

## Meeting Record

<b>Date</b>	25 <sup>th</sup> April 2022 (Mon), 16:30-18:00
<b>Venue</b>	Video conference using Microsoft Teams
<b>Chair</b>	Paul Bussey
<b>Author</b>	-

<b>Attendees</b>	<b>Name</b>	<b>Initial</b>	<b>Organisation</b>
1	Paul Bussey (chair)	PB	AHMM
2	Gary Walpole (guest speaker)	GW	NFRC
3	Aamir Shahzad	AS	Currie Brown
4	Alain Speed	AS	PRP Architects
5	Allan Binns	AB	Ryder Architecture
6	Billy Hare	BH	Caledonia University Glasgow
7	Chris Ottaway	CO	Ottaway and Associates
8	Ciaran Gallagher	CG	Hawkins Brown
9	Danny Coomber	DC	Hardwood
10	David Brook	DB	Nicholas Hare Architects
11	David Mulligan	DM	Network
12	Gary Burden	GB	PRP Architects
13	Graham Boyce	GB	Barton Willmore
14	Jasmine Adley	JA	Currie Brown
15	Jeffrey Tribich	JT	Tribich Consultancy
16	Mark Reynolds	MR	Boundary Concepts Limited
17	Martin Touška	MT	Rolfe Judd
18	Martin Thrope	MT	Mott MacDonald
19	Myshkin Clarke Hall	MCH	Myshkin Clarke Hall
20	Neil Molloy	NM	Levitt Bernstein
21	Nick Panayiotou	NP	P&P Architects Ltd.
22	Paul O'Shea	POS	Ashview Consultants Ltd.
23	Peter Hegarty	PH	Chapman Taylor
24	Richard Mills	RM	Reardon Smith Architects
25	Richard Price	RP	Sweco
26	Sarah Susman	SS	Scott Brownrigg
27	Stuart Osborne-Cudmore	SOC	???
28	Bari Kutbi	BK	AHMM
29	Goh Ong	GO	AHMM

**NOTE ON COVID-19:** Since 23<sup>rd</sup> March 2020, all DIOHAS meetings will take place over video conference.

**Speaker**                      **Presentation Title:** National Federation of Roofing Contractors (NFRC)

**Background:** Our guest speaker is Gary Walpole of the National Federation of Roofing Contractors (NFRC). Gary will be presenting the NFRC and CONIAC Managing Risk Well Fire Working Group position on CDM challenges

**Guest speakers:** Gary is a Chartered Safety & Health Practitioner, and in over three decades of working in the roofing industry, Gary has accumulated a wealth of knowledge and experience on safe and healthy working practices, which has proved a valuable resource to NFRC members seeking advice and guidance. Gary is an active committee member of the Construction Industry Advisory Committee (CONIAC), which is tasked with embedding high standards of health and safety practice across the construction industry and chairs the Fire Safety Working Group.

**Details**                              Link to the recording of the meeting:  
<https://www.youtube.com/watch?v=Qtiq14b1GW4>

# NFRC and CONIAC MRW Fire Safety WG Update

Gary Walpole CMIOSH













Exit

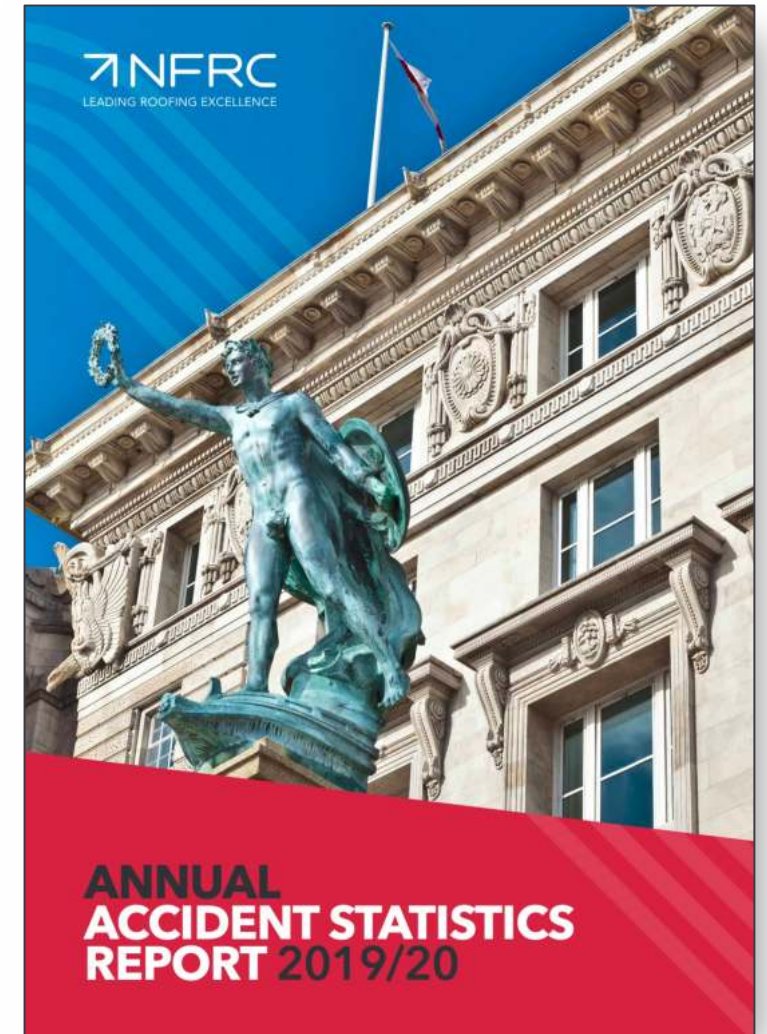
WILSON

MD

PS

# NFRC Accident Report

- Collect all members Accident Returns;
- Collate the data from the Accident Returns
- Useful Tool for Mapping Accident Trends;
- Produce an Annual Report;
- The Top Five Reported Accidents by NFRC Members Mirror the Top Five Accidents Across Construction as Reported by the HSE;
- Historically Low Accident Rate;

