

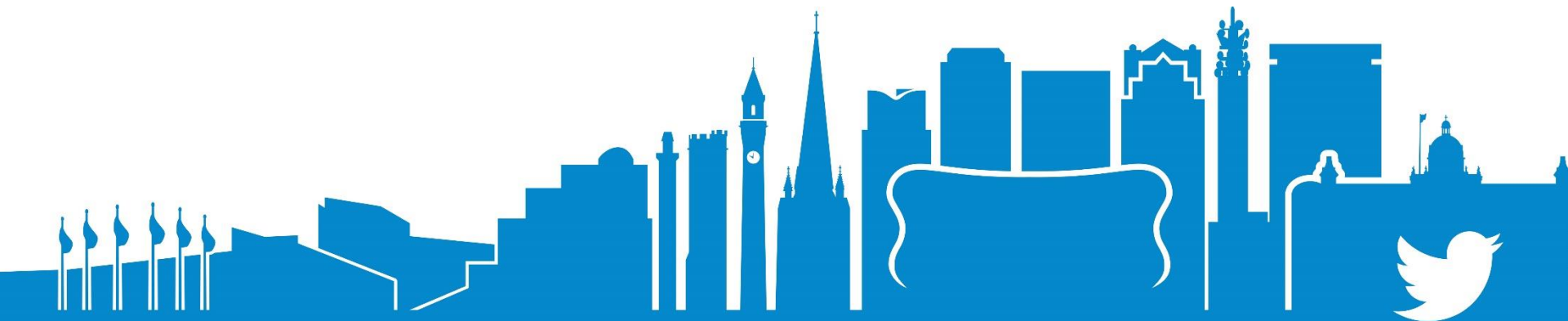
Workshop 1B:

Reviewing fire compliance procedures

Speaker: Mark Astbury (Ridge and Partners)

Chaired by: Karen Cannon (Walsall HG)

Room: **York Room**



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PROPERTY & CONSTRUCTION CONSULTANTS

Session 1B - Reviewing fire compliance procedures

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&

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Ridge & Partners LLP

23 January 2018

NHMF 2017

Where are we now?

Post Grenfell/DCLG

Wider Scope Assessments

LPS Blocks/Other Issues

Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

- NHMF 2017 - this time last year
- Where are we now?
- Post Grenfell DCLG driven actions
- DCLG Information Note December 2017
- Wider Scope Assessments
- Large Panel System blocks
- Other Issues
- Building Regulations Review – key points
- Retro fit of sprinklers – considerations
- Questions

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Where are we now?

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

- What are typical hazards and how often do they occur?
- How to choose a competent fire risk assessor
- How to choose the right format for your assessments
- The review process
- Lakanal House – lessons learnt
- Balconies and fire risk assessment

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Where are we
now?

Post Grenfell/DCLG

Wider Scope
Assessments

LPS Blocks/Other
Issues

Review of the
Building Regs &
Fire Safety

Sprinkler Retrofit
Considerations

- Post Grenfell - an emphasis on fire and compliance generally
- Refocus on asset management of stock
- Review of scheme designs with cladding
- Review of FRA's suitability and type
- Reviews of non high rise stock
- LPS blocks
- Initial findings of Dame Judith Hackitt's interim report of Building Regulations

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Where are we now?

Post Grenfell/DCLG

Wider Scope Assessments

LPS Blocks/Other Issues

Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

- DCLG immediate focus on undertaking inspections of high rise (6 storeys/18m and above)
- Determination of cladding types used
- ACM sampling
- Combustibility testing by BRE
- Short term measures
- Remediation - approx. 35% of blocks with ACM have been stripped

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Sprinkler Retrofit
Considerations

- Issued 11 December 2017
- Screening tests BS EN 13501-1:2007
- ACM with limited combustibility filler (cat1) can be used safely depending on fitting
- ACM with retardant filler (cat2)
 - Could be used with non combustible insulation depending on type
 - Presents notable fire hazard with rigid polymeric based foam
- ACM with unmodified polyethylene filler (cat3) with any insulation presents significant hazard

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

- Use of FRAs, Building Surveyors and Structural Engineers to assess:
 - Validate address list and associated blocks
 - Desktop review of data e.g. type of FRA, cladding information
 - Validate building height - FFL
 - Review of current FRAs and whether actions addressed
 - On site inspection of all blocks
 - Determine construction type and component parts e.g. insulation materials, fire breaks
 - Structural matters including compartmentation
 - Identification of actions required

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Sprinkler Retrofit
Considerations

- Ronan Point – 1968
- Must withstand blast of 5 psi otherwise banned from having gas supply
- Increased concerns following issue on the Ledbury Estate in Southwark
- Structural engineers review
- Not always easy to identify
- Compartmentation
- Strengthening work – sufficient?
- Records and specification of works completed
- Has the whole block been appropriately considered?



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Sprinkler Retrofit Considerations

- Calls for substantive advice regarding ACM panels
- ACM – building insurer requirements
- Mortgageability – recent refusal for high rise block with no sprinklers
- Supply chain pressure for cladding replacement systems and sprinkler systems etc.
- Significant costs and funding
- Refocus on asset management and compliance procedures

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Where are we now?

