Informing and supporting the fire service at high rise fires
Presentation to the Tall Buildings Fire Safety Network Group

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Aim and objectives

• Introduce the revised national Generic Risk Assessment (GRA) for high rise firefighting
• Promote understanding of the hazards and challenges faced by firefighters at high rise fires
• Explain how LFB plans for high rise incidents
• Outline how LFB responds to high rise fires
• Outline how the building owner/occupier can play a key part in supporting LFB planning and response
• The issues and potential challenges linked to dealing with the media
• “Post incident” issues and actions
What is the high rise GRA?

- Published by Department for Communities and Local Government & Chief Fire & Rescue Adviser
- Sets out a national statement of the hazards and control measures for high rise fires
- Each Fire and Rescue Service has to undertake it’s own risk assessment and create procedural guidance (“SOPs”)
- Provides guidance with regard to planning, training, equipment and incident management
- Provides ‘best practise’ advice and promotes a consistency of approach between different fire rescue services
- GRA is relevant to personnel from other emergency services and high rise building occupiers/owners (as well as FRSs)
The fire service definition of ‘high rise’

- Floor height and position prevents external firefighting/rescue
- Ranges from conventional ‘tower blocks’ to large/complex commercial premises
- Premises can have multiple use
Basic facilities provided for fire service use in high rise buildings

- Dry or wet rising mains
- Firefighting shafts
- Firefighting lifts
- May also have more complex building systems - sprinklers and smoke control
Challenges firefighters face at a high rise fire – building height and design

- Building height
- Falling objects
- Premises security
- Complex internal layout
- Floor or ceiling collapse
- Wall panel failure
- Construction technique (timber frame)
- Building under construction or refurbishment
Challenges firefighters face at a high rise fire – building height and design

- Extended communication lines
- Difficult to gather basic information
- Cable entanglement
- Firefighting facilities or fixed installations not working!
- Oxygen deficient or toxic atmospheres
- HVAC systems
Challenges firefighters face at a high rise fire – fire behaviour & development

- Fire and smoke spread
- Fire on multiple floors
- Effect of wind
- Falling burning debris
- Poor housekeeping (high fire loads)
- Smoke travel and the ‘stack effect’
- Limited ventilation in compartments (no openings)
Challenges firefighters face at a high rise fire – firefighting & rescue operations

- Unknown premises
- Impact of evacuation on firefighting (& vice-versa!)
- Firefighting facilities unavailable or defective
- Locating the fire floor
- Gathering resources
- Water supplies
- Physiological demands (high workload)
Challenges firefighters face at a high rise fire – firefighting & rescue operations 2

- Congested access/egress
- People shut in lift cars
- Breech of firefighting lobbies
- Electrical system failure
- Distances over which casualties may need to be carried
- Vandalism and unlawful activities
- Moral pressure and human factors
Planning – ‘making your friends before you need them’!

- Advance planning is key to success
- Prioritisation based on risk
- Must involve others – especially building owners/operators
- Confidentiality
- Methods of contact with LFB
- Joint training and exercises
Planning – site specific information the fire service will gather (1)

- Hazards
- Occupancy and use (any variations and the level of vulnerability of the life risk)
- Floor layout & height of the building
- Floor and flat numbering conventions/layout
- Water supplies & fixed installations
- Tactical considerations (such as RVP and appliance/crew access)
- Assess potential for incident size/complexity
- Identify and communicate any limitations
Planning – site specific information the fire service will gather (2)

- Number and location of firefighting lifts
- Evacuation protocols (e.g. phased?)
- Fixed installations, including location, status & controls
- ‘Bridgehead’ locations
- Communications (FRS & provided)
- Building construction – materials and design (e.g. presence of voids)
- Any significant fireloading and/or ‘housekeeping’ issues!
The fire service response to high rise fires – how we make decisions

- Information about the task or event
- Information about Resources
- Information about Risk and Benefit

GATHERING AND THINKING

OBJECTIVES

PLAN

COMMUNICATING

CONTROLLING

OUTCOME

EVALUATING

GATHERING AND THINKING

Information on progress

Information on progress
The fire service response to high rise fires – “on arrival” tactics and actions

- Attend to main entrance or RVP
- Appliance siting (access for aerial appliances and falling debris)
- Initial liaison with “responsible person” to determine fire location, life risk and hazards
- Building systems/information – status & location of AFD, building plates/information boxes or CCTV
- Confirm whether evacuation in progress and strategy in use
- Establish a safety cordon
What can an occupier do to support LFB in the early stage of an incident?

