

The Association for Specialist Fire Protection

An Overview of Risks in Buildings in Relation to Passive Fire Protection

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CEO

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Pioneering fire protection through innovation and professionalism

The Association for Specialist Fire Protection



Passive Fire Protection Understanding the Risks!

Wilf Butcher
Chief Executive Officer

Association for Specialist Fire Protection

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How does the dictionary define Competency?

- ❑ Skills or knowledge that lead to superior performance
- ❑ The characteristics of a manager, that lead to the demonstration of skills and abilities, which result in effective performance within an organizational area.
- ❑ Sufficiency of knowledge and skills that enable someone to act in a wide variety of situations
- ❑ Capacity to testify in a court of law



How do you define the term Competency?



Question: Who do you want to carry out your triple heart bypass?

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How does Wikipedia define Competency?

Wikipedia is quite succinct

The ability of an individual to do a job properly!



Clearly this is not!

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How does Wikipedia define Competency?

But is this?



Just because it may look right does not necessarily make it so!

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Which of these fire stopping examples has been installed incorrectly?

I don't know!



Once completed and without a destructive test it may prove impossible to know for sure how the fire stop or seal was installed

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Fire protection is not rocket science It does what it says on the tin



Up to 4hrs fire rating

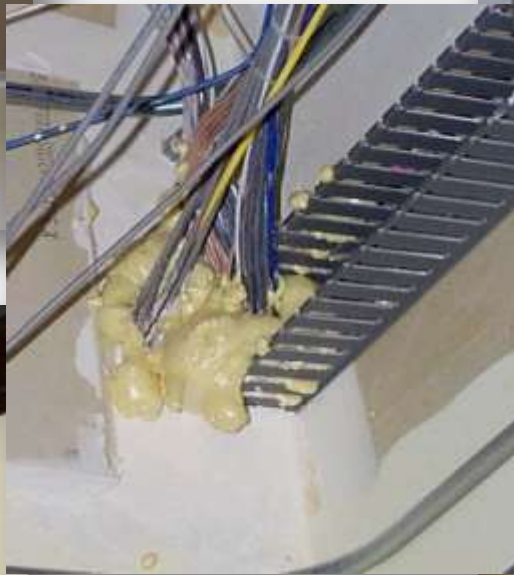
Depth mm	Width mm				
	10	20	30	40	50
10	280	140	93	70	56
20	140	70	46	35	28
30	93	46	31	23	18
40	70	35	23	17	14
50	56	28	18	14	11

But only in the right context

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In reality standards in Passive Fire Protection can vary significantly



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The responsibility is yours

I place the order; it is not my responsibility to install the works

If it is your responsibility to specify the materials and/or appoint the installation contractor, it is also your responsibility to ensure that they can prove competency for the fire protection materials used, or the works to be carried out. It's no longer simply a duty of care or voluntary – it's a legal obligation.

It is your responsibility to ensure that any installation of, or repair to, passive fire protection is undertaken by those with sufficient competency

The responsibility is yours

Which is why it is essential you ensure that the people or company you employ to carry out the work can **PROVE** that they are competent

DO YOU HAVE
THE SKILLS
TO CARRY OUT
THE WORK?



The responsibility is yours

Would you allow an unqualified plumber to work in your building?

To become a qualified plumber you will need an industry recognised qualification at level 2 or 3.

The main qualifications needed to become a qualified plumber are:

- Level 2/3 Diploma Plumbing and Heating
- Level 2/3 Diploma Installing and Maintaining Domestic Heating Systems.

The responsibility is yours

Would you allow an unqualified electrician to work in your building?

To qualify as an electrician, you need an industry-recognised level 3 qualification, such as:

- Level 3 Diploma in Electrotechnical Services (Electrical Maintenance)
- Level 3 Diploma in Installing Electrotechnical Systems & Equipment (Buildings, Structures and the Environment)
- Level 3 Diploma in Electrical Installations (Buildings and Structures) if part of an Apprenticeship.

The responsibility is yours

However do not assume that competency in one discipline will automatically be reflected in another



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The responsibility is yours

Is there a NVQ in Passive Fire Protection?

