

Background

17 years in high-rise construction

Technical Lead on commercial fit-out and high-rise residential construction

Technical Lead on the Embassy Gardens Skypool

Fire Risk Management and BSA specialist

LABC Construction Professional of the Year 2023 (London)



The Golden Thread

Proposed in Building A Safer Future: The final report by Dame Judith Hackitt and her team as a Golden Thread of Building Information.

Chapter 8

The interim report identified the need for a 'golden thread' of information for all higher risk residential buildings (HRRBs), so that their original design intent is preserved and changes can be managed through a formal review process. Equally, access to up-to-date information is crucial when effectively carrying out a fire risk assessment of a building and determining whether any action is required

Recommendation 8.1

- a. Government should mandate a digital (by default) standard of record-keeping for the design, construction and during the occupation of new HRRBs. This is to include any subsequent refurbishments within those buildings.
- b. Digital records are to be in a format which is appropriately open and non-proprietary with proportionate security controls.

Building Safety Act 2022 Part 4—Higher-risk buildings

88 Keeping information about higher-risk buildings

(1) An accountable person for a higher-risk building must—

- (a) keep prescribed information in accordance with prescribed standards, and*
- (b) so far as possible keep such information up to date.*

(2) An accountable person for a higher-risk building must keep copies of prescribed documents in accordance with prescribed standards.

(3) Where an accountable person does not hold prescribed information or a copy of a prescribed document, they must obtain it except where it is not practicable to do so.

4) The Secretary of State may by regulations make provision as to when the duties in subsections (1) to (3) apply. 89 Provision of information etc to the regulator, residents and other

The Higher-Risk Buildings (Keeping and Provision of Information etc.) (England) Regulations 2024

Golden thread information

4.—(1) The information and documents prescribed for the purposes of section 88 (1) and (2) of the 2022 Act (together “the golden thread information”) are set out in Schedule 1 (Footnote **16**)

(Footnote **16**) The standards in accordance with which the information and documents must be kept are prescribed in the Higher-Risk Building (Management of Safety Risks) (England) Regulations 2023, S.I. 2023/907.

The Higher-Risk Buildings (Management of Safety Risks etc) (England) Regulations 2023

Keeping of information and documents

7.—(1) The standards prescribed for the keeping of **information** under section 88(1) of the 2022 Act are that the information—

- (a) is kept in an electronic format which ensures it is capable of being transferred electronically to other persons without the data in it being lost or corrupted;**
- (b) is accurate;
- (c) is intelligible to the intended readers of the data, and any key needed to understand the data is provided with the data;
- (d) is kept in such a manner as to be accessible as soon as reasonably practicable in response to a request from any person specified in section 89(1) of the 2022 Act or prescribed by regulations made under that subsection;
- (e) is secure from unauthorised access; and
- (f) is only changed in accordance with procedures which record the person who made the change and the date of that change**

(2) The standards prescribed for the keeping of copies of **documents** under section 88(2) of the 2022 Act are that the documents—

- (a) are kept in an electronic format capable of being transferred to other persons without the data in them being lost or corrupted;**
- (b) are kept in such a manner as to be accessible promptly in response to a request from any person specified in section 89(1) of the 2022 Act or prescribed by regulations made under that subsection;
- (c) are secure from unauthorised access; and
- (d) are only changed in accordance with procedures which record the person who made the change and the date of that change.**

The Higher-Risk Buildings (Keeping and Provision of Information etc.) (England) Regulations 2024

SCHEDULE 1 — Golden thread information

1. **Information** to be kept by accountable persons
2. Building compliance: scheme work
3. Registration
4. Key Building Information
5. Building Assessment Certification application
6. Fire safety management
7. Evacuation
8. Fire Safety Regulations information
9. Structural risks
10. Management of Building Safety Risks
11. Building design
12. Mandatory reporting requirements
13. Resident engagement
14. Complaints
15. **Documents** to be kept by accountable persons
16. Completion and partial completion of works
17. Building compliance: scheme work
18. Registration
19. Building assessment certification application
20. Refusal of building assessment certification application
21. Building assessment certificate
22. Fire safety management
23. Fire Safety Regulations information
24. Structural risks
25. Building safety risk assessment
26. Management of building safety risks
27. Plans
28. Mandatory reporting requirements
29. Resident engagement
30. Complaints
31. Contravention notices



Occupied Buildings

Examples of Information are:

Name, address etc of the building concerned
Key Building Information
Name address etc of the PAP

Examples of documents are:

Fire Risk Assessment report
Safety Case report

Implementation of BS EN ISO 19650 and BS 8644-1

New builds may have a BIM Execution plan, which implements project-specific rules which will structure the documentation in the CDE. If there isn't one, it is sensible to establish a Document Management Protocol, in order to ensure that the information is stored in a well ordered manner.

If this hasn't been followed, or you are not sure what information is present, good first steps would be to set up a filing system and tracking document and populate these to establish what is missing.

This can be used to identify what information may be missing, which is relevant to the risk profile of the building.

It is important to consider that some "customers" of the data may not be familiar with using a Common Data Environment, and so it can be helpful to hyperlink the CDE data into an Excel document such as that shown opposite, to make it more user friendly.

	Main Folder	Sub-Folder/ Notes
1	Fire Safety File Summary	Regulation 38
2	Fire Safety Risk Assessment	Fire Safety Risk Assessment
3	Fire Strategies	As Built Fire Strategy Reports
4	Fire Strategy Drawn Information	01. Fire Strategy Plans and Elevations
		02. Escape Routes
		03. Fire Separating Elements
		04. Sitewide LFB Plans
		05. Dry / Wet Riser Inlet Points and Top Up Points
		06. Fire Tender Routing and Locations
		07. Firefighting core and lifts
		08. Evacuation Lifts
		09. Zoning drawings
		10. Heat / Smoke Detectors
		11. Alarm Call Points
		12. Detection / Alarm Control Points
		13. Alarm Sounders / Beacons
		14. Fire Safety Signage
		15. Emergency Lighting
		16. Fire Extinguishers
		17. Sprinkler systems
		18. Smoke Control Systems inc. AOV's
		19. CCTV
		20. Location of Hydrants
		21. Smoke System Inlet / Extract Locations
		22. Premises Information Box
		23. Access Control Box or Drop Key
		24. Evacuation (muster) Locations
		25. Fire Control Centre (FCC) – If appropriate
5	Maintenance	Logbooks
6	Cause and Effect	Cause and Effect Matrix
7	CFD	CFD Reports
8	Certification	Fire Doorsets
		Dry Risers
		Fire Fighting Core and Lifts
		Fire Alarm
		Emergency Lighting
		Sprinkler systems
		Smoke Control Systems inc. AOV's
		Evacuation System
		Refuse
		Electrical

