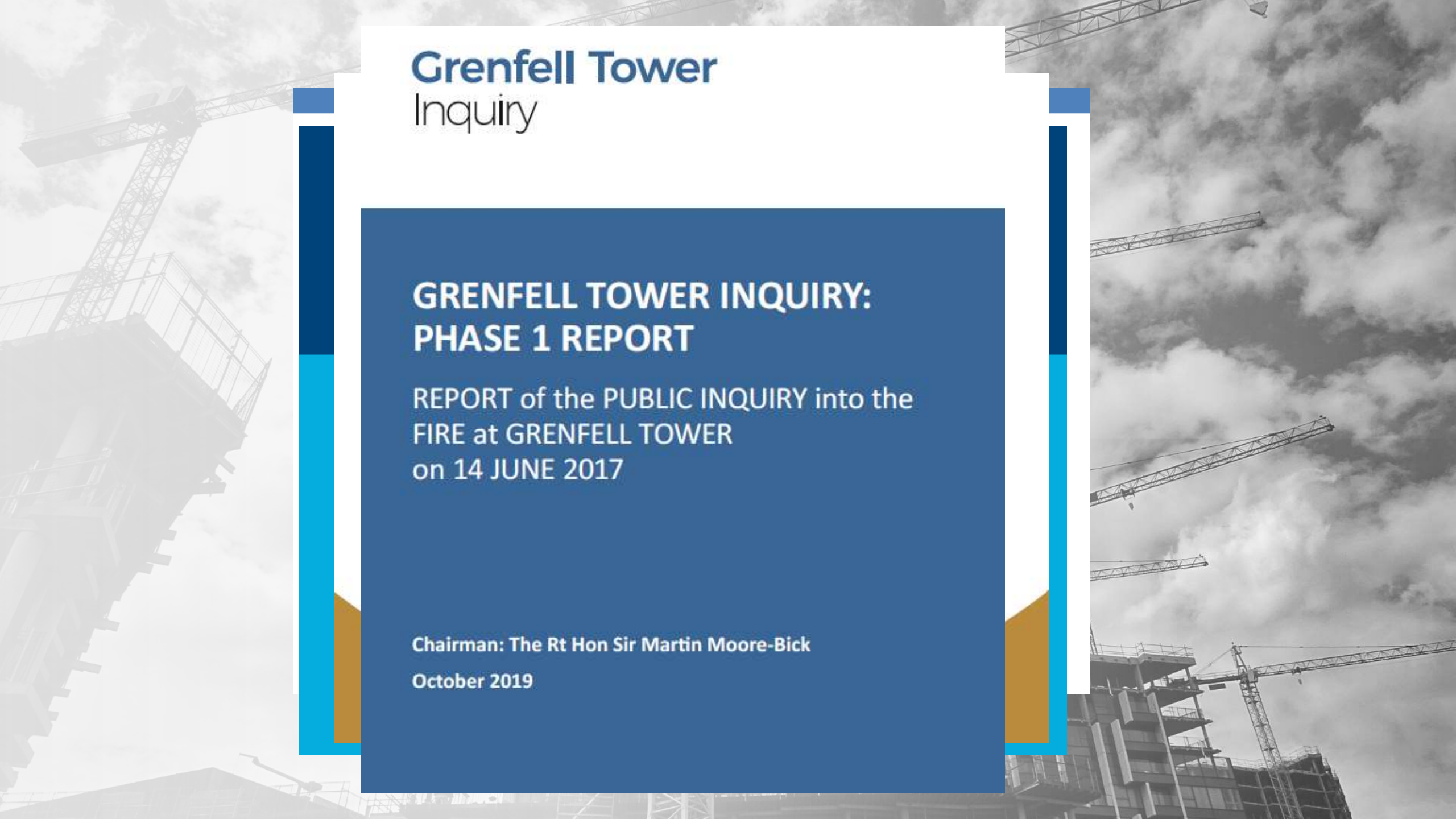
COGNITIVE DISSONANCE



Grenfell Tower
Inquiry

GRENFELL TOWER INQUIRY: PHASE 1 REPORT

REPORT of the PUBLIC INQUIRY into the
FIRE at GRENFELL TOWER
on 14 JUNE 2017

Chairman: The Rt Hon Sir Martin Moore-Bick

October 2019

2009

Lakanal House

Shanghai Tower

EIFS France

2010

Whooshin Suites

2011

Dynasty Wanxin Hotel

Tamweel Tower

Roubaix Tower

Tecom Tower

2012

2013

Al Hazeet Tower

Grozny Chechnya

2014

CCTV Tower
Bejing

Lacrosse,
Melbourne

Ajerbaizan Tower

Dubai Torch

2015

Al Nasser Tower

Dubai Torch 2017

Grenfell

SIGNATURES

- **Knowsley Heights – Liverpool – 1991**
- **Garnock Court – Scotland – 1999**
- Parliament paper 2000
- ***“we do not believe that it should take a serious fire in which many people are killed before all reasonable steps are taken towards minimizing the risks……..”***

Aviation Industry

Health Services

"it is acknowledged the majority of unsafe acts were honest errors"

How is learning institutionalised into aviation industry?

How is open culture created?

Roadmap to a Just Culture

Enhancing a Safe Environment – 2004

How can we apply lessons beyond aviation?

INDEPENDENT REVIEW OF BUILDING REGULATIONS AND FIRE SAFETY

A ROADMAP TO SAFER BUILDINGS IN WALES

REPORT CONTENTS

→ CHAPTER 1
- Parameters and principles of a new regulatory framework

→ CHAPTER 2
- Design, construction and refurbishment

→ CHAPTER 3
- Occupation and maintenance

→ CHAPTER 4
- Residents Voice

→ CHAPTER 5
- Competence

→ CHAPTER 6
- Guidance and monitoring to support building safety

→ CHAPTER 7
- Products

→ CHAPTER 8
- Golden thread of building information

→ CHAPTER 9
- Procurement and supply

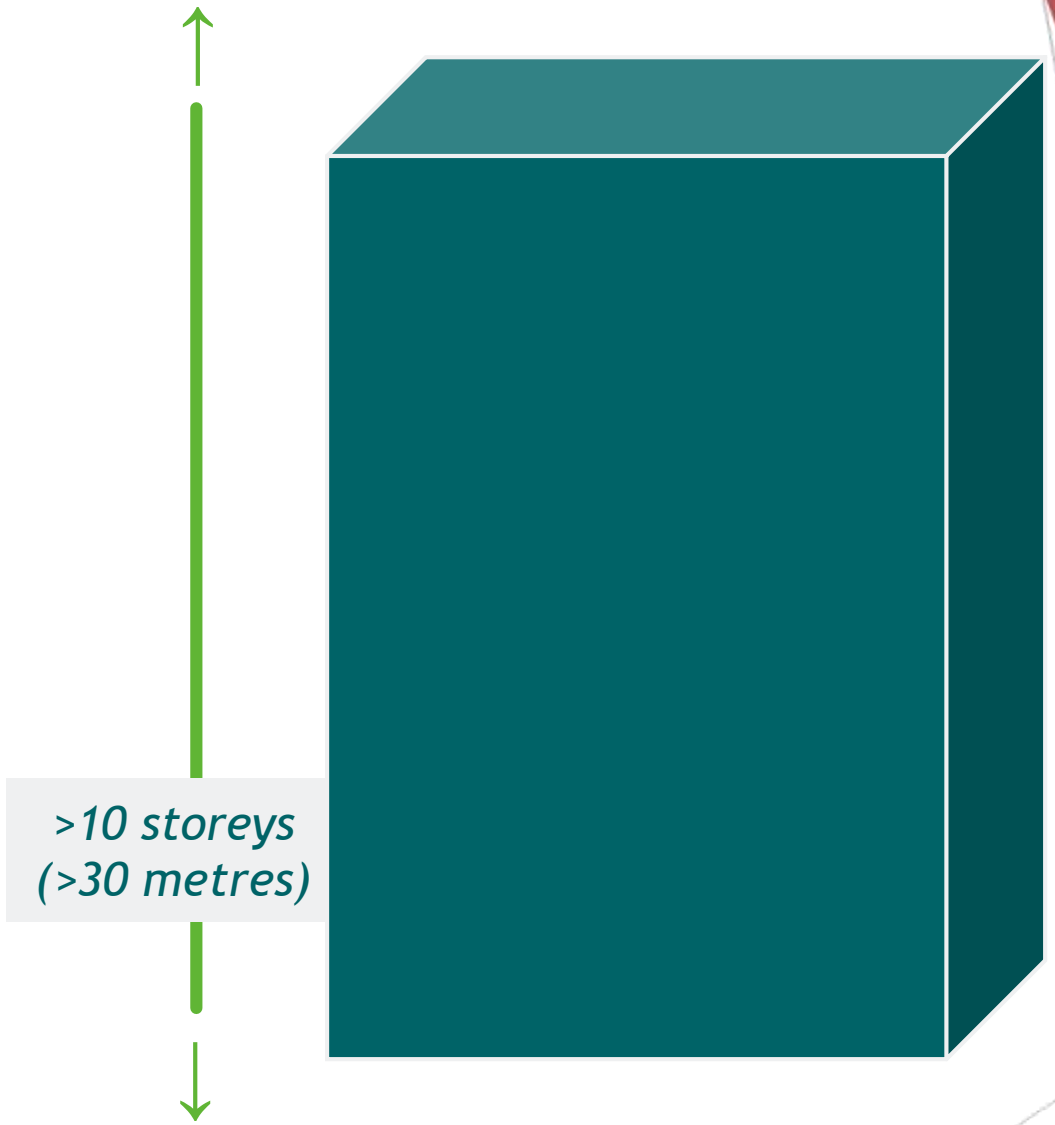
→ CHAPTER 10
- International examples

PARAMETERS AND PRINCIPLES OF NEW REGULATORY FRAMEWORK

Scope of Framework

Regulatory Framework for High Risk Residential Buildings (HRRB's) that exceed 10 storeys (30 metres).

