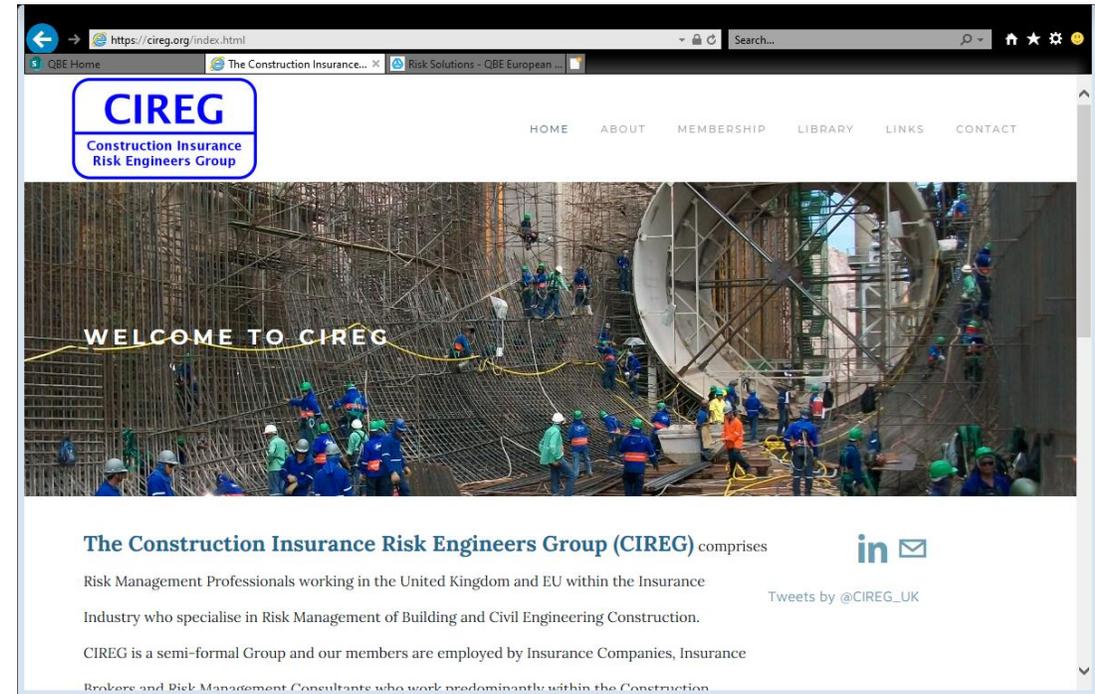
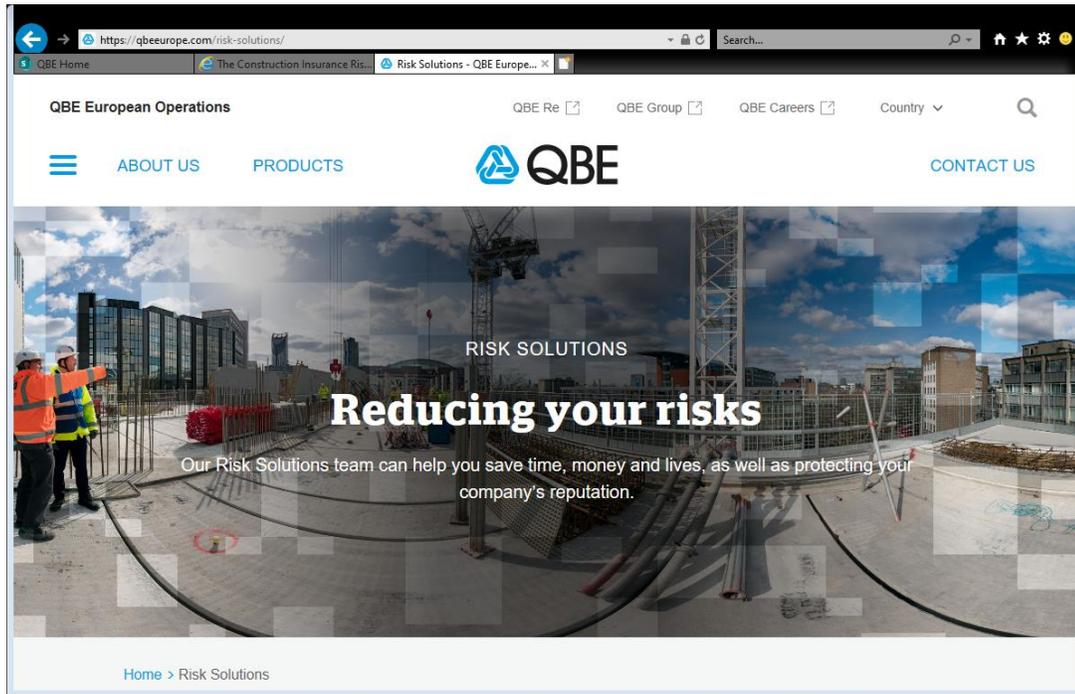