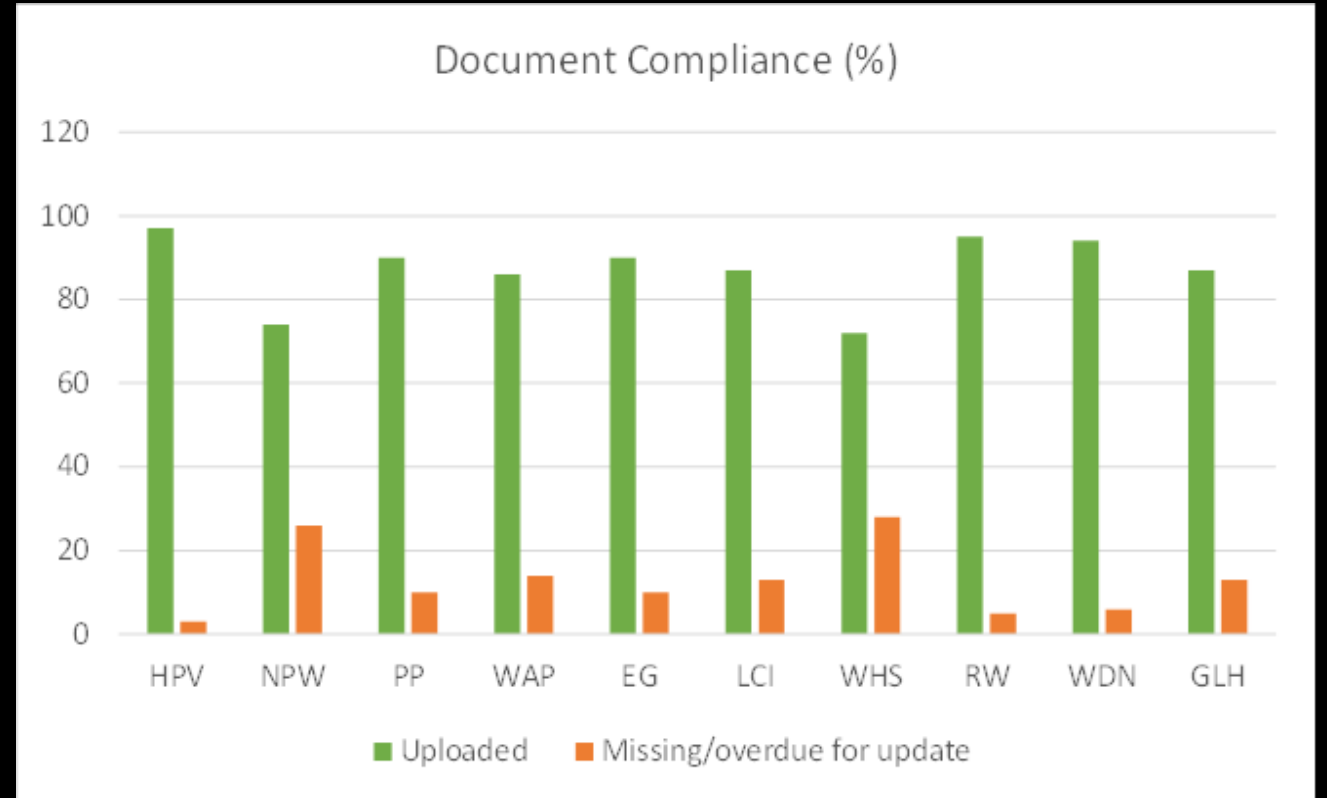
Compliance

The Building Safety Risk Management system tracks compliance (critical and secondary) for 86 risk parameters for each building:

- Fire
- Structure
- Legionella

The Building Safety Risk Management was implemented in July 2022. The implementation of the system has required a cultural change in the way we identify and manage risks.

As the system has matured, the number of non-compliant items has reduced, and the number of parameters being managed by the system has increased, as we continue to review the system and implement improvements in line with the PLAN-DO-CHECK-ACT cycle advocated by BS9997



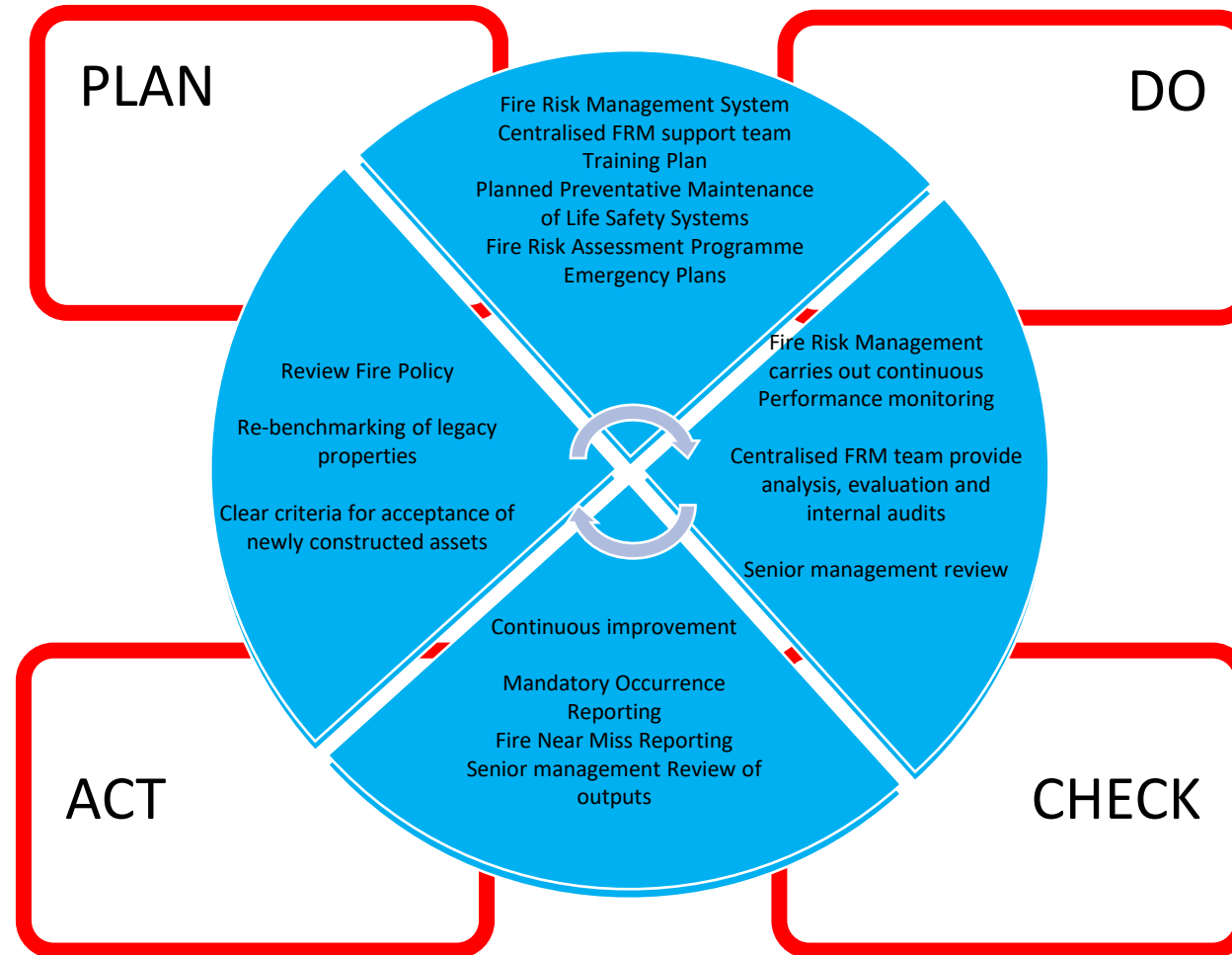
Fire Risk Management System

INTERESTED PARTIES

Freeholder
Leaseholders
Managing Agent
Residents
Visitors
Contractors

INPUTS

Fire Risk Assessments
Fire Strategy design
EWS1 & FRAEW
Maintenance
Construction handover



OUTPUTS

Clear information about risks

Actions on findings

Notifications to affected parties

Clear definition of responsibilities

Increased assurance

Process of continuous improvement

BUILDING SAFETY WEBINARS

The next two slides are from Building Safety Webinar No 10

The common data environment (CDE) is a central computer repository where construction project information and documents are housed.

Information from various devices and key documents are all stored in a common system.

In this example: Asset Register, Building Registration information, Installation quality records, Defect/Repair log, Fire Door Documents, Fire Risk assessments, Structural Reports, Safety Case Reports etc will be stored in the same system

New buildings may have BIM and other design data, and Gateway submittal records.