Cskills Awards L2 NVQ Diploma in Associated Industrial Services Occupations (Construction) - Passive Fire Protection

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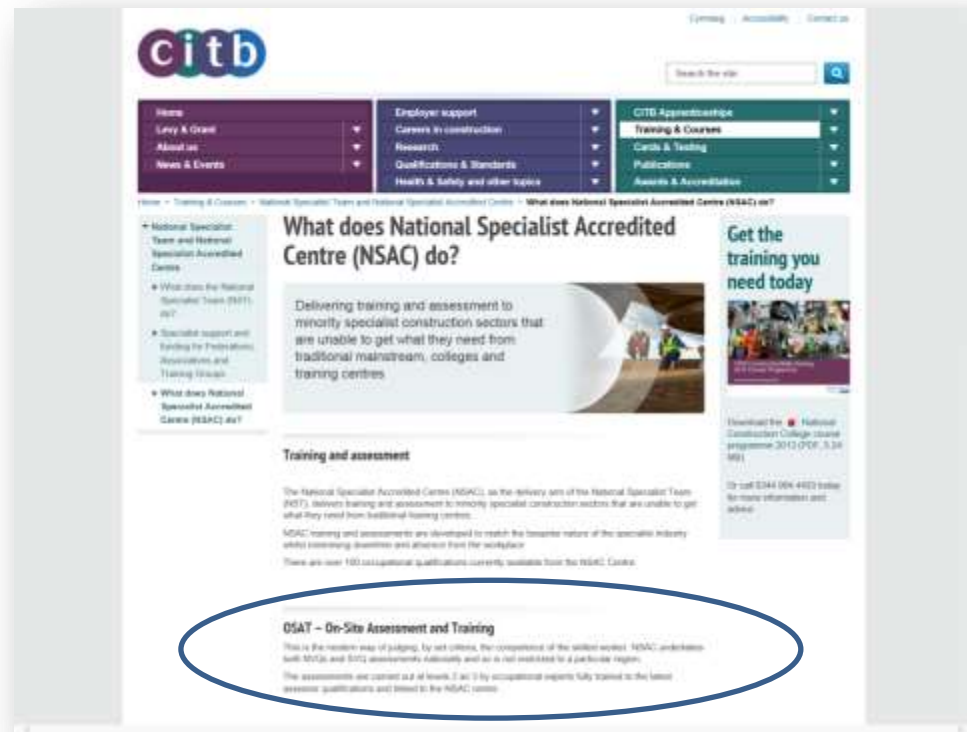
The responsibility is yours

Passive Fire Protection

- QCF351 Applying Intumescent Coatings in the Workplace
- QCF357 Applying Non-reactive Spray Coatings in the Workplace
- QCF641 Conforming to General Health, Safety and Welfare in the Workplace
- QCF642 Conforming to Productive Working Practices in the Workplace
- QCF250B Erecting and Dismantling Access/Working Platforms in the Workplace
- QCF356 Erecting Fire Resisting Ceiling Systems in the Workplace
- QCF355 Erecting Fire Resisting Walls and Linings in the Workplace
- QCF354 Installing Cavity Barriers in the Workplace
- QCF350 Installing Dry Cladding in the Workplace
- QCF352 Installing Fire Resisting Ductwork Systems in the Workplace
- QCF358 Installing Fire Resisting Timber Doorsets in the Workplace
- QCF353 Installing Fire Stopping in the Workplace
- QCF643 Moving, Handling and Storing Resources in the Workplace

The responsibility is yours

Passive Fire Protection



The screenshot shows the CITB website with the following content:

- Navigation:** Home, Levy & Grant, About us, News & Events, Employer support, Careers in construction, Research, Qualifications & Standards, Health & Safety and other topics, CITB Apprenticeship, Training & Courses, Cards & Testing, Publications, Awards & Accreditation.
- Page Title:** What does National Specialist Accredited Centre (NSAC) do?
- Main Content:**
 - What does National Specialist Accredited Centre (NSAC) do?**

Delivering training and assessment to minority specialist construction sectors that are unable to get what they need from traditional mainstream, colleges and training centres.
 - Training and assessment**

The National Specialist Accredited Centres (NSAC), on the delivery arm of the National Specialist Team (NST), delivers training and assessment to minority specialist construction sectors that are unable to get what they need from traditional training centres.