- Responsible person available to meet (and direct?) LFB on arrival
- Is there a need to create space for appliance access and siting?
- Life risk is key – has roll-call been completed and is everyone accounted for? Has evacuation strategy been implemented?
- Probable location of any persons believed to be missing?
- Any vulnerabilities to be considered – e.g. physical disability?
- Location and size of fire?
- Location and nature of any hazards?
- Hand-over relevant information – building handbook or plans
- Advise on status and location of building systems, such as risers, AFD, sprinklers and CCTV?
- Advise on status, locations and reach of relevant building services, such as fire lifts and internal communications
The fire service response to high rise fires – securing water supplies and firefighting lift

- Twinned hose into the rising main
- Confirm status of fixed installations
- Layout – need to know distances from outlet to fire and compartment size, layout and fireloading
- Take control of sprinkler stop valve
- Take control of firefighting lift(s)
- Confirm which floors served by lifts
- Firefighters must exit 2 floors below fire floor
- Lift car will then remain at this floor
The fire service response to high rise fires – establishing a ‘bridgehead’

- Established in safe air in a lobby (not a corridor)
- Two floors below where fire is or reported to be
- Position needs to take into account risk of smoke spread once doors opened
- Fire sector commander will take control of forward operations (IC stays on ground)
- Potential for congestion – may establish a ‘staging area’ below bridgehead
- May be re-located as last resort if compromised by fire/smoke
The fire service response to high rise fires – fighting the fire and carrying out any rescues

- Information about life risk will be recorded and used to determine priority of actions
- Crews entering the fire floor will take charged hose lines
- Building will be searched from point of greatest danger
- Crews may be committed above the fire without breathing apparatus (provided it is safe to do so)
- Other services e.g. police may assist with evacuation/rescue in areas not affected by fire or smoke
The fire service response to high rise fires – evacuation and fire survival guidance calls

- Evacuation will normally follow occupiers plan (as part of their FRA)
- Advice from LFB Control will normally be for occupants to stay put – unless directly affected by fire or smoke
- LFB Control will deal with any ‘fire survival calls’ using these 4 principles
  - *Escape* - Is there an alternative safe route out?
  - *Assess* - what situation is the caller faced with
  - *Protect* - by offering advice and reassurance
  - *Rescue* - maintain contact to assist rescue
- High rise fires can generate high numbers of calls

Vulnerability of occupants can have a significant impact
Media involvement

• Significant number may be on scene shortly after incident starts
• Potential for UK and World-wide interest
• Joint approach with Metropolitan Police and London Ambulance
• Pressure to speculate – e.g. on the cause of the incident
• Questions fed by rumour!
• Get your facts straight before you speak!
Media involvement

There are three phases to media interest

1. ‘Mayhem’ – “You are not coping!”

2. ‘Mastermind’ – “An expert has said….!”

3. ‘Manhunt’
   • “Who’s fault was this?”
   • “Have the emergency services done everything possible to save lives?”
   • Was the owner/occupier to blame or negligent?
After the fire

- Fire safety and structural integrity will be assessed before LFB hands back building to occupier (may involve external agencies, such as local authority)
- All fixed installations should be reinstated as far as practicable
- LFB will undertake damage control during incident – but there may be more to be done!
- Incident will be de-briefed – any “lessons learned” should inform future practises and procedures
- Review information held on premises (content and format)
- Need to make contemporaneous note of actions/decisions (to support any investigation and/or future enquiry)
- Any contraventions identified will be subject to appropriate enforcement action
- If premises is residential, further community safety intervention may be needed
- If there are any anti-social behaviour or vandalism issues, these should be reported to the police
Summary of key issues

- Fires in high rise buildings can pose particular challenges and hazards to the fire service
- Planning and information-sharing in advance of any incident is very important
- Building occupiers need to engage with the fire service locally and, where appropriate, facilitate familiarisation visits and training exercises
- Building occupiers can play a vital role in informing and supporting LFB operations at any fire
- High rise fires are likely to attract media interest
- There are a range of actions and considerations to be addressed after a fire i.e. the ‘recovery phase’
Any questions?

[Only easy ones please!]