FIRE SAFETY,
THE RISK ASSESSMENT MODEL
& LEGISLATIVE REQUIREMENTS

- The concept of Fire Risk Assessment and why it is now so important.
- What you should be looking for in an assessment.
- UK legislation as it has been implemented and what to expect in NI.
- Fines and penalties – precedents, values and examples.
- Statistics.
- The Fire and Rescue Services NI Order 2006 (part 3 Fire Safety) and the Fire Safety NI Regulations 2009
- What they mean, who they apply to, what are the key points and where to get documentation.
- What you need to look for in your Fire Risk Assessor.

Fire consultants for Royal Hospital Trust 10 years,
Over 2 million square metres of fire risk assessments completed by BHB
High rise building evacuation consultants
United Arab Emirates Fire/Safety training centre
Abu Dhabi Yas Marina F1 Fire Safety Consultants
Emergency response team training for many companies in UK and Ireland
Emergency stand-by for many leading organisations
Some of our partners…

Emergency Planning Services Ltd

Fire Statistics in NI & UK

Fire can break out in any workplace

• Not only can people be killed or injured, but fires can also be financially devastating to those involved.

• On average we have 130 workplace fires every day with many of those fires destroying businesses.

• There are around 11 construction fires every day in the UK.

Northern Ireland Fire & Rescue Service

Every year the NIFRS attends over 31,000 emergency incidents

Over 4,000 major fires, 90% of businesses never recover from fire

50% of all workplace fires happen outside working hours

Fire losses cost £850,000,000 every year! The total cost of fire to the UK and NI is 11 billion - 1.1% of the growth of the economy
Sat 14th January 1984

Victims were overcome by toxic fumes released by gymnastic mats in the storeroom.

Poor management, late call to fire service. Fire alarm not sounded.

Leads to Leisure Premises (Fire Safety) Regulations.

Maysfield Leisure Centre
Belfast 1984

“...we know from history that this can occur even in what might be regarded as a low risk situation and a fully code-compliant building. Arguably, the fire at Maysfield Leisure Centre in Belfast in 1984 was such a situation, when six people died in a short period of time on the ground floor of a local authority leisure centre, designed in accordance with relevant building regulations. Associated factors included an inappropriate fire procedure, inappropriate response by occupants, inadequate staff training and inadequate arrangements for liaison with the fire service on their arrival.”
Disruption after blaze at hospital

Fire officers attend the blaze at the Royal Victoria Hospital 2009

Tyre blaze 'under control'

A massive blaze at a tyre depot at Campsie Industrial Estate
Sun 4th October 2009

The new fire safety regime will be introduced through:

The Fire and Rescue Services (Northern Ireland) Order 2006
(Part III Fire Safety)
&
The Fire Safety (Northern Ireland) Regulations 2009?

A Commencement Order will be issued indicating a date for the new arrangements to come into force.
So why is this happening?

We have three options

1. To do nothing – not meeting EU directives
2. To provide limited reform- fail to rationalise all current fire legislation
3. A full rationalisation of the legislation, falling into line with the EU.

Anticipated the main cost to business is the time spent to understand the new legislation.

Existing fire safety arrangements

Proscriptive V Self Compliance

Fire Services (NI) Order 1984
(Fire Certificates)
Fire Precautions (Workplace) Regulations 2001
(Risk Assessment)

A word from the Northern Ireland Fire and Rescue Service

The role of NIFRS will be to:
- carry out periodic inspections of workplaces;
- and, whilst doing so, audit any significant findings of fire risk assessments;
- enforce relevant legislation where required.

Northern Ireland Fire & Rescue Service
Protecting Our Community
In England and Wales the new fire safety regime has been introduced through:

• The Regulatory Reform (Fire Safety) Order 2005.

In Scotland it has been introduced through:

• The Fire (Scotland) Act 2005.
• The Fire Safety (Scotland) Regulations 2006.

The Fire Safety Regulations (NI) 2009
Part 2 Assessments. Duty to review...

• Section 3. A review of an fire risk assessment shall be carried out regularly so as to keep it up to date. The ultimate in fire legislation.

• This also means if you don't have one you have no choice. You must carry out a fire risk assessment.

• When? ASAP.

'Reasonably practicable’

• This needs to be tested under the new regulations, the balance between cost and risk.

• Take a night club in the UK turning over £200,000 per week, over 4,000 people in the club per week – intoxicated (impaired judgment), smoking, young, drugs, unaware of their surroundings,

• Is it ‘reasonably practicable’ to ask in a risk assessment for sprinklers in the night club – the cost is minimal in this instance, against loss of life, as the club would have a large turnover in a year. (Yes)

• Look at a bookies. Would you ask of the same system in place? (No) as it is not ‘reasonably practicable’ to do so.