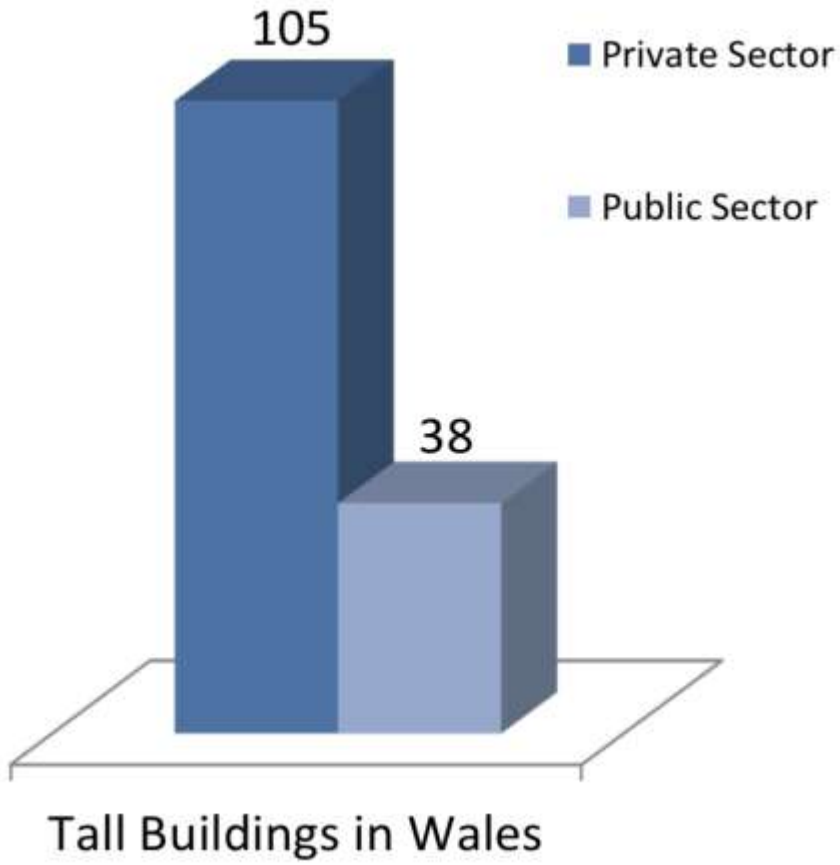
2,000-3,000 in the UK



Potential Scope of Framework in Wales

High Risk Residential Buildings that exceed 18 metres

- 143 buildings in Wales
- Potential to extend to where vulnerable people sleep
- Potential to extend sprinklers in existing in scope buildings



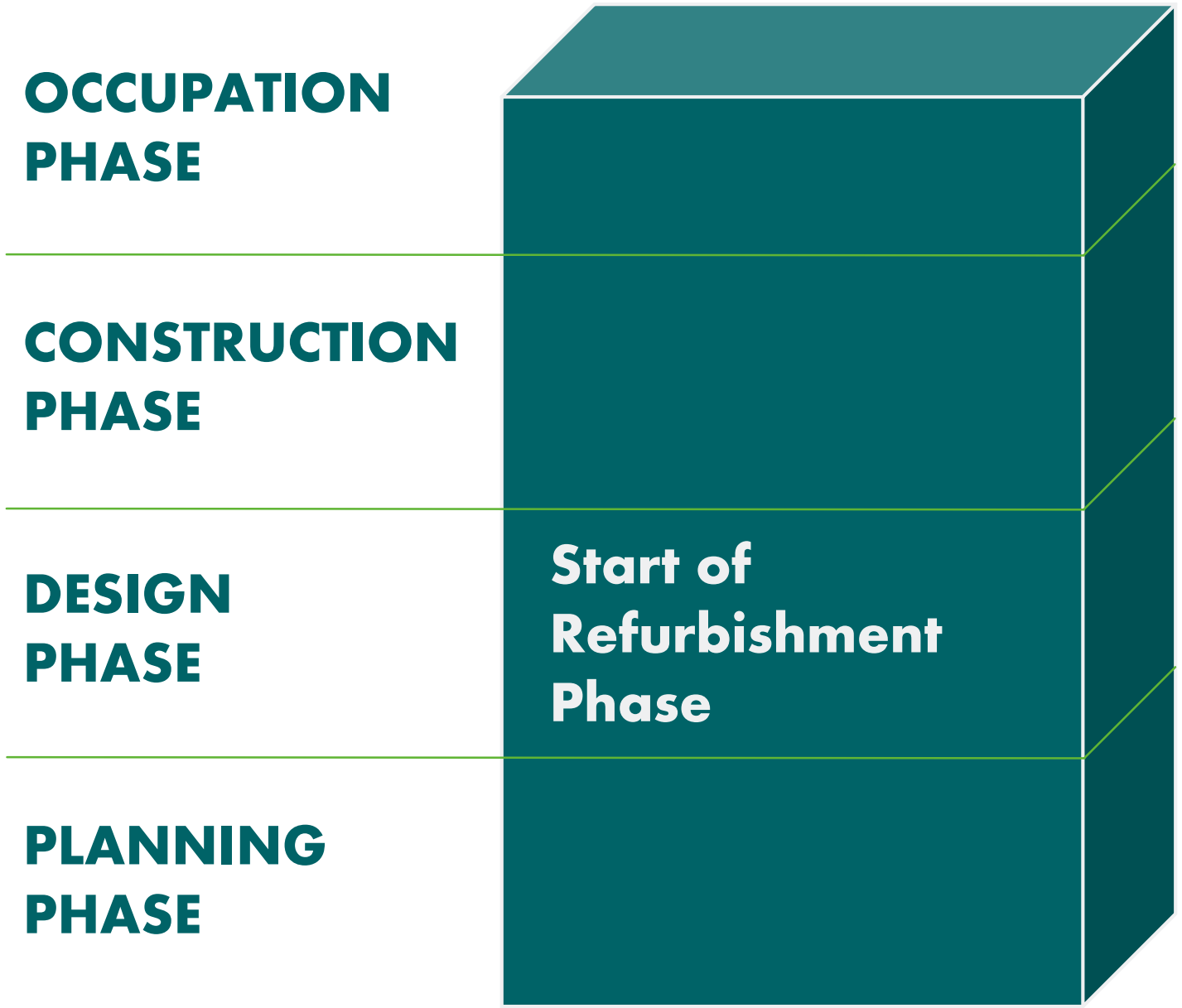
BUILDING SAFETY REGULATOR – KEY RESPONSIBILITIES

- How you manage building risks during the design and construction phase
- How you manage building risks during the occupation and maintenance phase
- How you report safety concerns to the Building Safety Regulator, including ‘Near Miss’

BUILDING SAFETY REGULATOR

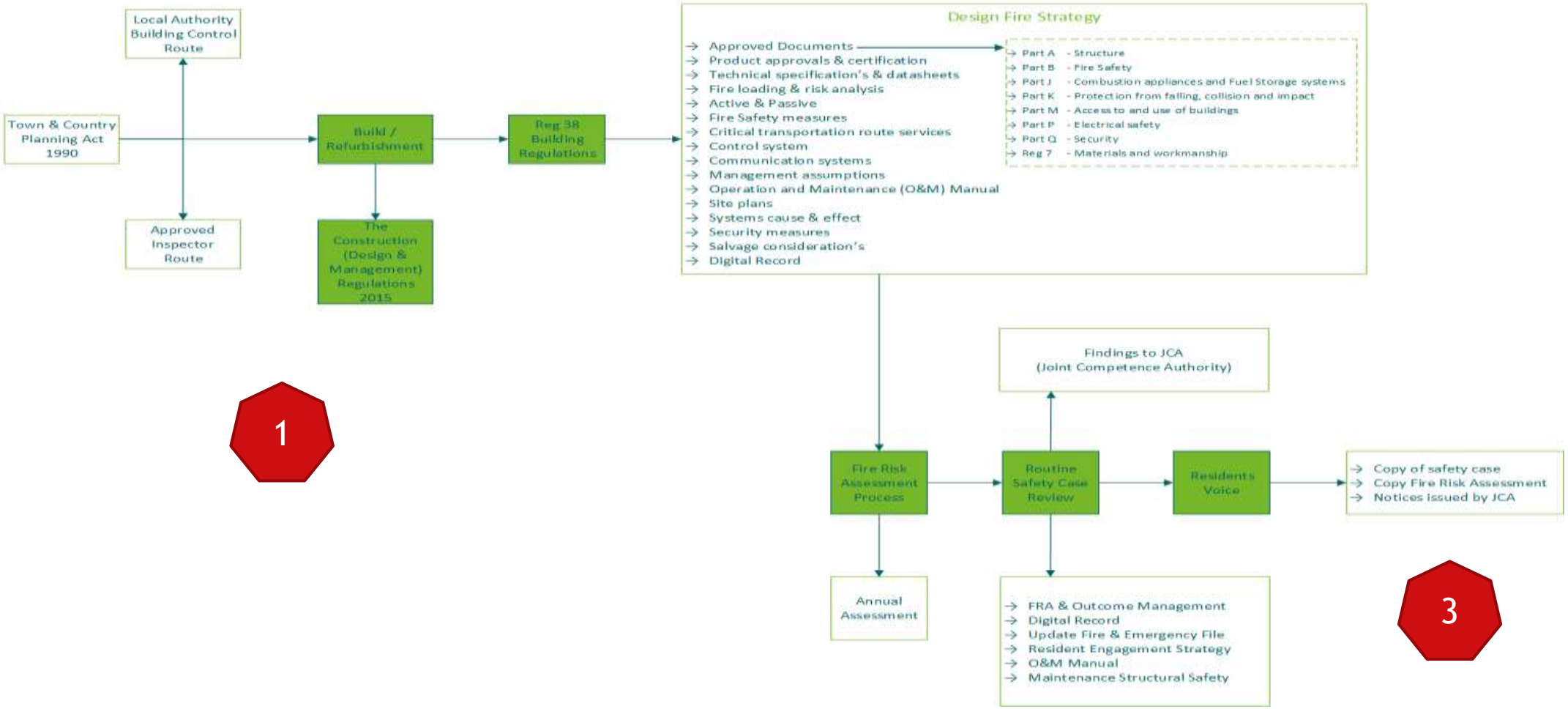
will be empowered to;

