant or boiler rooms, fuel storage areas, and medical gas or oxygen storage or piping.

Providers should ensure these areas are enclosed in a fire-resistant construction (walls, floors, ceilings and doors) and fitted with fire doors with the appropriate fire performance rating. Each elevated fire risk area should be individually risk assessed so that the risks are being appropriately managed.

Specific fire precautions and procedures should be in place for the management of high-risk areas, and staff should be aware of those procedures. The provider should ensure that proactive measures are in place to reduce the risk of fire in these areas to as low a level as possible.

## Electrical installations

Electrical installations and electrical equipment in the designated centre can be a significant cause of fire.

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<sup>\*</sup> A room intended primarily to house electrical switching and distribution equipment for a building.  
Source: Health and Safety Authority's *Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007*. See:  
[https://www.hsa.ie/eng/Publications\\_and\\_Forms/Publications/Retail/Gen\\_Apps\\_Electricity.pdf](https://www.hsa.ie/eng/Publications_and_Forms/Publications/Retail/Gen_Apps_Electricity.pdf)

## What are the possible causes of an electrical fire?



Possible causes of electrical fires include the following:<sup>^</sup>

- equipment faults
- overheating of cables and equipment due to overloading or loose connections
- incorrect installation, use or maintenance of the installation or equipment
- damaged or inadequate insulation on cables or wiring
- combustible materials placed close to the electrical equipment which may give off heat
- arcing (electrical arcing occurs when an electric current flows through the air, from one conductive point to another) or sparking
- modifications to an installation by an unskilled, untrained or unaccredited person.

The electrical installation should be regularly inspected, maintained and certified by a competent person in accordance with the latest version of the National Rules for Electrical Installations (I.S. 10101:2020<sup>9</sup> and ET101 at intervals no greater than five years.<sup>‡</sup> Any modifications to the electrical installation should be completed and certified by a competent person in accordance with the latest version of the National Rules for Electrical Installations<sup>10</sup>. All electrical appliances and equipment should be inspected and tested (PAT tested) and regularly serviced by a competent person to ensure that they are in safe working order.

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<sup>^</sup> Scottish Government — Practical Fire Safety Guidance for Care Homes (2014).

<sup>9</sup> Where I.S. Irish Standards are referenced throughout this document the appropriate person should refer to the National Standards Authority of Ireland for the most up to date and relevant standards.

<sup>‡</sup> Published by the former Electro-Technical Council of Ireland (ETCI) (whose role has since been taken over by the National Standards Authority of Ireland).

<sup>10</sup> Noting there is a transition period from 1 April 2020 to 1 April 2022 for the new standards.

## What is PAT testing?

Portable appliance testing (PAT) is the term used to describe the examination, and testing, of electrical appliances and equipment to ensure they are safe to use.



When not in use, electrical equipment should be switched off and unplugged. Care should be taken not to overload sockets. Trailing leads or double adapter sockets should not be used.

Providers should give particular consideration to providing dedicated fire protected areas for slow charging equipment and slow charge batteries, such as those used in mobility chairs and powered wheelchairs to reduce the risk of electrical fires.

Electrical equipment should not be charged along escape routes that would impede the safe evacuation of residents or children.

## Oxygen use and storage

Where oxygen is on site in a designated centre, providers should take particular measures, including staff training, to ensure its safe use and storage. Providers must install appropriate signage to alert people in the centre, and the fire service, to the presence of oxygen.

High concentrations of oxygen can cause materials to burn extremely rapidly and can cause some materials to burn that are not normally combustible. It can also cause an explosion if in contact with materials, such as grease and oil. Therefore, the safe storage and use of oxygen should be specifically outlined in the fire procedures.

Residents and children who use oxygen should be informed about the increased risk to their safety from the use of oxygen, and all necessary safety precautions put in place. Providers are also advised to review the Health and Safety Authority's 2019 revised safety alert on portable medical oxygen cylinders.<sup>‡</sup>

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<sup>‡</sup> Health and Safety Authority. Use of Portable Medical Oxygen/Entonox (Integral Valve) Cylinders. Online. Available from:  
[https://www.hsa.ie/eng/safety\\_alerts/2019/use\\_of\\_portable\\_medical\\_oxygen\\_entonox\\_integral\\_valve](https://www.hsa.ie/eng/safety_alerts/2019/use_of_portable_medical_oxygen_entonox_integral_valve)

Smoking, or the use of matches, cigarette lighters or hob lighters should not be allowed anywhere near to where oxygen is used or stored. The use of electrical equipment such as hairdryers, electric razors and chargers should be avoided near to where oxygen is stored or used.

Equipment should not be left on charge in the vicinity of an oxygen cylinder.

Where oxygen is distributed through fixed piping, the system must be adequately maintained in line with the manufacturer's instructions and must only be modified by a competent person. Staff should know the locations of all emergency shut off devices for oxygen, and these devices should be easy to identify using clear signage.

### **Oxygen storage**

Suitable, well ventilated, oxygen storage areas should be provided where oxygen cylinders should be stored securely in line with the manufacturer's guidance, when not in use. They should not be stored in stairwells, escape corridors or near any ignition or heat sources. Oxygen cylinders should be stored away from all other combustible materials, aerosols or electrical switch gear.

In England, the Care Quality Commission has published the following webpage on managing oxygen in care homes, which providers may wish to consult for further information: <https://www.cqc.org.uk/guidance-providers/adult-social-care/managing-oxygen-care-homes>.

## **Smoking**

If smoking of tobacco products by adult residents is permitted in the centre, it must be included in the risk management procedures to ensure the safety of residents, children and staff, along with its inclusion in the fire safety strategy. The careless use of cigarettes and other smoking materials is a common cause of fire and injury to residents and children, and can sometimes be fatal.

If such smoking is permitted in the centre, a safe, suitably located, environmentally risk assessed, designated smoking area should be provided for residents. This location should not ventilate to any other part of the building that is required to be smoke free. For each resident that smokes, appropriate assessments and care plans should be prepared.

The smoking supervision needs of residents should be identified. Staff should be trained to identify unsafe smoking practices, increased risk to the resident from an

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\_cylinders/.

adverse health event due to a pre-existing medical condition, or unsafe use of lighters or matches. Smokers individual care plans should include the:

- level of assistance or supervision residents require
- most appropriate protective equipment, where required, such as a large size smoking blanket or smoking apron.

The designated smoking area should be free from combustible materials, be regularly inspected and should have:

- flame retardant furniture and furnishings in good state of repair
- sufficient quantities of suitable ashtrays that are regularly emptied into metal containers
- a fully equipped first aid kit, to include burn gel, readily accessible
- accessible emergency call alarms
- fire extinguishers
- fire blankets
- firefighting equipment
- an appropriate escape route.

Any signs of scorch marks or burning on furniture or carpets in the designated smoking area (or anywhere else in the centre) should be reported immediately to the person in charge.

### **Vaping of electronic cigarettes**

If vaping of electronic cigarettes, also known as e-cigarettes, by residents, visitors and staff is permitted in the centre, e-cigarettes should be identified as a potential ignition source.

## What precautions should be considered if electronic cigarettes are used?



If electronic cigarettes (e-cigarettes) are vaped by residents, visitors and staff, the following fire precautions should be considered:

- Residents, visitors and staff should be advised to:
  - never vape wherever oxygen is in use
  - vape in a designated location
  - never leave e-cigarettes on charge or unattended for long periods of time or charged overnight
  - never charge e-cigarettes near to or on top of combustible or flammable materials
  - never mix the components of different e-cigarettes.

## Reducing the risk of fire from smoking

The best way to reduce the risk of fire from smoking is to reduce the incidence of smoking in the designated centre. It is recommended that along with providing a safe and appropriate smoking environment, the provider should provide access to a smoking cessation programme to all residents and staff who may find it beneficial.

## Bedding and furnishings

The choice of furniture and textiles can affect the cause, spread and speed of growth of a fire. While it is important to create a homely environment in the centre, the provider must make sure that all furniture and bedding supplied use flame retardant material to reduce the risk of fire.

Labels attached to bedding, drapes, clothing and upholstered furniture will often provide information on the flammability of the product and should always be left in place and not clipped off. Bedding and furnishings marked or labelled as flammable should not be used. To maintain the effectiveness of flame retardant treatment of furnishings and bedding, the provider should make sure that they are laundered in line with the manufacturer's specific instructions.

The filling material in many items of upholstered furniture may easily catch fire and can emit extremely toxic gases and fumes when burning. Therefore, furniture must be well maintained, with no rips or tears that expose the filling material. Upholstered



furniture, bedding, clothing and building fabric should be regularly inspected and repaired or replaced, as necessary.

Where residents and children wish to bring their own furniture into the centre, the centre should carry out a fire risk assessment so that any risks are identified and managed appropriately. Care should always be taken to avoid pressing furniture and furnishings directly up against central heating sources in all rooms, such as pipework, radiators or storage heaters.

## Storage rooms

The provider should ensure that equipment and supplies are kept tidy and stored in suitable fire protected storage areas and rooms. Storage cabinets and presses that are not fire protected should not be located along bedroom corridors, escape routes or escape stairs. The attic space should be inspected regularly to ensure that it is not being used for storage.

All combustible materials and aerosol containers should be stored in designated protected areas. The quantities stored should be kept to the minimum amount needed and risk assessed. Combustible and waste materials should not be stored in plant rooms, boiler rooms, laundry rooms, attics, service voids and shafts, electrical main or sub-switch rooms.

The centre's fire procedures should include regular checks to make sure that storage policies and procedures are being complied with.

## Laundry rooms

Laundry equipment should be inspected, serviced, and maintained (including a lint removal programme) in line with the manufacturer's recommendations to ensure their continuing safe operation. All laundry areas should be ventilated to avoid a build-up of heat and be kept clean and free from clutter. They should contain appropriate fire detection and firefighting equipment. For more information on laundry room safety, see Chapter 12.

## Waste disposal

Suitable facilities should be provided for the collection and disposal of packaging, waste and other combustible rubbish.

External storage and bin collection areas should be located away from the building

so that any fire that starts in them cannot easily spread to the designated centre.

They should be secured to prevent unintentional movement. Where deliberate arson or fire raising is a potential problem, providers are advised to use lockable metal bins or alternatively to store bins or containers in a secure fire-resistant enclosure.

### **Your notes**

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## Chapter 8. Fire detection, alarm and emergency lighting



### Introduction

The provider must provide an effective fire detection and alarm system, and emergency lighting system in the centre.

The detection and alarm system will help warn of the outbreak of a fire and help staff to quickly identify its source and begin fire evacuation procedures. Earlier detection and alarm will result in emergency procedures being implemented sooner and the risk of fire being minimised.

Effective emergency lighting will make sure that escape routes will be lit up and clearly indicated.

### The fire detection and alarm system

The provider must install and maintain a fire detection and alarm system complying with Irish Standard I.S. 3218:2013+A1:2019. Where appropriate, the system should have automatic fire or smoke detection, manual call points, such as break glass units, and alarm devices installed throughout the premises.

Detection devices should be included in all rooms, corridors, stairwells, store rooms, void spaces and roof spaces. The fire detection and alarm system should enable staff to quickly identify the location of the alarm activation and prioritise the compartment that may need to be evacuated.

Providers should install what is termed an 'addressable fire detection and alarm system' in proposed new designated centres. Current designated centres should have an addressable fire detection and alarm system installed whenever their existing systems are being extended or upgraded.

## **What is an 'addressable' fire detection and alarm system?**



An addressable fire detection and alarm system has the functionality to identify and show on the alarm panel where any individual device, such as a fire or smoke detector or break glass unit, has been activated.

It is recommended that fire alarm detection zones correspond with fire-resistant building compartments in the centre. If a fire detection zone crosses two compartments in the centre, it may cause confusion for staff when trying to locate a fire and even delay the evacuation of residents.

In line with the Irish Standard I.S. 3218:2013+A1:2019, the fire detection and alarm control panel should be located in a visible and accessible location, such as next to the main entrance to the building or near to the main reception area or nurses station. The provider must ensure that the alarm panel is not obstructed and is easy to reach.

To reduce the time taken for staff to travel to view an alarm panel and investigate the reason for an alarm activation — especially in larger designated centres — the provider should consider installing a number of duplicate 'repeater' control panels in strategic locations in the centre.