NSAC training and assessments are developed to match the bespoke nature of the specialist industry which increasing diversity and absence from the workplace.

There are over 100 occupational qualifications currently available from the NSAC Centres.
 - OSAT – On-Site Assessment and Training**

This is the modern way of judging, by set criteria, the competence of the skilled worker. NSAC undertakes both NVQs and SVQ assessments nationally and so is not restricted to a particular region.

The assessments are carried out at least 3 and 5 by occupational experts fully trained to the latest assessment qualifications and listed to the NSAC centres.
- Right Side:** Get the training you need today, Download the National Construction College course programme 2012 (PDF, 5.24 MB), Call 0344 006 4402 today for more information and advice.

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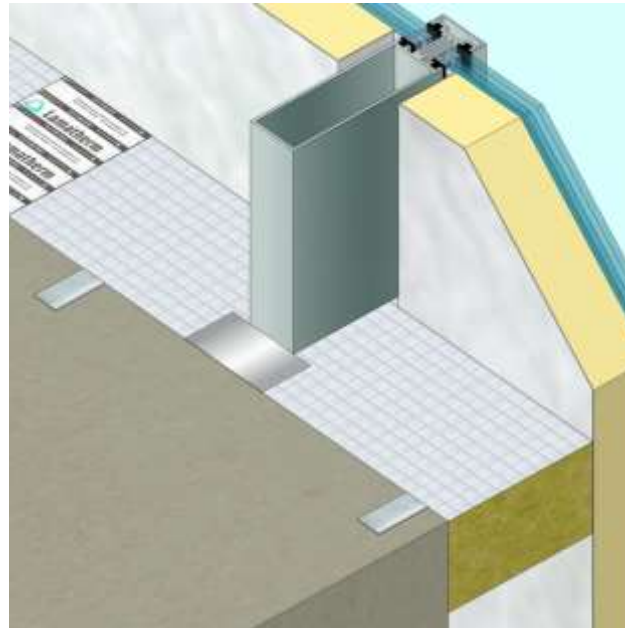
The responsibility is yours

Passive Fire Protection

I need to undertake a passive fire protection refurbishment programme. How do I select appropriate products and installers?

3rd Party Certification

The essential question to ask is



**Is your preferred product supplier / installer part of a
third party certification scheme?**

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3rd Party Certification

Quality Assurance /Third Party Certification – What is it?

- Supporting evidence of the quality of the PRODUCT or SERVICE for Architect, Specifier, Contractor, Building Control Authority, End-user, RESPONSIBLE PERSON and any other stakeholder
- Assures the quality of the product or service INDEPENDENTLY of the supplier
- Encouraged by Authorities such as DCLG (AD-B), Scottish Government, AI, LABC, CFOA etc.
- Encouraged by all fire protection trade associations
- Creates a level playing field for installers
- Protection against claims



3rd Party Certification

Two types of Certification

Certification of Products

- Relates to products sold on the market
- For manufacturers
- Stakeholders
 - Manufacturers
 - Installers
 - Architect/Specifier
 - Enforcement authority
 - Local authority
 - Wider community

Certification of Installers

- Relates to services carried out by installing contractors
- For installers/contractors
- Stakeholders
 - Installers
 - Manufacturers
 - Architect/Specifier
 - Enforcement authority
 - Local authority
 - Wider community

3rd Party Certification

For nearly two decades all ASFP Contractors have been required to gain 3rd Party Certification from a UKAS accredited Certification Body as a mandatory requirement of entry to and membership of the ASFP



BMTRADA



3rd Party Certification

Essential Principles Document

Principle 10: 'As a minimum, all fire protection products shall be third party certified to an appropriate product or performance based standard'



3rd Party Certification

Approved Document B 0.20

‘... provide a means of ensuring that installations have been conducted by knowledgeable contractors to appropriate standards, thereby increasing reliability of the anticipated performance in fire’



Is this really that big an issue?

In 2011 LABC Building inspectors made over 800,000 interventions in relation to Part B of the Building Regulations.



Is this just the tip of the iceberg?