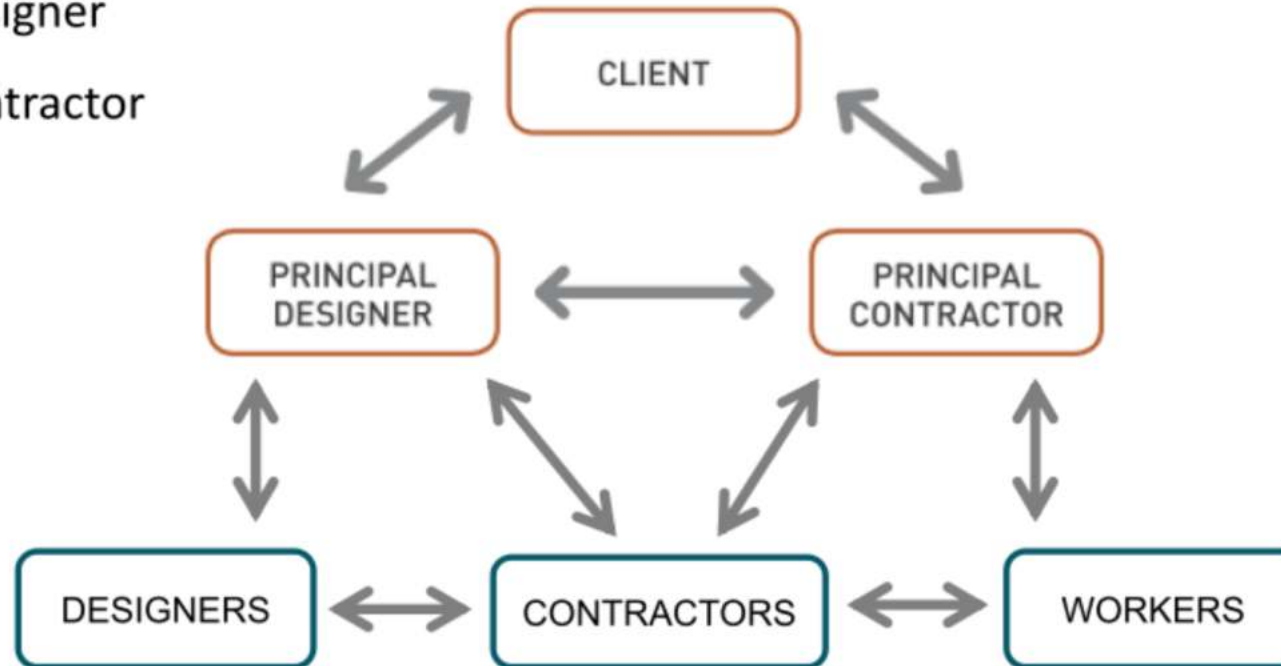




# CDM Duty Holders

## CDM 2015 – Duty Holders

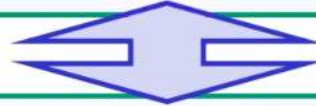
- Client
- Principal Designer
- Principal Contractor
- Designer
- Contractor
- (Worker)



# ACHIEVING THROUGH WORKING TOGETHER



Construction Industry Advisory Committee (CONIAC)  
Acting Together Steering Group



Construction Industry Advisory Committee (CONIAC)  
Supporting Small Employers Working Group



Construction Industry Advisory Committee (CONIAC)  
Managing Risk Well Working Group



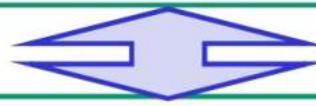
Construction Industry Advisory Committee (CONIAC)  
Sharing Our Success Working Group



Construction Industry Advisory Committee (CONIAC)  
Tackling Ill Health Working Group



Construction Industry Advisory Committee (CONIAC)  
Keeping Pace With Change Working Group



**CONSTRUCTION INDUSTRY ADVISORY NETWORK (CONIAN)**

# Construction Fire Risk Management



- Working Group formed February 2018.
- Fire Risk Management during the design, planning and construction phase.
- Group members including Clients, Principal Designers, Principal Contractors, House Builders, Fire Risk Assessors, Specialist Trainers, Trade Bodies and the HSE.
- The Group have developed a matrix for duty holders that defines baseline responsibilities & competencies for each role.

# Construction Fire Risk Management



- The matrix outlines the roles and the responsibilities of the relevant duty holders involved in fire prevention during the design and construction phase.
- It signposts the user to the information relevant each of the duty holders.
- It offers guidance for duty holders, especially surrounding high risk projects.
- It Identifies baseline competence for duty holders.

Responsibility of Duty Holders in Line with Current Legislation and Guidance.	Client	Principal Designer	Designer	Principal Contractor	Fire Risk Assessor / Advisor	Responsible Person*	Contractor	Fire Safety Coordinator	Fire Marshal / Fire Warden	Worker
<a href="#">The Regulatory Reform (Fire Safety) Order 2005(FSO), The Fire Safety (Scotland) Regulations 2006 &amp; The Fire Safety Regulations (Northern Ireland) 2010</a>	Yes	N/A	N/A	Yes	Yes	Yes	N/A	N/A*	N/A	N/A
<a href="#">CDM 2015</a>	Yes	Yes	Yes	Yes	N/A*	N/A*	Yes	N/A*	N/A*	Yes
<a href="#">HSG168</a>	Yes	Yes	Yes	Yes	N/A*	Yes	Yes	Yes	Yes	Yes
<a href="#">JCoP 9<sup>th</sup> Edition</a>	Yes	Yes	Yes	Yes	N/A*	Yes	Yes	N/A*	Yes	N/A

**N/A\*** Not a specific role within CDM 2015 but must have a good knowledge and understanding of the of the legislation and guidance.

**N/A** No specific responsibilities to their role but a level of understanding of the of the legislation and guidance will be benefit the design and construction phase.

**Responsible Person\*** The Responsible Person role is a duty required within FSO in England & Wales. In Scotland and Northern Ireland this duty falls upon the employer, landlord or person in control, if a building is in refurbishment.

## Baseline Competencies Required for Duty Holders

[Back to Matrix](#)

### Client

- Ensure suitable arrangements for fire risks during the project to include the appointment of a Principal Designer and Principal Contractor that has the relevant Skills, Knowledge, Training and Experience to prepare and implement suitable pre-construction and construction phase fire safety plans.
- Ensure they have access to competent advice, either in house or from an external source, to discharge their duties.

### Principal Designer

- Have an effective understanding of the Client duties under CDM so that they can ensure the Client is aware of their responsibilities during the pre-construction and construction phases of the project, including where technical advice might be needed (e.g. fire risk assessments for on and off-site risks), and the information the client should provide about fire hazards or existing precautions.
- Have the relevant Skills, Knowledge, Training and Experience required, including the organisational resource to plan, manage and monitor the pre-construction design phase, which may continue during the pre-construction phase, including the identification of fire risks and the application of the principles of prevention to these.
- Understand client and contractor needs for information during pre-construction phase regarding fire risk and any specified fire mitigation.
- Have knowledge and understanding of the mechanism for fire ignition and spread and measures to prevent and mitigate these.
- Should be familiar with the general fire precautions for the fire management on construction sites, including ensuring adequate means of escape.
- Be able to co-ordinate the design process and ensure that fire risks arising from design are addressed by all designers so far as is reasonably practicable.
- Co-ordinate with the principal contractor where needed to incorporate suitable general fire precautions required for the construction phase.
- Have an awareness of the relevant legislation and guidance including: [CDM 2015](#), [FSO 2005](#), [FSA 2005](#), [FSR 2010](#), [HSG168](#), [JCoP 9<sup>th</sup> Edition](#) and relevant Building Regulations.
- Understand the needs of local fire and rescue service.

### Designer

- Have the relevant Skills, Knowledge, Training and Experience, or organisational resource to address relevant fire risks arising from their design and decisions.
- Have knowledge and understanding of the mechanisms for fire ignition and spread and measures to prevent and mitigate these and be able to apply these to their design (this should include the risks to those both on site, and those around adjacent buildings).
- Have an awareness of the relevant legislation and guidance including: [CDM 2015](#), [FSO 2005](#), [FSA 2005](#), [FSR 2010](#), [HSG168](#), [JCoP 9<sup>th</sup> Edition](#) and relevant Building Regulations.
- Designers should be able to determine the stages at which the fire safety provisions to be present in the final building/structure are implemented (or removed in the case of refurbishment/demolition), or compensated for until they are implemented, to eliminate or reduce these risks so far as is reasonably practicable.

