

Fire safety in construction - what you need to know

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Overview

- Why fire safety in construction is important
- Your legal duties
- How to remove or reduce the risk

The Problems



Example of poor process control



Prosecutions

- PC fined £80,000 for breach of CDM2015 regulation 15(2);
- Managing director ordered to carry out 150 hours of unpaid community work for breaching HSWA 1974 S37(1), and was also disqualified from being a company director for a period of 3 years.
- Poor conditions on site including dangerous work at height, lack of suitable equipment, untrained operatives, inadequate supervision;

Recent prosecutions

- Employer fined £733,000 after a fitter suffered fatal burns when his clothing was ignited by sparks in an oxygen enriched area – previous near miss.
- Sole trader fined £2,500 after insufficient measures were taken to prevent a welder falling through the mezzanine floor while under construction.
- Home builder fined £1,250,000 after members of the public were exposed to carbon monoxide fumes following works to an external wall

Main Law

- The Health and Safety at Work etc Act 1974
- Management of Health and Safety at Work Regulations 1999
- The Regulatory Reform (Fire Safety) Order 2005
- Fire (Scotland) Act 2005
- DSEAR 2002
- The Construction (Design and Management) Regulations 2015



What others need to do

CLIENT

Provide pre-construction H&S information to allow contractor to identify risks & develop safe work practices.

Make suitable arrangements for managing the project

PRINCIPAL DESIGNER

Plan, manage, monitor and co-ordinate the pre-construction phase.

DESIGNER

Identify risks from fire & explosion during the construction phase (on/off site)

Determine stages when fire safety provisions are present/implemented or removed.

What you need to do

Principal contractor/contractor

- Employer/person in control
- Duty to implement and take adequate measures (fire safety) for premises under your control
- Duty to implement and take appropriate precautions (process fire) for the build/activities
- Prevent or reduce risk of injury from fire & explosion risks
- plan, manage, monitor

Specific Regulations in CDM 2015

- **Reg 29** Prevention of risk from fire
- **Reg 30** Emergency procedures
- **Reg 31** Emergency routes and exits
- **Reg 32** Fire detection and fire-fighting

Fire Risk Assessment

- Identify the hazards
- Identify the people at risk
- Evaluate, remove, reduce and protect from risk
- Record, plan, inform, instruct and train
- Review

The construction fire risk assessment

YES

- Site specific and meaningful
- On and off site risks
- Your skills/competence to undertake this task
- Proportionate response to the risks
- Management arrangements

NO

- Generic
- Forget risks to and from neighbours
- Meaningless paperwork and unidentified risks
- Unused and not actioned

Higher risk construction

E.G. Structural Timber

- Higher risk so more controls needed
- Most vulnerable during construction phase
- Early design considerations needed
 - emitter length/no. of storeys/neighbours
- ON and OFFSITE consideration of fire risks
- Sequencing and workmanship
 - STA - separation distance guidance
 - site security guidance
 - 16 steps guidance
 - risk assessment checklist guidance



Hazards

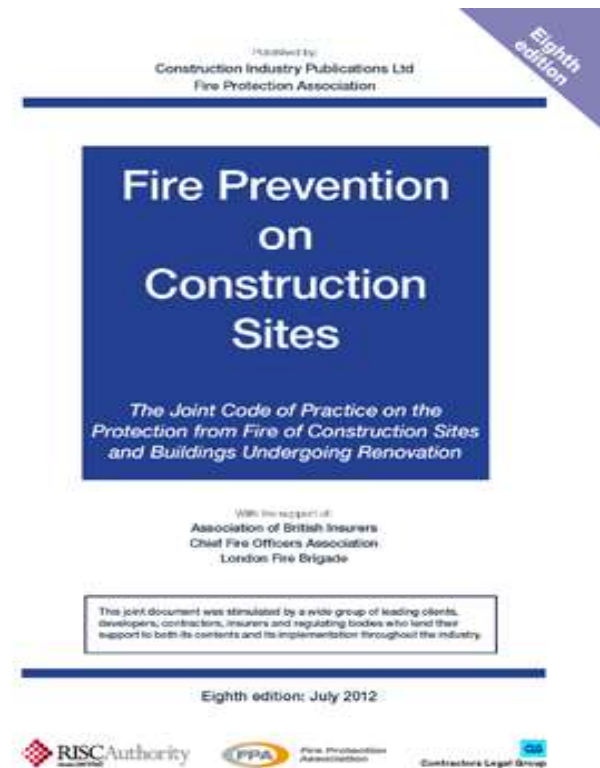
- Smoking
- Naked flames
- Heaters
- Electrical faults
- Contractors tools and equipment
- Fire raising
- Hot work and other open flames (embers, burning of waste)
- Electrical distribution
- Smoking
- Cooking
- Handling flammables

Fuel sources

- Construction materials (expanded plastic insulation, rubber membranes, wood)
- Structural framing material
- Shoring materials
- Vegetation
- Gasoline
- Solvents
- Waste (carpets, furniture, off-cuts)