An accurate and up-to-date detection zone plan of the designated centre should be displayed beside the fire alarm panel. Staff should be trained in operating the panel and should be able to read and understand the panel display so that they can identify where the alarm has been raised and investigate it quickly.

In addition to providing automatic fire and smoke detection, manual call points, such as break glass units, should be provided throughout the designated centre, typically in circulation spaces (such as stairways, lobbies and corridors) and near exit doors so that a person who discovers a fire can raise the alarm.

## Giving warning of fires

It is essential that in the event of a fire, everyone in the centre is warned. The provider should consider a range of warning systems, such as audible alarms, visual alarms and tactile alarm devices, taking into consideration the type of service and care being provided.

The assessed needs and abilities of the residents and children should also be considered (see Chapter 3 of this handbook). For example, special consideration should be given to residents or children:

- who are known to be heavy sleepers
- who are on medication that may reduce their level of alertness during the night and
- with hearing or communication difficulties.

Staff should be aware of any specialist communication needs of residents and children and should be trained to use all warning equipment that will be used in the centre. Providers and staff must consider the impact of an alarm on those residents and children who may be affected by loud noises that may trigger behaviours that can impact on safe evacuation. They should consider how residents' behaviour in the event of a fire may affect the smooth evacuation of compartment or centre.

The provider should ensure that audible alarms can be clearly heard throughout the centre. The provider should refer to I.S. 3218:2013+A1:2019 for the specific alarm volume (decibel) levels and a fire safety professional should verify that the required sound levels are being achieved. These decibel measurements should be carried out in a way that is sensitive to the needs of residents and children and which minimises disruption to their routine.

Residents, children, visitors and staff should also be informed in advance of any alarm testing that may be carried out.

Emergency call facilities are required in all bedrooms, day rooms, dining rooms and smoking areas, and other rooms used by people using the service in designated centres for older people. This is not a requirement in special care units or designated centres for people with a disability, but may be considered appropriate to meet the needs of individual residents and children.

## Category of alarm system used

In designated centres, the installed fire detection and alarm system should generally be constructed and installed to 'Category L1 standard', while a lower standard of 'LD1' as defined in Irish Standard I.S. 3218:2013+A1:2019 in conjunction with a fire alarm control switch to facilitate testing of the system, is acceptable in community dwellings.<sup>+</sup>

## Emergency lighting and exit signage

Escape routes should be lit up for safe evacuation in the event of a fire or general power failure. Emergency lighting is designed to come on and remain on in the event of a power cut. Emergency exit signage is used to indicate the direction to the emergency exit. Emergency lighting and exit signage should be provided inside and outside the premises to direct everyone to final exits and to external assembly points.

Emergency lighting and emergency exit lighting should be designed, installed and maintained to Irish Standard I.S. 3217:2013+A1:2017. It should be provided throughout the building, including in circulation spaces such as stairs, lobbies and corridors, in large dayrooms and so on. Such lighting should also be provided outside the building, beside final exits, to help evacuees during the hours of darkness to safely disperse or safely reach evacuation assembly points once they reach outside.

The code of practice on community dwellings recommends at least 'one self-contained emergency luminaire [a complete electric light unit] should be provided to corridors, hallways, landings and stairways'.

### What is emergency lighting?

Emergency lighting is lighting provided for use when the power supply to the normal lighting fails to light up spaces, escape routes and location of equipment.



### What is emergency exit signage?

Emergency signage is used to indicate an escape route.

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<sup>+</sup> *Fire safety in community dwelling houses: Code of practice for fire safety in new and existing community dwelling houses 2017.*

## System maintenance

The provider should establish, maintain and regularly review the system of daily and weekly maintenance and operating checks by staff, appropriate to the fire detection and alarm systems and emergency lighting systems in place. Maintenance related records should be clear and easy to maintain, and any actions taken to fix identified defects should be recorded in the fire safety register held in the designated centre. The fire detection and alarm and emergency lighting systems should be maintained every three months and annually inspected by an appropriate person in line with the requirements of the Irish Standards.

Certificates confirming the inspection and maintenance of the fire detection and alarm and emergency lighting systems should be provided by the competent person and kept in the fire safety register. A copy of the competent person's certification for the fire detection and alarm system should be displayed next to the fire alarm panel. The provider must ensure that any identified faults are promptly addressed.

### Your notes

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## Chapter 9. Means of escape



### Introduction

The safe evacuation of a designated centre relies on an adequate means of escape, which the provider is responsible for ensuring. Each person's escape route starts with where they are located if a fire breaks out and finishes when they have reached a place where they are no longer in danger from that fire.

In designated centres, the escape route may include travel through compartments, sub-compartments, bedrooms, day rooms, staff rooms, inner rooms, corridors, stairs and final exits. To make sure that everyone can be safely evacuated from the centre, the provider must make sure that these areas are always ready for use for escape from the centre.

### The provider's responsibilities

Coupled with the requirement to provide an adequate means of escape, the regulations require providers to make 'adequate' arrangements for the evacuation of everyone from the centre in the event of a fire. In the context of designated centres, 'adequate' means that all residents, children, staff and visitors can be safely evacuated before they have been harmed by the effects of fire.

Therefore, the provider must make sure that the escape routes throughout the centre are suitable for the evacuation needs of residents and children and the evacuation procedure. For example, evacuation using beds should not be used where corridors are too narrow for beds to be easily moved along them, while wheelchairs should not be used where there are steps along the escape route.



**Case study 3** demonstrates the importance of ensuring escape route doors will open in an emergency situation.

## CASE STUDY 3:

### Résidence du Havre nursing home: 32 residents died



#### Profile of fire

Résidence du Havre nursing home in L'Isle-Verte, Québec, Canada (2014) — residential centre for older people/supported living. Fire assessed to have started near the kitchen: 32 residents died.

#### Commentary

The investigation report into Résidence du Havre found that a number of fire safety systems were not adequate and ultimately failed when the fire broke out. Doors to the outside were supposed to unlock following the alarm sounding; however, the fire caused a power outage which resulted in outside doors failing to open when the alarm activated.

The report findings outlined two cases where there was no back-up option to opening the doors if there was a power failure. In one case, the internal panic-open bar had been removed from a door to prevent confused residents exiting, while in the other case, the main door into the reception area required a code on a keypad to open.

The lack of back-up systems was an unidentified risk, as it eliminated the doors use as fire exits on this occasion.

**Case study 5** demonstrates the importance of a means of escape when planning for the safe evacuation of residents.

## CASE STUDY 5:

### Quakers Hill: 14 residents died



#### Profile of fire

Quakers Hill Nursing Home, Quakers Hill, New South Wales, Australia (2011) — residential centre for older people. The fire was caused by a nurse setting fires in the centre: 14 residents died.

#### Commentary

In Quakers Hill, it was found that the design of an L-shaped ramp with a handrail at the exit of one unit failed to meet the mobility needs of all residents in the unit. Residents confined to their beds could not be evacuated down the ramp due to the location of the handrail. On the night of the fire, this unidentified risk ultimately hindered the evacuation procedure.

## Means of escape

In the event of a fire, residents, children, staff and visitors must be able to evacuate the centre by escape routes that are protected from fire and smoke and are free from obstruction. A suitable means of escape must be available for each resident or child at all times.

### **What is the 'means of escape'?**



A physical means, whereby a safe route or routes are provided for people to travel from any point in a building to a place of safety.<sup>‡</sup>

The means of escape is a combination of the method and route that will be used by residents, children, staff and visitors to move to a place of safety, or exit the building, in the event of a fire.

In case an escape route becomes blocked or unusable during a fire, there should usually be an alternative escape route available.

Typically, there should always be at least two independent escape routes available from any part of the centre. Where only one escape route is available, the area should be risk assessed and its future use restricted. For example, bedrooms with only a single escape stairs should not be allocated to people who are not independently mobile.

The provider must identify the best escape routes for each resident. These must be wide enough and should be suitable for the equipment that will be needed. Planning for bed evacuation is particularly important and should consider bedroom layout, door widths, corridor widths, steps, ramp corners and structural obstructions, such as columns.

It is also recommended that a simulated trial run of a bed evacuation be conducted as part of the assessment of escape routes for bed evacuation. Training in bed manoeuvring control when moving residents in their beds should be provided to all staff likely to undertake this role.

To minimise confusion for staff, residents and children, directional signage should be provided along all escape routes — including at all internal corridor junctions with multiple route options — to indicate the route to be followed to the nearest exit point. Outside the building, signage should indicate the route to the external assembly point.

Floor plans that clearly indicate the alternative escape routes to places of safety and the locations of firefighting equipment should be displayed throughout the centre.

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<sup>‡</sup> The means of escape is defined in British Standard B.S.4422:2005 as being 'the structural means whereby (in the event of a fire), a safe route or routes is or are provided for persons to travel from any point in a building to a place of safety'.

## What may be considered when assessing the means of escape?



The provision of an adequate means of escape should consider the following:

- a. the findings of the fire safety risk assessment
- b. the evacuation strategy and procedure including safe evacuation times
- c. the evacuation needs (assistance and equipment) of residents and children in designated centres for older people and people with disabilities
- d. the number and width of available escape routes
- e. the number of bed spaces in each bedroom and each compartment
- f. the travel distances within compartments
- g. corridor layout and restrictions, sub-divisions, steps, ramps, ramp corners, sharp turns, narrow points, tight corners, location of vending machines and water coolers
- h. the use of stairs for vertical evacuation (floor to floor)
- i. any inner rooms (a room within a room without its own access to a circulation corridor)
- j. the size and position of final exit doors.

## Typical escape routes in a designated centre

### Bedrooms

The provider must make sure that adequate space is provided within each bedroom to enable the safe and quick evacuation of each resident from the room whenever any evacuation aids that residents need are being used.

Evacuation equipment required by each resident should be suitably stored and easy to access at all times. For example, a suitable number of wheelchairs should be provided within the compartment, ski sheets<sup>‡</sup> or similar type equipment should be fitted to the mattresses and hoists should be readily available if they are needed.

Within designated centres, each bedroom should be enclosed in a 30-minute fire-

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<sup>‡</sup> A rugged evacuation mat in which evacuees are secured in and pulled along the ground to safety.

protected construction and fitted with 30-minute fire-protected doors. In community dwellings, each bedroom should be separated from escape corridors and stairs with a 30-minute fire-protected construction and fitted with 20-minute fire doors.

## **Corridors**

For new or existing centres, corridors should be designed and arranged to help the safe evacuation of residents or children and meet the requirements of the Technical Guidance Document B (2006).<sup>±</sup> Providers should maximise the space available by ensuring corridors are clutter-free.

Providers should ensure that corridors are constructed to the required fire rating, and where glazing has been used, they should be inspected by a competent fire safety professional to ensure that they provide the required levels of fire resistance.

Because smoke from a fire can hamper safe evacuation, the escape corridors should be sub-divided to restrict the spread of smoke using cross-corridor fire doors in line with Technical Guidance Document B.

The method of opening fire doors or holding them open should also be considered, and if these are automatically released in the event of fire alarm activation.

Wherever they do not automatically open, a risk assessment by a competent fire safety professional with input from the fire authority, as appropriate, should be carried out and mitigating actions identified. See Chapter 12 for further information on fire doors.

If within the designated centre there are staff-only controlled doors, this must be compensated for by the ability of well trained staff to organise a controlled evacuation quicker than if the residents and children can evacuate independently.

Any door releases, hold-open devices on doors and electric door locks should be regularly tested and serviced by a competent person or fire safety professional to ensure that they are in safe working order and will not delay escape in the event of a fire within the designated centre.

## **Stairs**

Stairs must be enclosed in a fire-resistant construction that can be adequately protected on all floor levels from fires which have taken hold in bedrooms and corridors. They should be well maintained and not used for the storage of supplies

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<sup>±</sup> Building Regulations 2006: Technical Guidance Document B: Fire Safety (2006) and Department of the Environment, Heritage and Local Government's *Guide to fire safety in nursing homes and similar type premises* (1996).

or equipment.

It is recommended that providers engage a competent fire safety professional in the design phase to ensure that the configuration and layout of each stairs and stairwell is in line with the appropriate technical guidance, with the input of the relevant fire and building control authority as appropriate.