# Construction Fire Risk Management



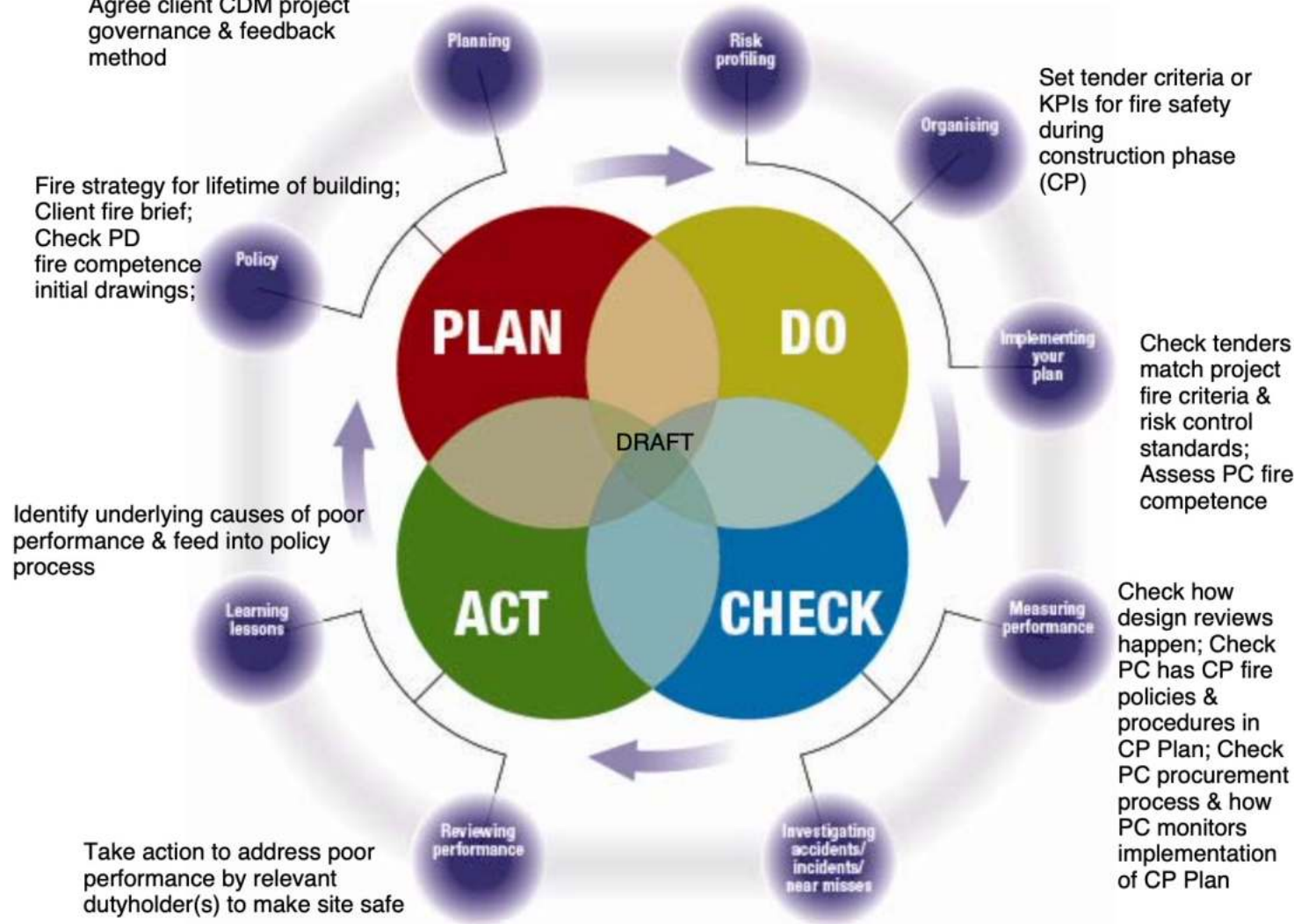
- The Matrix has been developed by industry.
- This Matrix does not set out to define every detailed requirement for every detailed situation .
- It sets out to identify the issues which all the duty holders should be able to deal with.
- Duty holders should be able to use the matrix to support their decisions when managing fire prevention on construction sites.
- The Matrix is the first step of the journey.
- The WG have been investigating different work streams to complement the work already achieved.

Client fire arrangements

# Plan, Do, Check, Act flowchart

Collate fire safety standards;  
Establish procurement processes;  
Agree client CDM project governance & feedback method










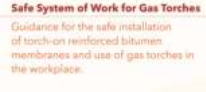
Get survey data;  
Design stage fire RA for fire risk profile;  
Input from fire engineer as required;  
Design review to eliminate risk SFAIRP  
PCI - Residual risk information



Monitor fire safety performance; \*Investigate any gaps between fire-related specifications and actual work methods & materials installed





PRE – CONSTRUCTION PHASE SAFETY RISK MATRIX						HOT ROOF WORKS		
Ref. No	HAZARD- Material, hazardous activity, location or circumstance	SIGNIFICANT RISKS Generic /Trade & Project Specific Risks Consequences	PERSONS AT RISK	ELIMINATE or AVOID risks SFARP Mitigation measures > (early stages)	REDUCE or MINIMIZE risks ALARP by :- (During all design stages) Prioritised safe systems of work options available to resolve	INFORMATION To be provided with the design	OTHER SPECIALIST GUIDANCE & COMMENTS Health Issues Further References	
<b>1.0</b>	<b>Picture</b>	Type of Risk	Individual or multiple	Do not use ?	Design method option 1	Design method option -2	Other Documentation	Further Information
<b>Hot working risks</b>	 Hot work roof fire	Waterproofing membranes that need to be installed using heat can cause a significant risk of fire if the work is not managed.	Fires can result in total building loss.	Select Roof systems that do not require hot works during the installation process. However be aware that substrates need to be dry to accept most waterproofing systems so some hot working could be required.	Utilise <a href="#">pictorial checklist</a> to identify areas where it is not safe to use the gas torch  	Record findings – preferably on a visual image:  	Construction fire strategy; Construction fire risk assessment; Hot work permits;	<a href="#">HSG168 Fire safety in construction</a> <a href="#">Joint Code of Practice 9th edition</a> <a href="#">NFRC Safe2Torch</a> <a href="#">HSG33 – Health &amp; Safety in Roof Work</a> National Federation of Roofing Contractors (NFRC) - <a href="mailto:Helpdesk@nfrco.co.uk">Helpdesk@nfrco.co.uk</a>
<b>Tooling</b>	 LPG Gas Torch	Produces naked flame when in use; has the potential cause a fire when used in high risk situations near combustible materials.	Building loss; loss of life; burns	Consider alternatives installation methods. Follow industry safe working guidance – <a href="#">Safe2Torch</a>	Use self-adhesive membranes in high risk areas.  	Hot air tooling can help aid adhesion in cold conditions  	Construction fire strategy; Construction fire risk assessment; Hot work permits;	<a href="#">HSG168 Fire safety in construction</a> <a href="#">Joint Code of Practice 9th edition</a> <a href="#">NFRC Safe2Torch</a> <a href="#">HSG33 – Health &amp; Safety in Roof Work</a> NFRC - <a href="mailto:Helpdesk@nfrco.co.uk">Helpdesk@nfrco.co.uk</a>
<b>Application</b>	 Torching directly to combustible substrate (plywood)	Naked flame coming into contact with timber substrate	Building loss; loss of life; burns	Consider alternatives installation methods	Use self-adhesive membranes.  	Laps to be sealed using hot air tooling and pressure roller.  	Follow <a href="#">Safe2Torch</a> <a href="#">SSoW</a>  	<a href="#">HSG168 Fire safety in construction</a> <a href="#">Joint Code of Practice 9th edition</a> <a href="#">NFRC Safe2Torch</a> <a href="#">HSG33 – Health &amp; Safety in Roof Work</a> NFRC - <a href="mailto:Helpdesk@nfrco.co.uk">Helpdesk@nfrco.co.uk</a>

# Health Risks


















Falls and other safety issues are not the only risks linked to roof work. There are some significant health risks as well. The most important ones are:

- Manual handling;
- Vibration;
- Noise;
- Sun exposure
- Harmful dusts and chemicals; including
- Asbestos;
- Silica;
- Glues and solvents.



