It’s the balance we have to find?
• Will the risk change?
It is your duty to determine that and your perception of
the risk!!!!!!

• Will principles of fire precautions in buildings
change? You need to look at the 7 legal duties and general
requirements:

1. Carry out a fire risk assessment
2. Put in place fire safety measures which have been
   identified as necessary as a result of fire risk assessment
   outcome
3. Implement
4. Put in place fire safety arrangements for ongoing control
5. Comply with the specific requirements of the regulations
6. Keep the assessment under constant review
7. Keep records

Will principles of fire risk
assessment change?

Active V Passive protection V Management
solutions

Can you guarantee your management system is
robust and will not fail:
if it were to be examined in a court of law; if we had
loss of life or serious injury; against the cost of
persons losing their life, where active and passive
systems (sprinklers, or an evacuation system) would
have saved them.

• The aim is to simplify existing fire safety
legislation and reinforce the modern risk
based approach to fire prevention.

• In general the law will seek to ensure the
safety of persons lawfully in, or in the
immediate vicinity of the premises or
those whose safety would be at risk in the
event of fire in the premises.
   (Art 52 "Relevant Person")
THE ORDER APPLIES TO ALL PREMISES, EXCEPT:

• Domestic premises;
• Construction sites, ships and hovercraft, mines and offshore installations;
• Premises to which Part 1 of Schedule 1 of Fire Certificate (Special Premises) Regulations applied;
• Premises occupied by armed forces;
• Borehole sites;
• Any premises and land other than buildings used as part of agricultural or forestry undertaking.

Where does it apply?
Applies to virtually all premises, structures and open spaces. For example:

- Care homes
- Places of worship
- Halls
- HMO'S
- Restaurants
- Schools
- Sports
- Tents
- Marquees
- Hostels
- Private houses
- Flats

Domestic Premises (def)

“Premises occupied as a private dwelling (including any garden, yard, garage, outhouse, or other appurtenance of such premises which is not used in common by the occupants of more than one such dwelling).”
Who or what does the Order apply to?

- Relevant premises;
- Employers;
- Persons with control of a relevant premise.

The new Order and Regulations requires all “relevant persons” to be considered as part of the fire risk assessment.

“Relevant Person” definition:

(a) Any person who is, or may be, lawfully in the premises or
(b) Any person-
   (i) Who is, or may be, in the immediate vicinity of the premises and
   (ii) Whose safety would be at risk in the event of fire in the premises.

Guidance on carrying out a risk assessment suggests you must identify those at risk such as;

- Lone workers
- Visitors & customers unfamiliar with the layout
- Children and young persons
- People with disabilities or poor mobility.
The New Guides. They are many?

- Ideally everyone in a building should be able to escape unaided in the event of fire.
- Most buildings do not allow this and some other arrangements need to be made.
- In the case of employees this can usually be achieved by a PEEP (Personal Emergency Evacuation Plan)
- Visitors and customers can be covered by generic / standard evacuation plans. If used, training for staff is vital and may have to be carried out more regular.

What action can NIFRS take?

- Notice of deficiencies
- Action plans
- Enforcement notices
- Prohibition notices
- Alterations notices
- Prosecutions
Initial Evaluation of the Effectiveness of The Regulatory Reform (Fire Safety) Order 2005

Fire Research 3/2009

Nationwide prosecutions for breaches of the FSO in the UK

- Reading – £5,000 - Failure to provide an appropriate fire alarm system
- Brixton, London – Company Director ordered to pay £5,500 and all court costs £25,000 – failure to take adequate fire safety precautions
- Watford, London – Staff international £260,000 and £45,000 costs, prohibition notice served as deficiencies were so severe - no training; fire doors defective; heavy fire loading and so on.
- Nottingham – 6 months suspended sentence 180 hrs community service – lack of fire alarm and basic fire safety and poor housekeeping
- Edinburgh – Church fined £30,000 – overcrowding of the church; Capacity 600 - found to have over 1200, double the capacity. Fire exit blocked by steel bar; 18 LPG bottles stored in the building
- Widnes, Cheshire – Recycling plant - £30,000 – stairs blocked by LPG; final exit not available.
- Breach of fire risk assessment – unsuitable fire risk assessment – no training, poor signage; no disability access (PEEPS)

Breach of fire regs

UK Fire Service College failed to comply with the fire regulations itself.