The provider should ensure that each stairs that will be used for escape has been included in the fire risk assessment, as discussed in Chapter 6 of this handbook. Particular attention should be paid to stair lifts, as these may restrict or impede safe evacuation along this route.

Where required, the provider should have evacuation aids in place at each floor level that are suitable for use on the stairs and stairwells. Providers should consult with the relevant guidance regarding restrictions, such as the 1996 guide to fire safety in nursing homes and similar premises, and the code of practice for fire safety in community dwelling houses.

### **External escape stairs**

Any external escape stairways must be sufficiently wide enough for safe evacuation and should be suitable for the assessed evacuation assistance and evacuation equipment that the residents and children may need. Stairways should be constructed, and enclosed where necessary, and fitted with guarding and handrails, as required by the relevant building regulations.

### **Inner rooms**

#### **What is an 'inner room'?**

An inner room is a room that is not accessed from a circulation space, such as a corridor, and the only way in or out of the room is through another room (termed an 'access room').



Providers should not use inner rooms as bedrooms for either residents or staff and should ensure they contain only limited combustibles and sources of ignition. The means of escape and travel distances from inner rooms to escape routes should be carefully planned and specifically addressed in the evacuation procedures and fire safety risk assessment. All inner rooms should fully comply with the recommendations of Technical Guidance Document B.

## Final exits

The final exit of each escape route should lead to a place of safety outside the building.

### What is a final exit?



A final exit is defined in Technical Guidance Document B 2006 as being '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'.

**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.

**Doors on escape routes** should not be fitted with any locking device. If a locking device is required, it should be able to be opened without the need for a key, from the side approached by people making their escape.

On escape-route doors and final exit doors, enabling a door to be readily opened could include installing thumb turn locks on doors provided for a small number of occupants or push bar and push pad devices fitted to doors provided for large numbers of occupants.

Where additional controls are required to safeguard residents, one or more of the following should be in place:

- electrically powered lock (with suitable fail-safe, typically connected to the fire detection and alarm system and or green manual call point or break glass unit)
- increased staff supervision
- motion detector which causes a local alarm to go off
- door exiting alert
- relocation of particular residents in the centre.

Key-operated or staff-controlled doors on escape routes are sometimes provided in limited situations where people with dementia or cognitive impairment are living. In this situation, a risk assessment<sup>^</sup> of this method should be carried out. In such cases, it is recommended that there is one key that operates all doors concerned and all staff members should have this key on their person. A copy of the key should

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<sup>^</sup> It is recommended that you engage a fire expert in these assessments.

also be located adjacent to each door in a break-glass unit.

### **Your notes**

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## Chapter 10. Safe evacuation

### Introduction

In so far as possible, each resident or child should be made fully aware of the evacuation plan as it relates to them and the assistance they will be provided with in the event of a fire alarm sounding.

Evacuating a centre during a fire will be a physically demanding and dangerous event for residents, children, visitors and staff. The provider is responsible for ensuring the safe evacuation of everyone. The fire service should not be relied on to evacuate people from the centre. The role of the fire service is to tackle the fire; and to rescue residents and children when a centre's evacuation strategy has failed.

Case study 1 demonstrates the importance of reducing evacuation times and how quickly a fire can turn fatal.

### CASE STUDY 1:

#### Rosepark Care Home: 14 residents died



#### Profile of fire

The fire started in a cupboard, located along a bedroom corridor, on the upper level of the premises. The cupboard contained an electrical distribution board and combustible materials, including a number of aerosol sprays. In the fatal accident enquiry report, the Sheriff Principal opined, following toxicology reports and expert witness statements, that the 10 residents who were pronounced dead at the incident had succumbed to the toxic fire products 11 minutes after the fire alarm sounded, and before the attendance of the first fire service appliance.

A full scale reconstruction of the fire indicated the following timelines for the development of the fire:

- 0 minutes — fire starts
- 4 minutes — heavy smoke logging in corridors
- 6 minutes — visibility in corridor almost nil. Incapacitation (loss of consciousness) is predicted at around 5.5 minutes
- 7 minutes — temperature in corridor 990°C

- Rooms with open doors — ceiling temperatures 540°C, 'nose height' 300°C
- The predicted results of an exposure in bedrooms (or any other room) with open doors along the fire corridor are for incapacitation due to asphyxia, approximately 1 minute after that in the corridor at around 6.5 minutes
- Time from ignition to peak temperature – 7 minutes.  
The reconstruction suggests that the combined effects of heat and asphyxiant gas from the fire would probably have led to conditions in the escape corridor which meant that no one could have been survived some 6 to 7 minutes after the fire started.

## The provider's responsibilities

The provider must pay particular attention to the safety of staff who are expected to coordinate and complete the evacuation before anyone is harmed. Such staff may be required to repeatedly return to the location of a progressively growing fire to complete the evacuation of residents or children from the compartment in which the fire has started.

It is widely accepted that the length of time that a person has been exposed to the effects of a fire (such as smoke inhalation and or carbon monoxide poisoning) has a direct impact on the degree of harm they will suffer.

Defining a safe evacuation time is complex, but as outlined in the case study, corridors can become filled with smoke and death can occur very quickly. To this end we encourage providers, through practiced drills and fire safety training, to focus on the factors which reduce evacuation times. Determine safe evacuation times, if possible, and if not to set a target to achieve and work to reducing the evacuation time to a safe and reasonable level. If providers have not identified a 'safe evacuation time' for the entire centre, or compartments or sub-compartments within the centre, they do not have a measurable reference point to use for assessing the adequacy of fire procedures, fire precautions, fire drills, compartment sizes, staffing numbers or staff training.

## Evacuating residents

The safe evacuation of residents requires that staff explicitly know and understand the ability or dependency of each resident and the factors that may affect this. In the context of fire, it means the ability of each resident or child to understand and physically respond to a warning of fire.

The provider should clearly define the criteria that it will use to assess residents or children's dependencies in the context of a fire-related evacuation, reassess these dependencies regularly and keep a record of those that can be easily retrieved in the event of an emergency.

The provider and staff should also consider any factors that may influence residents or children's abilities in a fire situation, such as their dependency, acute illness or medication use.

## The importance of an evacuation strategy

An evacuation strategy sets out the general principles involved and is part of the overall fire evacuation procedure. The evacuation procedure describes in detail the specific steps to be followed in the event of a fire so that the **safe evacuation** can always be achieved.

In order to comply with the regulations, the provider must ensure there are enough staff on duty to safely evacuate all residents and children from the centre. The procedure should include setting an evacuation time for each compartment, as a target to work towards. Where the target evacuation time is not realised through drills, the provider's aim should be to review and implement procedures to reduce the real evacuation time towards the target evacuation time.

## Safe evacuation time

To show that it has adequately planned for the evacuation of residents and children from each compartment or sub-compartment, the provider, in consultation with its fire safety professional, should assess and document the safe evacuation time for each compartment or sub-compartment.

### What is the safe evacuation time?

The safe evacuation time is the maximum time window available between the time a fire starts and the time when the evacuation of the compartment is no longer safe. While assessing this time window, providers must



consider the findings and recommendations of the fire safety risk assessment, and identify how long it is acceptable for residents, children, visitors, and staff assisting with the evacuation to be exposed to fire, smoke and the other effects of fire.

Providers must also actively consider the likely consequence of the identified evacuation time on the health and safety of residents, children, visitors and staff. Once identified, the safe evacuation time should be recorded and communicated to all staff. The provider should also record the methodology used for this assessment.

## Reducing the evacuation time?

To reduce the evacuation time, the provider and fire safety professional should consider the following:

- a. number and sizes of compartments and travel distances to each compartment exit
- b. number of fire protected rooms (including bedrooms) in each compartment
- c. number of residents or children (and their dependency levels and abilities) in each bedroom and each compartment
- d. staffing and equipment resources required to evacuate the residents or children from the compartment, including the use of fire wardens to effectively direct and manage the evacuation
- e. daytime and night-time staffing levels
- f. availability of alternative escape routes from the compartment
- g. travel distances within each compartment.

In addition, the provider and fire safety professional should also consider the following when assessing the safe evacuation time:

1. Known deficiencies in the:
  - a. fire detection and alarm systems or emergency lighting systems
  - b. fire prevention measures
  - c. fire and smoke containment measures.
2. Fire drill reports, risk assessments and training records.
3. The presence of areas of high fire risk within the compartment.

The safety of residents and children that are being exposed to the effects of fire and smoke.

The safe evacuation time for each compartment should be clearly stated in the

designated centre's fire strategy, and used as the basis for all fire drills, training, the provision of staff and equipment resources, and the allocation of residents or children's bedroom accommodation.

## Evacuation strategy options

The strategy may be either a:

1. Single stage total premises evacuation (an entire premises evacuation).
2. Progressive and phased evacuation.

Various factors will influence the preferred strategy, such as the dependencies of residents and the minimum number of staff on duty. Staff must be able to account for all people who were in the centre at the time of an evacuation. To help achieve this, providers are advised to keep a daily record of rostered staff, residents, visitors or contractors that may be on site.

## Single-stage total evacuation and progressive and phased evacuation

### What is single-stage total evacuation?

A single stage total evacuation is where all occupants of the centre simultaneously evacuate it upon hearing the alarm. This is suitable in premises where, due to either the building size and or the abilities of residents or children, it has been decided that all people are able to (and willing to) evacuate quickly to a place of safety outside the building.



### What is progressive and phased evacuation?

Progressive and phased evacuation is the evacuation of the centre in a controlled sequence, with those within the compartment in which the fire has started being evacuated directly into an adjoining compartment or sub-compartment first.

The initial movement from one compartment to another is typically horizontal within the building.

## Discussion on evacuation strategies

A phased evacuation strategy will usually be the only realistic evacuation strategy for most designated centres for older people due to the difficulty in moving residents and the potentially extended evacuation times due to residents' frailty and dependencies. However, in community dwellings, single stage total evacuation will

probably take place.

The floors and ceilings of multi-storey designated centres using phased evacuation should be divided with 60-minute fire-resistant construction<sup>‡</sup> on each floor, from all other floor levels. Each floor level must also be divided into no fewer than two appropriately sized compartments.<sup>♦</sup>

Due to the time taken to safely negotiate stairs during an evacuation, a phased horizontal evacuation strategy (on the same floor level) should be in place between compartments on the same floor level before 'vertical evacuation' (moving down levels) is required between floors.

For phased evacuation, the size and layout of each compartment or sub-compartment should be big enough to temporarily accommodate residents or children moved into it. Their supervisory and welfare requirements also need to be considered in the strategy.

The selected strategy should be reviewed and tested against the safe evacuation time, and be recorded in the fire safety management policy and procedure documents. It should be used in all drills, staff training, evacuation floor plans and signage. It should also be used to inform the:

- allocation of residents or children's bedrooms
- minimum number of staff that are needed on each shift, and
- type and quantity of evacuation equipment required in the centre.

All staff, and residents and children where appropriate, must know and understand the evacuation strategy being used in the designated centre.

## Fire evacuation procedure

Fire evacuation procedures should be displayed beside the fire detection alarm panels and in staff areas. The procedure notices displayed throughout the centre should be clear, unambiguous and consistent, while the signage should match the overall fire safety strategy.



### Fire evacuation procedure

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<sup>‡</sup> Technical Guidance Document B 2006.

<sup>♦</sup> Technical Guidance Document B 2006.

A fire evacuation procedure is a step-by-step description of the actions that staff should take at various stages of a fire emergency from the initial alarm activation right through to the evacuation and potential relocation of residents or children to different premises.

The fire procedures should consider the current ability and specific needs of each resident to evacuate the centre. The procedure should also consider changes in human behaviour and confusion that may arise when a fire is identified. Where necessary, the procedure should be updated to reflect the changing needs of residents, children, staffing and premises changes.

### **What should be included in the fire evacuation procedure?**



The fire evacuation procedure should include clear direction on what staff do upon hearing the fire alarm, including:

- A. investigating and confirming the cause of the alarm activation
- B. identifying the fire's location and deciding who is at immediate risk.

It should include what staff should do in the event of a confirmed fire, including:

- A. arrangements for raising the alarm, calling assistance and calling the fire service (building details, address and Eircode)
- B. firefighting, if safe to do so.
- C. meeting the fire service on arrival so that it can be shown exactly where they need to go and how to get there, including details of utility shut off valves and location of hydrants.

