

A tall building under construction is shown with a large fire and thick smoke billowing from it. The smoke is dark and dense, rising high into the sky. The building's facade is visible, showing a grid of windows. The overall scene is dramatic and highlights the challenges of high-rise construction in fire-prone areas.

Balfour Beatty

Providing facilities for Fire fighters during high rise construction

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- What's the scale of the challenge
- Construction, Refurbishment and or Partial occupation
- What are the risks to Fire fighters
- Those who have a responsibility
- Facilities and an ask



Moscow 2023



Cambridge (UK) 2022

Recognition, there are 4 x Groups at risk

Firefighters

Colleagues involved in construction

Occupants

The general public

Construction, Refurbishment and or Partial occupation

“There's some distinct differences and specific challenges with all 3”

- A new building from the bottom up - We have high fire loading at the front end including plant and associated equipment. During the middle phase we will see plentiful quantities of flammables such as diesel, LPG, wood, timber, plastics, cabling and hot works. At the end we have an almost complete building without fully commissioned systems
- During refurbishment and partial occupation, we have limited access, many of the risks above and very often occupied spaces.

All against a backdrop of sustainable and thermal rated products which are often very flammable.

The harsh reality





What are the risks to Fire fighters



- Type of construction ie Timber frame- rapid fire spread
- Building stability
- Stability in floors
- Falling from height
- Neighbouring buildings
- High winds
- Electrical services
- Wet/dry rising main, non functional
- Poor visibility
- Protruding steelwork
- Entrapment
- Non compartmentation and smoke logging
- Staircase fire spread
- Appliance positioning
- Falling objects
- Flammable materials, liquids, solids
- Solar, LPG, Battery storage systems, Lithium ion, Hydrogen



Those who have a responsibility

“So, who holds responsibilities here”?

- Construction Design Management Regulations
- Regulatory Reform (Fire Safety) Order
- Building Safety Act
- Fire and Rescue Services Act
- Health and Safety at Work Act

The Regulators

Clients

Principle Contractor

Principle Designer

Person with control

Contractors

Suppliers

Employees **Employer, owner, occupier**

- We consider fire fighter risks and access during design – Not just positioning a fire appliance, or water supplies
- PC's have a credible evacuation plan
- Central stair cores are compartmentalised as soon as possible
- Dry and wet risers are commissioned asap
- F&R Services are visible, engaged and work collaboratively with all parties
- Water authorities provide accurate information
- Projects have a suitable Fire Risk Assessment
- PC's have a specialist capability to support you to develop a 'FS Construction Management Strategy' which identifies risks and how to manage arrangements throughout the whole of the project (A golden thread of FS support)

**“We're all in this together so let's make this
happen”**

Thank you

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