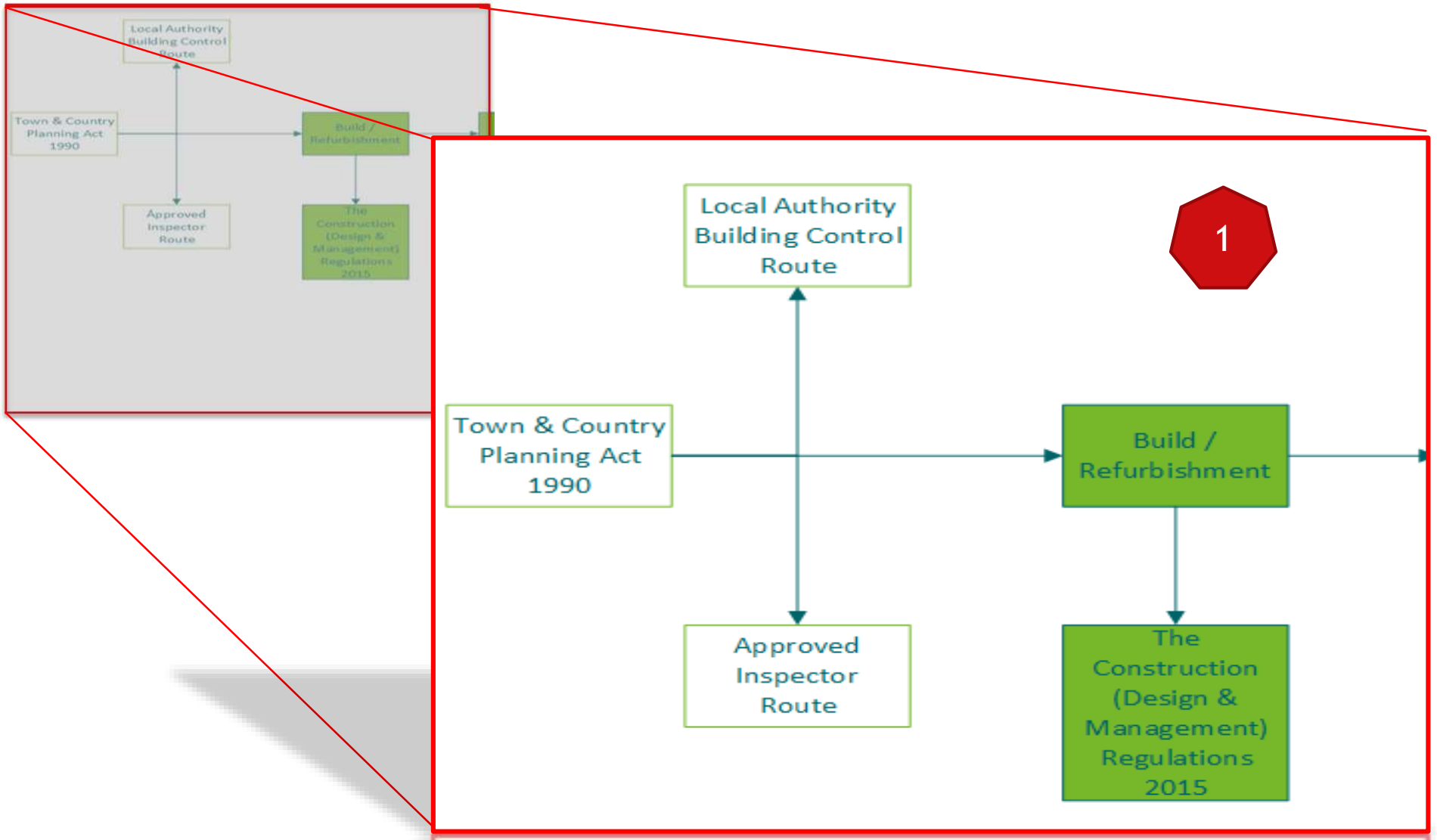
1. Serve building improvement notice
2. Deal with immediate risk
3. Inspect buildings to ensure information given to them (Safety Case) is accurate and to ensure Duty Holder is carrying out their role effectively
4. Meet with residents where necessary



Gateway(s)

Building Life-Cycle


Local Authority Building Control Route
Town & Country Planning Act 1990
Build / Refurbishment
Reg 38 Building Regulations
Approved Inspector Route
The Construction (Design & Management) Regulations 2015
Design Fire Strategy
Approved Documents
Product approvals & certification
Technical specification's & datasheets
Fire loading & risk analysis
Active & Passive
Fire Safety measures
Critical transportation route services
Control system
Communication systems
Management assumptions
Operation and Maintenance (O&M) Manual
Site plans
Systems cause & effect
Security measures
Salvage consideration's
Digital Record
Part A - Structure
Part B - Fire Safety
Part J - Combustion appliances and Fuel Storage systems
Part K - Protection from falling, collision and impact
Part M - Access to and use of buildings
Part P - Electrical safety
Part Q - Security
Reg 7 - Materials and workmanship
1
Findings to JCA (Joint Competence Authority)
Fire Risk Assessment Process
Routine Safety Case Review
Residents Voice
Copy of safety case
Copy Fire Risk Assessment
Notices issued by JCA
Annual Assessment
FRA & Outcome Management
Digital Record
Update Fire & Emergency File
Resident Engagement Strategy
O&M Manual
Maintenance Structural Safety
3
2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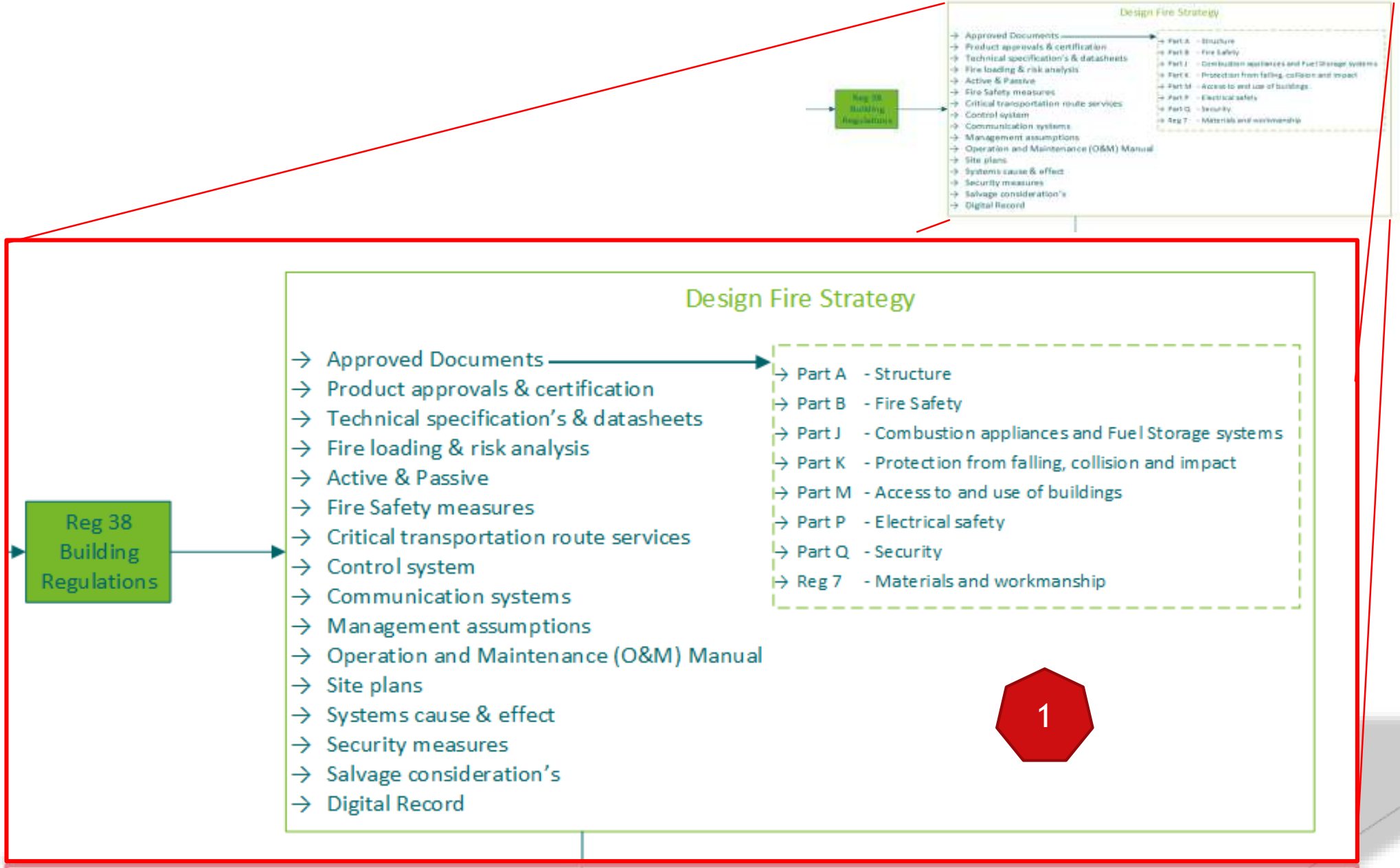
1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Reg 38 Building Regulations
Approved Documents
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Part M - Access to and use of buildings
Part P - Electrical safety
Part Q - Security
Reg 7 - Materials and workmanship
1

DESIGN, CONSTRUCTION AND REFURBISHMENT

FIRE AND EMERGENCY FILE

Appendix D: Outline of the Fire and Emergency File

As set out in Chapter 2, the Fire and Emergency File (FEF) should become a clearer obligation on client, Principal Designer and Principal Contractor to initiate, update, finalise and then pass across to the building owner to help them better understand how to effectively manage their building in a fire/emergency situation.

Fire is an emergency situation that can affect essentially any building and, accordingly, the FEF must always contain:

- a copy of the fire strategy design report for the building which details the strategic measures that are provided in the building to satisfy Parts B1 to B5 of Schedule 1 of the Building Regulations (for which guidance to assist with compliance is provided in Approved Document B). See box below for more details.
- For each of parts B1 to B5 the FEF should then include:
  a. all relevant technical specifications
  b. product datasheets
  c. operation and maintenance manuals
  d. inspection and commissioning records.

A standard Fire and Emergency File would include:

- all assumptions in the design of the fire safety systems such as fire load, any risk assessments or risk analysis;
- all assumptions in the design of the fire safety arrangements regarding the fire safety management of the building including emergency procedures;
- escape routes, escape strategy and muster points;
- details of all passive fire safety measures e.g. compartmentation, cavity barriers, fire doors, duct dampers and fire shutters;
- details of fire detector heads, smoke detectors, alarm call-points, fire safety signage, emergency lighting, dry or wet risers and other firefighting equipment, exterior facilities for fire and rescue services;
- details of all active fire safety measures such as sprinkler systems, smoke control systems;
- information about any elements of the fabric and services that may adversely affect the 'general fire precautions' in a fire (e.g. cladding);
- any other high-risk areas in the building e.g. heating machinery;
- information on the requirements of the fire safety equipment including operational details, manuals, software, routine testing, inspection and maintenance schedules; and
- provisions incorporated into the building to facilitate the evacuation of disabled and other potentially vulnerable people.

In addition there are other emergency situations that can occur which can impact on building safety including structural collapse, explosion, flooding, electrocution, exposure to harmful substances and threat from terrorist/criminal activity. One of the significant risks created by these emergency situations (not just a fire emergency) is the possibility of panic resulting in crowding in escape routes and at exits where people may be put at risk

FIRE AND EMERGENCY FILE

Fire and Emergency File – Milton Court

Address:
Ringland, Newport, NP19 9HF

Telephone:
01633 481687

Site Responsible Person

Telephone
Email

Building Safety Coordinator
Andrew Lloyd
Telephone: 07971 675094
Email: andrew.lloyd@newportcityhomes.com

1. Design Fire Strategy
2. Electricity
3. Gas
4. Water
5. Lifts (LOLER)
6. Asbestos
7. Radon
8. Business Continuity

LESSONS LEARNT

Three common themes of new build/refurbishment schemes;