Work Stage: <b>ROOFING</b>			Project: <b>DOMESTIC PROPERTY</b>				Date:		
<b>PRE-CONSTRUCTION &amp; CONSTRUCTION PHASE Hazard Awareness &amp; Risk Management</b>							< Insert Trade package >		
Ref. No	HAZARD- Material, hazardous activity, location or circumstance	SIGNIFICANT RISKS Generic /Trade & Project Specific Risks Consequences	PERSONS AT RISK	ELIMINATE or AVOID risks SFARP Mitigation measures > (early stages)	REDUCE or MINIMIZE risks ALARP by: (During all design stages) Prioritised safe systems of work options available to resolve			INFORMATION To be provided with the design	OTHER SPECIALIST GUIDANCE & COMMENTS Health Issues Further References



1.0	Large concrete interlocking roof tiles that produce silica dust when cut.	Type of Risk	Individual or multiple	Do not use or options for alternative roof coverings.	Design method option - 1	Design method option - 2	Design method option - 3	Other Project Documentation	Further Information
EG.		Generic /Trade specific risks are those that should be mitigated by trained and experienced tradesmen	Many people can be affected by dust & noise whether operatives, supervisors, visitors, neighbours, the environment		Use of designer skills to achieve visual intent with minimisation of harmful potential	Use of designer skills to achieve visual intent with minimisation of harmful potential	Use of designer skills to achieve visual intent with minimisation of harmful potential	Refer to: Project drawings cross referenced Specification Cost Plan	<a href="#">HSE Research Report RR878 - Respiratory issue report</a> Signage Specialist Design or client input Climatic conditions Costs/ Benefits
1.1		Musculo-Skeletal injuries during moving and handling of roof tiles 	Operatives		Utilising a forklift truck and loading bay eliminate the need to manually move the roof tiles from ground to roof level 	Roof tile bump/elevator allows tiles to be mechanically moved to the scaffold platform. Tiles should be split into smaller manageable piles. 	Gin wheel and rope is labour intensive and should only be selected where access or there is lack of an electrical supply. 	Access, size of project and duration for mechanisation will dictate the method chosen. Small refurbishments may not justify the use of large plant.	<a href="#">HSC33 – Health &amp; Safety in Roof Work</a> National Federation of Roofing Contractors - <a href="mailto:Helpdesk@nfrco.co.uk">Helpdesk@nfrco.co.uk</a> 
1.2		Respiratory Risks during cutting roof tiles 	Operatives; Other workers; Site staff; Neighbours; Members of the Public.	Natural slates are traditionally cut by hand or non-mechanical means thus removing the risk of silica dust. 	Slates to be cut with a guillotine. 	Manually cut using handheld slate cutter. 	Manually cut slates using traditional cutting tools 	M-Class Rated Industrial Vacuum Cleaner required to clean up slate waste from cuts. 	<a href="#">HSC33 – Health &amp; Safety in Roof Work</a> National Federation of Roofing Contractors - <a href="mailto:Helpdesk@nfrco.co.uk">Helpdesk@nfrco.co.uk</a> 

Work Stage: <b>ROOFING</b>			Project: <b>DOMESTIC PROPERTY</b>			Date:	
<b>PRE-CONSTRUCTION &amp; CONSTRUCTION PHASE Hazard Awareness &amp; Risk Management</b>						<b>&lt; Insert Trade package &gt;</b>	
Ref. No	HAZARD- Material, hazardous activity, location or circumstance	SIGNIFICANT RISKS Generic /Trade & Project Specific Risks Consequences	PERSONS AT RISK	ELIMINATE or AVOID risks SFARP Mitigation measures > (early stages)	REDUCE or MINIMIZE risks ALARP by: (During all design stages) Prioritised safe systems of work options available to resolve	INFORMATION To be provided with the design	OTHER SPECIALIST GUIDANCE & COMMENTS Health Issues Further References

1.3		Respiratory Risks during cutting roof tiles 	Operatives; Other workers; Site staff; Neighbours; Members of the Public.	Select plain roof tiles that can be cut by non-mechanical means thus removing the risk of silca dust. These can be either clay or concrete roof tiles. 	Minimise cuts by design; i.e. minimise dormer windows, valley's, hips within the roof structure design. 	Cut roof tiles using tile cutting nibbler designed for cutting clay plain roof tiles. 	Manually cut roof tiles using a scribe and a handheld tile nibbler. 	M-Class Rated Industrial Vacuum Cleaner required to clean up roof tile waste from cuts. 	<a href="#">HSG33 – Health &amp; Safety in Roof Work</a> National Federation of Roofing Contractors - <a href="mailto:Helpdesk@nfrc.co.uk">Helpdesk@nfrc.co.uk</a> 
1.4		Respiratory Risks during cutting roof tiles 	Operatives; Other workers; Site staff; Neighbours; Members of the Public.		Dry cut tile saw which collects 99.5% of the silca dust created by cutting the roof tile 	Incorporating a jig to hold the roof tile secure, safely allows the tile to be cut, using the cut off machine (disc-cutter) and the suppression of silca dust whilst cutting 	RPE <b>must</b> be worn when cutting roof tiles mechanically. Disposable masks meeting the APF of 20 are marked FFP3. The changeable filters used in combination with a reusable mask are marked P3. 	On site availability of suitable cutting equipment and containment to cutting areas is essential. 	<a href="#">HSE Research Report RR878 - Respiratory issue report</a> <a href="#">HSG33 – Health &amp; Safety in Roof Work</a> National Federation of Roofing Contractors - <a href="mailto:Helpdesk@nfrc.co.uk">Helpdesk@nfrc.co.uk</a> 

EXAMPLE A - ROOFING

Work Stage: <b>ROOFING</b>			Project: <b>DOMESTIC PROPERTY</b>			Date:	
<b>PRE-CONSTRUCTION &amp; CONSTRUCTION PHASE Hazard Awareness &amp; Risk Management</b>						< Insert Trade package >	
Ref. No	HAZARD- Material, hazardous activity, location or circumstance	SIGNIFICANT RISKS Generic /Trade & Project Specific Risks Consequences	PERSONS AT RISK	ELIMINATE or AVOID risks SFARP Mitigation measures > (early stages)	REDUCE or MINIMIZE risks ALARP by: (During all design stages) Prioritised safe systems of work options available to resolve	INFORMATION To be provided with the design	OTHER SPECIALIST GUIDANCE & COMMENTS Health Issues Further References

1.5		<p>Hand Arm Vibration (HAV) during cutting roof tiles.</p> 	Operatives		<p>Use bench saw to cut tiles.</p> 	<p>Manual cut tiles. Note: labour Intensive; does not provide a clean cut; tiles can fracture easily.</p> 	<p>Health surveillance required.</p> 	<p>HSE - Hand-arm vibration at work guidance.</p> 	<p>HSE HAV's Calculator</p> 
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# Safety Steps

## Working at height guidance

Safety Steps is a series of documents that can be used freely – in whole or part – to help produce any type of height safety output for designers, clients, managers, supervisors or operatives. A key aim of the documents is to do away with continually redefining or looking for the essential messages for ensuring safe work at height. Safety Steps provides the key messages in one place, making it a valuable, long-term reference point for industry.

Safety Steps were created by the 'Managing Risk Well' Group, a leading safety group within construction industry body CONIAC (the Construction Industry Advisory Council), with input from the Access Industry Forum.

## How you might use Safety Steps

From toolbox talks to checklists, providing a structure for training material content to informing flowcharts, Safety Steps, have a wide range of uses.



Flowcharts/ infographics



Training materials



Poster campaigns



Toolbox talks



Rules and guidelines

## Scope of Safety Steps

Safety Steps contain general, rather than task-specific, messages. So, for example, they don't provide information about specific situations such as the use of scaffolding or mobile work platforms, or working on roofs. Instead, their essential messages underpin any type of work at height activity.