Guidance



Guidance for Structural Timber



16 Steps to fire safety
Promoting good practice on construction sites
Version 4.3 October 2017



Compromised fire breaks



Fire Doors



Site security and build up of combustible waste



Storage of waste



Storage of waste



Sources of ignition

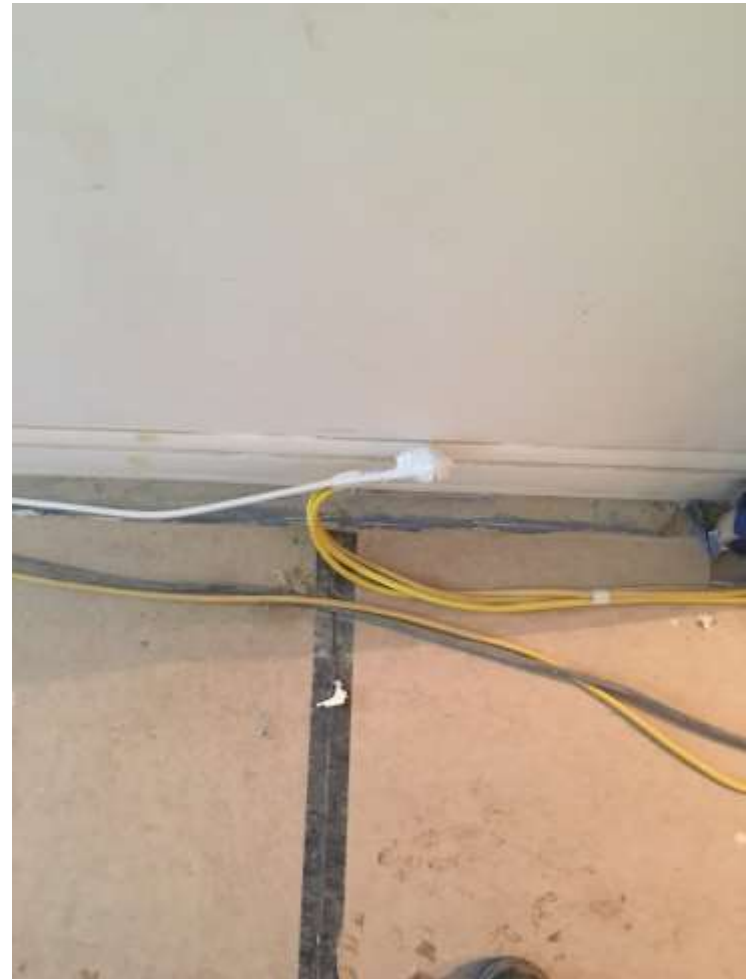


Paint spraying

Lighting/cables/coverings



Sources of ignition



Good Practice



Sources of ignition



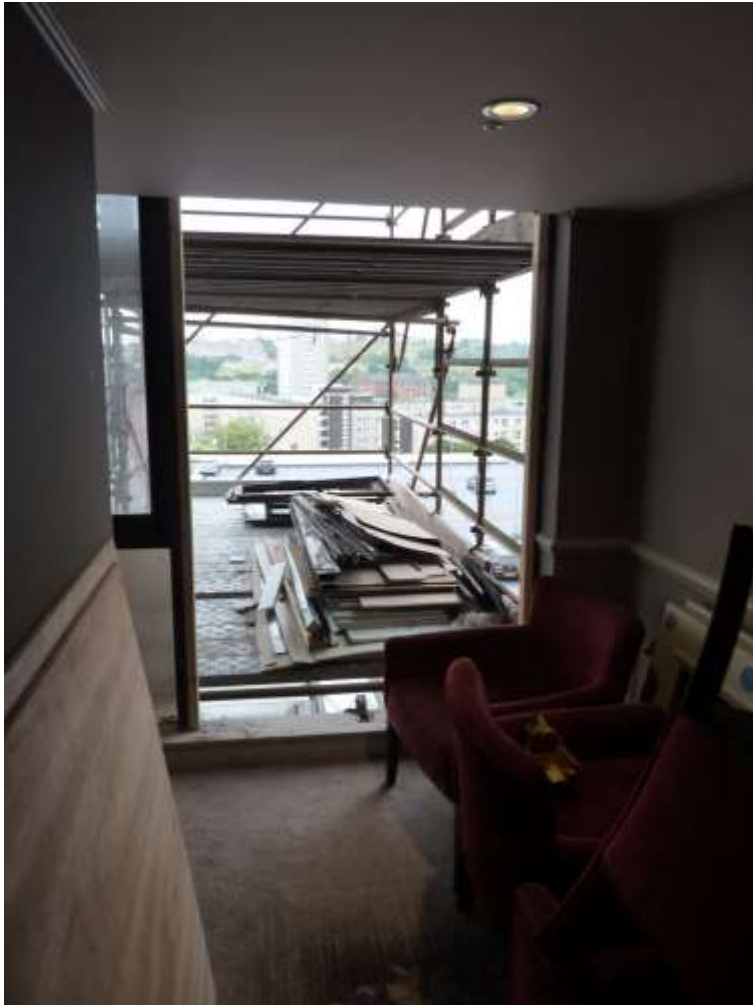
Refuelling plant and equipment



LPG Storage



Obstructing escape routes



Example of poor means of escape



Alarms & fire fighting



Sleeping on Site