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The Reality of Fire

2000 years ago life was simple

King Herod (74BC-4AD) introduced a law which stated that:

'Should a man construct a building which falls down and kills another then this man should be slain'.



The Reality of Fire

So just how important are passive fire protection measures in today's building design!

Other than fire fighters few of us have had to face the reality of fire and smoke spread!



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The Reality of Fire

So just how important are passive fire protection measures in today's building design!

A London hotel 30 minutes after the fire alarms were tested!



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The Reality of Fire

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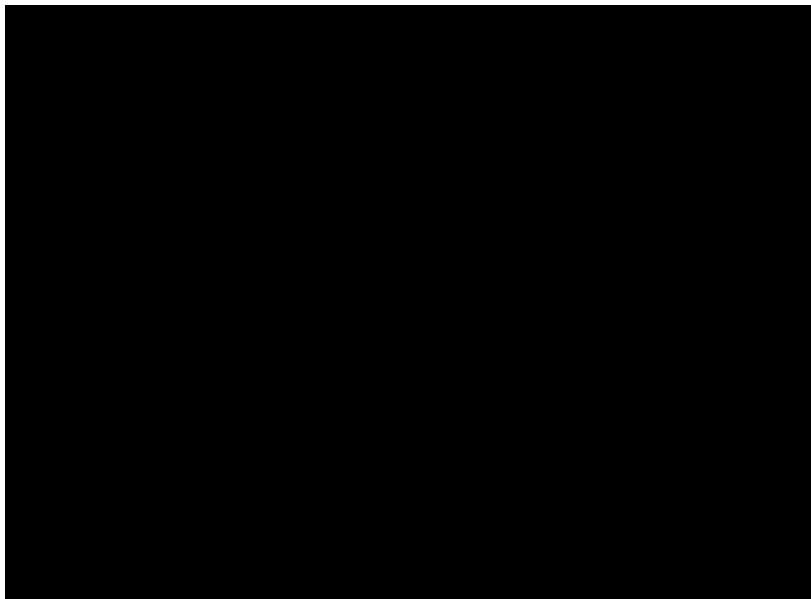


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The Reality of Fire

So just how important are passive fire protection measures in today's building design!



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The Reality of Fire

The answer of course is quite clear, it's essential!



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The Reality of Fire

Common Conceptions.....

- Wood Burns
- Structural steel does not collapse in a fire
- Concrete is fireproof
- Holes are a general maintenance issue
- There is always time!

.....Or are they Misconceptions



Four Key Issues

Issue One

Building Regulations

Within the Building Regulations there is an expectation that the duties of Building Regulation 38 (previously known as Regulation 16b) will be reliably carried out and the building user/owner will be fully informed of the fire protection provisions in the building he now occupies

‘Regulation 38 requires that, where building work involves the erection or extension of a relevant building, fire safety information shall be given to the responsible person at the completion of the project or when the building or extension is first occupied’

Four Key Issues

Issue Two

Regulatory Reform (Fire Safety) Order 2005

Table 1: Summary of the applicable legislation

Country	England & Wales	Scotland	N Ireland	Ireland
Relevant Act	Regulatory Reform (Fire Safety) Order 2005 (FSO)	Fire Safety (Scotland) Regulations & Fire Scotland Act 2005	Regulatory Fire & Rescue Services (N Ireland) Order 2006	General Application Regulations 2007 under the Safety, Health and Welfare at Work Act 2005. Fire Services Acts 1981 & 2003
Person responsible	Responsible Person	Duty holder	Appropriate Person	Responsible Person (Employer/landlord)
Person to do risk assessment	Responsible person or subcontractor	Responsible person or subcontractor	Responsible person or subcontractor	Responsible person or subcontractor
People affected in building	Relevant persons	Relevant persons	Relevant persons	Employees and persons connected with the workplace
Building Regulations	Building Regulations 2010	Building (Scotland) Regulations 2006	Building (N Ireland) Regulations 2000	Building Control Regulations 1991, 1997 - 2011
Statutory or Supporting Guidance documents	Approved Document B 2006	Technical Handbook B 2010	Technical Booklet E 2005	Technical Guidance Document B 2006
Building Regulation 38/16b equivalent	Yes	No*	No	Fire Services Acts 1981 and 2003
CDM regulations or equivalent	'94 to '97	'94 on	'94 on	No

* Although Scottish Building Standards Officers can apply 'continuous requirements' and fire safety design documents are part of those.