# Planned / Right Equipment / Competent?





# Planned / Right Equipment / Competent?



# Planned / Right Equipment / Competent?



# Planned / Right Equipment / Competent?







**Any Questions?**

## Reinforced Bitumen Membrane (RBM)

- Pour and roll – bitumen boiled in a boiler
- The hot bitumen is then carried in a bucket to the roof
- It is then poured between two layers of roofing felt and the felt is rolled out to bond the layers together
- The source of heat tends to be at ground level



# Reinforced Bitumen Membrane RBM

- Torch-on felts – polymer modified bitumen applied to membrane during manufacturing process
- It is then torch applied using a gas torch
- The source of heat is at roof level





# Hot Melt Membranes

- Compound heated in a boiler
- Compound poured onto substrate and spread out
- Covered with a felt membrane
- Details tend to be torch applied



## Cold Applied Liquid Membranes

- Liquid compounds are cold applied in a built-up system usually incorporating a carrier membrane
- They alleviate the use of heat
- Can be difficult to install in cold damp conditions



# Single Ply Membranes

- Lightweight polymer sheets of membrane
- Sheets are sealed at joints to form continuous waterproofing
- Flame-free construction using hot-air welding, adhesives and fasteners



# Roof Fires – The Scourge on our Industry



- In 2016 at the request of contractor members, a focus group formed;
- Industry needed to promote a positive image of the responsible contractors who were implementing measures to mitigate the fire risk;
- Safe2Torch campaign created;
- Risk of fire best identified and dealt with at the survey/specification stage;

# Roof with Marked Zones

Figure 1

Visual impression of the areas where it is not Safe2Torch



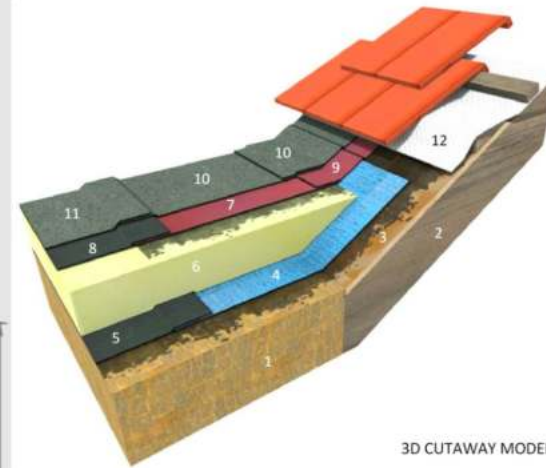
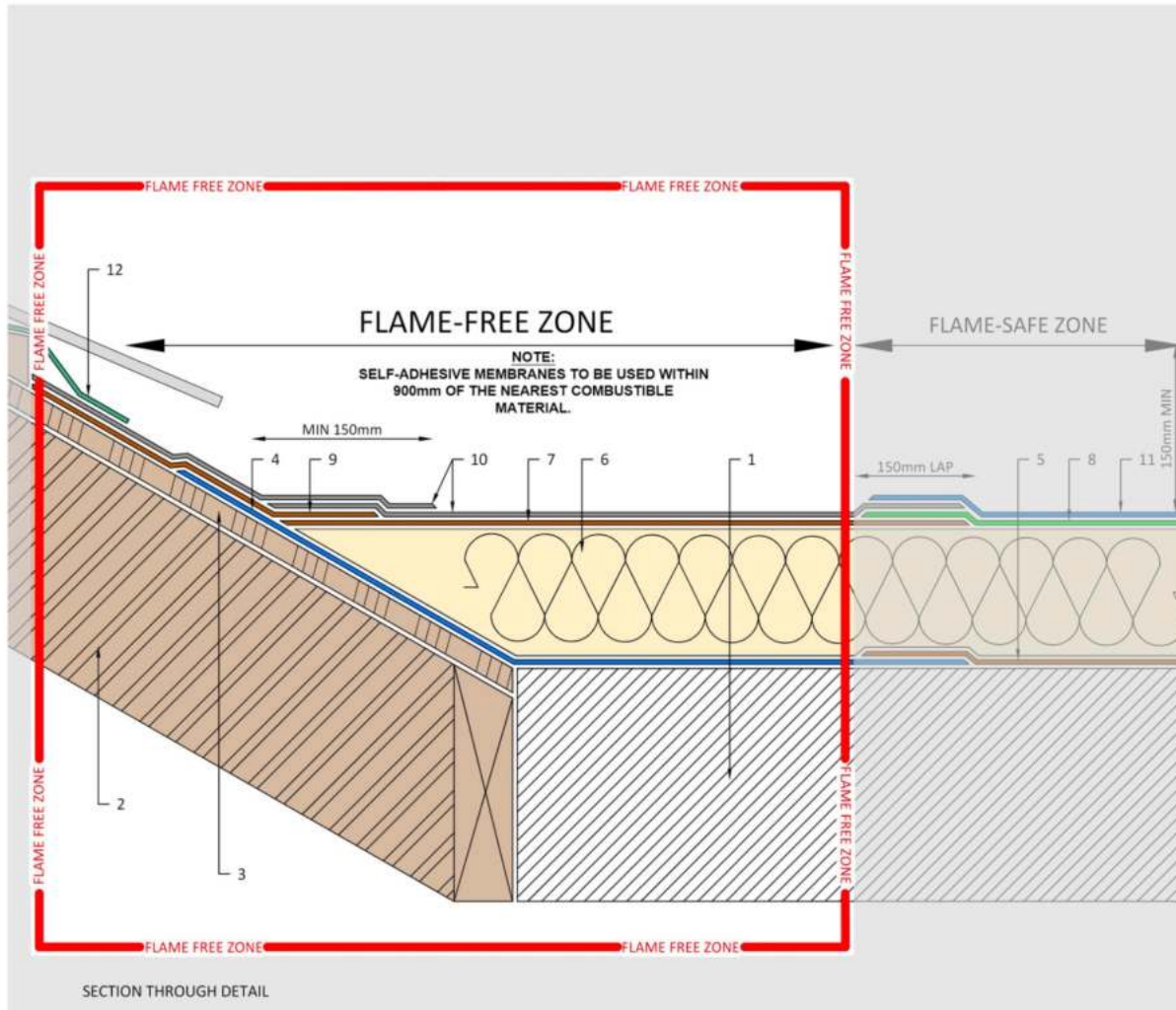
No naked flames