CDEs allow you to combine structured, unstructured and semi-structured data to create single customer view. A CDE can ingest data from any source

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ENGINEERS**



The Institution of
StructuralEngineers



Engineering
Council



BUILDING SAFETY WEBINARS

Document and Information Storage System specification

Regulations do not specify the type of data storage unit to be used as this will be proportional to the size of the building estate being managed.

Its advisable to have a separate computer system for this purpose and to ensure good security and access control

There are a number of relevant standards including:

BS 8644-1: Digital management of fire safety information. Part 1: Design, construction, handover, asset management and emergency response - Code of practice

ISO 19650-1:2018 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)

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ENGINEERS**



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StructuralEngineers



Engineering
Council



BUILDING SAFETY WEBINARS

BS 8644-1: Digital management of fire safety information

This standard introduces the concept of **Information Exchange Points** (IEPs)

These are the critical points in the building lifecycle when information and documents are handed over between the different dutyholders.

Information management according to BS EN ISO 19650 Guidance Part D Developing information requirements

https://www.ukbimframework.org/wp-content/uploads/2021/02/Guidance-Part-D_Developing-information-requirements_Edition-2.pdf

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ENGINEERS**



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StructuralEngineers



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Council



Building Safety Case

BUILDING NAME AND ADDRESS

Orientation Plan

RELEVANT PERSONS

DESCRIPTION OF THE BUILDING

RISK ASSESSMENT

Description of the process for assessing risk

DESCRIPTION OF RISKS

How things could go wrong

Other matters which could exacerbate these

Potential consequences

Relevant control measures

Emergency Arrangements

Management of alterations

The process for processing minor alterations

The process for processing major alterations

FIRE SAFETY

Type and frequency of risk assessments and reasons for this approach

Fire Strategy Summary

Regulation 38 information

SUMMARY OF PREVENTION AND PROTECTION MEASURES

Relationship to the findings of the building safety risk assessment

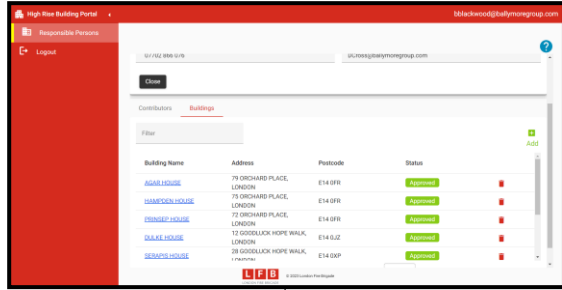
STRUCTURAL INTEGRITY

Actions in place to identify the structural condition of the building

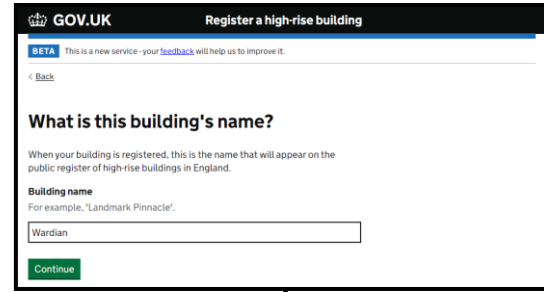
How the structural integrity is maintained



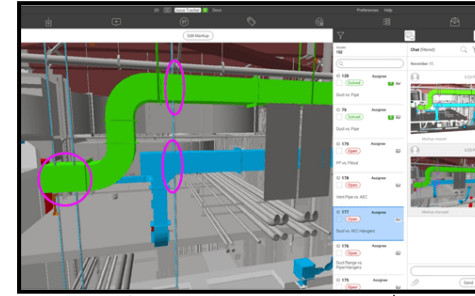
LFB High-rise Buildings Registration



HSE High-rise Building Registration



Design



Photographic records



Golden Thread

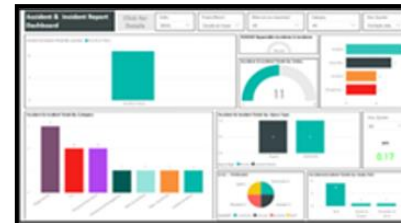
Common Data Environment



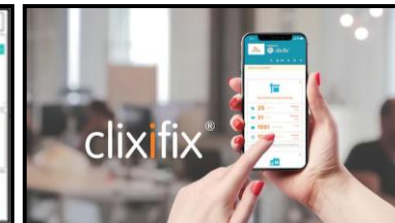
Premises Information Box



Mandatory Occurrence Reporting



Aftercare/Complaints



Resident Engagement App.



Combustibility matrix

On-site Quality Records

Fire Risk Management System

Computer-Aided Facilities Management System



Golden Thread

Common Data Environment

Asset Register



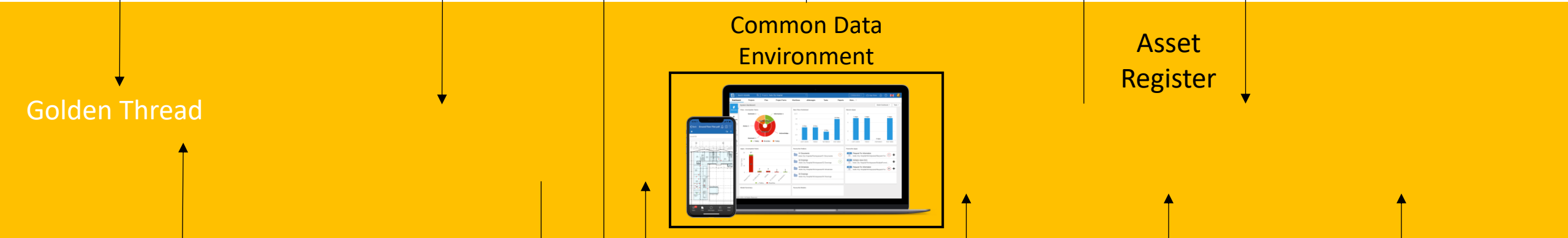
BIM + Technical Submissions + Drawings

Fire Door Inspection + maintenance records

Method statements

Competence Assessment

Tendering /Contracts



Combustibility Matrix

.....is simply good document management practice

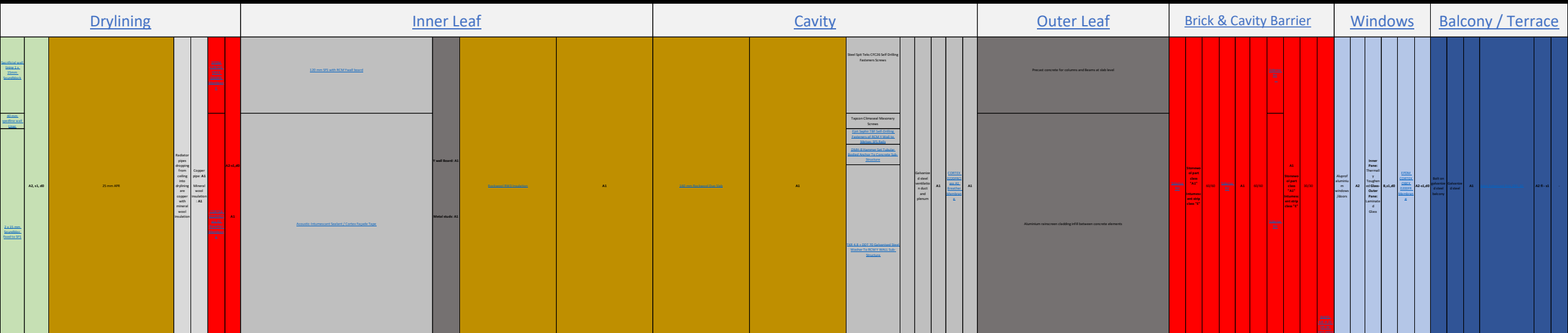
Example: External Wall

- Full traditional brickwork
- Concrete outer skin
- Insulation
- Concrete inner skin
- Lightweight lining installed