# Insurance Aspects of Construction Fire Safety

# QBE and CIREG

## Risk management for construction projects



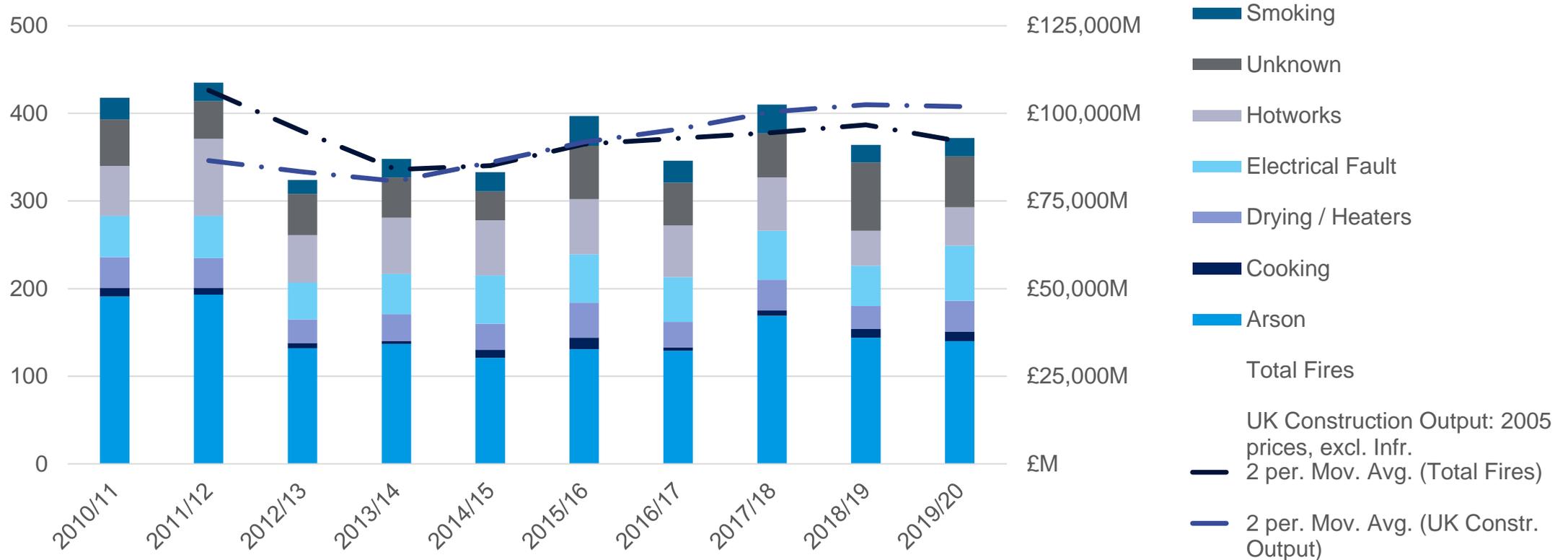
# A fire during construction

2017



# Fires during construction in the UK

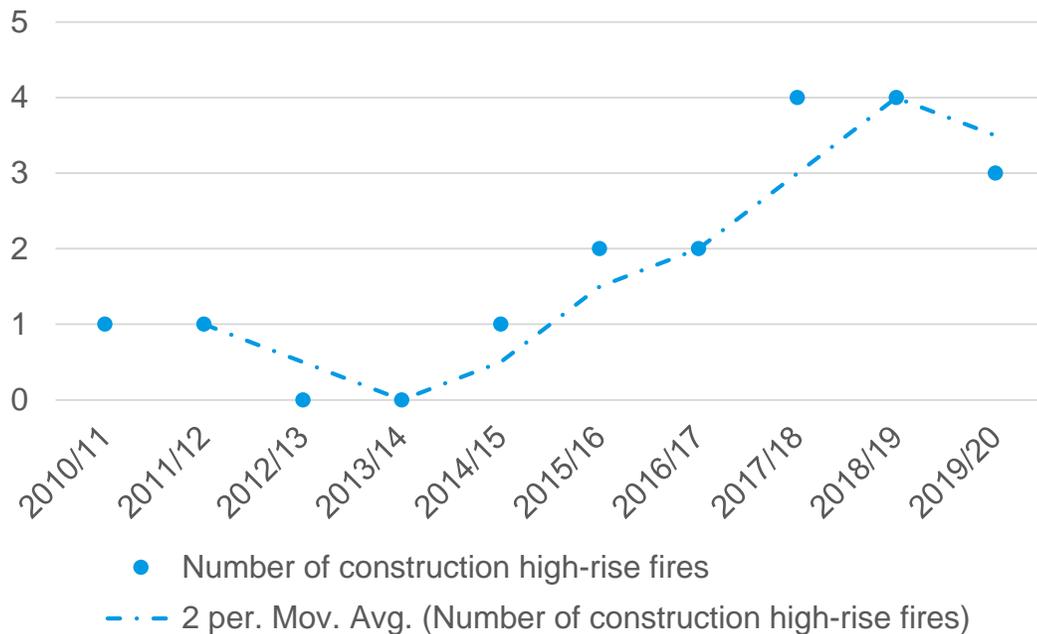
## UK fire incidents on construction sites by cause vs. construction output



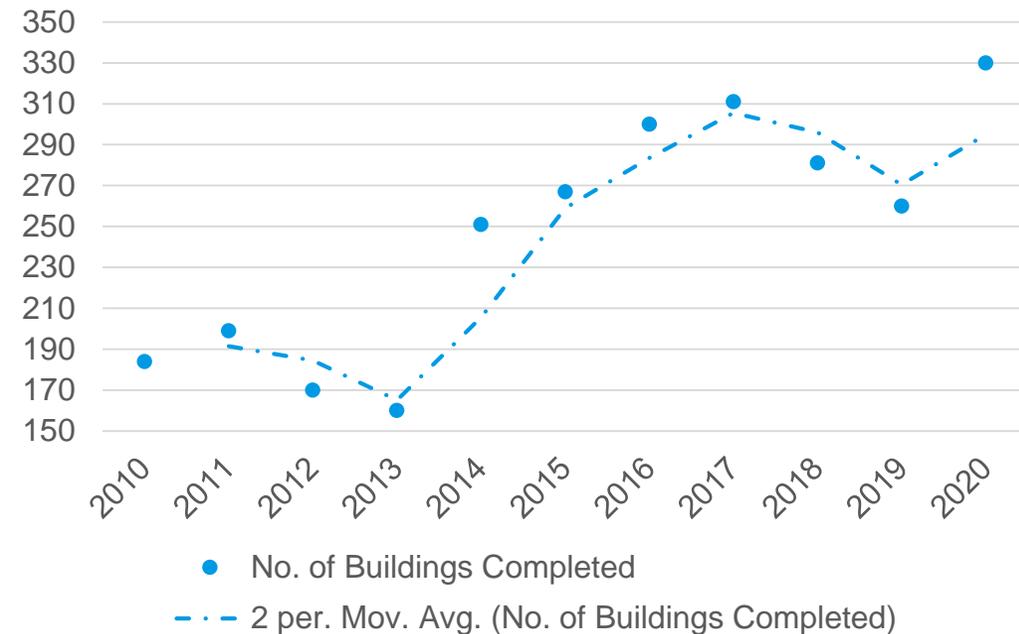