Safe2Torch



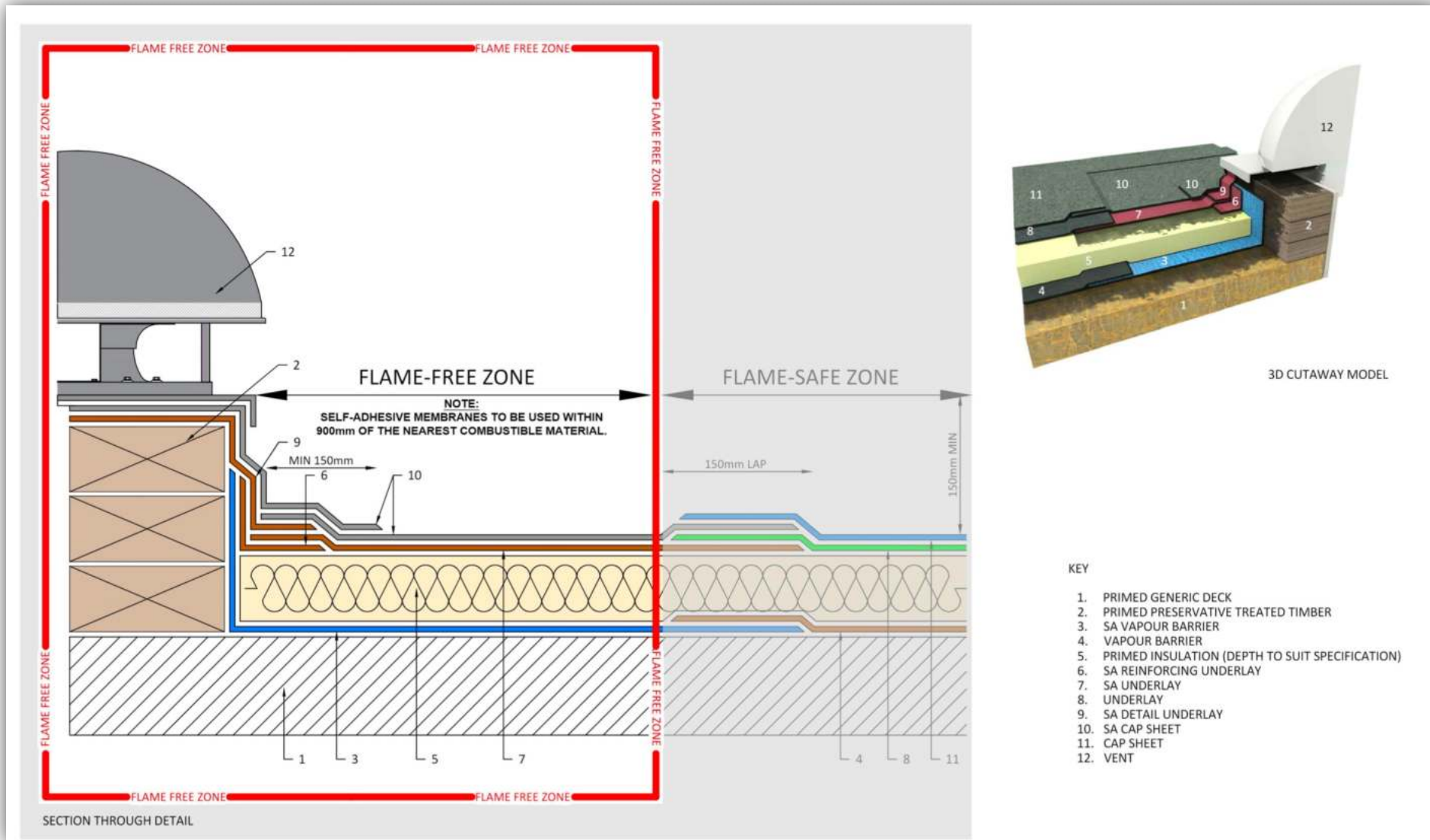
# Detail Drawing with Marked Zones



KEY:

1. PRIMED GENERIC DECK
2. RAFTER
3. PRIMED LAYBOARD
4. SA VAPOUR BARRIER
5. VAPOUR BARRIER
6. PRIMED INSULATION (DEPTH TO SUIT SPECIFICATION)
7. SA UNDERLAY
8. UNDERLAY
9. SA DETAIL UNDERLAY
10. SA CAP SHEET
11. CAP SHEET
12. UNDER SLATING/TILE MEMBRANE

# Detail Drawing with Marked Zones





# Safe2Torch

REGISTERED

Pledge support for the Safe2Torch campaign. Pledging support means that the organisation has read and understood the guidance, is committed to promoting and using the campaign throughout their organisation.

**What is Safe2Torch?**

Safe2Torch is an NFRC campaign developed in partnership with contractor and manufacturer groups to promote the safe use of gas torches on roofs and to prevent roof fires when installing torch-on membranes.

Registered #Safe2Torch Member

Registered #Safe2Torch Member

Registered #Safe2Torch Member

**Safe2Torch Checklist**

It is recommended that anyone preparing a specification should complete this checklist and if any boxes are ticked avoid the use of a direct torch-on application in these areas.

**Safe2Torch**

Guidance for the safe installation of torch-on reinforced bitumen membranes and use of gas torches in the workplace.

NFRC

Topics covered within the Safe2Torch training module include:

- LPG Gas Cylinders – Safety & Storage
- Tools and Equipment, including a practical training session;
- Fire Extinguishers;
- Fire Triangle and Fire Prevention;
- Safe2Torch Checklist;
- Hot Works;
- Permits to Work;
- Fire Watches.

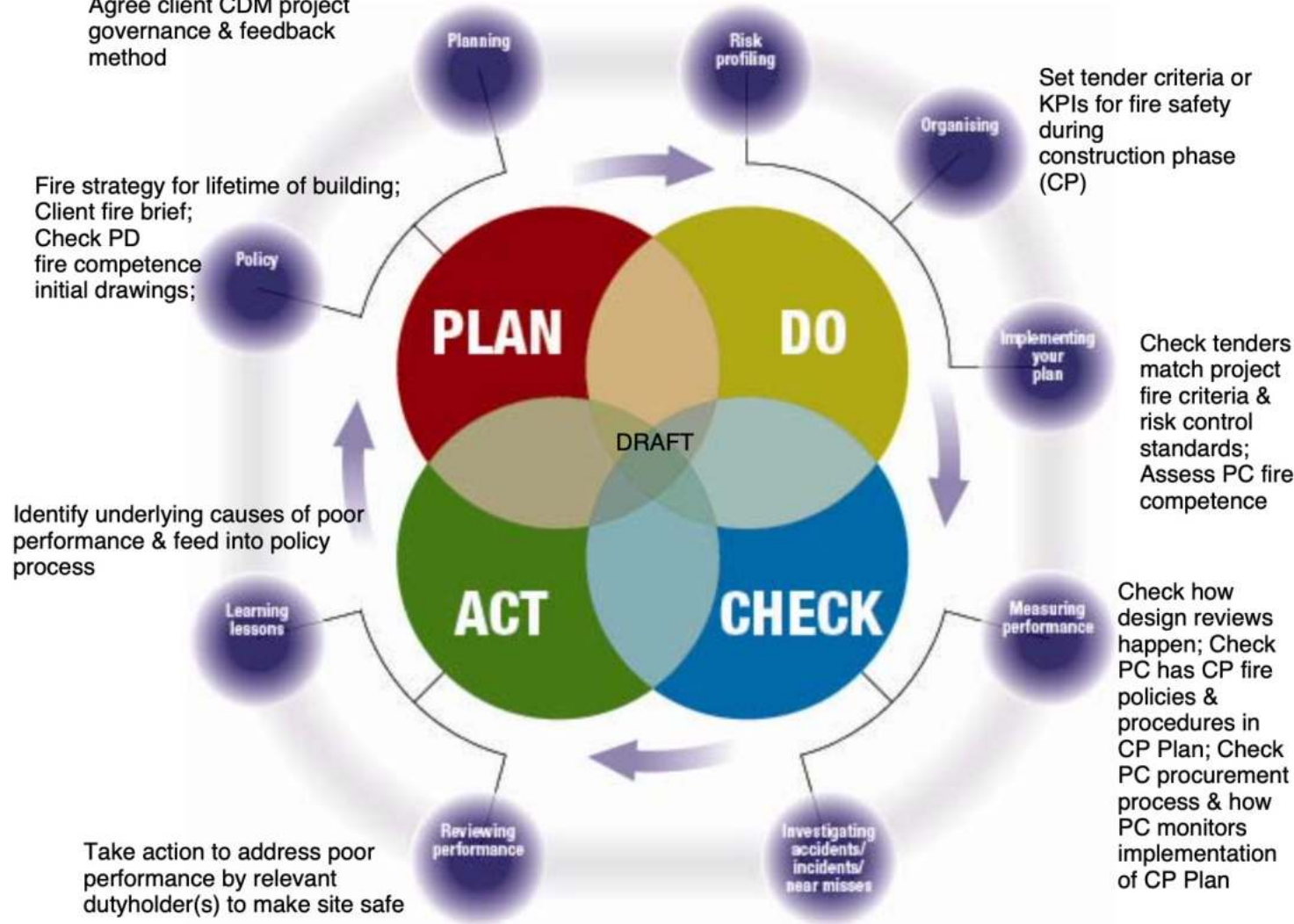


Client fire arrangements

# Plan, Do, Check, Act flowchart

Collate fire safety standards;  
Establish procurement processes;  
Agree client CDM project governance & feedback method