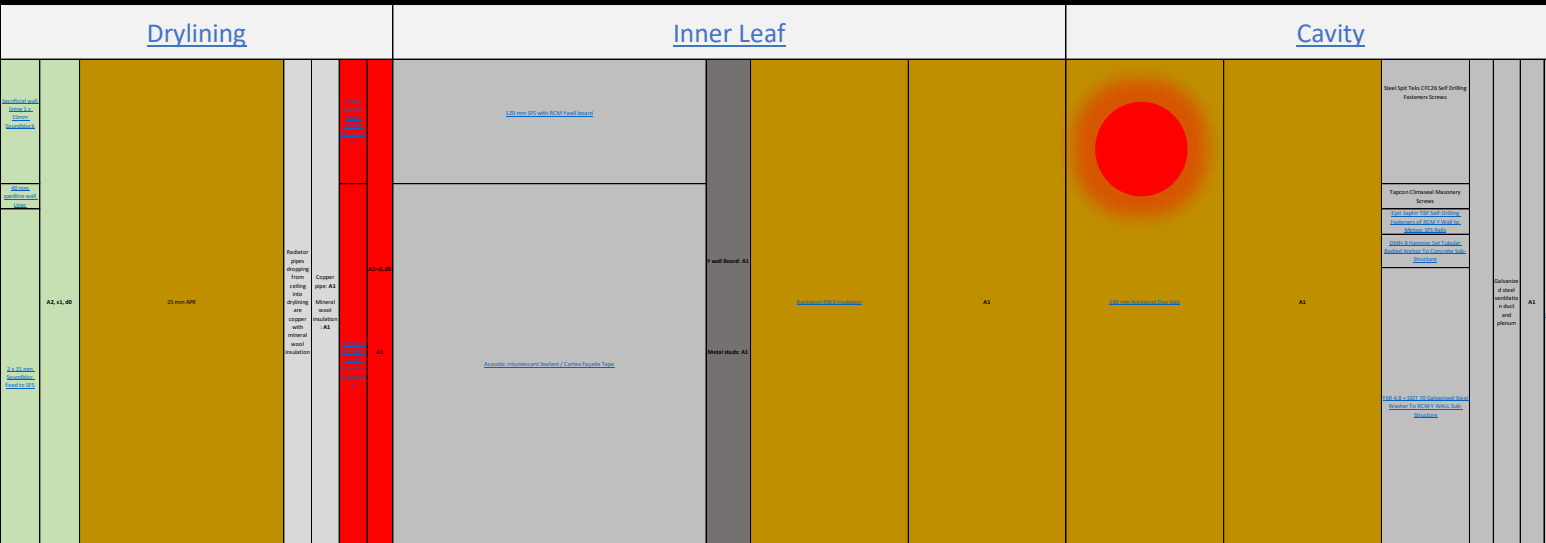
External Wall

Golden Thread



External Wall

Golden Thread



Rockwool Ltd
Wern Tarw
Pencoed
Bridgend CF35 6NY



Agreement Certificate
17/5402
Product Sheet 1

Tel: 01656 862621 Fax: 01656 862302
e-mail: technical.solutions@rockwool.co.uk
website: www.rockwool.co.uk

ROCKWOOL INSULATION SYSTEMS

RAINSCREEN DUO SLAB FOR USE IN RAINSCREEN CLADDING SYSTEMS

This Agreement Certificate Product Sheet⁽¹⁾ relates to Rainscreen Duo Slab⁽²⁾ for use in Rainscreen Cladding Systems, a mineral wool insulation slab for use as thermal insulation on new and existing timber- or steel-frame walls or masonry walls. The product is used in domestic and non-domestic buildings in conjunction with weathertight ventilated cladding systems.



(1) Hereinafter referred to as 'Certificate'.
(2) Rainscreen Duo Slab is a registered trademark.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Thermal performance — the product has a declared thermal conductivity (λ_{10}) of 0.034 or 0.035 W·m⁻¹·K⁻¹, depending on the thickness (see section 6).

Condensation risk — the product can contribute to limiting the risk of condensation (see section 7).

Behaviour in relation to fire — the product is classified as Class A1 in accordance with BS EN 13501-1 : 2007 (see section 8).

Durability — the product will have a life equivalent to that of the wall structure in which it is incorporated (see section 13).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 15 March 2017

John Albon – Head of Approvals
Construction Products

Claire Curtis-Thomas
Chief Executive

The BBA is a UKAS accredited certification body – Number 112.
The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bba.org.uk
Readers are advised to check the validity and latest issue number of this Agreement Certificate by either referring to the BBA website or contacting the BBA direct.

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

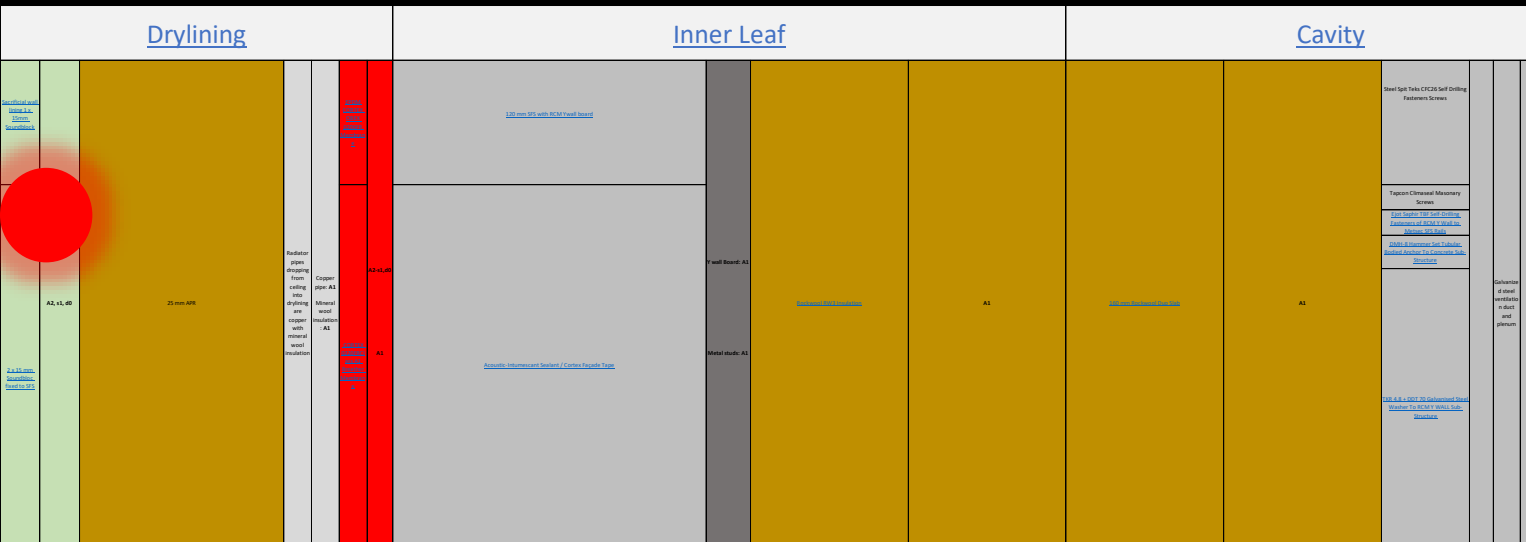
tel: 01923 665300
fax: 01923 665301
clientservices@bba.star.co.uk
www.bba.org.uk

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Page 1 of 1

External Wall

Golden Thread



Product Data Sheet

Gyproc® FireLine 15mm



Gyproc FireLine 15mm is a plasterboard that contains glass fibre and other additives for extra fire protection.