# Tall building fires during construction

## The UK picture vs. global construction trends

Tall building fires during construction in the UK



No. of Tall Buildings (150m+) Completed Globally\*

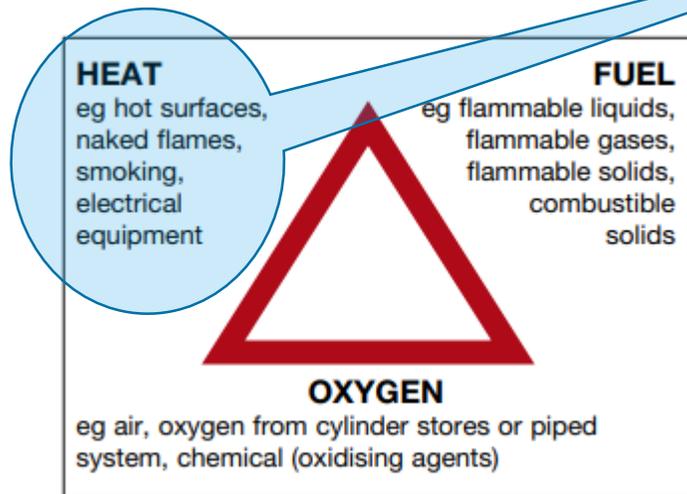


\* Data from [www.skyscrapercenter.com](http://www.skyscrapercenter.com)