Four Key Issues

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Four Key Issues

Issue Two

Regulatory Reform (Fire Safety) Order 2005

So who is defined as a 'Responsible Person'?

- An employer
- A managing agent or owner of shared premises
- A charity or voluntary organisation
- A contractor with a degree of control over any premises

Four Key Issues

Issue Two

The act states that any fire-risk in a premises must be managed, for the life of the building. Fire authorities no longer issue fire certificates and those previously in force now have no legal status, therefore the Responsible Person must carry out a fire-risk assessment.

Where expertise to carry out such a risk assessment is lacking this process may be passed to some that can be deemed as 'Suitable and Sufficient'. None-the-less, the Responsible Person will still be responsible, in law, for meeting the order.

The Responsible Person, either on their own or with any other Responsible Persons, must as far as is reasonably practical make sure that everyone on the premises, or nearby, can escape safely if there is a fire.

Four Key Issues

Issue Three

Construction Products Regulation

Came into force in April 2011

Where appropriate, mandatory from 1st July 2013

The Construction Products Regulation (305/2011/EC - CPR) replaces the Construction Products Directive (89/106/EEC - CPD) and lays down harmonised conditions for the marketing of construction products.



Four Key Issues

Issue Three

Construction Products Regulation

- CPR applicable in all Member States
- CPR came into force on 1 July 2013 CE marking **mandatory** if product is covered by a European Product Standard (hEN)
- CE marking **voluntary** if product covered by a European Assessment Document (EAD)
- ASFP is publishing a (mercifully short) guide to CE marking on the website
- Status of CE marking for all products we are interested in

Products	CE Marking basis (29 April 2013)		Comments
	ETAG	hEN	
Reactive Coatings for Fire Protection of Steel Elements	Voluntary under ETAG 18-2	EN being prepared by CEN TC 138 WG 13	CEPE has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Renderings and Rendering Kits intended for Fire Resisting Applications	Voluntary under ETAG 18-3	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Fire protective board, slab and mat products and kits	Voluntary under ETAG 18-4	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Fire Stopping and Fire Sealing Products Part 2: Penetration Seals	Voluntary under ETAG 026-2	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Fire Stopping and Fire Sealing Products Part 3 : Linear Joint and Gap Seals	Voluntary under ETAG 026-3	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Reactive and Mechanical Air Transfer Grilles, (Fire resistant and Cold Smoke Control Fire Resistant Types	Voluntary under ETAG 026-4	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Cavity Barriers	Voluntary under ETAG 026-5	To be prepared in CEN – see comment	EAPFP has prepared a draft mandate for the EU Commission to discuss in June 2013. This might lead to a hEN and mandatory CE marking, but not for at least 1 year and probably 2.
Fire resisting ducts	Voluntary under ETAG 026-5	prEN 15871 not yet agreed	The hEN reached an advance stage, but has just failed to be agreed as a standard. Consequently, CE marking is still voluntary under ETAG 018-4. Once the hEN is published then it will be mandatory
Fire resisting dampers	N/A	Mandatory from 1 July 2013 under EN 15650	CE marking is mandatory from 1 July. However, there are some deficiencies in the associated (EXAP) standards which mean that not all products or installations will have been covered. Technically, one can only sell what has been tested and classified and so there will be some difficulties.
Fire doors	N/A	Voluntary	CE marking will only be applicable for doorsets i.e.

Four Key Issues

Issue Four

'Ad-hoc' tests – May not always be appropriate!

Unless the condition on site is equal to or less onerous than the situation to which the ad-hoc test was based then the test evidence has no validity.

If in any doubt seek advice from the test/certification authority that undertook the test

Four Key Issues

Issue Four

'Ad-hoc' tests – May not always be appropriate!

It is important to recognise that performance results awarded are a function of the system under test **AND** the substrate to which it is applied, surrounds or fits between.



The Association for Specialist Fire Protection

Why it is dangerous to assume contractors have the right expertise or competencies!



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