Where to use

Use it in partitions, ceilings and steel encasement systems to achieve the fire performance required in domestic separating walls, corridors, garages and steel encasements.

Certifications

Environmental Product Declaration (EPD) available [Click here.](#)



Product Information

Composition

The plasterboard is made of a gypsum core between paper liners. It uses glass fibre reinforcement and other additives for extra fire resistance.

Colour

Face colour: Pink.
Reverse colour: Brown.

DIMENSIONS AND WEIGHTS

PRODUCT SIZES (mm)	900 X 1800	1200 X 2400	1200 X 2700	1200 X 3000
Nominal thickness (mm)	15	15	15	15
Minimum weight (kg/m ²)	11.4	11.4	11.4	11.4
Edge options	Tapered edge only	Tapered edge, Square edge	Tapered edge only	Tapered edge only
Number of tapered edges	2	2	2	2
Width: maximum tolerance (mm)	+0	+0	+0	+0
Width: minimum tolerance (mm)	-4	-4	-4	-4
Length: maximum tolerance (mm)	+0	+0	+0	+0
Length: minimum tolerance (mm)	-5	-5	-5	-5
Taper: maximum width (mm)	80	80	80	80
Taper: minimum width (mm)	40	40	40	40
Taper: maximum depth (mm)	2.5	2.5	2.5	2.5
Taper: minimum depth (mm)	0.6	0.6	0.6	0.6
Squareness: 900mm width boards (maximum difference in diagonal measurements, mm)	4	-	-	-
Squareness: 1200mm width boards (maximum difference in diagonal measurements, mm)	-	5	5	5

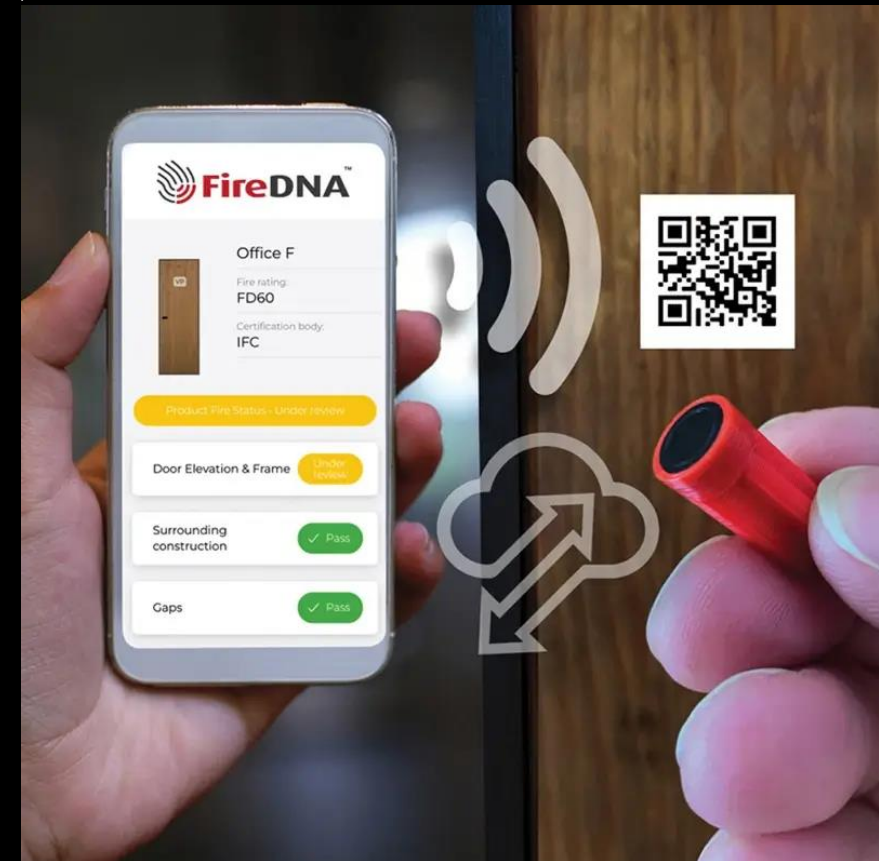
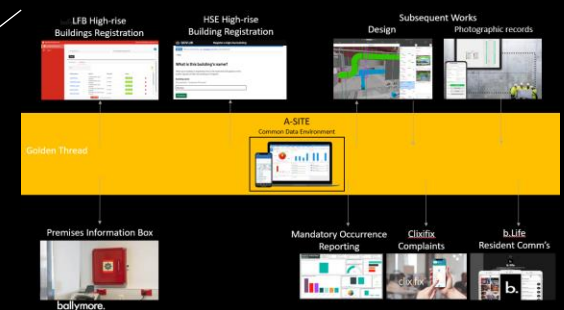
NR: Dimensional tolerances. Quality controls are set to meet customer requirements between these maximum and minimum tolerances.

Fire Doors

Regulation 10 of the *Fire Safety (England) Regulations 2022* requires all communal doors to be checked quarterly and best endeavours to check apartment entrance doors annually.

The *Regulatory Reform (Fire Safety) Order 2005* has been amended to include specific reference to apartment front doors.

BAML has taken the pro-active step to implement a system of co-ordinating the information about the fire doors called Fire DNA which operates via QR code references attached to each door.



Dealing with Fire Risks

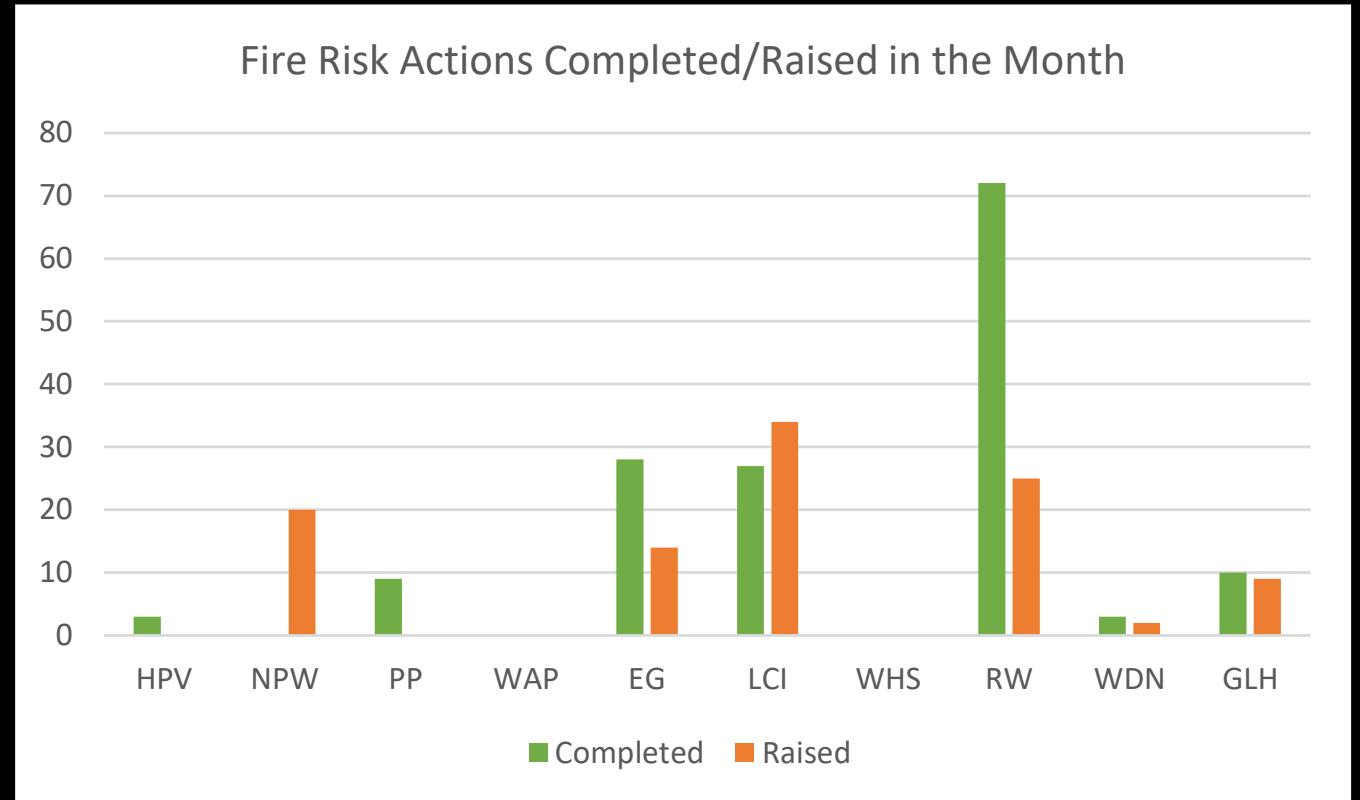
The most fundamental duties upon the Responsible Person includes identifying Fire Risks and dealing with the outcomes.