The fire evacuation procedure may also include:

- A. the procedure for a phased or total evacuation
- B. a sweep of all areas of the evacuated compartment to ensure no one has been left behind
- C. where residents or children should assemble during and after evacuation
- D. care of and emergency relocation of residents or children following an evacuation
- E. what staff should do in the event of false alarm.

## **Roles and responsibilities of staff**

Each shift in the designated centre should have a fire warden, or a specific person,

with responsibility for implementing and coordinating the fire evacuation procedure. All staff should be trained in the procedure and be able to implement it quickly and efficiently.

Staff should know who is the fire warden or other responsible person on each shift. When agency staff are working in the centre, a fire safety briefing and the procedures to be followed in the event of a fire should form part of each shift handover.

### **Review the fire evacuation procedure when:**

- there are changes in staffing levels
- there are changes in residents and children's dependencies
- new or upgraded fire detection and alarm systems or evacuation equipment are being introduced
- the specific evacuation requirements of a resident have not previously been required within the designated centre
- issues that arise during fire drills need to be addressed
- fire-related adverse events have occurred in the centre
- whenever new fire hazards or risks have been identified.

### **Staff resources for evacuation**

Safe evacuation of a designated centre relies on the staff being suitably trained to ensure that they have the knowledge and skills to implement the fire safety strategy and evacuation plan.

Providers, together with the person in charge, should carefully consider fire safety requirements (including the residents or children's abilities or dependencies) when deciding on staffing levels for each shift. For example, it would be unrealistic to expect a small number of staff to be able to evacuate a large number of residents and children who have medium or high dependencies.

When deciding on minimum staffing levels, the provider must realistically consider the expectations placed on staff conducting an evacuation of a compartment and ensure that these expectations are realistic and that staff and residents will be safe.

Regulations and national standards do not set out any required minimum number of staff that must be on duty, as this will largely depend on the profile of people living in the designated centre and their assessed needs. Determining a safe staffing level is influenced by a number of variables, for example, the number and dependency

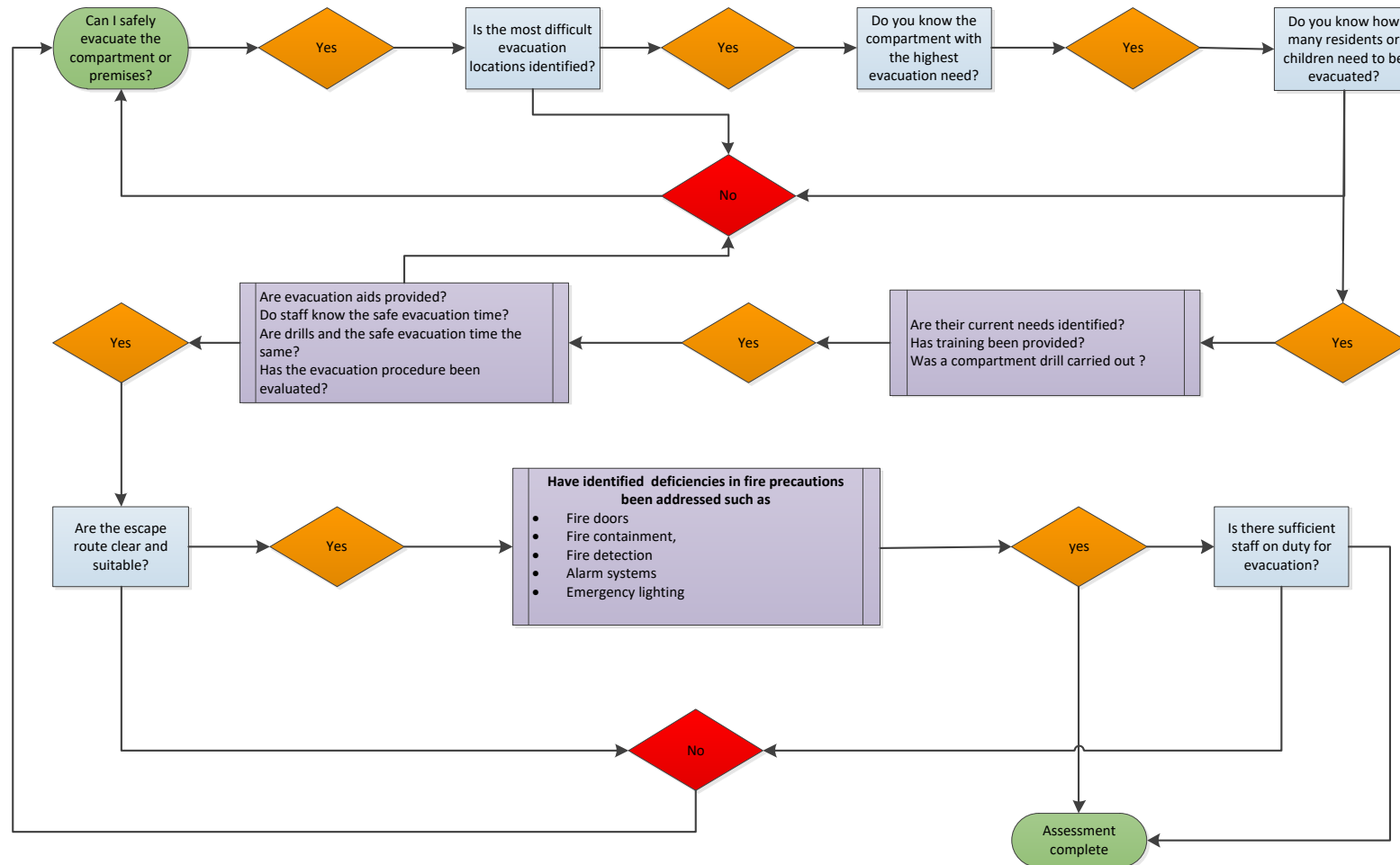


levels of residents or children and their evacuation assistance needs; the skill-mix of the staff; and the size, layout and condition of the infrastructure.

However, under the regulations, each provider must assess the resident population in their designated centre and determine a safe staffing level. The provider must demonstrate how it is assured that its staffing levels are appropriate. Once verified, the staffing numbers should not be allowed to fall below the minimum number needed on shift in the centre to evacuate the particular building compartment with the highest evacuation needs. The provider should monitor changes in the dependencies of residents and children and consider any impact it may have on the existing staffing levels and experience, skills and abilities of staff on duty.

The safe evacuation time and the minimum number of adequately experienced staff required to successfully carry out the fire evacuation procedures should be clearly stated in the fire precautions. A flow chart is included here (see Figure 3) to assist providers with reviewing the fire evacuation plans for each compartment

**Figure 3. Flowchart for provider review of compartment evacuation plans and related staffing levels**



## Number of beds in each room

Providers may wish to consider guidance issued in the Northern Ireland Firecode, which recommends that there are no more than four bed spaces in any bedroom.<sup>†</sup>

In addition, Statutory Instrument 293 of 2016, that is scheduled to apply to all designated centres for older people from 1 January 2022, states that 'no bedroom shall have more than four residents, other than a high dependency room which shall have not more than six residents'.<sup>^</sup>

The evacuation needs of a bedroom for six high dependency residents would need to be assessed in detail by the provider so that there is always enough experienced and able staff on duty with the skills required to safely evacuate the room within the safe evacuation time.

### **What should be considered when deciding how many residential places (bed spaces) are in each compartment?**

To address this question, the provider should carefully consider the following:

How many 30-minute, fire-protected bedrooms are there in the compartment?

What is the safe evacuation time for the compartment and has this been achieved during drills?

What is the minimum number of able and experienced staff that will be available to conduct the initial evacuation of the entire compartment in a safe and timely manner?

What is the longest travel distance to each compartment exit?

What is the assessed evacuation abilities or dependencies of each resident or child within the compartment?

What evacuation aids will be needed, and how many residents or children will need them?

How long will it take to locate a fire in the compartment?

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<sup>†</sup> Northern Ireland Firecode: *Health Technical Memorandum (NIHTM) 84: Fire risk assessment in residential care premises* and Northern Ireland Fire and Rescue Service's *Fire Safety Risk Assessment: Residential Care Premises*.

<sup>^</sup> Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) (Amendment) Regulations 2016. <http://www.irishstatutebook.ie/eli/2016/si/293/made/en/print>.

It is recommended that providers review the fire safety risk assessment guidance published in Northern Ireland, which indicates there should be no more than nine bed spaces in any sub-compartment with four or more staff awake at all times.♦

## Display of fire procedures

Fire safety notices and evacuation procedures must be clearly displayed in the designated centre. They should be up to date, easy to read by all and specific to the designated centre. They should be displayed next to the fire alarm panels, in the nurses' station or office and or the manager's office and within each compartment. They should give clear instructions describing the steps to be followed in the event of a fire.

Although a legal requirement, the design and location of fire safety evacuation procedures should be carefully considered so that they do not create an institutional look and feel in the designated centre or make it appear less homely.

To support safe evacuation, a floor plan should be displayed along the escape corridors of each compartment and beside all alarm panels. The floor plan should show the 'you are here' location, general building layout, escape routes, escape direction and compartment boundaries. It may also include specific relevant information, such as the location of fire extinguishers or significant hazards, for example, oxygen storage.

**Case study 1** demonstrates the importance of fire precautions.

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♦ Northern Ireland Fire and Rescue Service. *Fire Safety Risk Assessment: Residential Care Premises*, page 28. Northern Ireland Fire & Rescue Service; 2017. ISBN: 978 0 33709 7249 and *Northern Ireland Health Technical Memorandum (NIHTM) 84: Fire risk assessment in residential care premises*, page 26.

## CASE STUDY 1:

### Rosepark Care Home: 14 residents died



The fatal accident enquiry identified that the following matters would have been reasonable precautions:

- Providing clear information at the fire alarm panel (and, in particular, a visual representation) would enable staff to identify quickly and accurately the location of the detector which had been activated.
- Giving the nurse in charge instruction in relation to the new fire alarm panel which was installed some days before the fire. It should be noted this would have involved:
  - a) drawing the new panel to the attention of any nurse who was to be a nurse in charge
  - b) explaining to the nurse in charge that, although the panel had changed, the zoning arrangements had not changed
  - c) giving the nurse in charge sufficient information to enable them to interpret the indications on the panel accurately
  - d) giving the nurse in charge sufficient information to enable them to carry out the basic operations at the panel — silencing and re-setting — correctly.
- Exhibiting, on prominent display in Matron's office, a laminated sheet specifying clearly what information should be given to the control operator by the member of staff who calls the fire service;
- An immediate call to the fire service when the fire alarm sounded and, to that end:
  - an emergency procedure which provided for an immediate call to the fire service; and
  - an automatic transmission of a signal to the fire service in the event that the fire alarm was activated.

For further information on alerting the fire services, see Chapter 14.

## Directory of residents or children

It is recommended that a directory of all the current occupants in the designated centre and a record of rostered staff and visitors be maintained. This is to help staff to know at all times how many people are in the designated centre and who will need to be accounted for after an evacuation. In addition, the care and welfare regulations for designated centres for older people and designated special care units require providers to maintain a directory of visitors.

## Safe care and location for residents or children

The provider must have prepared a contingency plan for the safe care and appropriate re-location and or accommodation of residents and children if the prolonged evacuation of the designated centre is necessary. For example:

During a phased evacuation, how many staff will be required to stay with the evacuated residents while other staff continue to evacuate the building?  
What impact could the weather conditions have for the health and welfare of residents until they can return to the building or to alternative accommodation?

## **Your notes**

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## Chapter 11. Restricting the spread of fire



### Introduction

Restricting the spread of fire in a designated centre is an essential component of keeping people safe. This is achieved through sub-dividing the centre into a number of smaller fire-protected areas, a process called compartmentation. It serves two purposes: the first being to contain the spread of fire within parts of the centre; and the second being to allow for the phased evacuation of the centre.

In the event of a fire, phased evacuation requires that all residents and children in a compartment in which the fire has started are immediately moved to an adjoining compartment.

A compartment may be further sub-divided into smaller fire-protected areas called sub-compartments. This may be useful to help reduce the number of residents who may be exposed to the effects of fire or reduce the numbers of residents who will need immediate evacuation. Case study 1 demonstrates the devastating effects of ineffectual or no compartmentation.