- May 2009, a fire broke out at the College in Morton-in-Marsh, Gloucestershire. No-one was hurt but more than 60 fire-fighters were called to the premises, part of which burnt down.
- The cost of the damage to the facility was in the region of £1million. Eleven fire engines were lost and the garage completely destroyed.
- It is alleged that no current fire risk assessment was in place when the fire broke out. The college said it was in the process of completing an up-to-date fire risk assessment when the fire happened.
- Fortunately, none of the shortcomings on this occasion led to injury or loss of life, the breaches have all been rectified and no enforcement action has been taken.
Statistics of the breaches

- Over £550,000 in fines
- Directors given suspended sentence
- Inadequate risk assessment
- Lost time in court
- Money could have been spent on the issues and not lost in fines
- 3 of the 6 have gone out of business

All actions were reactive not proactive. FSO is all about PROACTIVENESS.

Training of technical fire safety staff.

So who should you use, and how do you know they are competent assessors?

Safety Assistance Section 17-1. The person with duties under article 25 or 26, shall nominate one or more competent persons to assists him in undertaking the measures necessary to comply with fire safety duties.


It is a Publicly Available Specification and has been amended and adopted by the British Standards Institution, BSI.

Fire Risk Assessors

- They must have a good understanding of current fire safety legislation and qualifications in a discipline of the current Regulations or Orders.
- A track record in fire risk assessments.
- Know how to calculate flow rates, travel distances, numbers allowed in that area or premises and then be able to look at the hazards associated and reduce where needed.
- They should take time to visit your premises and understand the function of the business and the people in it.
- Have a good vision of potential fire risks and have the ability to look further than the cosmetics and aesthetics of the building.
- Be versatile and be able to visualise what the consequences of fire may be for your business.
- Have worked in a variety of premises, offices, factories, hospitals, shops, construction sites...
A short guide to making your premises safe from fire.

So how does a fire risk assessment protect our workplace from fire?

The Concept

• The major component of the fire risk assessment is fire hazard identification, in simple terms, the process of identifying circumstances that may result in fire.

• Soft hazards or hard hazards.

• In practice carrying out a fire risk assessment should bring together identification and investigation.

• From this to this, in just 5 minutes.

The Consequences of Fire - People

There are many human traits and human factors we need to look at when carrying out a FRS:

• The occupants and their physical condition;

• Reaction time (state of mind);

• Impaired mobility (PEEPS) Personal emergency evacuation plan;

• Alcohol, sleep deprivation and drugs;

• Human behavioural traits (look at the following clip)
Personal Emergency Evacuation Plans (PEEPs)

If you require a copy of this document, e-mail kevin@bhb.ie

BHB Fire Risk Assessment process:
The 9 steps

1. Obtain information on the building, the activities undertaken in the building and the people present or likely to be present.
2. Identify the fire hazards and the means for eliminating or controlling them.
3. Assess the likelihood of fire, at least in subjective terms.
4. Determine the fire protection measures in the building.
5. Obtain relevant fire safety information about fire safety management.
6. Make an assessment of the likely consequences to people in the event of fire, at least in subjective terms.
7. Make an assessment of the risks.
8. Formulate and document an action plan, with prioritisation if appropriate.
9. Define the date by which the fire risk assessment should be reviewed.
The likelihood of harm is governed by a number of factors:

- Number of people at risk
- The physical and physiological characteristics of the occupants
- Familiarity of occupants with the premises and of the fire procedures
- Height of the building above ground or below ground
- Means of escape
- Measures that assist in escape
- Fire warning arrangements
- Means of containing and extinguishing fire

Action plan

Now we have determined the level of risk, an action plan should be formulated.

This plan must be tested and workable.

The following questions should be thought through:

- Will the revised controls lead to tolerable fire risk levels?
- Are new hazards created?
- Have the most cost-effective solutions been chosen? If so will they stand up in court?
- What will occupants affected think about the need for and practicality of the revised precautions?
- Will the new precautions be workable or will they be ignored?
- Do they work for all levels of mobility and disability?

Documentation

There is no right or wrong way to record a fire risk assessment.

It should record:

- Significant findings in respect of fire hazards;
- People at risk;
- The consequences of that risk;
- Controls that are in place;
- Action plan;
- Training required;
- Priorities and time scales;
- Review timescale.

And above all it must be acceptable and sufficient to maintain.
Remember are 3 good reasons for preventing fires in the workplace and maintaining good standards of fire safety

• Moral;
• Legal;
• Financial arguments.

BHB would like to thank

For giving us the opportunity to speak to you all today.

THANK YOU.
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