1. All buildings approved
2. Fire stopping, fire door installation
3. Regulation 38 handover

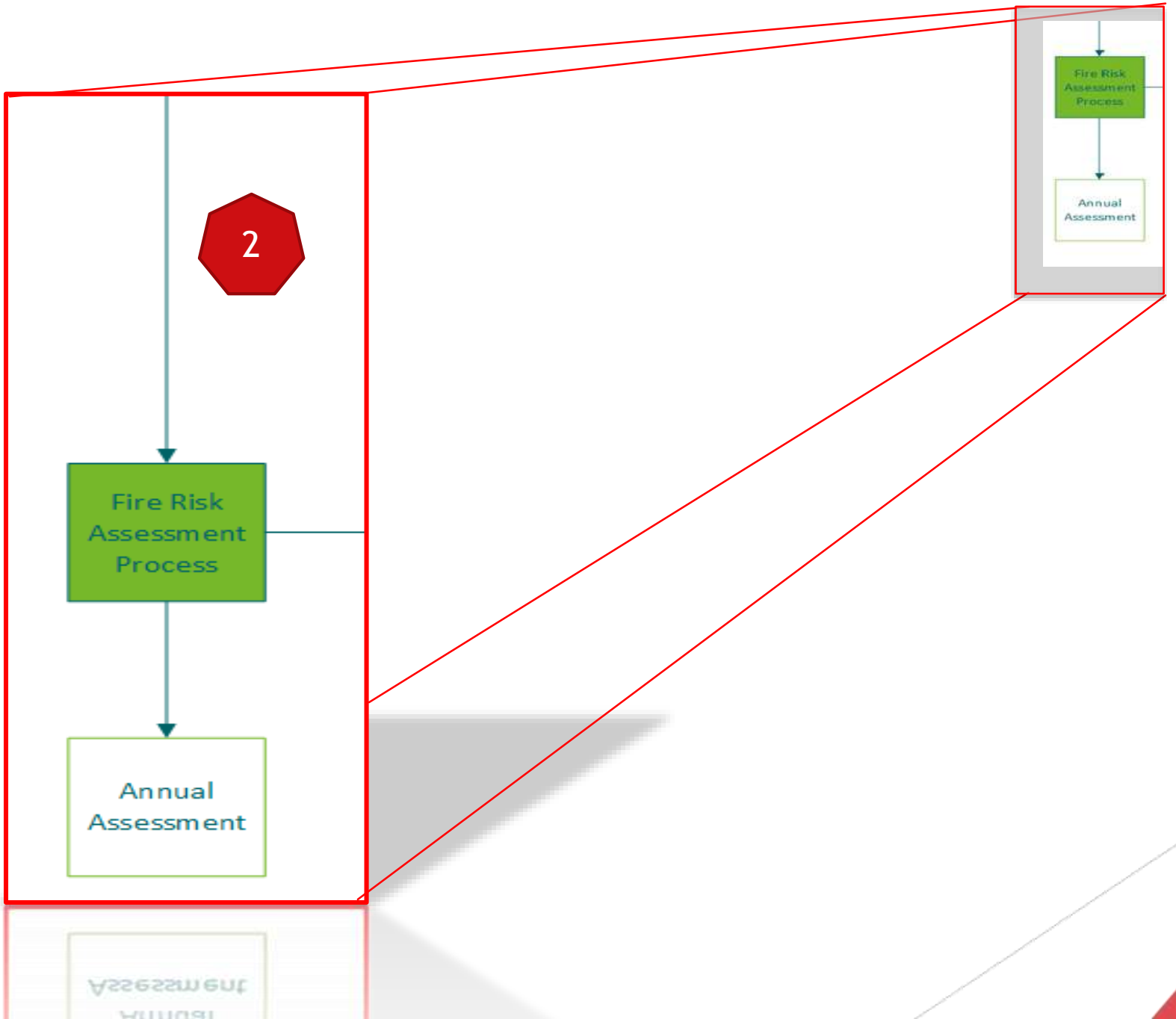
COGNITIVE DISSONANCE

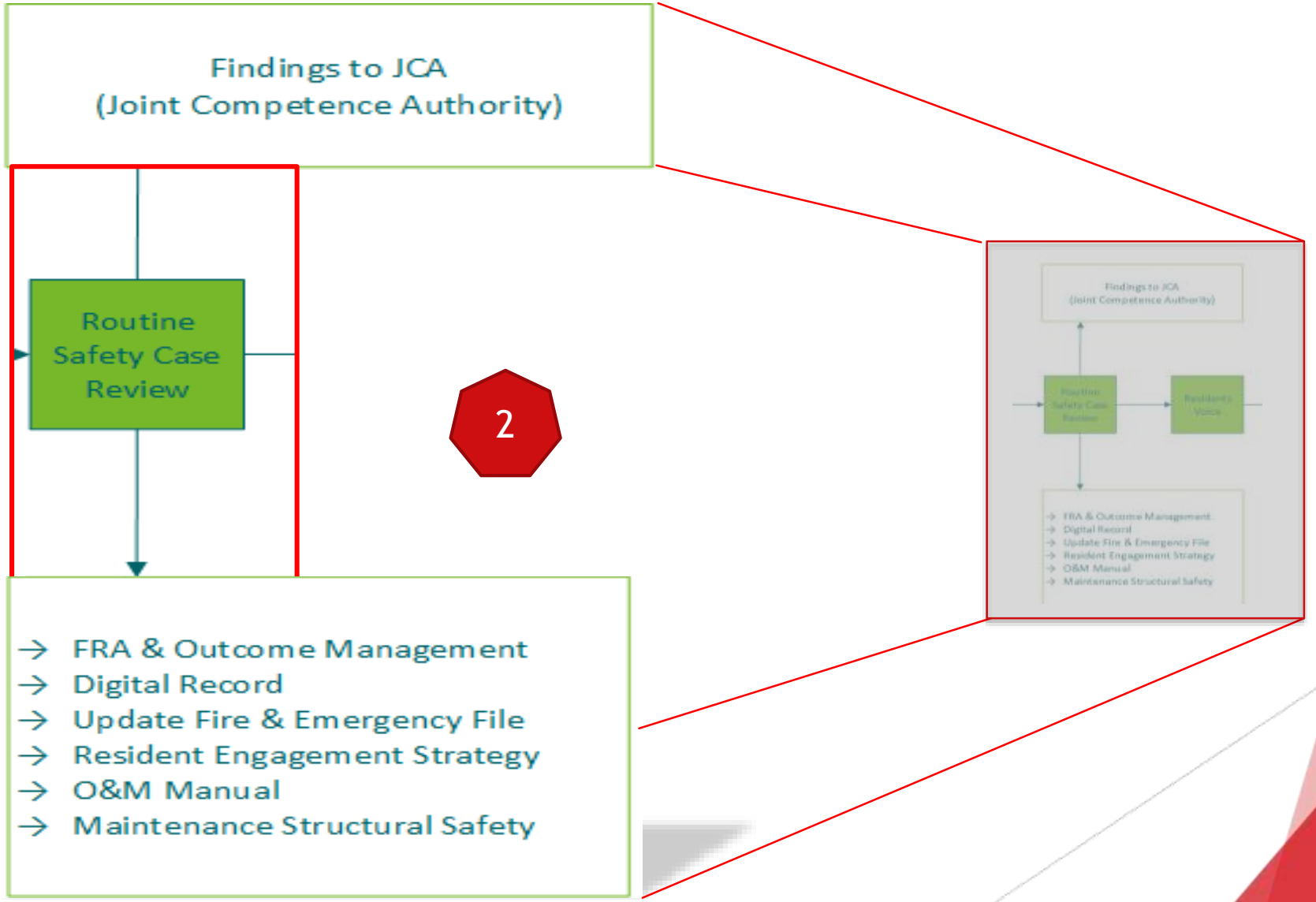
"the state of having inconsistent thoughts, beliefs, or attitudes, **especially as relating to behavioural decisions and attitude change**"

QUICK WINS

- Re-write scope for scheme(s)
- Meet with enforcement bodies
- Upskill key staff – internally/externally
- Engage with contractor's pre-build
- Regulation 38 – Gateway to handover

OCCUPATION AND MAINTENANCE


2
Fire Risk Assessment Process
Annual Assessment


Findings to JCA
(Joint Competence Authority)
Routine
Safety Case
Review
2
→ FRA & Outcome Management
→ Digital Record
→ Update Fire & Emergency File
→ Resident Engagement Strategy
→ O&M Manual
→ Maintenance Structural Safety

GRENFELL INQUIRY

“Quite rightly, questions have been focused on the façade for a lot of this inquiry and in the media itself, but actually I think the bigger story is about how we got to that place of such a catastrophic internal fire spread and my immediate thought was that something had gone wrong inside the building as well”

Commissioner LFB

Norbord

LESSONS LEARNT

- Fire risk assessments and intrusive surveys
- Assessment outcome(s) management
- Cost to implement measures
- Capital spend programmes