### CASE STUDY 1:

#### Rosepark Care Home: 14 residents died



The fire started in a cupboard on the upper level of the premises which contained an electrical distribution board and combustible materials, including a number of aerosol sprays. These circumstances led to a very fast developing fire of short duration, which, according to expert opinion and detailed reconstruction of the incident, would normally have self-extinguished before the fire and rescue service (FRS) was called or certainly before they arrived.

However, the following factors contributed to a protracted incident during which the majority of the upper floor of the centre was smoke logged:



- Fire dampers (shut off doors or louvres) had been omitted from the ventilation system, thereby allowing smoke to move from one fire compartment to another through the ventilation shafts, and in particular from the corridor adjacent to the room where the fire started to the upper lift shaft area.
- There was no fire stopping of service entry points between fire compartments (the fire-resistant sealing off of access holes for services running between the compartments).
- There was no effective compartmentation in the attic area, and the presence of an open vent in the lift shaft area allowed smoke from the upper corridor, adjacent to the room where the fire started, to penetrate via the roof space to the upper lift shaft area.

Bedroom doors were routinely left open overnight.

## The provider's responsibilities

Compartmentation plays a fundamental part in making sure that all residents, children, visitors and staff in the centre can be quickly moved to a place of relative safety in the event of a fire. It is critical that the compartment structures are effective and will provide the protection from fire that is expected from them.

The provider should have the compartmentation structures periodically inspected by a fire safety professional to confirm that they are adequate.

Floor plans of the building that show the locations of all compartment boundaries should be available to the provider, managers and staff in the centre and should be used during staff training and fire drills to ensure that all staff are aware of their locations, and the critical role they play in the safety of people in the centre.

## Compartmentments

Where phased evacuation is part of the evacuation strategy and procedure in the designated centre, each floor level of the centre must be divided into at least two compartments separated by construction which is 60-minute fire-resistant.

Effective compartmentation of each floor level will:

- improve the safety of all residents and staff in the centre by limiting their exposure to the effects of a fire
- reduce the number of residents or children who will need to be evacuated in

the initial stages of a fire

- reduce the number of staff required for evacuation and
- reduce the safe evacuation time to a readily achievable time.

Fire compartments are created through the use of doors, walls and floors of fire-resisting construction. Compartment walls should be extended through the roof or attic space all the way to underneath the roof covering, where it is fire sealed to the underside of the roof covering material, or to the floor above.

Any access through the fire-resisting compartment walls should be provided by way of fire doors with the same fire resistance as the compartment wall, generally 60 minutes of fire resistance.

Further guidance on compartmentation and travel distances is given in Technical Guidance Document B of the building regulations. Advice should be obtained from a fire safety professional with the input of the relevant fire and building control authority, as appropriate.

## Sub-compartments

When planning the number of staff and equipment that will be needed to achieve satisfactory evacuation times, it may be useful to divide larger compartments into a number of smaller sub-compartments — but only having taken the advice of a fire safety professional and with the agreement of the local fire authority.

A sub-compartment is a smaller grouping of rooms within a larger compartment. Sub-compartment boundaries have the same construction requirements as compartment boundaries except with a lower fire rating. Each sub-compartment must be enclosed in a fire-resisting construction (walls, doors and floors and be able to impede the spread of fire) that achieves 30 minutes of fire resistance.

The sub-compartment boundary walls must also be extended through roof or attic spaces all the way to underneath the roof covering, where it is fire sealed to the underside of the roof covering material or to the overhead compartment floor.

## Travel distances

The escape distance to be travelled within each compartment should be limited in line with the requirements of Technical Guidance Document B.

In general, the travel distance to the nearest compartment exit should be less than 10 metres, where escape is only available in one direction and 20 metres when more than one escape route is available. Where actual travel distances exceed the requirements of Technical Guidance Document B, then appropriate risk-reduction measures should be identified and implemented. Further advice should be obtained from the fire safety professional or local fire authority.

### **What is travel distance?**



The travel distance is the actual distance to be travelled by a person from any point within the floor area to the nearest place of relative safety (adjoining compartment, storey or exit, having considered the layout of walls, partitions, furniture and fittings).

## Ensuring effective compartmentation

Compartmentation is only beneficial to the safety of residents, children and staff if it has been constructed properly and will contain the effects of fire for the required rated fire-resistance time. While the provider must be able to provide assurances that it will perform as required in the event of a fire, the inspection and assessment of compartmentation is a specialist area and therefore requires the expertise of a fire safety professional.

Following the completion of any construction works in the centre, or the installation of building services works, the compartment elements should be re-inspected by a fire safety professional to confirm that effective compartmentation is being provided. Periodic inspection, repair and maintenance of compartment structures (such as fire door seals) are necessary and should be included in the building's maintenance programme.

## Compartment boundary floor plans

Compartment boundaries are the locations beyond which residents and children must be moved in the initial stages of the evacuation of the centre. It is essential that all staff are aware of the exact locations of compartment boundaries and can readily identify and locate them. Signage indicating their presence should be provided to ensure this.

Accurate floor plans that show the locations of compartment elements, along with their required fire rating, should be included in fire safety training material provided to staff and be used to inform contractors whenever works are being carried out on the premises.

## Chapter 12. Fire and smoke containment

### Introduction

Smoke inhalation as a result of a fire can have very serious consequences for residents and staff. A fire in a building can generate smoke that is thick and black, obscures vision, causes difficulty in breathing and can block escape routes. Smoke is a serious threat to life which should not be underestimated.

To reduce the risk of harm from the uncontrolled spread of smoke, fumes and fire, the building should be subdivided into fire-separated compartments, as discussed in the previous chapter.

Fire doors should be fitted to the walls between compartments, while the roof and attic space and ceiling voids may be sub-divided with cavity barriers.<sup>‡</sup> Particular care should be taken to ensure any gaps or openings in compartment walls or floors, or in cavity barriers, are fire sealed. Shut off doors in ventilation shafts should be in place to restrict the spread of smoke, fumes and fire.

The following case studies emphasise the importance of fire protection and fire containment in the designated centre. **Case study 1** demonstrates the importance of fire protection for bedrooms.

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<sup>‡</sup> Cavity barriers are used to sub-divide concealed cavities, ceiling void spaces and roof spaces to limit the spread of smoke, flame and hot gases through these areas or within such a space.

## CASE STUDY 1:

### Rosepark Care Home: 14 residents died



The centre was required to have overhead self-closing devices fitted to all bedroom doors. The investigation report found that on the night of the fire and for a variety of reasons the majority of these self-closing devices had been manually disconnected. A fire safety risk assessment of the premises did not identify the lack of self-closing devices as a risk.

The fatal accident enquiry identified a number of reasonable precautions which would have been expected to be in place, including:

- It would have been a reasonable precaution for the management of Rosepark to have fitted devices to ensure that bedroom doors were closed automatically in the event that the fire alarm sounded.
- 
- It would have been a reasonable precaution for all bedroom doors to have been closed in the event that a fire alarm sounded.
- 
- It would have been a reasonable precaution to have fitted smoke seals on bedroom doors.

These case studies demonstrate the importance of fire containment.

In the case of **Quakers Hill Nursing Home**, the fire investigation report found that fire barriers in the attic of the centre had been compromised from penetration of combustible material through the fire rated wall.

In **Greenwood Health Centre**, it was found that on the night of the fire, smoke moved freely between floors and between rooms. This was due to an absence of

smoke barriers between the false ceilings that connected residents' rooms.

It was found that smoke also spread through **NHC HealthCare Centre** during the fire. Smoke spread between voids in floors. There were no smoke dampers (shut off doors or louvres) in the ventilation system and it is also believed that the ventilation system in NHC Healthcare did not shutdown when the fire alarm sounded, which caused a further spread of smoke.

In the **Riverview IRA** facility, it was found that there was a total lack of fire barriers in the attic. The attic was assessed to have been the main route through which the fire spread through the centre.

The report into **Merrymount Nursing Home** noted that although the evacuation of the nursing home had been successful, smoke still passed from the basement into floors above through gaps in the flooring.

## The provider's responsibilities

The provider must have confidence in the effectiveness of the fire-containment of compartment walls, fire doors, door closers, cavity barriers, or fire dampers (shut off doors or louvres) in ventilation shafts in the centre. It is recommended that a detailed inspection of the designated centre is carried out by a fire safety professional — engaged by the provider — to inform the provider of what fire-containment measures are in place, their condition and any upgrade or repair works that may be needed.

## Fire doors

The use of fire doors throughout the centre is essential to protect escape routes so that they are available for use in the event of a fire in the centre. All bedroom doors, doors located along escape routes and doors to high-risk areas are required to be fire doors.

With the exception of fire doors to service ducts or cupboards which are normally kept locked shut and doors to toilets, bathrooms and shower rooms, all fire doors should be fitted with self-closers. The gaps between the edges of the door leaf (the entire door which opens and closes) and door frame should be fitted with intumescent strips and smoke seals. The intumescent strips expand when heated by a fire, to seal the gap between the door and the frame, while smoke seals prevent the spread of smoke at lower temperatures.

The provision of fire doors and their required performance should be decided by

reference to appropriate technical guidance by a fire safety professional or as approved by the local fire and building control authority. Further guidance on fire doors is given in Appendix B of Technical Guidance Document B.

### **Fire doors in community dwellings**

In line with the Code of Practice for Fire Safety in Community Dwellings, in existing community dwellings, where the existing frame and door has been assessed by a fire safety professional and is found to meet the equivalent standard of a 20-minute fire-resisting frame and door, it need not be replaced.

Where the frame and door has been assessed and does not meet the fire-resistance standard, the door may be replaced with a fire-resisting door leaf.

All hardware associated with these door sets<sup>¥</sup> must be compatible with a 20-minute fire-resisting door assembly.

### **Door closers**

A fire door will only prevent the spread of fire and smoke when it is closed. Due to the possibility of doors being left open, either intentionally or unintentionally, most fire doors should be fitted with a self-closing device that can fully close the door from any angle and against any latch fitted to the door. It is not necessary to have automatic closers on service ducts or cupboards which should be kept locked, nor on doors to toilets, bathrooms and shower rooms.

Bedroom doors in designated centres should be fire resisting and fitted with self-closing devices in order to reduce the risk of the spread of fire. The decision not to fit a self-closing device to a bedroom door should not be taken lightly and should only be taken to address very specific needs of individual residents and children. It should not be a widespread practice in a centre.

Where there are concerns that a door closer may cause injury to a resident or restrict their ability to move freely and independently around the centre, it usually indicates that a suitable closer has not been identified and fitted, or that the closer has not been properly adjusted. All door closers should be adjusted so that the force needed to open them, or the force they will use when closing are within the limits prescribed in the Building Regulations, Technical Guidance Document M<sup>11</sup>.

In particular circumstances, for example, frail residents who may be unable to open

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<sup>¥</sup> The complete fire door assembly, including door leaf (the entire door that opens and closes), frame, glazing, closers, ironmongery, hinges, smoke seals and intumescent strips.

<sup>1111</sup> Technical Guidance Document M 2010 Access and Use.



doors to their bedrooms, consideration may also be given to fitting suitable 'hold open devices' that releases the door to the closed position when the fire detection and alarm system is activated or in the event of an alarm malfunction or power failure.

It is not acceptable to disable a self-closing device through the use of wedges, hooks or props or to remove the self-closing device. Routine inspections should be conducted daily by the person in charge or other manager or designated staff member to ensure that fire doors are not inappropriately held open or blocked.

Some residents may prefer that their bedroom door is left open for their comfort or peace of mind. In such cases, suitable hold open devices should be used along with suitable self-closers. Every effort should be made to address the needs and preferences of each resident without compromising their safety and the safety of others in the centre.

Where it has been decided not to fit a self-closer to a resident's bedroom door, the provider should be able to show that they have considered all possible alternatives to find a suitable automatic closer and hold-open device. They must be able to demonstrate they had no choice left but to manage the higher fire safety risk. In such cases, the provider should be able to show:

- They have reviewed the assessed needs of the individual resident and have identified the specific difficulties that a self-closer on the bedroom door presents for the resident.
- They have tried and tested the full range of door closers and automatic hold open devices, including free-swing closers, and that nothing is suitable to address the needs of the resident.
- A risk assessment has been prepared by the fire safety professional to review and verify the actions taken to date, and to identify the risk-reduction measures that are needed to address the increased fire safety risk.
- Risk-reduction measures have been implemented.