The most common significant prosecutions in relation to fire safety relate to failure to identify and deal with fire risks.

The Building Safety Risk Management system is used to log all identified fire risks track their close-out.

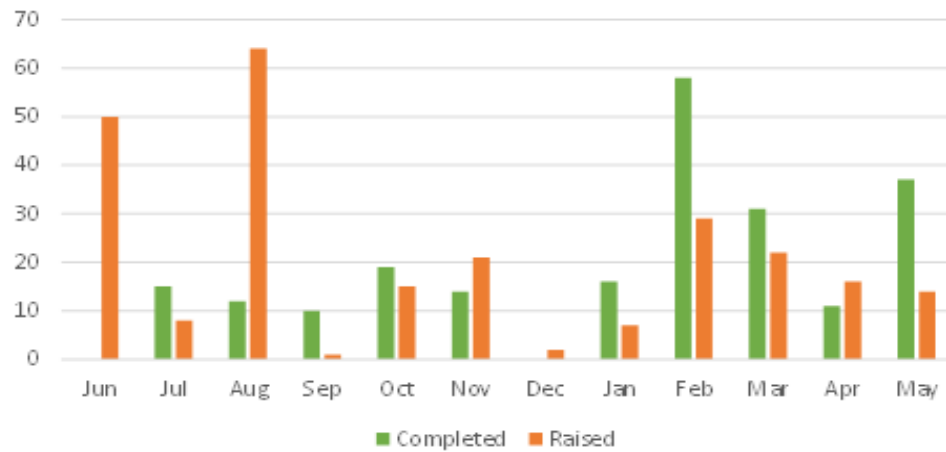
The histogram opposite shows the number of risks identified (Raised) in the month to date, and the number of risk actions closed (Completed) in the month to date.

Wapping has failed to identify any risks in the month, whereas Royal Wharf has identified 25 risks and closed 72 risks in the month.

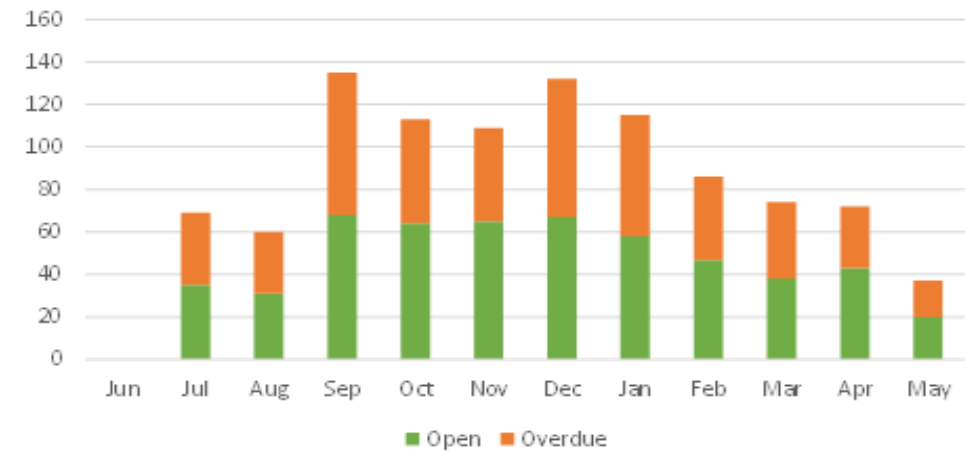


Operational Management

Fire Risk Actions Completed/Raised



Fire Risk Actions Open/Overdue



Critical Fire Document Compliance (%)



■ Compliant 266 Docs (89%) ■ Awaiting Doc 9 Docs (3%) ■ Non-Compliant 24 Docs (8%)