Get survey data;  
Design stage fire RA for fire risk profile;  
Input from fire engineer as required;  
Design review to eliminate risk SFAIRP  
PCI - Residual risk information



Monitor fire safety performance; \*Investigate any gaps between fire-related specifications and actual work methods & materials installed

## Check the following fire risks before starting hot works

Exposed timber deck



Yes

No

N/A

Metal decking (refurbishment) where old material may accumulate in the troughs



Yes

No

N/A

Concrete substrate where expansion joints are exposed



Yes

No

N/A

Insulation unless specifically designed and tested for use with torch-on membranes

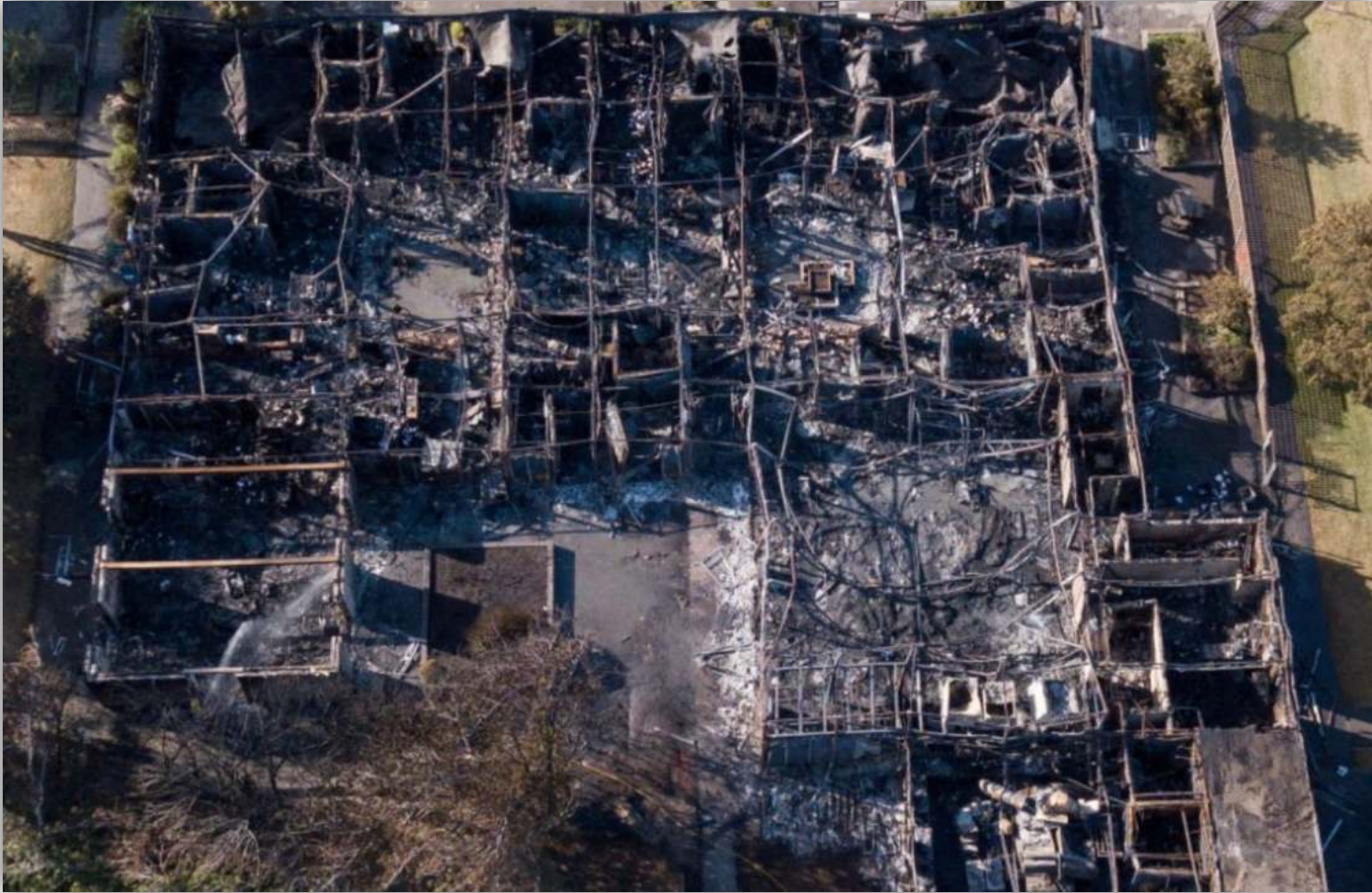


Yes

No

N/A

# Harrington Junior School, Long Eaton



# Harrington Junior School, Long Eaton





# Safety Alert: CLASP Buildings and their Increased Fire Risk



- System buildings are particularly widespread throughout the public sector;
- A need to highlight duty holders on the increased fire risk;
- Developed a safety alert with the support of industry experts;
- Freely available from the Safe2Torch webpage.

The screenshot shows a document from NFRC (Leading Roofing Excellence) titled "CLASP Buildings and their Increased Fire Risk". It features a red header with a warning icon and the text "NFRC Safety Alert". The main content includes a section titled "A recent roof fire which destroyed a school in Long Eaton, Nottinghamshire has highlighted concern of the fire performance of lightweight system-built schools, particularly in CLASP\* schools." Below this, there is text explaining that CLASP (Consortium of Local Authorities Special Programme) ran from the 1950s until the 1980s, and that a fire in a CLASP school in 2017 resulted in 20 deaths. The document also includes a "FURTHER INFORMATION" section with links to NFRC resources and a "WHY CHOOSE AN NFRC CONTRACTOR?" section. At the bottom, there is an "ACTION: CLASP SCHOOLS!" section with three numbered points: 1. Avoid the risk: use flame-free alternatives; 2. Reduce the risk: strictly follow the Safe2Torch guidelines; 3. Select flame-free alternatives in high-risk areas. The document also features a photograph of a school building under construction and a diagram of a roof structure.



**Any Questions?**



## Table 5 Limitations on roof coverings\*

Designation† of covering of roof or part of roof		Minimum distance from any point on relevant boundary			
		Less than 6m	At least 6m	At least 12m	At least 20m
National Class	European Class				
AA, AB or AC	B <sub>ROOF</sub> (t4)	●	●	●	●
BA, BB or BC	C <sub>ROOF</sub> (t4)	○	●	●	●
CA, CB or CC	D <sub>ROOF</sub> (t4)	○	● <sup>(1) (2)</sup>	● <sup>(1)</sup>	●
AD, BD or CD	E <sub>ROOF</sub> (t4)	○	● <sup>(1) (2)</sup>	● <sup>(1)</sup>	● <sup>(1)</sup>
DA, DB, DC or DD	F <sub>ROOF</sub> (t4)	○	○	○	● <sup>(1) (2)</sup>