## Fire door assessment

Due to the critical role of fire doors in the containment of the spread of fire, smoke and combustion fumes, and in their protection of escape routes, the provider should at all times be assured that all fire doors throughout the designated centre will perform as required.

In new designated centres, the completed fire door sets should be installed in line with manufacturer's instructions and should come with a fire test report and assessment from an accredited laboratory. This report should indicate that the complete assembly meets the required performance. The certification should be carefully retained for future reference.

In existing centres, it is recommended that a fire safety professional assesses all door sets to identify their likely fire performance. The resulting report should identify any door sets that are unlikely to provide the required fire-resistant performance. An upgrade, repair or replacement programme should be prepared if required, along with a timescale for the prompt completion of the works.

## Fire door inspection log

To help with the regular inspection and maintenance of fire doors, a log of all doors in the centre should be prepared and cross-referenced with a floor plan of the centre that shows the location of each door set. It should also include the required fire performance of each door set. The door log should include a record of all daily, weekly and periodic checks carried out on the door, as well as identifying maintenance and repair works that are required.

### **What checks are needed on fire doors?**

It is recommended that the following daily checks should be carried out on all doors to make sure they:

- close and catch properly
- are unobstructed
- are not wedged open
- are kept locked, where required.

It is recommended that the following weekly checks are carried out on all fire doors:

- make sure that all hold-open devices close on activation of the fire alarm system



- make sure that the door panels, closers, smoke and heat seals are not damaged or missing
- make sure that electronic locking devices operate and release as expected.

## Cavity barriers

### What is a cavity barrier?

A cavity barrier is a construction provided to close or sub-divide a concealed space or cavity, ceiling void space and roof space against penetration of smoke, flame and harmful gases, or provided to restrict the movement of smoke, flame and or hot and harmful gases within such a space.



Particular attention should be given to ensuring compliance with the requirements to provide cavity barriers above the walls of all escape corridors, stairwells and bedroom walls or partitions.

Cavity barriers should not be provided above compartment walls, or sub-compartment boundary walls. Instead, these walls are required to extend through the ceiling or next floor and be fire sealed to the underside of the floor above or to the underside of the roof covering in the attic space above.

Cavity barriers are generally needed in the locations described in Table 3.2 of Technical Guidance Document B 2006. Further advice should be obtained from a competent fire safety professional with the input of the relevant fire and building control authority and with reference to the appropriate technical guidance documents.

## Fire sealing (also known as fire stopping)

Compartment elements (walls, floors and ceilings), fire doors and cavity barriers are only useful if they effectively contain smoke, flame and harmful gasses emitting from a fire.

There may often be unsealed gaps between building components (such as between door frames and walls, or between walls and the underside of roof coverings) or where building services (such as pipes, ventilation shafts or ducts, or cables) pass through compartment or fire-resisting walls, floors, ceilings and cavity barriers. It is essential that all gaps are identified, particularly when building works are being carried out, and filled with a suitable fire-stopping material to limit the spread of smoke, fire and harmful gases through the fire-resistant building component.

When it is intended that ceilings are to provide fire protection to roof spaces or ceiling void spaces, all service openings, cable or pipe penetrations, attic access hatches and recessed lights must be fire sealed to ensure the integrity of the fire-resistant ceiling and prevent fire and smoke spread to the roof and ceiling void spaces.

## Ducted ventilation and extraction systems

Ventilation shafts can allow the movement of smoke, fumes and fire from one compartment to another. Any ventilation shafts — including fresh air supplies, kitchen and bathroom extraction or smoke ventilation systems that are installed in the centre — should not be capable of spreading fire, smoke or harmful gasses throughout the centre.

Therefore, they must be fitted with fire dampers (shut off doors or louvres) to prevent the spread of smoke or fire to adjoining compartments.

Due to the build-up of grease, kitchen extract ducts should not be fitted with fire dampers. Where they cannot discharge directly to open air, the extract duct should either be fire resisting or contained within fire-resisting construction.

The installation, inspection and maintenance of fire dampers should be recorded within the building's maintenance documentation, and they should be maintained in line with the manufacturer's instructions.

## Fire-containment inspection

Checking the provision of fire-containment measures — such as cavity barriers, dampers on ventilation shafts and providing adequate fire sealing — is a specialised area. The provider should, therefore, engage a competent fire safety professional to inspect and report on all the adequacy of fire-containment measures in the centre.

The resulting report should assure the provider and regulatory authorities that effective fire-containment measures are in place. The report should identify any additional measures that may be required. In all cases, ongoing repair or periodic maintenance will be needed and should be included in the building's maintenance programme.

## Chapter 13. Building maintenance



### Introduction

The regular inspection and maintenance of the building's structural fabric (walls, floors, ceilings, attics and roofs), furniture and fittings and building services is needed to make sure that they are safe to use and are not increasing the risk of fire in the centre.

Building services include electrical and heating systems, gas supplies, lifts and laundry equipment. A comprehensive inspection and maintenance plan should be prepared and implemented and is likely to include the following areas:

- building structural fabric
- building services
- compartments, cavity barriers, fire sealing (also known as fire stopping)
- ventilation shaft fire dampers
- automatic opening vents and windows
- lift
- laundry and kitchen equipment.

The frequency of inspection, maintenance and testing can vary widely and may be daily, weekly, monthly, every three months, every six months or once a year. It should reflect the recommendations of national standards, manufacturers' recommendations, best practice guidance and or risk assessments. A fire risk assessment should accompany refurbishment or building works.

## The provider's responsibilities

### Building structural fabric

To comply with not just the physical environment regulations, but also fire safety requirements, the provider should make sure that the structural fabric of the building is kept in a good state of repair and is subject to ongoing inspection and maintenance.

Any damage or wear and tear to walls, ceilings and floors, handrails, doors, windows and flooring should be identified as part of regular housekeeping checks and attended to on a timely basis, particularly where the damage could pose a risk in the event of a fire.

Particular attention should be paid to maintaining the effectiveness of building compartmentation measures and the fire protection of escape routes, stairs and corridors.

### Building services

Many building services (electrical, heating, gas, lifts, laundry and so on) are a potential source of fire. The provider must ensure all such services are suitable for the centre and are installed and maintained by competent and suitably qualified people. Appropriate safety measures should be available to staff; for example, emergency shut off valves on gas cooking equipment.

### Heating systems

Heating systems may use a variety of fuels, including oil, gas or solid fuel. Regardless of the type of system, its installation, use, regular servicing and maintenance should comply with all relevant guidance, which may include technical standards or manufacturers' instructions and should only be installed, serviced or modified by a suitably qualified competent person.

### Open fires and stoves

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

### Gas supplies

Any gas installation (heating, cooking, clothes drying or water heating) throughout the premises should be certified by a competent gas contractor and regularly serviced and adequately maintained by a competent person, at least every three years.

Heating systems fuelled by gas should comply with the relevant Irish standard and should only be installed or modified by a competent person.

## Lift

Lifts, including stair lifts, should be inspected, tested, serviced and maintained in accordance with the manufacturer's recommendations and relevant Irish standards at the appropriate intervals, to ensure continuing safe operation.

Unless the lift is specifically designed for use in a fire, it should not be part of the means of escape or evacuation strategy for the centre.

## Laundry

Laundry washing and drying equipment should be inspected, serviced and maintained in accordance with the manufacturer's recommendations to ensure their continuing safe operation. All laundry areas should be kept clean and free from clutter and contain appropriate fire detection and firefighting equipment. Washing machines and dryers in use should not be left unattended for long periods.

See also the entry on laundry rooms in Chapter 7.

## Kitchen

All electrical appliances and equipment used in the kitchen should be inspected and tested (PAT tested) and regularly serviced by a competent person to ensure that they are in safe working order with appropriate safety equipment provided.<sup>+</sup>

Kitchen extractor canopy filters, ducting and fans, and grease traps should be regularly inspected, maintained and cleaned or emptied to prevent the accumulation of grease which would pose a fuel hazard in the event of a fire.

## Sluicing facilities

All electrical sluicing equipment should be inspected, PAT tested and regularly

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<sup>+</sup> It is recommended that PAT (portable appliance testing) be carried out on electrical equipment and appliances in all areas of the designated centre. In addition, in 2019, the Health & Safety Authority (HSA) issued a safety alert on the inherent dangers associated with electricity in a restaurant kitchen, which may be of relevance to designated centres. See: [https://www.hsa.ie/eng/safety\\_alerts/2019/electrical\\_hazards\\_in\\_restaurants\\_kitchens/](https://www.hsa.ie/eng/safety_alerts/2019/electrical_hazards_in_restaurants_kitchens/).

serviced by a competent person to ensure that they are in safe working order.

Isolation switches for the electrical supply to the sluicing equipment should be clearly identified, readily accessible and located near to an exit.

## Emergency generators

Any emergency generating equipment provided should be located, installed and maintained by a competent person in line with the manufacturers' instructions.

## Carbon monoxide detectors

Carbon monoxide detectors should be installed in rooms containing a fuel-burning appliance in line with best practice guidance (see Technical Guidance Document J: Heat Producing Appliances for further information). Further information is available in Technical Guidance Document J.



## Chapter 14. Firefighting equipment and alerting the emergency services



### Introduction

The provider must equip the centre with appropriate firefighting equipment and ensure trained staff know how to use this equipment. Additionally, providers must have adequate arrangements in place for calling the fire services in the event of a fire in the centre.

Firefighting equipment must be provided throughout the centre to allow staff to control or extinguish a fire in its early stages, if safe to do so. Firefighting by staff may prevent a fire from spreading and becoming life threatening.

### The provider's responsibilities

The degree of firefighting equipment required will vary from centre to centre depending on its design and layout. At a minimum, the provider must supply a suitable range of fire extinguishers and fire blankets. Following the fire risk assessment, the provider may also wish to provide localised fire-suppression systems in kitchens, boiler houses or plant rooms, or in areas with a particularly high risk of fire.

While currently not a legislative requirement in the Republic of Ireland, some providers may also decide to provide a sprinkler system. All firefighting equipment should be supplied, tested, maintained and serviced in line with manufacturers' guidance and relevant standards.

Adequate arrangements must be in place for alerting the fire services about a fire, and documented procedures will support staff to communicate effectively with the fire services. On each shift, at least one member of staff should be responsible for calling the fire service.

The provider must be sure that a sufficient number of experienced and skilled staff are on duty at all times to allow for one member of staff to call the emergency services and maintain contact with them on the phone for as long as required and as

other staff are evacuating the centre.

## Firefighting equipment

The provider shall ensure that suitable firefighting equipment is provided throughout the designated centre. Such equipment, along with staff trained how to use it, are an important element in reducing the risk to people from fire, by controlling and possibly preventing the spread of small fires.

However, the use of a fire extinguisher to try to extinguish such a fire should not affect the immediate implementation of other procedures, such as calling the emergency services or evacuating residents and children to save precious time in the event that use of an extinguisher is ineffective.

The range of firefighting equipment needed will vary from premises to premises, depending on the design and layout of the designated centre. It may include but is not limited to:

- a. fire extinguishers
- b. fire blankets
- c. fire hose reels
- d. fire hydrants
- e. wet or dry risers
- f. extract canopy suppression systems
- g. boiler suppression systems
- h. sprinkler systems.

All firefighting equipment must be provided, tested, serviced and maintained in line with the suppliers' recommendations and in line with the applicable minimum Irish Standards. The provider should consult with a competent fire safety professional to decide on the firefighting equipment required for the specific centre.

The locations of all firefighting equipment should be marked on the floor plans displayed next to the fire detection and alarm system panel and on any floor plans displayed throughout the premises.

All staff should know the locations of, and all able staff trained in the use of, all firefighting equipment provided in the centre.

## Fire extinguishers

Portable fire extinguishers should be located, installed, maintained and tested in line with Irish Standard I.S. 291:2015.

The type of fire extinguisher (such as chemical foam or compressed carbon dioxide) should be appropriate to the fire risk and the type of fuel available nearby. They should be carefully positioned on escape routes, close to room or storey exits and, if necessary, placed next to fire hazards posing a high risk (such as hot cooking oil).

Providers must take care not to create an injury risk for residents and children and other people in the centre from the location of wall-mounted fire extinguishers. Care should also be taken that such extinguishers do not reduce the width of escape routes used for bed evacuation.