Critical Fire Document Variation

+1

Non-compliant documents versus previous months

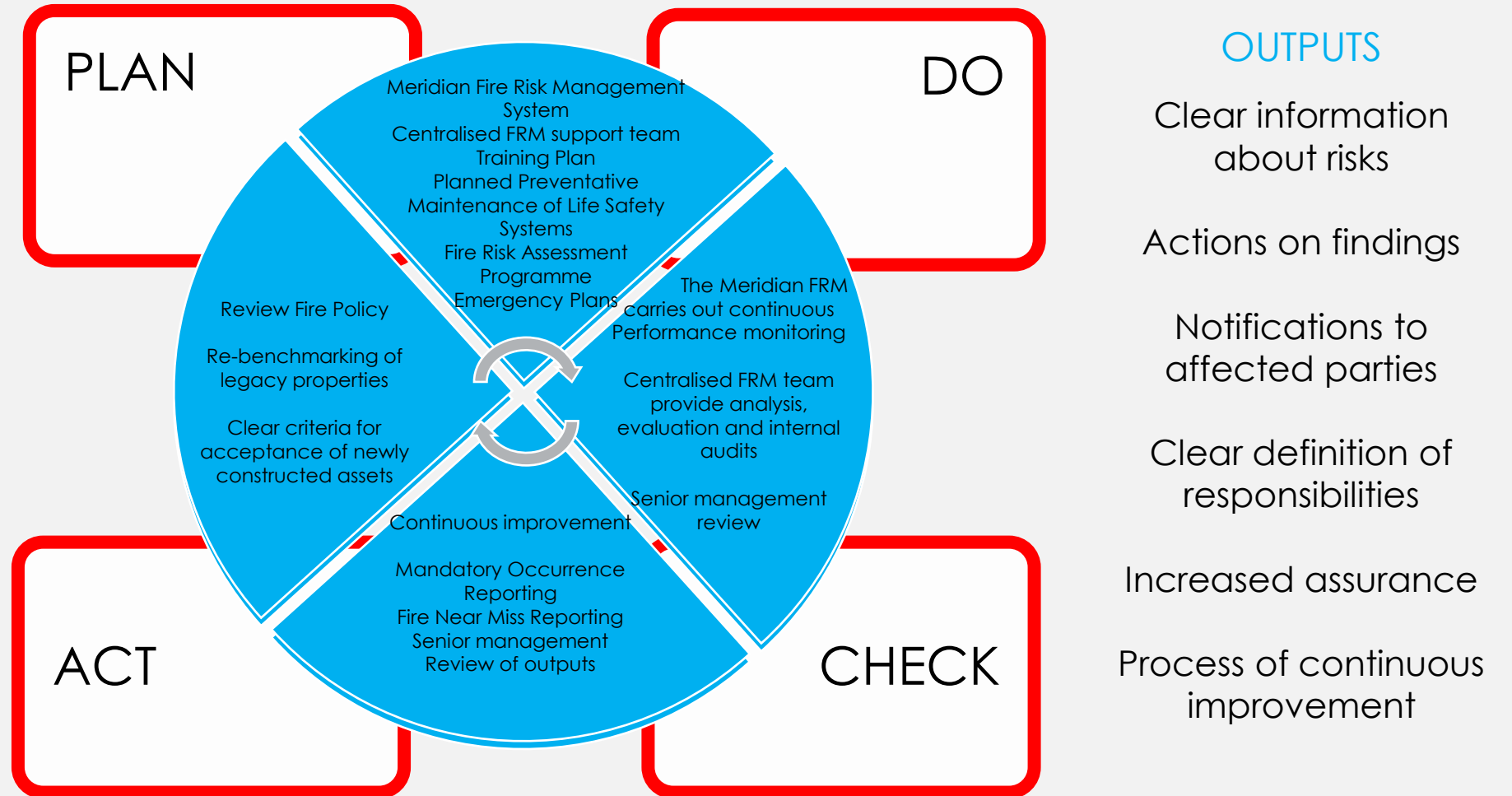
Fire Risk Management System

INTERESTED PARTIES

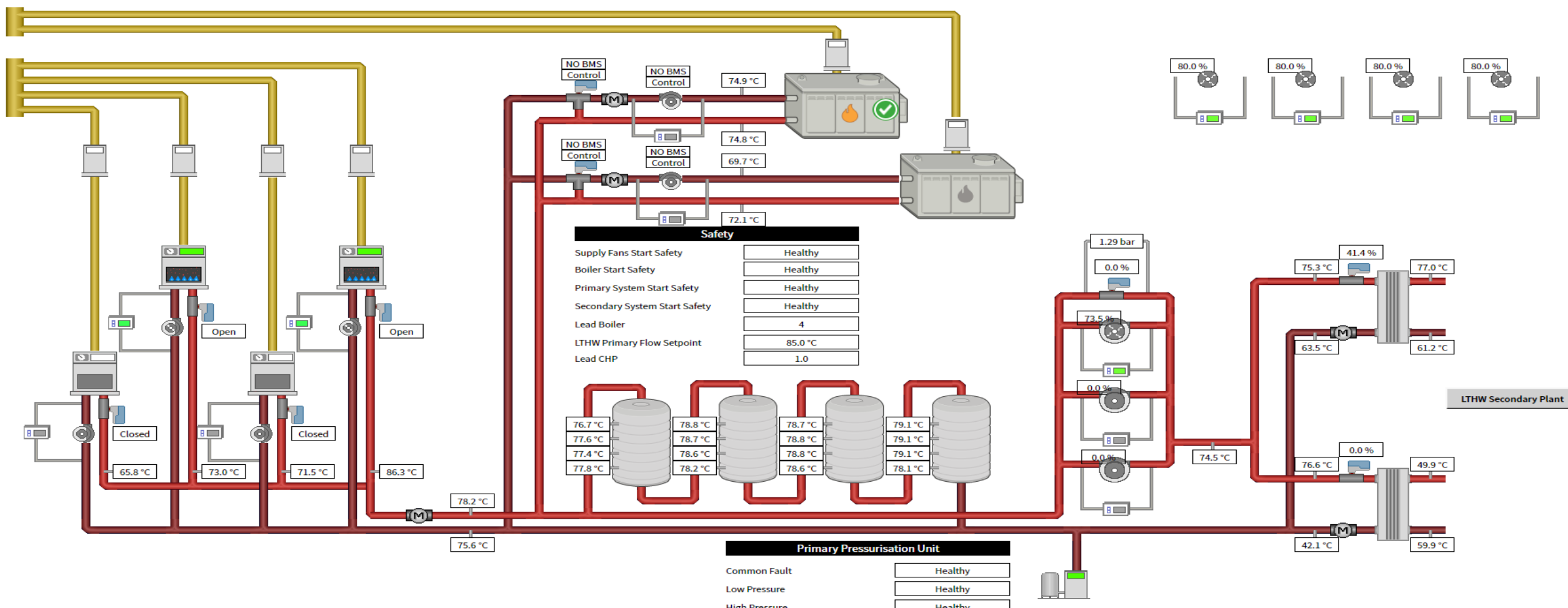
Freeholder
Leaseholders
Managing Agent
Residents
Visitors
Contractors

INPUTS

Fire Risk Assessments
Fire Strategy design
EWS1 & FRAEW
Maintenance
Construction
handover



Operational Management



Leverage information to provide a live, holistic quantification of risk

- Reporting
- Properties
- Sold Properties
- New Property
- Property Assets
- Removed Property Assets
- New Property Asset
- Documents
- Visits
- Actions
- Inspection Forms
- Library
- Profiles
- Administration
- Contact Us

Site

Address: London, E...

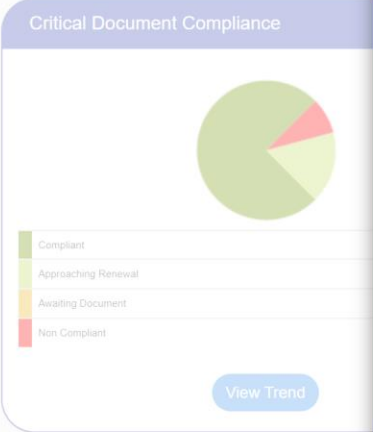
Main Contact: Name110...

Type: Commer...

Portfolio: Default

Fund: Default

Dashboard Detail



Fire Risk Profile

This score was generated from the **Fire Risk Assessment** carried out on **23/10/2024** by **William Martin** [Click to view]

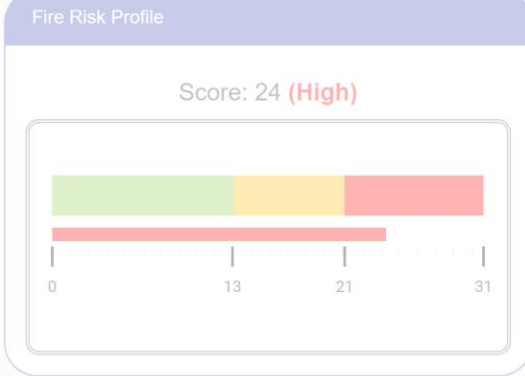
Topic	Response	Score	Rating
Building Type and Expected Occupancy	Shops (retail): >301.	3	Moderate
The Risk Profiling for this building has been assessed, based upon occupancy characteristic and fire growth rate, as;	B4 - Occupants who are awake and unfamiliar with the building; ultra fast fire growth. Unacceptable without the addition of an effective localized suppression system or sprinklers.	5	High
No. of Floors Entirely Below Ground Level.	2 basements (residential or mixed site).	4	Moderate-High
No. of Protected Staircases.	2 means of escape (residential or mixed site).	3	Moderate
Height of Building (m). (Measured/Estimated).	>30m Measured.	5	High
% Cladding Coverage.	>25% (residential or mixed site).	4	Moderate-High
Total Score		24	High