CASE STUDIES

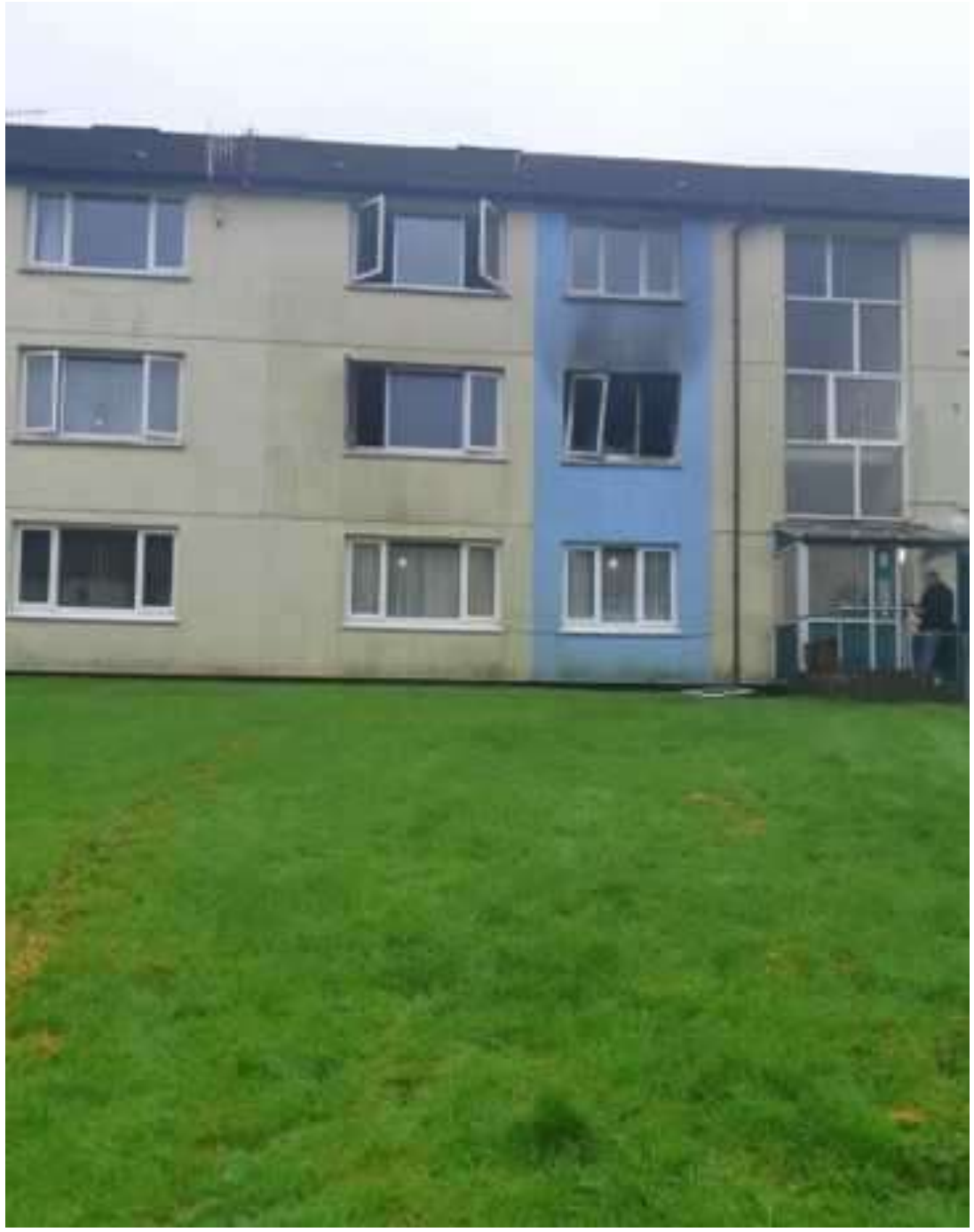
General Needs Flats

- 450 blocks
  - Doors
  - AOV
  - Compartment Lines
  - Asbestos
- £12,000,000

55+ Scheme

- Type 4 Survey
- Passive Costs - £150,000

GRP DOOR



GRP DOOR

Sprinklers

Hostel Fire

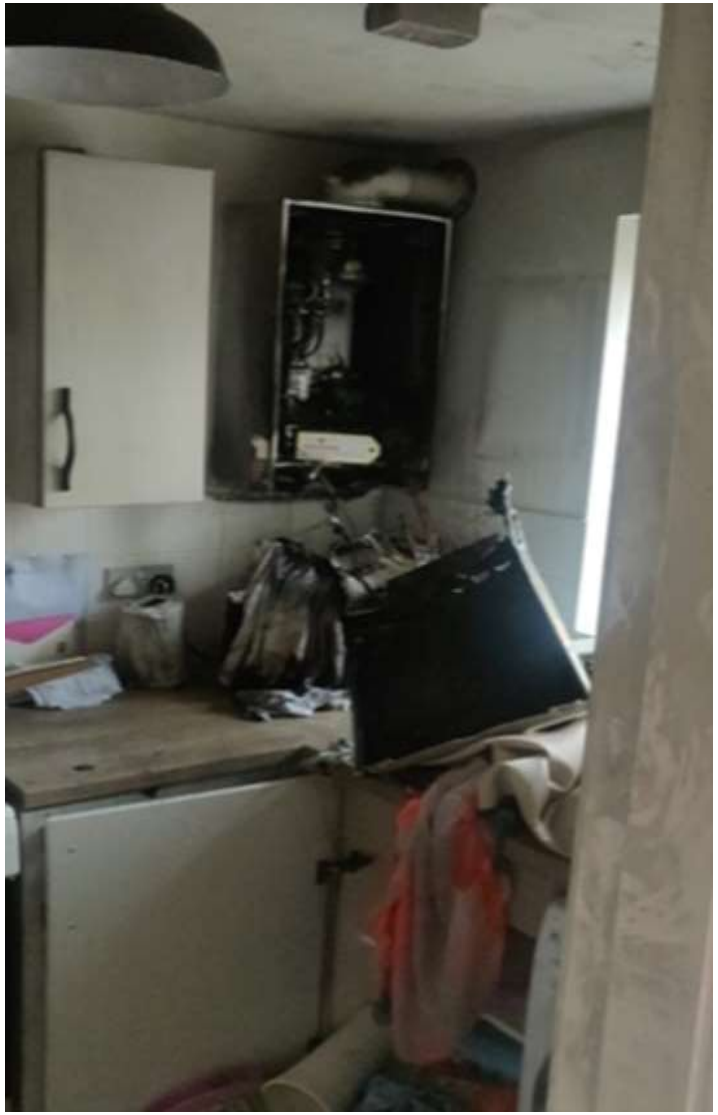
Mobility Scooter

Sprinklers

Laundry Fire

Supported Living

Sprinklers

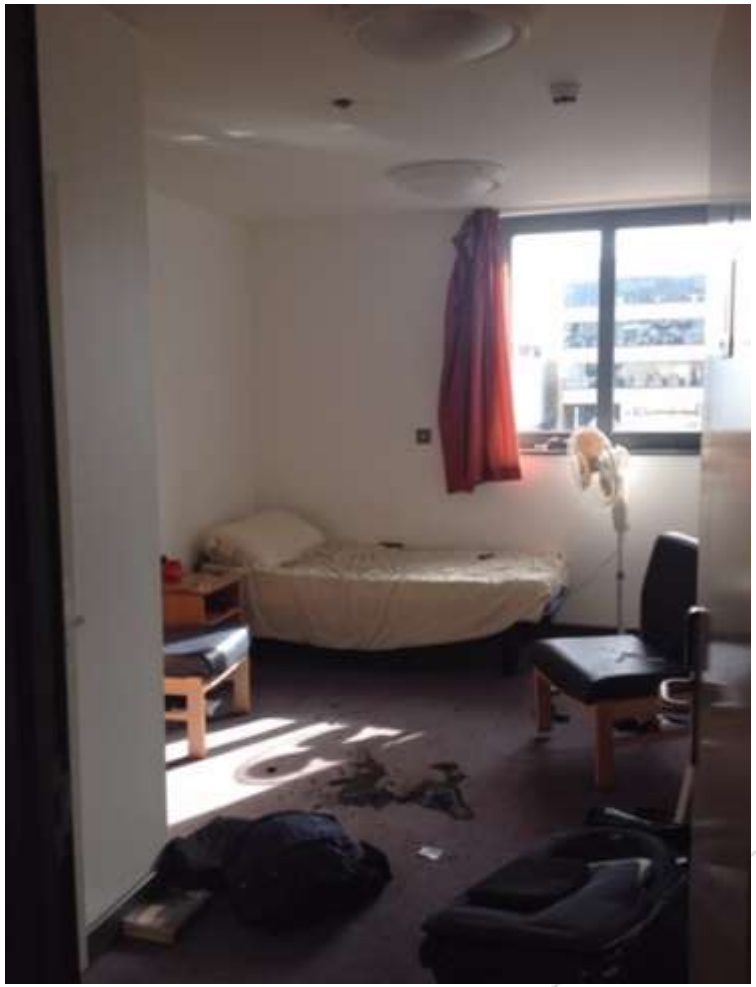


Boiler

General Needs

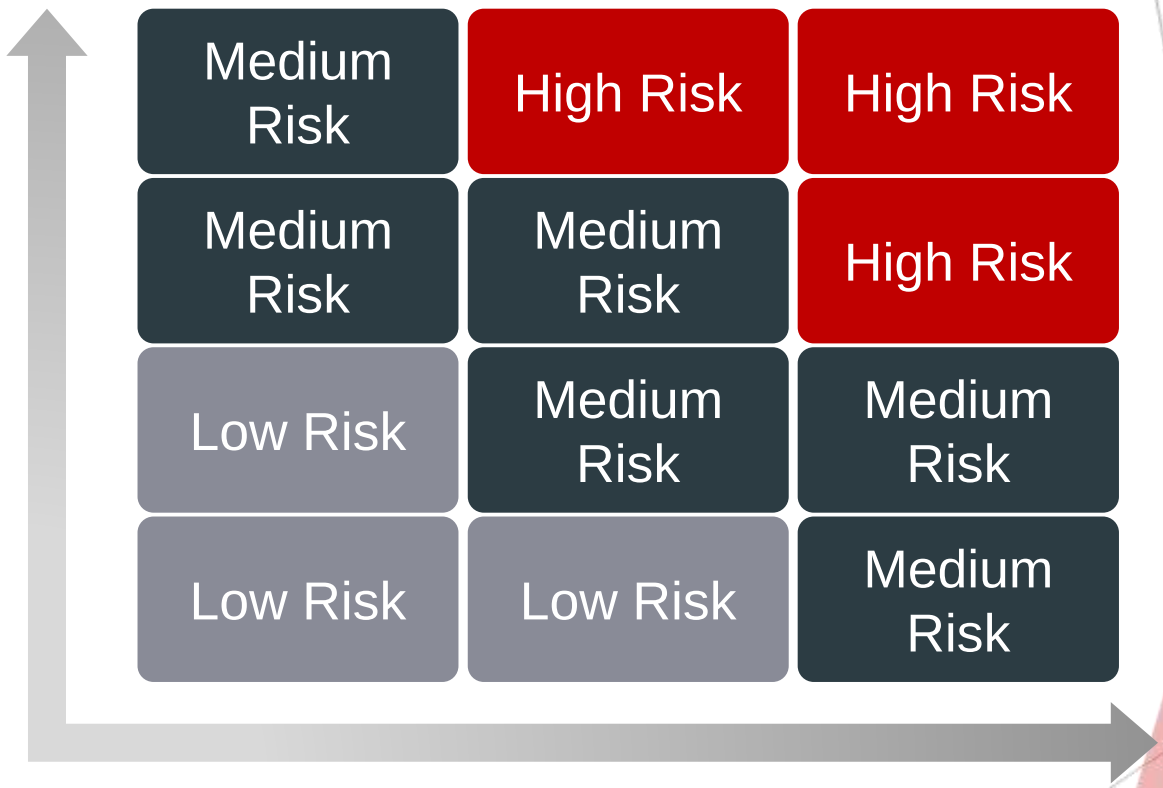
Sprinklers

Hostel



- Height
- Construction
  - Internal
  - External
- Code compliant – MOE
  - Internal flat layout
  - Communal
- Smoke Control
- Warning
- Vulnerability