All able staff should be trained in the correct use of all fire extinguishers provided in the designated centre. Fire extinguishers should be checked and maintained once a year by a competent person who should provide a record confirming their maintenance. This record should be kept in the fire safety register of the centre.

## Fire blankets

At least one fire blanket complying with Irish Standard I.S. 415: 1998 should be provided in each kitchen. Following risk assessment, additional fire blankets should be provided as may be required in other areas, such as designated smoking areas.

## Fire hydrants

Technical Guidance Document B (2006) gives guidance on the provision of fire hydrants which a provider may wish to discuss with their local fire authority. The provider should ensure that vehicles cannot park on top of them and that adequate signage is in place to guide responding fire service personnel.

## Calling the fire service and other emergency services



The registered provider should ensure that adequate arrangements are in place for calling the fire service. On each shift, at least one staff member should be clearly identified in the fire procedures as being responsible for placing this call. The designated staff member must be clear on the centre's emergency evacuation plan and the procedure to be followed.

The provider should ensure that clear written instructions are prepared for calling the fire service to support staff to communicate clearly and effectively with them. These instructions should be readily accessible for use in an emergency and include all relevant information likely to be needed by all the emergency services to find and access the premises including:

- a. the premise's name, address and Eircode
- b. entrance to be used by fire service
- c. the building location within a campus
- d. access code for entrance gates or barriers
- e. number of staff, residents, children and visitors in the designated centre
- f. if possible, the nature and location of the fire
- g. location of fire hydrants or water supply outside and inside
- h. location of utility shut off points.

The procedures to be followed for calling the fire service should be practised in the fire drills. Consideration should also be given to where the fire service tenders will enter the centre, where they will park (near water hydrants) and be able to turn, and how their parked location will impact on the fire assembly point for everyone in the centre who has been evacuated.

Similarly, the procedures should consider access and parking for emergency ambulances that may be required. When the fire service arrives at the centre, the designated staff member who has rang the fire service will update the fire crew on the scene. This update should include the nature of and location of the fire, the status of the evacuation and the current location of residents and children.

## Local fire authority

It is recommended that the provider actively engages with the local fire authority when reviewing its fire precautions and for advice on fire prevention in the centre. To familiarise local firefighters with the centre premises, a floor plan of the premises, including external entry points and a description of the type of service they are providing, should be submitted to the local fire authority. Where possible, familiarisation visits to the premises should be arranged with the local fire authority.

## **Your notes**

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## Conclusion to Part 2

Throughout the designated centre, there are areas that have a higher fire-risk level than others. These areas include kitchens, store rooms, sluice rooms, bedrooms, laundries, switch rooms, plant or boiler rooms, fuel storage, medical gas or oxygen storage.

Higher fire-risk areas should be enclosed in fire-resistant construction and fitted with fire doors with the appropriate fire performance rating. Due to the increased risk associated with the use of oxygen, its storage and use must be carefully managed.

The provider should ensure that all its furniture and bedding has an appropriate level of flame resistance. Equipment and supplies must be kept in suitable fire-protected storage areas as appropriate, while storage cabinets and presses that are not fire protected require careful placement. Each higher fire-risk area or activity should be individually risk assessed so that they are being appropriately managed.

The provider must ensure all escape routes are suitable for the evacuation needs of residents and the evacuation procedure. Typically, there should always be at least two independent escape routes available from any part of the centre. Certain smaller centres, such as community dwellings may be provided with a single means of escape. Clear directional signage should be provided along all escape routes. There must be adequate space in residents and children's bedrooms to enable a quick and safe evacuation of residents and children. Community dwellings may have reduced fire safety measures, guidance for which is available in *Fire Safety in Community Dwelling Houses – Code of Practice for fire safety in new and existing community dwelling houses – September 2017*, published by the Department of Housing, Planning and Local Government.

It is the responsibility of the provider to ensure that everyone in the centre can be safely evacuated during a fire and other emergency situation. To achieve this, the provider must have a tried and tested evacuation strategy, and evacuation procedures in place.

In designated centres, compartmentation divides the building into a number of smaller fire-protected areas. It serves two purposes: the first being to contain the spread of fire; and the second being to allow for the phased evacuation of the centre.

When planning the number of staff and equipment that will be needed to achieve satisfactory evacuation times, it may be useful to divide larger compartments into a number of smaller sub-compartments once expert advice has been obtained and considered.

The most common cause of death from a fire is being overcome by smoke, gases or toxic fumes. To reduce the risk to everyone in the centre during a fire, it is necessary to restrict the uncontrolled spread of smoke, fumes, gases and fire by subdividing the centre with fire-resisting construction into a number of fire-separated compartments.

Some areas of the centre present a particularly potent source of fuel and ignition. However, all of the building's structural fabric, furniture and fittings and building services must be regularly checked and maintained in good order to help reduce the risk of fire in the centre.

Providers must be able to demonstrate that adequate maintenance is being carried out on an ongoing basis. A documented lint removal programme for tumble dryers should be implemented, while lifts (elevators) should not be used for escape unless specifically designed for use in a fire.

The provider must have clear procedures in place for calling the fire service in the event of a fire in the centre. In the centre's fire procedures, at least one member of staff on each shift should be clearly identified with the responsibility for calling the fire service.

A sufficient number of staff must be on duty at all times in the centre to allow for one member of staff to call the fire service, and spend the required time on the phone to them, while at the same time, the evacuation of residents and children will be underway.

The provider should also actively engage with the local fire authority and, if possible, facilitate familiarisation visits by the fire prevention officer.

# Appendices



## Appendix 1. Overview of the regulatory framework for fire safety in designated centres under the Health Act 2007 (as amended)

The Health Act 2007 (as amended) is the primary legislation from which regulations are made and national standards for health and social care services set.

Service type	Regulations	National standards
<b>Designated centres for older people</b>	<p>Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) Regulations 2013.</p> <p>Health Act 2007 (Care and Welfare of Residents in Designated Centres for Older People) (Amendment) Regulations 2016.</p> <p>Health Act 2007 (Registration of Designated Centres for Older People) Regulations 2015.</p>	<p><i>National Standards for Residential Care Settings for Older People in Ireland</i> (2016).</p> <p><a href="https://www.hiqa.ie/reports-and-publications/standard/current-national-standards-residential-care-settings-older-people">https://www.hiqa.ie/reports-and-publications/standard/current-national-standards-residential-care-settings-older-people</a></p>
<b>Designated centres for persons (children and adults) with disabilities</b>	<p>Health Act 2007 (Care and Support of Residents in Designated Centres for Persons (Children and Adults) with disabilities) Regulations 2013.</p> <p>Health Act 2007 (Registration of Designated Centres for Persons (Children and Adults) with Disabilities) Regulations 2013.</p> <p>Health Act 2007 (Registration of Designated Centres for Persons (Children and Adults)</p>	<p><i>National Standards for Residential Services for Children and Adults with Disabilities</i> (2013).</p> <p><a href="https://www.hiqa.ie/reports-and-publications/standard/national-standards-residential-services-children-and-adults">https://www.hiqa.ie/reports-and-publications/standard/national-standards-residential-services-children-and-adults</a></p>

	with Disabilities) (Amendment) Regulations 2015.	
Service	Regulations	Standards
<b>Special care units</b>	Health Act 2007 (Care and Welfare of Children in Special Care Units) (Amendment) Regulations 2018.	<i>National Standards for Special Care Units: November 2014</i> (published 2015).
	Health Act 2007 (Care and Welfare of Children in Special Care Units) Regulations 2017.	<a href="https://www.hiqa.ie/reports-and-publications/standard/national-standards-special-care-units">https://www.hiqa.ie/reports-and-publications/standard/national-standards-special-care-units</a>
	Health Act 2007 (Registration of Designated Centres) (Special Care Units) Regulations 2017.	

## Appendix 2. Regulations and national standards under the Health Act 2007 (as amended) relevant to fire safety

Designated centres for older people care and welfare regulations	
<p>Regulation 3: Statement of Purpose</p> <p>Regulation 4: Written policies and procedures</p> <p>Regulation 5: Individual assessment and care plan</p> <p>Regulation 15: Staffing</p> <p>Regulation 16: Training and staff development</p>	<p>Regulation 17: Premises</p> <p>Regulation 19: Directory of residents</p> <p>Regulation 21: Records</p> <p>Regulation 23: Governance and Management</p> <p>Regulation 26: Risk management</p> <p>Regulation 28: Fire precautions</p> <p>Regulation 31: Notifications of incidents</p>
<i>National Standards for Residential Care Settings for Older People in Ireland (2016)</i>	
<p><b>Standard 2.7:</b> The design and layout of the residential service is suitable for its stated purpose. All areas in the premises meet the privacy, dignity and wellbeing of each resident.</p> <p><b>Standard 3.2:</b> The residential service has effective arrangements in place to manage risk and protect residents from the risk of harm.</p> <p><b>Standard 5.1:</b> The residential service performs its functions as outlined in relevant legislation, regulations, national policies and standards to protect each resident and promote their welfare.</p> <p><b>Standard 5.2:</b> The residential service has effective leadership, governance and management arrangements in place and clear lines of accountability.</p>	<p><b>Standard 6.1:</b> The use of resources is planned and managed to provide person-centred, effective and safe services and supports to residents.</p> <p><b>Standard 7.2:</b> Staff have the required competencies to manage and deliver person-centred, effective and safe services to all residents.</p> <p><b>Standard 7.4:</b> Training is provided to staff to improve outcomes for all residents.</p> <p><b>Standard 8.1:</b> Information is used to plan and deliver person-centred, safe and effective residential services and supports.</p>



Designated centres for persons (children and adults) with disabilities care and support regulations	
<p>Regulation 3: Statement of Purpose</p> <p>Regulation 4: Written policies and procedures</p> <p>Regulation 5: Individualised assessment and personal plan</p> <p>Regulation 15: Staffing</p> <p>Regulation 16: Training and staff development</p>	<p>Regulation 17: Premises</p> <p>Regulation 19: Directory of residents</p> <p>Regulation 21: Records</p> <p>Regulation 23: Governance and management</p> <p>Regulation 26: Risk management procedures</p> <p>Regulation 28: Fire precautions</p> <p>Regulation 31: Notifications of incidents</p>
<i>National Standards for Residential Services for Children and Adults with Disabilities (2013)</i>	
<p><b>Standard 2.2 — children</b></p> <p>The residential service is homely and accessible and promotes the privacy, dignity and safety of each child.</p> <p><b>Standard 2.2 — adults</b></p> <p>The residential service is homely and accessible and promotes the privacy, dignity and welfare of each person.</p> <p><b>Standard 3.4 — children and adults</b></p> <p>Adverse events and incidents are managed and reviewed in a timely manner and outcomes inform practice at all levels.</p> <p><b>Standard 5.1 — children</b></p> <p>The residential service performs its functions as outlined in relevant legislation, regulations, national policies and standards to protect each child and promote their welfare.</p> <p><b>Standard 6.1 — adults</b></p>	<p><b>Standard 5.1 — adults</b></p> <p>The residential service performs its functions as outlined in relevant legislation, regulations, national policies and standards to protect each person and promote their welfare.</p> <p><b>Standard 5.2 — children</b></p> <p>The residential service has effective leadership, governance and management arrangements in place with clear lines of accountability.</p> <p><b>Standard 5.2 — adults</b></p> <p>The residential service has effective leadership, governance and management arrangements in place and clear lines of accountability.</p> <p><b>Standard 6.1 — children</b></p> <p>The use of available resources is planned and managed to provide child-centred, effective and safe residential services and supports to children.</p>