Risk bandings

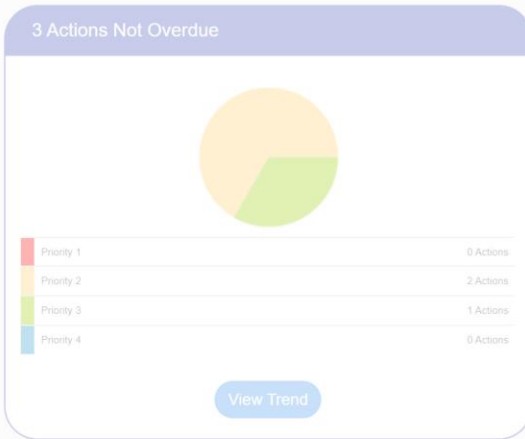
0 - 13	Low
13 - 21	Medium
21 - 31	High

OK

Edit



Administration



Make better decisions

- Reporting
- Properties
- Properties
- Sold Properties
- New Property
- Property Assets
- Removed Property Assets
- New Property Asset
- Documents
- Visits
- Actions
- Inspection Forms
- Library
- Profiles
- Administration
- Contact Us

Site Edit Map

Address London, EC1N 1AA, United Kingdom

Main Contact Name1104 Surname1104



Type Commercial

Portfolio Default

Fund Default

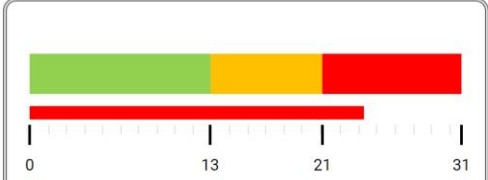
80329f1d-e2c2-4ab5-a88f-5627b1ef6ce2

Photos Edit

Fire Risk Profile


Score: 24 **(High)**



0 13 21 31

- Dashboard
- Detail
- Contacts
- Documents
- Visits
- Doc. Reminders
- Compliance
- Actions
- Assets
- Audit
- Administration


Critical Document Compliance



Compliant	9 Docs (75%)
Approaching Renewal	2 Docs (17%)
Awaiting Document	0 Docs (0%)
Non Compliant	1 Docs (8%)

[View Trend](#)


Secondary Document Compliance



Compliant	9 Docs (64%)
Approaching Renewal	1 Docs (7%)
Awaiting Document	0 Docs (0%)
Non Compliant	4 Docs (29%)

[View Trend](#)


27 Overdue Actions



Priority 1	4 Actions
Priority 2	16 Actions
Priority 3	7 Actions
Priority 4	0 Actions

[View Trend](#)

3 Actions Not Overdue



Priority 1	0 Actions
Priority 2	2 Actions
Priority 3	1 Actions
Priority 4	0 Actions

[View Trend](#)

Bring all stake holders along with us

RESIDENTS

BUILDING MANAGEMENT TEAMS

FIRE & RESCUE SERVICE

BUILDING SAFETY REGULATOR

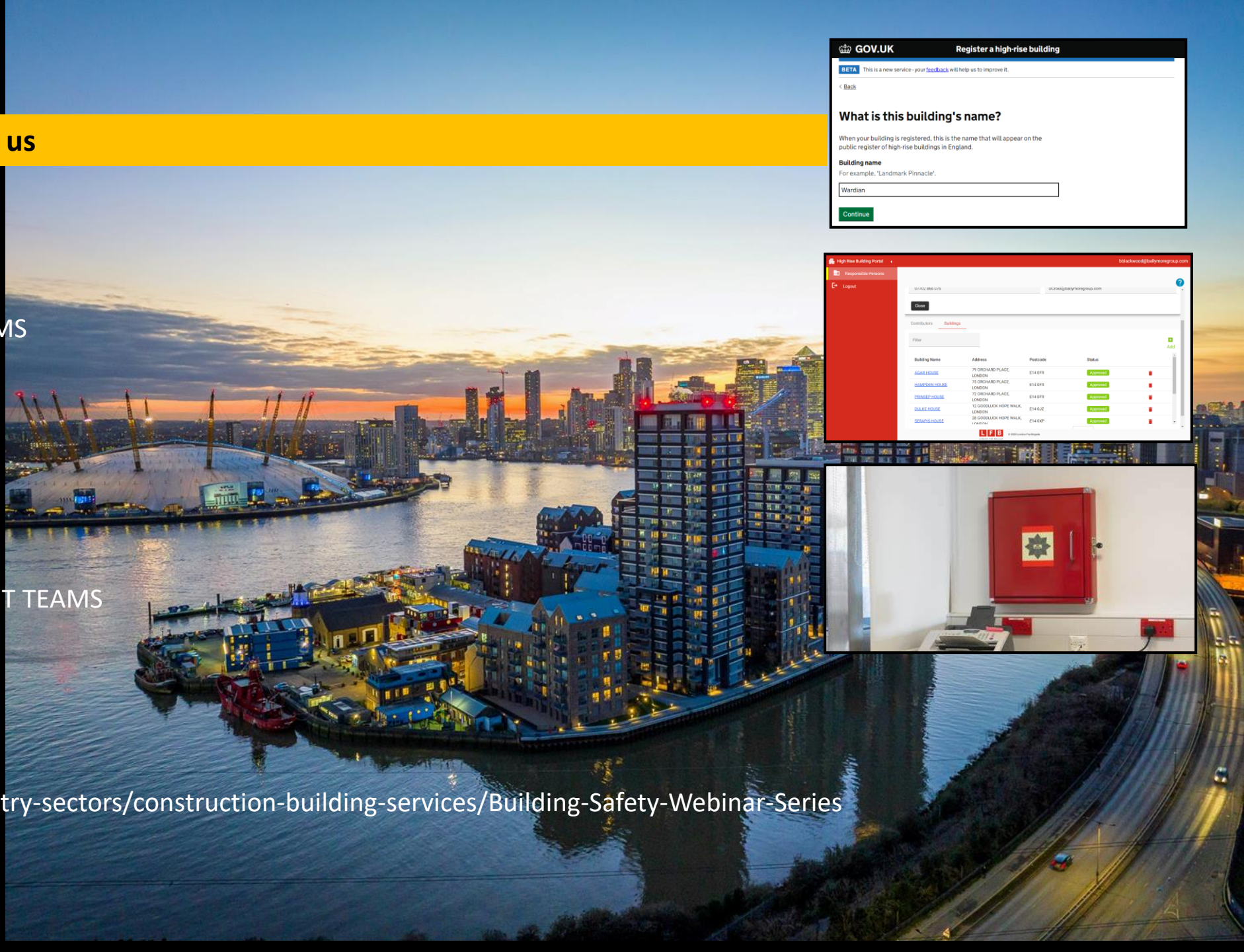
CONTRACTORS

NON-SPECIALIST MANAGEMENT TEAMS

FREEHOLDERS

Further resources available at:

<https://www.imeche.org/industry-sectors/construction-building-services/Building-Safety-Webinar-Series>



GOV.UK Register a high-rise building

BETA This is a new service - your feedback will help us to improve it.

< Back

What is this building's name?

When your building is registered, this is the name that will appear on the public register of high-rise buildings in England.

Building name
For example, 'Landmark Pinnacle'.

Continue

High Rise Building Portal

Responsible Person

Logout

Contributors Buildings

Filter

Building Name	Address	Postcode	Status
AGAVE HOUSE	79 ORCHARD PLACE, LONDON	E14 0FR	Approved
BAMFOLK HOUSE	75 ORCHARD PLACE, LONDON	E14 0FR	Approved
BRANDY HOUSE	77 ORCHARD PLACE, LONDON	E14 0FR	Approved
BLAKE HOUSE	12 GOODLUCK HOPE WALK, LONDON	E14 0L2	Approved
BRANDY HOUSE	28 GOODLUCK HOPE WALK, LONDON	E14 0QR	Approved