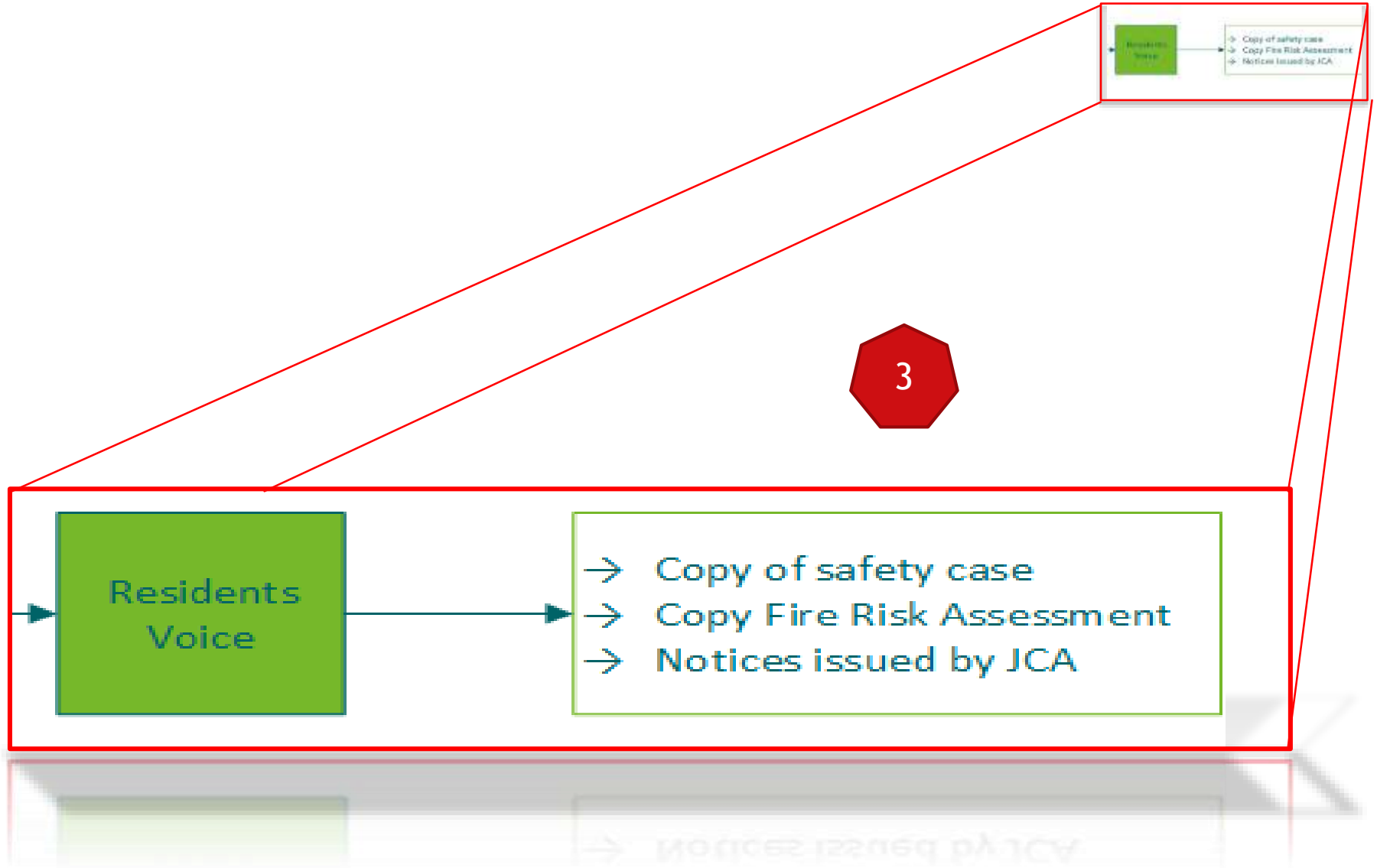
Risk Matrix



QUICK WINS

- Reassess portfolio based on risk matrix
- Upskill staff
  - Type 4 surveys
  - Fire risk assessments
- Strategy for dealing with issues that fall into the hard to answer box
  - Leaseholder doors
  - GRP doors
- Strategic plan for spend programmes
- Capital spend programmes – Collective purchasing power

RESIDENT ENGAGEMENT


3
Residents Voice
Copy of safety case
Copy Fire Risk Assessment
Notices issued by JCA

OCCUPATION AND MAINTENANCE

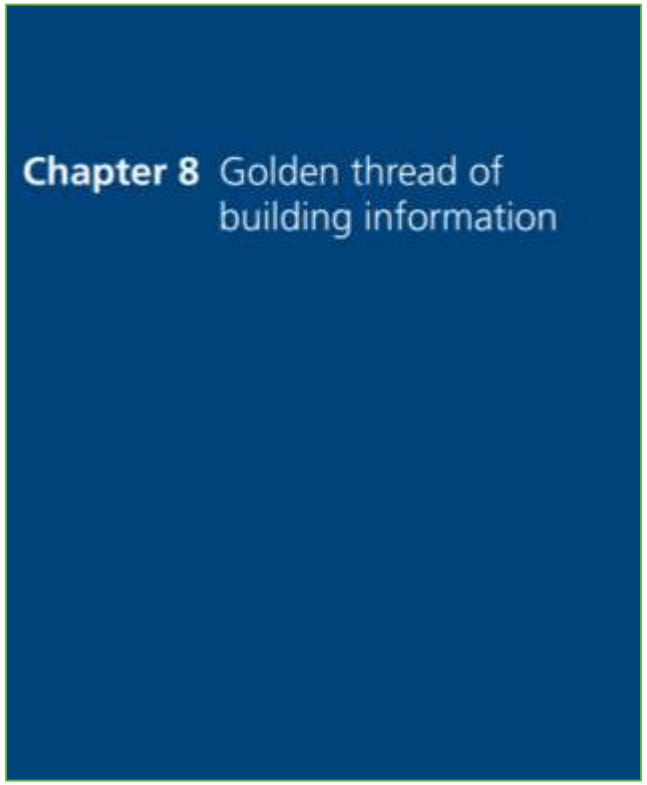
- Duty Holder must nominate '**Building Safety Manager' (Coordinator);**
- Competence for day to day management, including Fire and;
- Will be point of contact for residents and Building Regulator

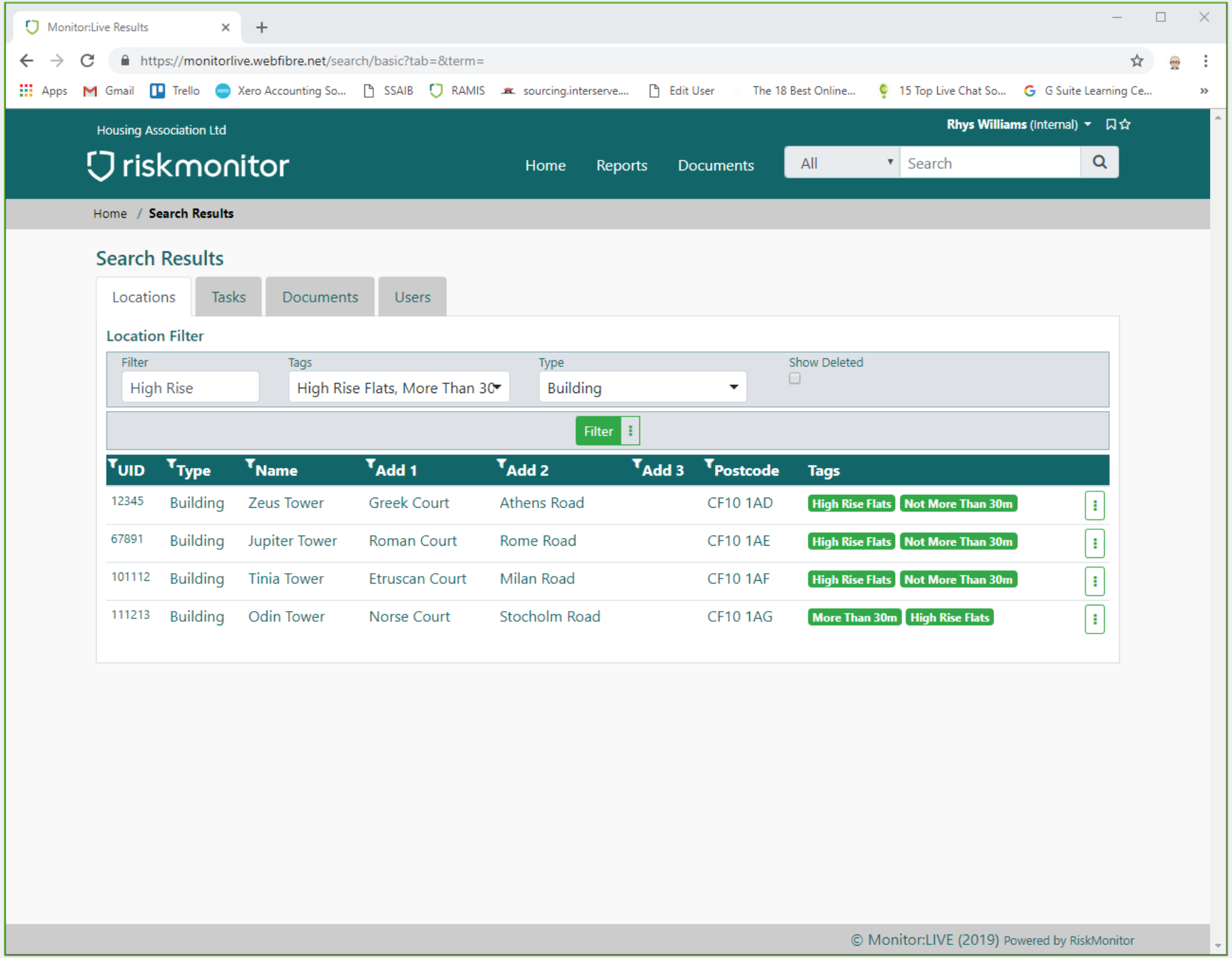
Residential Accommodation Operator
Building Safety Coordinator
Competent Person(s)

Organisational Considerations to Support Review Outcomes

- Duty Holder
- Responsible Person
- Competent Person
- Appointed Person

GOLDEN THREAD OF BUILDING INFORMATION

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Rhys Williams (Internal)
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Filter
High Rise
Tags
High Rise Flats, More Than 30
Type
Building
Show Deleted
Filter
UID
Type
Name
Add 1
Add 2
Add 3
Postcode
Tags
12345 Building Zeus Tower Greek Court Athens Road CF10 1AD High Rise Flats Not More Than 30m
67891 Building Jupiter Tower Roman Court Rome Road CF10 1AE High Rise Flats Not More Than 30m
101112 Building Tinia Tower Etruscan Court Milan Road CF10 1AF High Rise Flats Not More Than 30m
111213 Building Odin Tower Norse Court Stocholm Road CF10 1AG More Than 30m High Rise Flats
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Housing Association Ltd

riskmonitor

Rhys Williams (Internal)

Home | Reports | Documents | All | Search

Home / Housing Association Ltd / Zeus Tower / Please select...