## ROOFING INDUSTRY FIRE TEST ISSUES

### Challenges:

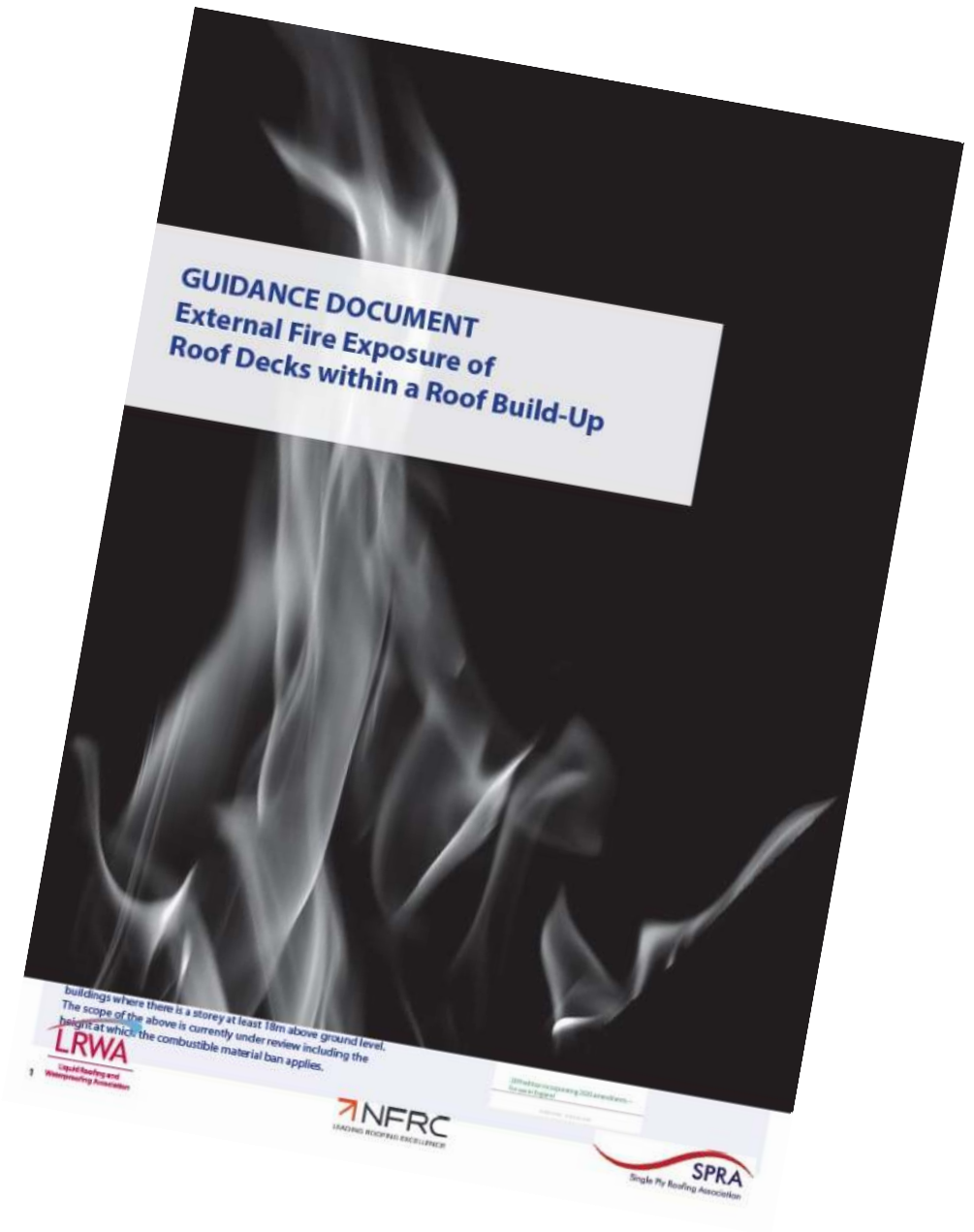
- Only 2 test houses that can do UK fire test.
- No EXAP rules for testing – so hundreds of permutations, therefore less common build-ups not tested.
- Specifier and Building Control acceptance that timber is the worst-case scenario for the deck.



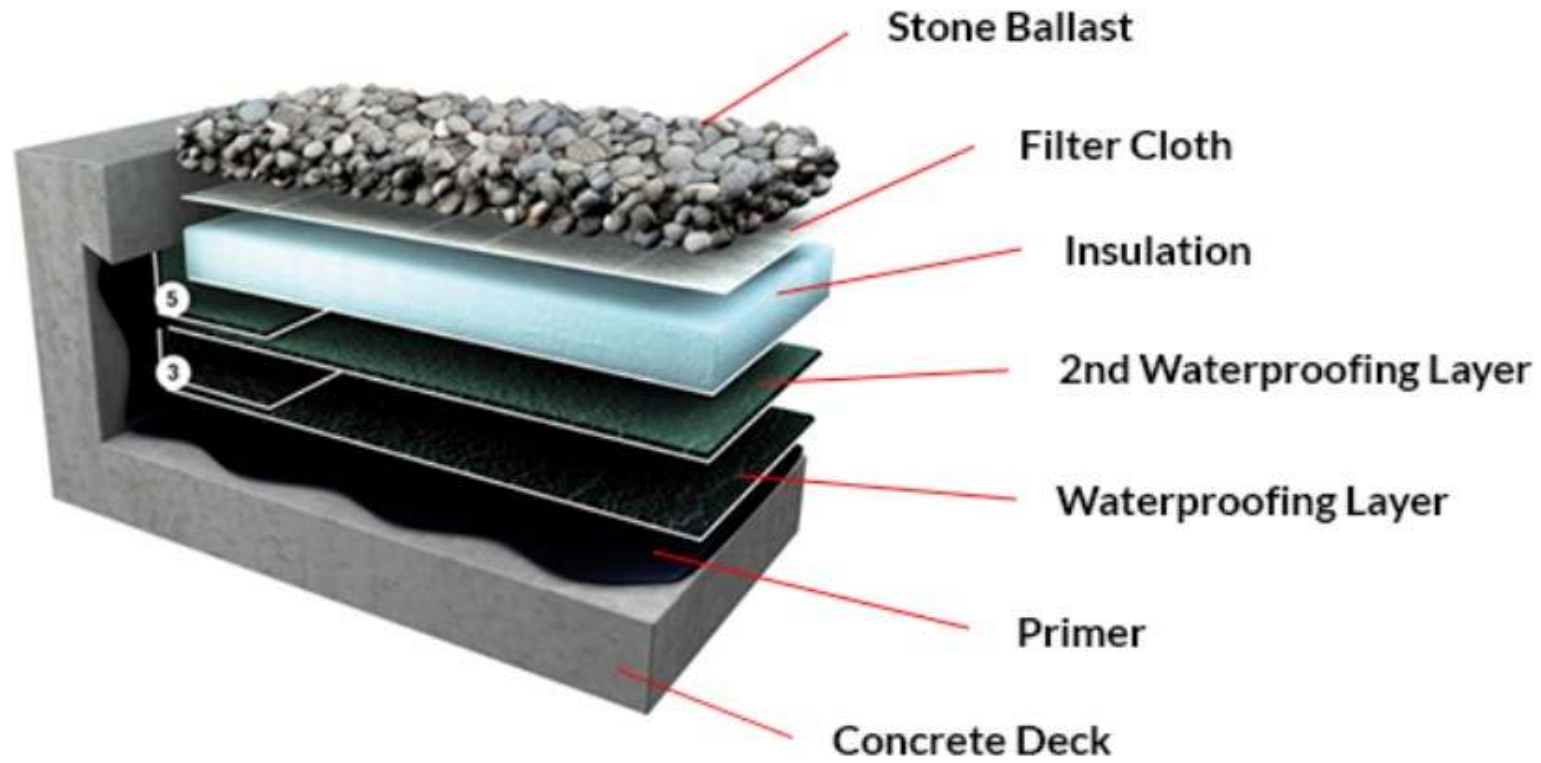
# WORST CASE SCENARIO

Roof Deck	Average Penetration Time (mins)	Observations
Profiled Steel 0.7mm	No penetration	Refer to BRE test report P118474-1000. See appendices
Plywood 18mm	41.44 mins	
Orientated Strand Board (OSB3) 18mm	Could not be established by this test equipment	
Calcium Silicate Board 11.5mm	No penetration	

Roof Deck	Average Penetration Time (mins)	Observations
Orientated Strand Board (OSB3) 18mm (not FR grade)	16.41 mins	Refer to Warringtonfire Test report 20776A. See appendices



# Inverted Roof Build-up





**Any Questions?**

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