# Observations from Insurer Risk Control Surveys

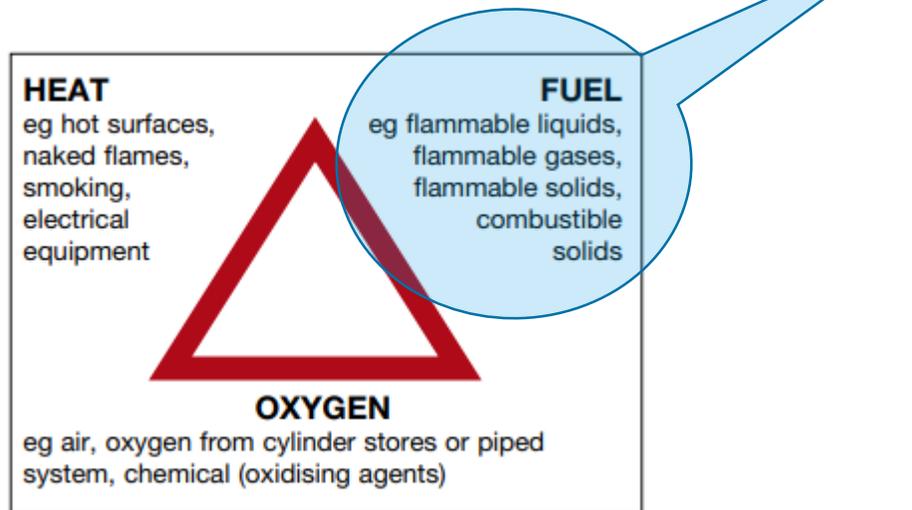
## Fire Prevention: Control of Ignition Sources



- Hotworks
  - **Implement and verify fire watches**
  - **Use thermographic cameras**
- Electrical equipment
  - **Inspect and test all temporary electrical equipment**
- Smoking
  - **A “Red Card” rule**
- Arson
  - **Adopt robust security measures**

# Observations from Insurer Risk Control Surveys

## Fire Mitigation: Control of Fire Spread



- Fuel
  - **Minimise combustible material stored within in buildings; provide additional controls as required**
  - **Temporary coverings must be LPS-certified**
  - **Good housekeeping and prompt removal of waste**
- Compartmentation
  - **Horizontal compartmentation must be robust**

# Observations from Insurer Risk Control Surveys

## Fire Mitigation: Detection, Suppression, Firefighting



Image used with kind permission from Ramtech Electronics Limited

- Fire detection systems
  - **Wider use of temporary systems; properly designed where protecting storage areas**
- Provisions for firefighters
  - **Properly designed dry or wet risers, continued up the building**
- Site Fire Safety Plan
  - **Construction Fire Risk Assessment by professional fire engineer**
  - **Liaison with Emergency Services**

# Inherent risk, design and insurability

## Underwriting concerns

- Emergence of large scale timber buildings
- Use of combustible cladding
- Fire performance of volumetric modular construction
- Control of hotworks:-
  - **Re-emergence of heat warranties**
- Adherence to good construction practice:-
  - **Joint Code of Practice often a condition of cover**
  - **Implementation of risk improvements identified through risk control surveys**
- The insurance market response can be a combination of pricing increases, coverage restrictions and exclusions, and increased scrutiny through risk control surveys

# Insurance Aspects of Construction Fire Safety

To wrap up...

- Management of fire safety on construction sites is reasonable in the UK and on international projects, but hasn't shown much improvement over the last ten years
- Inherent fire risk is increasing, with more tall buildings and increased use of combustible construction materials
- To avoid a catastrophic fire and ongoing insurance premium increases, on tall building projects in particular, the construction industry needs:-
  - **Better-quality, project-specific construction fire risk assessments undertaken by suitably-qualified and experienced fire engineers**
  - **More robust and reliable implementation of existing good practice such as the JCoP and NFPA 241**



Tom Clapton, QBE & CIREG