Zeus Tower

12345 - (Building)

About | Structure | Action Plan | Documents | Event Log

Action

Upload

Building Details	
UID	12345
Name	Zeus Tower
Add 1	Greek Court
Add 2	Athens Road
Town	Cardiff
Postcode	CF10 1AD
Tags	High Rise Flats, Not More Than 30m

General Information	
Main Duty Holder	Housing Association Ltd
On Premises Responsible Person (RP)	Gerard Jones
RP email	gerard.jones@housing.com
RP phone	020190109450

Premises Category and Use

Residential

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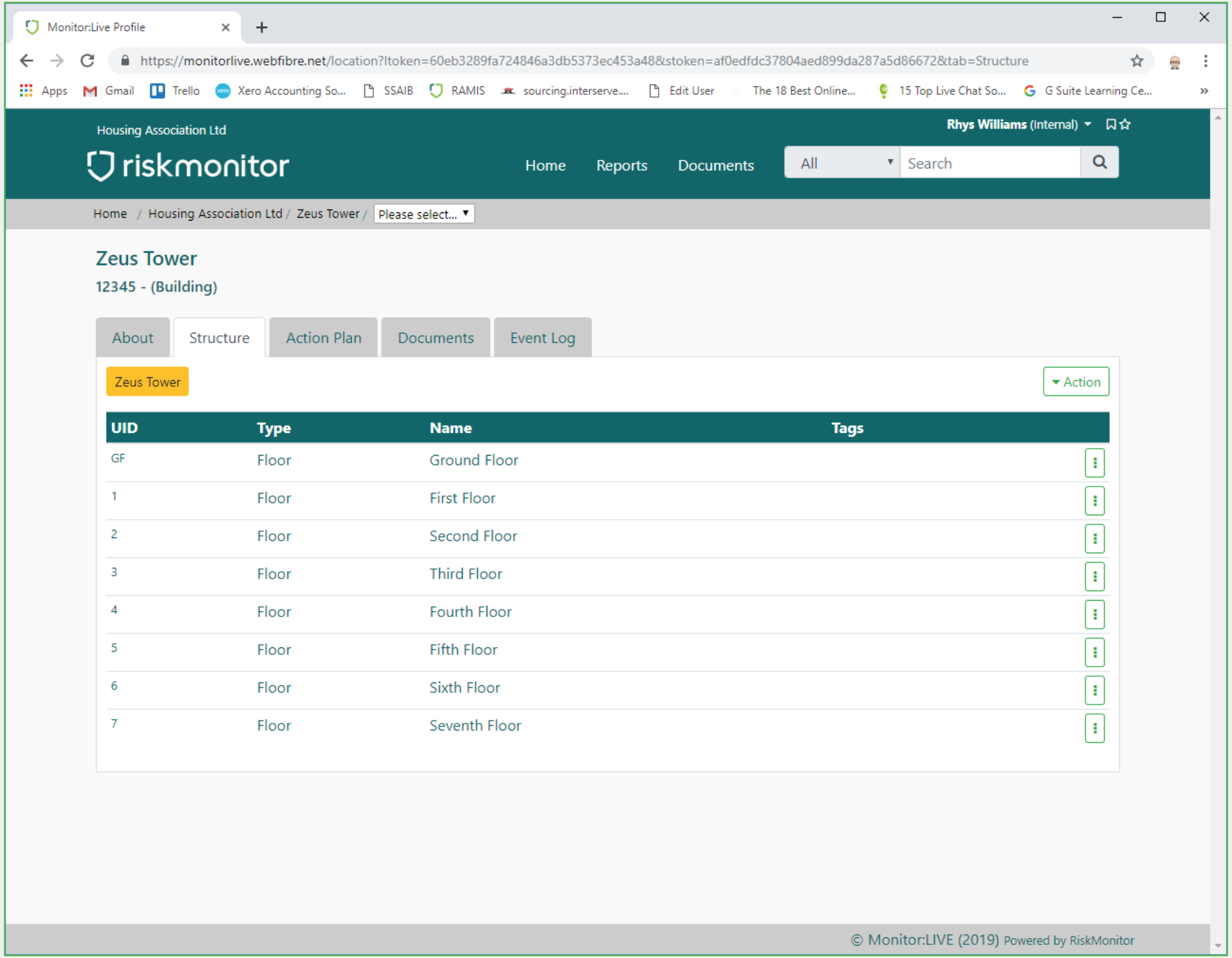
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Action Plan
Documents
Event Log
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Ground Floor
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First Floor
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Third Floor
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Seventh Floor
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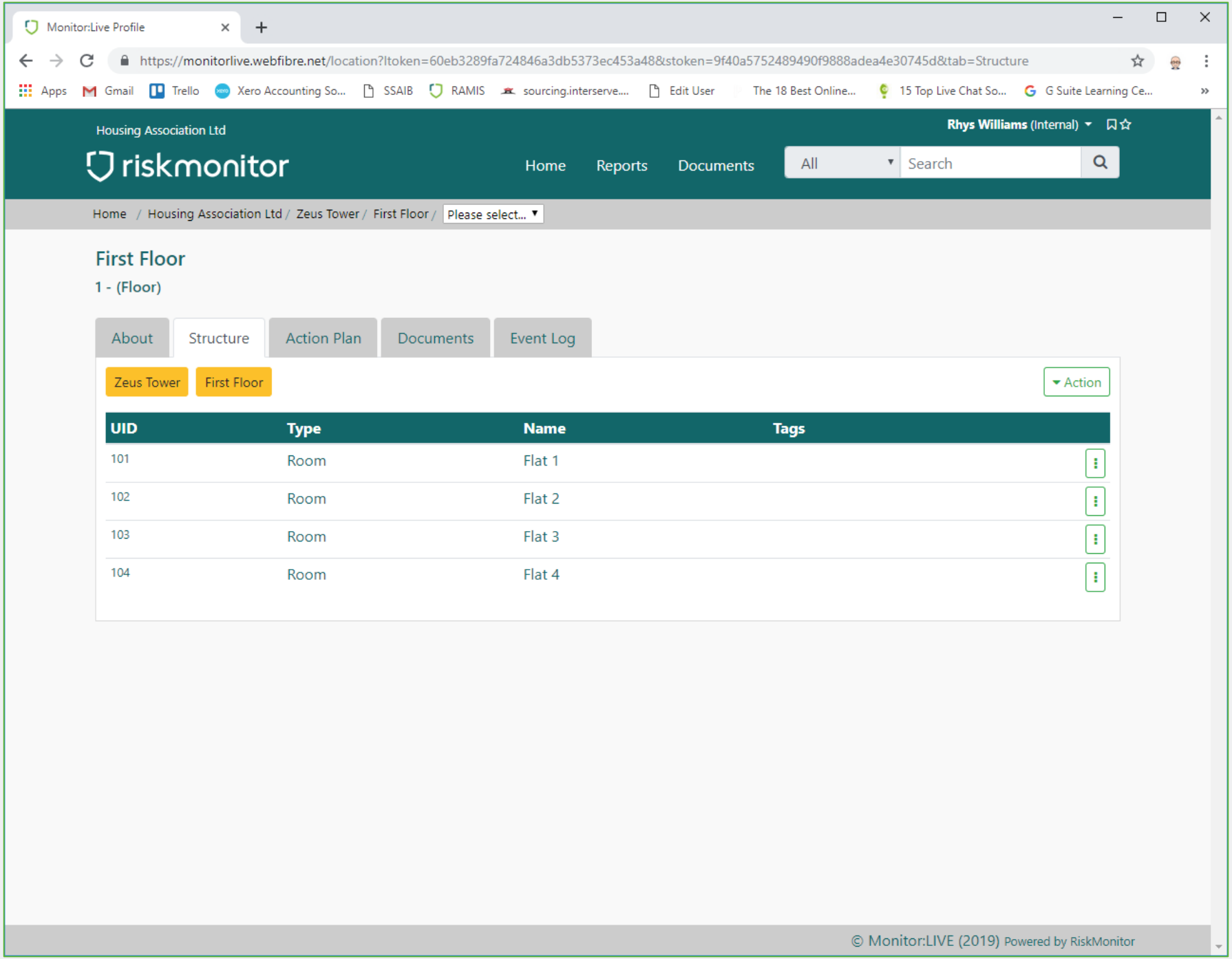
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First Floor
1 - (Floor)
About
Structure
Action Plan
Documents
Event Log
Zeus Tower
First Floor
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103
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Flat 3
104
Room
Flat 4
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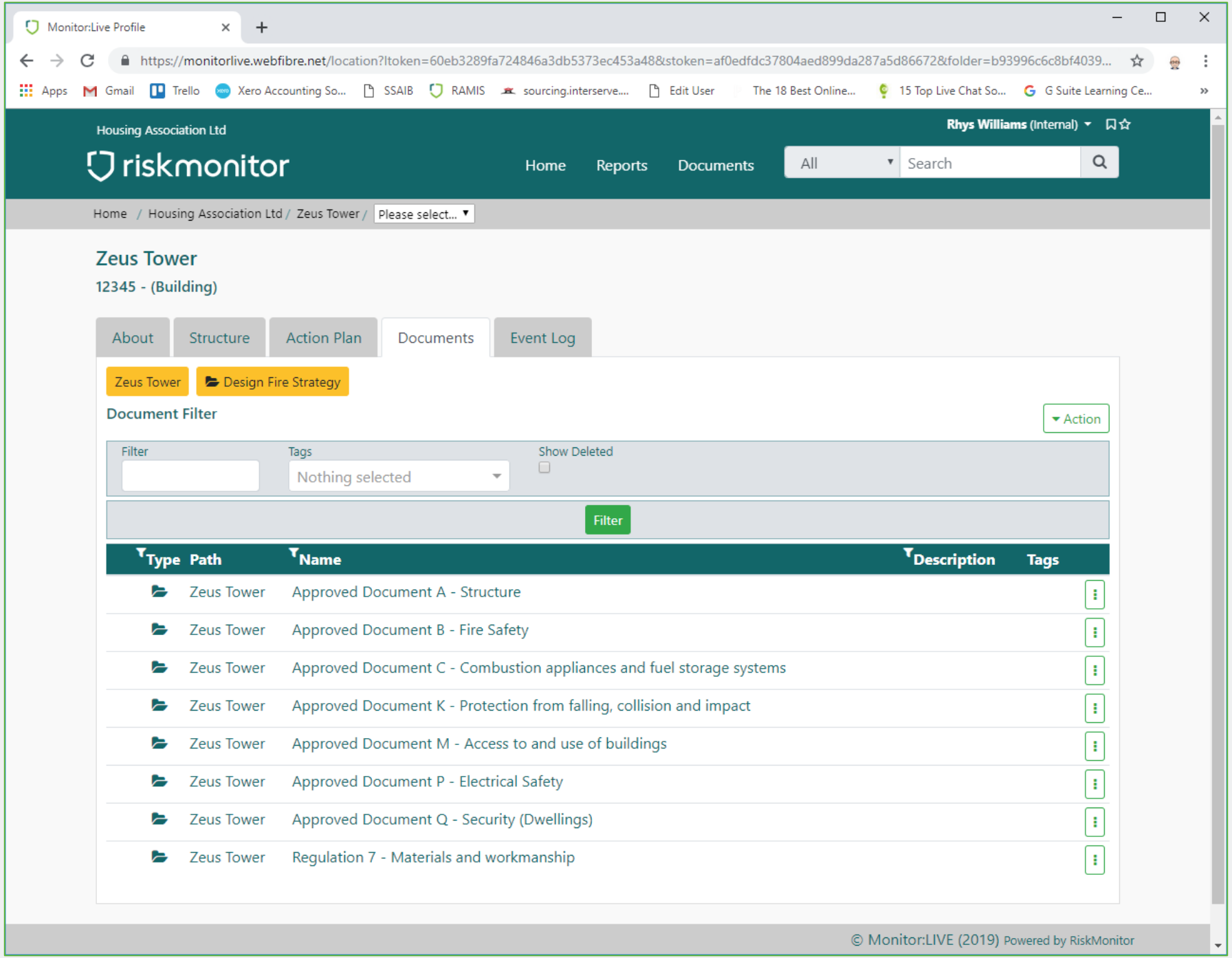
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Zeus Tower
Approved Document A - Structure
Zeus Tower
Approved Document B - Fire Safety
Zeus Tower
Approved Document C - Combustion appliances and fuel storage systems
Zeus Tower
Approved Document K - Protection from falling, collision and impact
Zeus Tower
Approved Document M - Access to and use of buildings
Zeus Tower
Approved Document P - Electrical Safety
Zeus Tower
Approved Document Q - Security (Dwellings)
Zeus Tower
Regulation 7 - Materials and workmanship
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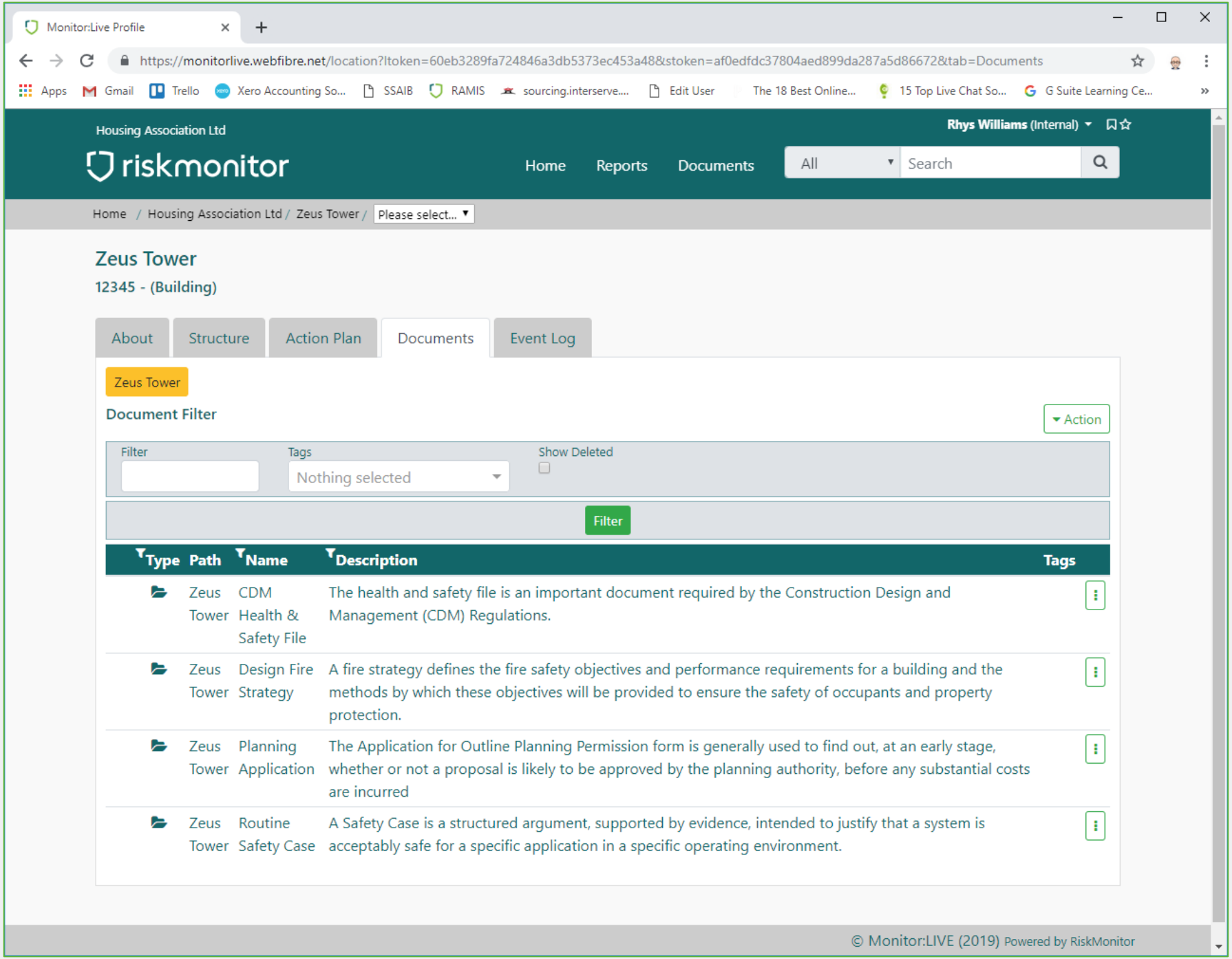
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Structure
Action Plan
Documents
Event Log
Zeus Tower
Document Filter
Action
Filter
Tags
Nothing selected
Show Deleted
Filter
Type
Path
Name
Description
Tags
Zeus Tower
CDM Health & Safety File
The health and safety file is an important document required by the Construction Design and Management (CDM) Regulations.
Zeus Tower
Design Fire Strategy
A fire strategy defines the fire safety objectives and performance requirements for a building and the methods by which these objectives will be provided to ensure the safety of occupants and property protection.
Zeus Tower
Planning Application
The Application for Outline Planning Permission form is generally used to find out, at an early stage, whether or not a proposal is likely to be approved by the planning authority, before any substantial costs are incurred
Zeus Tower
Routine Safety Case
A Safety Case is a structured argument, supported by evidence, intended to justify that a system is acceptably safe for a specific application in a specific operating environment.
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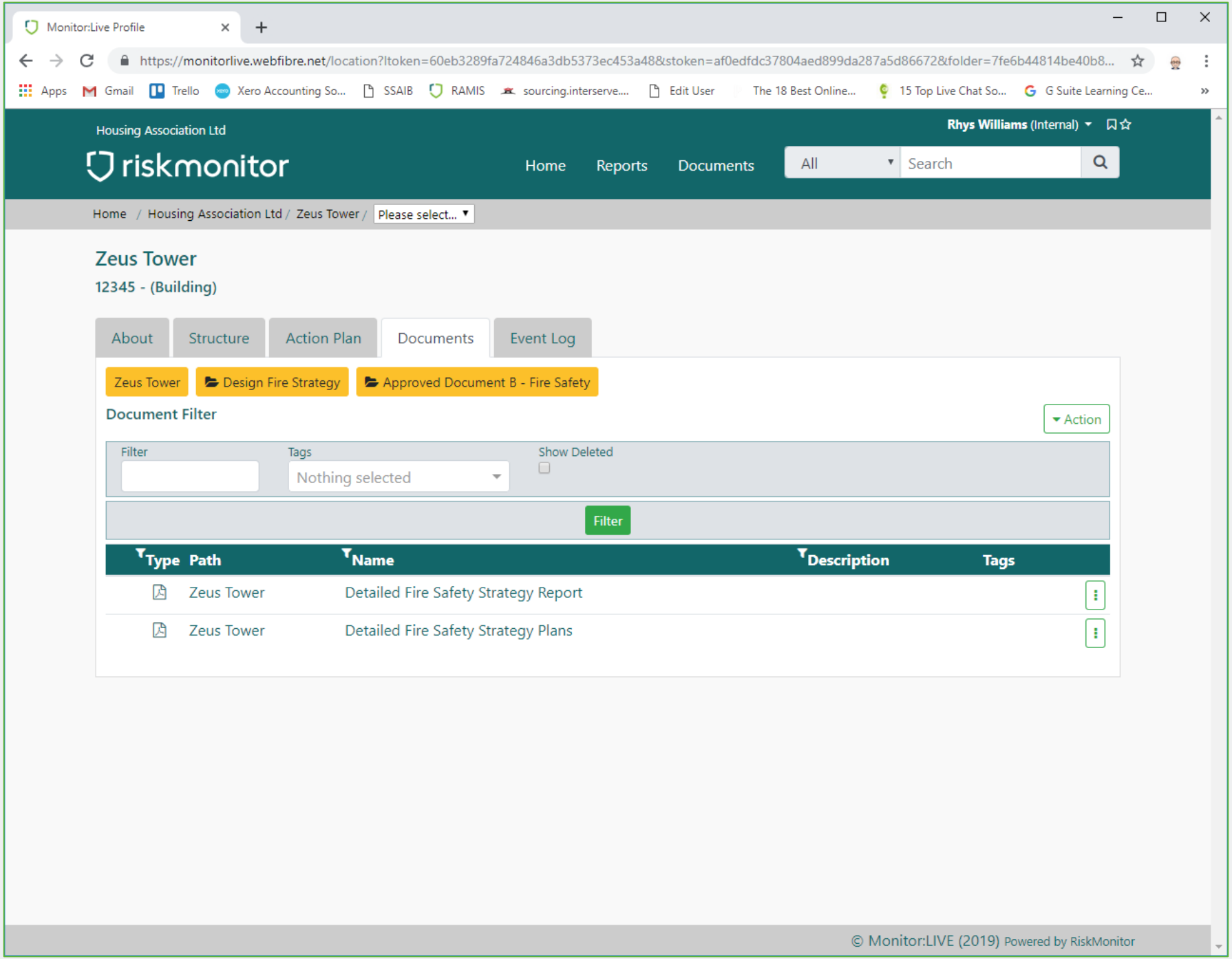
Back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Housing Association Ltd
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Rhys Williams (Internal)
Home
Reports
Documents
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Search
Home / Housing Association Ltd / Zeus Tower / Please select...
Zeus Tower
12345 - (Building)
About
Structure
Action Plan
Documents
Event Log
Zeus Tower
Design Fire Strategy
Approved Document B - Fire Safety
Document Filter
Action
Filter
Tags
Nothing selected
Show Deleted
Filter
Type
Path
Name
Description
Tags
Zeus Tower
Detailed Fire Safety Strategy Report
Zeus Tower
Detailed Fire Safety Strategy Plans
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COMPETENCE