<p>The use of available resources is planned and managed to provide person-centred effective and safe residential services and supports to people living in the residential service.</p> <p><b>Standard 7.2 — children</b></p> <p>Staff have the required competencies to manage and deliver child-centred, effective and safe services to children.</p> <p><b>Standard 7.2 — adults</b></p> <p>Staff have the required competencies to manage and deliver person-centred, effective and safe services to people living in the residential service.</p>	<p><b>Standard 7.4 — children</b></p> <p>Training is provided to staff to improve outcomes for children.</p> <p><b>Standard 7.4 — adults</b></p> <p>Training is provided to staff to improve outcomes for people living in the residential service.</p> <p><b>Standard 8.1 — children</b></p> <p>Information is used to plan and deliver child-centred, safe and effective residential services and support.</p> <p><b>Standard 8.1 — adults</b></p> <p>Information is used to plan and deliver person-centred, safe and effective residential services and supports.</p>
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Special care units care and welfare regulations	
<p>Regulation 5: Statement of Purpose</p> <p>Regulation 6: Care practices, operational policies and procedures</p> <p>Regulation 7: Programme of care</p> <p>Regulation 14: Staff members and others working in the special care unit</p> <p>Regulation 15: Training and staff development</p>	<p>Regulation 17: Accommodation</p> <p>Regulation 21: Register of children detained in the special care unit</p> <p>Regulation 24: Governance and management</p> <p>Regulation 25: Risk management</p> <p>Regulation 26: Fire precautions</p> <p>Regulation 27: Notifications of incidents</p>

<i>National Standards for Special Care Units: November 2014</i> (published in 2015)	
<p><b>Standard 2.3:</b> The special care unit is homely and promotes the welfare, dignity and safety of each child, consistent with the provision of safety and security.</p> <p><b>Standard 3.4:</b> Incidents are managed and reviewed in a timely manner and outcomes inform practice at all levels.</p> <p><b>Standard 5.1:</b> The special care unit performs its functions as outlined in relevant legislation, regulations, national policies and standards to protect each child and promote their welfare.</p>	<p><b>Standard 5.2:</b> The special care unit has effective leadership, governance and management arrangements in place with clear lines of accountability.</p> <p><b>Standard 6.1:</b> The use of available resources is planned and managed to provide child-centred, effective and safe services to children.</p> <p><b>Standard 7.2:</b> Staff have the required competencies to manage and deliver child-centred, effective and safe services to children.</p> <p><b>Standard 8.1:</b> Information is used to plan and deliver a child-centred, safe and effective service.</p>



## Appendix 3. Fire safety checklists<sup>§§§</sup>



	<h3>Checklist for fire safety management documentation</h3>	
	Fire safety management policy	
	Fire safety management procedures	
	Day and night-time emergency procedures	
	Fire safety training records, including the content of training provided	
	<p>Current floor plans on which are marked:</p> <ul style="list-style-type: none"> <li>• room numbers</li> <li>• locations of fire-resisting door sets</li> <li>• locations of all compartment and sub-compartment boundaries (walls, doors, floors, ceilings and roof spaces), and</li> <li>• travel distances to the alternative exits</li> </ul>	
	Current fire detection and alarm zone plans	
	A current schedule of residents within each compartment along with their evacuation dependencies (such as the need for staff and or equipment assistance)	
	The safe evacuation time for each compartment and the method used to work it out	
	Fire-drill reports for the simulated evacuation of the bedrooms and	



<sup>§§§§§</sup> These checklists are for guidance only and illustrate many, but not all, aspects of managing fire safety in the designated centre. They should not be relied on to ensure compliance with either the building regulations or requirements under the Health Act 2007 (as amended). For all legal purposes, providers should refer to the original legislation and associated regulations and seek professional advice from a fire safety professional when necessary.



	<h2 style="text-align: center;">Checklist for fire safety management documentation</h2>	
	<p>compartments for residents or children with the highest dependencies.</p>	
	<p>Confirmation of the number of staff on duty at night-time</p>	
	<p>The servicing and maintenance records (carried out every three months) for the fire detection and alarm system for the past 12 months in the format prescribed by the Irish Standard for fire detection and alarm systems for buildings, I.S. 3218:2013+A1:2019</p>	
	<p>Confirmation that the fire detection and alarm system in the designated centre is an L1 system (or LDI system, including a fire alarm control switch for testing the system, in a community dwelling), that there is full coverage throughout the designated centre and that the system is fully addressable</p>	
	<p>The servicing and maintenance records (carried out every three months) for the emergency lighting system for the past 12 months in the format prescribed by the Irish Standard for emergency lighting, I.S 3217:2013+A1:2017</p>	
	<p>A door performance assessment to confirm that all door sets provide the required fire performance</p>	
	<p>Confirmation of the satisfactory standard and fire integrity of compartment doors, walls, ceilings and floors</p>	
	<p>A current fire safety risk assessment and the control measures in place</p>	
	<p>Copies of any correspondence between the provider and the local fire authority relating to fire safety</p>	
	<p>Current installation and servicing certification confirming that the fire extinguisher installation is in accordance with Irish Standard I.S. 291:2015</p>	
	<p>A periodic inspection report for the electrical installation in the form described in the latest version of the National Rules for Electrical</p>	







	<h3>Checklist for fire safety management documentation</h3>	
Installations		
A certificate of cleanliness confirming that there are no deposits of grease in the cooker extract fans, hoods and ducts and that cleaning has been completed in line with the TR/19 guide to good practice, or other similar standard.		



	<h2>Checklist for fire safety management policies and procedures</h2>	
	Residents' care needs assessment	
	Staff member training needs, knowledge and competence	
	Environmental risk assessment and management, including planning for management of high-risk areas	
	Maintenance of fire equipment and systems, buildings and services (including testing and service)	
	The evacuation procedures (with specific personal emergency evacuation plans)	
	Fire precautions, including a fire drill programme, and fire-containment measures	
	Frequency of inspection of premises, including escape routes	
	Ensuring the safe placement of residents and children	
	Investigation of fire alarm activation	
	Giving warning of fire and what to do on discovering a fire	
	Actions in the event of a fire, including fighting the fire, first aid, equipment, assembly point and informing a designated person or persons of the situation, accounting for each person on the premises, calling the fire service and assisting the fire service on its	



arrival.		
	Checklist for annual review of fire precautions	
Identified and assessed fire risks and risk management policy		
The adequacy and effectiveness of staff training, including any gaps in staff knowledge		
The adequacy and outcomes of the fire drills		
Changes to the layout of the designated centre, including: <ul style="list-style-type: none"> <li>• Any alternations to the building</li> <li>• Changes in fixtures and fittings and furniture</li> <li>• Introduction of new equipment</li> <li>• Maintenance requirements</li> </ul>		
An increase in the storage of dangerous substances		
Changes in the dependencies or needs of the residents and children		
Adequacy of resources, including human and financial		
Review of any adverse incidents that may have occurred		
Review of recurring fire safety issues		
Changes in current best practice or work practices		
The outcomes of daily, weekly and monthly safety checks		
Feedback on fire safety from staff, residents, children and visitors		
Improvements identified by consultation with a person competent in fire safety		
Adequate fire prevention measures, including: <ul style="list-style-type: none"> <li>• A review of firefighting equipment</li> <li>• The implementation and effectiveness of fire safety procedures and precautions.</li> </ul>		

	<b>Fire-safety risk-assessment checklist</b>	
	Has a fire safety risk assessment been completed?	
	When was the fire safety risk assessment last reviewed?	
	Does it identify all fire hazards or potential hazards?	
	Does it identify all fire risks or potential risks?	
	Does it identify all parts of the building that may be more difficult to evacuate than others?	
	Does it specifically consider the risks associated with the largest compartment in the centre?	
	Does it identify all the people at risk?	
	Does it identify existing fire precautions?	
	Does it evaluate the risk and decide if the fire safety measures are appropriate?	
	Does it identify the steps and control measures that will be taken to reduce or eliminate the hazards to an acceptable level?	



	<h2>Building compartment checklist</h2>	
<p>Is phased horizontal evacuation being used in the centre?</p>		
<p>Is there a floor plan that clearly shows the locations and fire resistance of all compartment and sub-compartment elements?</p>		
<p>Are all staff aware of the locations of each compartment boundary?</p>		
<p>Have the compartment boundary walls, floors, and doors been inspected by a fire safety professional?</p>		
<p>Are upgrade and or repair works required to ensure effective compartmentation?</p>		
<p>What compartment will be most difficult to evacuate?</p>		
<p>Are there always enough staff on duty to evacuate the most difficult compartment?</p>		
<p>Is there a list of how many residents are in each compartment and their assistance needs?</p>		
<p>Has the safe evacuation time of each compartment been assessed?</p>		
<p>Is the safe evacuation time being achieved in drills?</p>		
<p>How can the evacuation time be further reduced?</p>		
<p>Are compartment floor plans displayed?</p>		
<p>When was the compartment assessment last reviewed?</p>		

	<h2>Fire door self-assessment checklist</h2>	
	<p>Have all fire doors been inspected by a fire safety professional to confirm they will provide the required fire performance?</p>	
	<p>Are fire doors regularly inspected for damage that may affect their fire performance?</p>	
	<p>Is a fire door log in place to track the inspection, maintenance and repair of all doors?</p>	
	<p>Are fire door closers that meet the needs of residents or children fitted to all fire doors?</p>	
	<p>Do all fire doors close and catch fully?</p>	
	<p>Do hold-open devices work properly?</p>	
	<p>Have all fire doors been checked to ensure they are not being propped or wedged open?</p>	
	<p>Are all fire door seals in place and undamaged?</p>	
	<p>Has all door ironmongery (handles, locks, hinges, closers, lock plates and so on) been checked, and are they suitable for use on fire doors?</p>	
	<p>Have measures being taken to repair fire doors where gaps between the edges of the door leafs and door frame are larger than 3mm, and between the base of the door and the saddle boards or floor are larger than 5mm?</p>	

	<h2>Fire containment self-assessment checklist</h2>	
<p>Have all ceiling and roof void spaces been inspected by a fire safety professional to confirm that fire-containment measures have been provided and will be effective?</p>		
<p>Is the ceiling intended to be a fire-resisting ceiling?</p>		
<p>If the ceiling is intended to be fire resisting:</p> <p>Are recessed lights fire sealed?</p> <ul style="list-style-type: none"> <li>• Are attic access hatches fire sealed?</li> <li>• Are there ceiling-mounted extract fans, and are they fire sealed where they pass through the ceiling?</li> <li>• Are extract ducts fire sealed where they pass through the ceiling?</li> <li>• Are there ceiling-mounted loud speakers, and are they fire sealed where they pass through the ceiling?</li> </ul>		
<p>If the ceiling is not intended to be fire resisting :</p> <p>Have cavity barriers been fitted above bedroom and escape corridor walls?</p>		
<p>Have all fire-resisting walls, floors, ceilings and cavity barriers been inspected by a fire safety professional to make sure they will be effective?</p>		
<p>Has a fire-stopping survey been completed in concealed spaces and roof voids?</p>		
<p>Have all fire dampers and ventilation shafts been inspected to ensure they are suitable?</p>		
<p>When were fire-containment measures last reviewed?</p>		

	<h2>Daily inspection of escape routes checklist</h2>	
	<p>All escape routes are clear of obstructions and are immediately available for use</p>	
	<p>There are no combustibles stored along the escape routes</p>	
	<p>Escape routes are adequately lit up by the main lighting and emergency lighting</p>	
	<p>Exit doors can be easily opened</p>	
	<p>Curtains, drapes or hangings are not placed across or along an escape route in a manner that would delay or obstruct escape</p>	
	<p>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</p>	
	<p>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</p>	
	<p>Fire doors are not wedged or propped open</p>	
	<p>External areas at, or near, exit doors and external escape routes are kept free of obstructions that might impede escape to a place of safety</p>	
	<p>There are no warnings or faults showing on the fire detection and alarm panel</p>	
	<p>All fire extinguishers and other firefighting equipment are in place</p>	



	<h2>Weekly inspection of escape routes checklist</h2>	
	<p>Check fire doors, door fastenings, hold-open devices on doors, any door releases and electric door locks connected to the fire detection and alarm system</p>	
	<p>Check the lighting and electrical installation (including for obvious visual damage such as breakage and or scorching)</p>	
	<p>Check firefighting equipment is in place and working or that service and or periodic review dates are fully up to date</p>	
	<p>Test the manual call points and automatic fire detector points on the fire detection and alarm system.</p>	

## Appendix 4. References and bibliography\*

Please note that the accuracy, quality, relevance and currency of these works are not guaranteed or uniform. More recent information may have superseded these works. It does not include all the resources that may be relevant to service providers. It is up to each service provider to identify the best available evidence relevant to their activities.

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\* All online resources were accessed at the time of preparing this fire safety handbook. Please note that web addresses may change over time and that the Chief Inspector of Social Services is not responsible for external website content. Any possible omissions are unintentional and will be corrected in future editions.

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