Post Grenfell/DCLG

Wider Scope Assessments

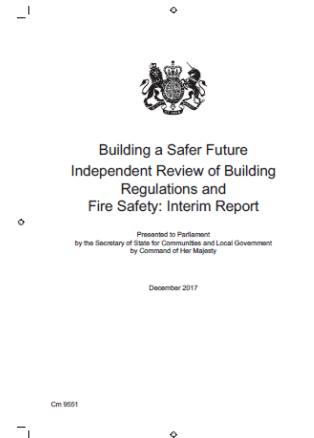
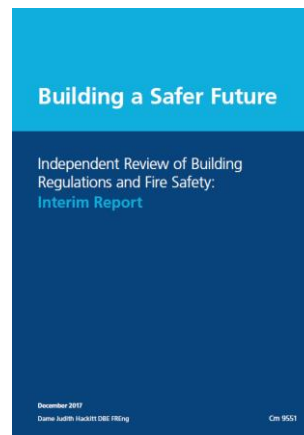
LPS Blocks/Other Issues

Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Building a Safer Future – Independent Review of the Building Regulations and Fire Safety

- Focus on fire safety in high rise residential buildings
- The final report is to be issued in Spring 2018
- The review is future focused – it does not concern the tragic events of Grenfell Tower which are subject to Police scrutiny



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Sprinkler Retrofit
Considerations

■ Key themes

- Current regulations and guidance are too complex and unclear
- Clarity of roles and responsibilities is poor
- The means of assessing competency throughout the system is inadequate
- Compliance, enforcement and sanctions processes are too weak
- How to raise Residents voice and concerns is unclear and inadequate
- Quality Assurance methods are unclear

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Review of the
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Sprinkler Retrofit
Considerations

Regulation and guidance – the issues

- Confusion over what constitutes “the regulations”
- The format of the Approved Documents
- Multiple specifications for the same building elements are required

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Considerations

Regulation and guidance – direction of travel

- To define a revised regulatory system which will be “simpler, clearer to all involved and deliver better overall outcomes”
- A risk-based and proportionate system
- A streamlined, holistic version of the Building Regulations!
- Interim measure – presentational changes to the format

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Where are we now?

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Roles and responsibilities – the issues

- There is a general lack of clarity throughout the system
- There is no requirement for a named Dutyholder responsible for compliance with the Building Regulations
- Who are the “Responsible Persons?”
- The “minimum level” of compliance approach

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Review of the
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Sprinkler Retrofit
Considerations

Roles and responsibilities – direction of travel

- Primary responsibility to rest with those who commission the work and those who design and build the project
- A clear chain of command
- Value engineering and innovation must demonstrate compliance
- Responsibility within the handover process for the lifecycle of the building
- Responsibilities within blocks of flats must be clarified

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Review of the
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Considerations

Competency – the issues

- The means of assessing and ensuring appropriate levels of competence throughout the system are unclear and inadequate
- Fire risk assessor qualifications for high rise and complex buildings?

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Considerations

Competency – direction of travel

- Those working on complex and high-risk buildings need to have and evidence the appropriate qualifications and experience

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Review of the
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Sprinkler Retrofit
Considerations

Process, compliance and enforcement – the issues

- Design & Build Contracts
- Building Regulations – do modern standards apply?
- Key control stages of the process are not being followed

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Process, compliance and enforcement – direction of travel

- The “Golden Thread” for high rise and complex buildings
- Early consultation with the fire brigade
- Complex/high rise FRAs to be subject to regular review
- Reliance on compartmentation to be reviewed
- Enforcement to be reviewed

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Where are we now?

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Addressing residents concerns – the issues

- Residents involvement is inadequate
- Residents often find it difficult to voice their concerns
- There is no effective means to ensure some representatives meet their responsibilities to other residents

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Post Grenfell/DCLG

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Review of the
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Sprinkler Retrofit
Considerations

Addressing residents concerns – direction of travel

- Residents need to be reassured that an effective system is in place
- A clear system for addressing residents concerns needs to be available
- Fire safety information etc. to be shared with residents

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Where are we now?

Post Grenfell/DCLG

Wider Scope Assessments

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Quality assurance and products – the issues

- DCLGs Building Safety Programme identified 200 high rise residential buildings with unacceptable ACM cladding
- Individual elements being used as components not being tested as systems
- Test conditions do not reflect real life conditions

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Considerations

Quality assurance and products – direction of travel

- Product testing data to be simplified
- A call to reinstate the Clerk of Works or similar to act as the primary gatekeeper

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Review of the Building Regs & Fire Safety

Sprinkler Retrofit Considerations

Sprinkler Retrofit Considerations

- A significant proportion of stakeholders involved in the production of the Interim Review of the Building Regulations are in favour of sprinkler installation in new build, smaller number for retrofit
- The review acknowledges the practical challenges of sprinkler installation to existing buildings
- Should not be seen as a “panacea”
- However, fire safety professionals are to not rely solely upon compartmentation and consider other options

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Sprinkler Retrofit Considerations

Sprinkler Retrofit Considerations

- While the contemporary requirements of the Building Regulations may form a reference point in evaluating the fire performance of and safety for occupants in existing buildings, determining appropriate action in such buildings is usually driven by risk and what is reasonably practical
- The fire risk assessment is a key document when considering upgrading buildings to include sprinklers
- Many buildings are identified as having shortcomings to fire protection. These should be taken in context of the cost of retrofitting sprinklers

Indicative Cost (installation)

Primary School - 125/150 pupils	Approx. £65,000 for sprinklers + £40,000 for additional project costs	Approx. £10-15/m ²
Typical 3/4 bedroom detached house	£3000-£3500 if mains pressure adequate (add £750 if not) - reduced by 10-15% for more houses on a development	1-2% of build costs
High rise or larger public building with complex layout	1.5-1.9% of new build costs	£18-25/m ² of the building

Source: Chief Fire Officers Association: Business Case for Sprinklers

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Sprinkler Retrofit Considerations

Design Considerations

- Installation Guarantee (Pre-tender design cost)
- Water Pressure
 - Location of the tanks
 - Gravity fed/requirement for booster pumps
 - Utilisation of the existing building water tanks
- Installation within the flats
 - Clashing with existing services
 - Concealed within the ceiling void?
 - Consequential upgrades, e.g. electrical

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THANK YOU

Any Questions?

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