GRENFELL INQURY

“There is some silly money being paid to fire risk assessors who may not be good enough. The fact that you rode a fire engine for 30 years does not make you a fire risk assessor”

Senior LFB Officer

Raising the Bar - Improving Competence

- Bickerdike Allen Review
  - HNC/HND – Direct Tutor Contact 20 weeks – 800 hours
- Fire Safety Engineering Degree
  - 3 years
  - Direct Tutor contact – 700 – 800 hours
- Workplace Directive/FSO
  - 5 day course 36 hours

Raising the Bar - Improving Competence

- Overarching Competence Body
  - Engineers
  - Installers
  - Fire Engineers – Fire Risk Assessors – Fire Safety Enforcers
  - Building Standard Professionals, Designers, Architects
  - Building Safety Coordinators
  - Site Supervisors, Project Managers
  - Procurement Professionals
  - Products

Raising the Bar - Improving Competence

- R35 - New build or refurbishment – Design Fire Strategy
- R38 and R39 – Fire Risk Assessment (FRA) process
- R40 and R41 – FRA undertaken by competent registered persons
- R48 - Building Safety Coordinator (BSC)
- R49 – To be competent a BSC must;
  - Recognised fire/life/building safety qualification
  - Meaningful CPD

LESSONS LEARNT

- Competence is poor across industry groups
- Difficulty in attracting ‘competent person(s)’
- Reliance on third party contractors

Level 4 - Diploma in Fire Safety Studies

- Week 1 – First principles
- Week 2 – Residential
- Week 3 – Day risk
- Week 4
  - Active and passive fire safety systems
  - Fire Risk Assessment

QUICK WINS

- Roll out Fire Safety Diploma
  - First Cohort 30th March
- Level 3 Certificate in Passive Fire protection
  - First cohort November 2020
- Level 2 Certificate Fire Door Installation Scheme
  - First cohort April 2020
- BAFE SP 203, SP 204, SP 205

alamy

THANK YOU

QUESTIONS?