



Compliance Made Easy

# Non-functioning door closers

Demystifying the problem and how to deal with the symptoms that cause them.

# Fire doors

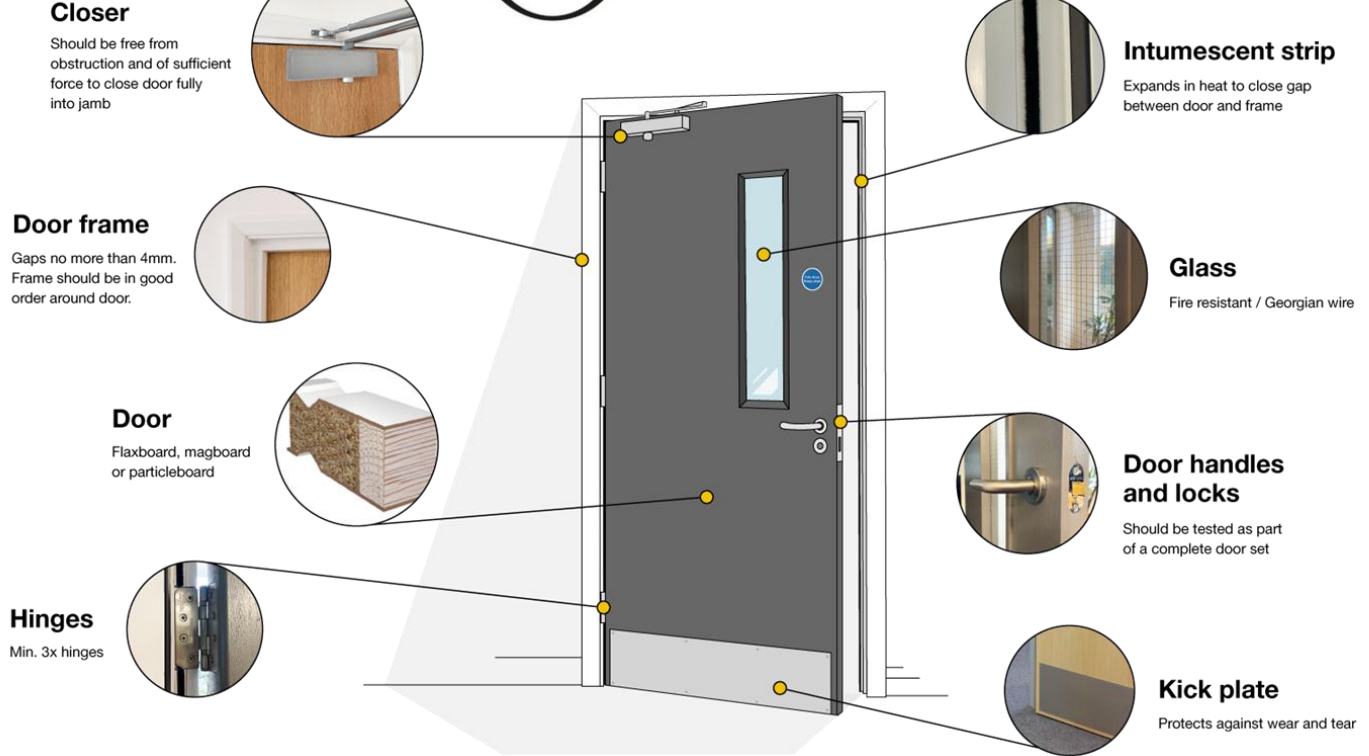
The bullies of fire safety?

# What is a fire door?

A **fire door** is a door with a fire-resistance rating used to reduce the spread of fire or smoke between compartments and to enable safe egress from a building.

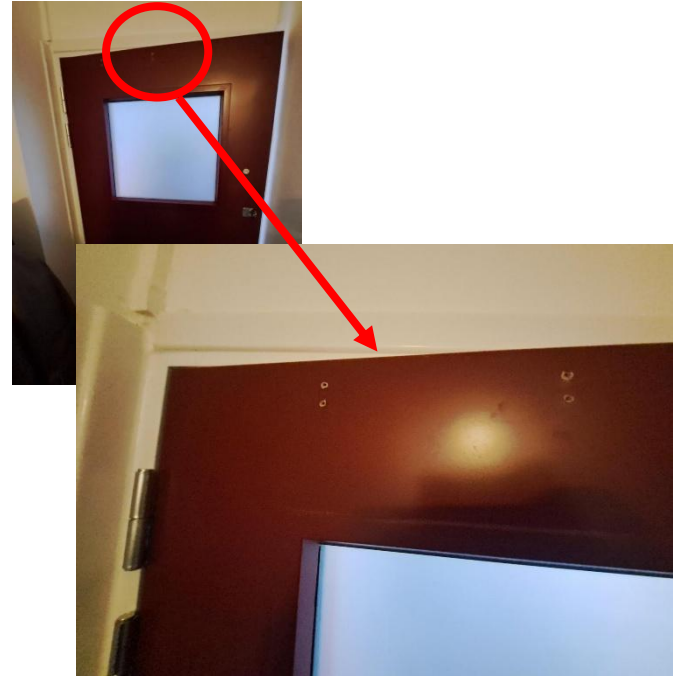


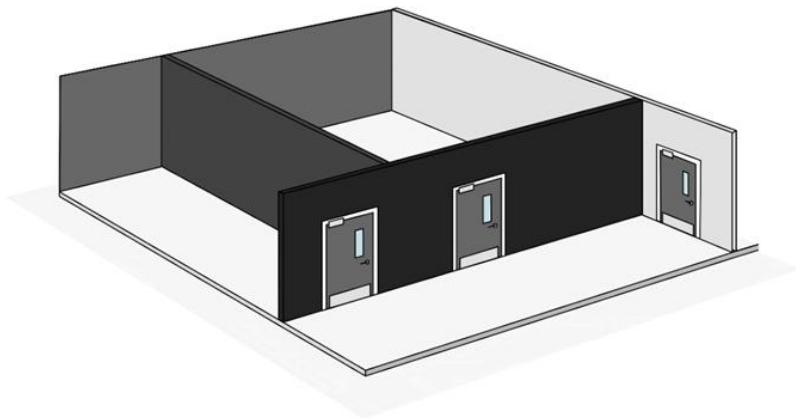
## Ladybird book of fire doors



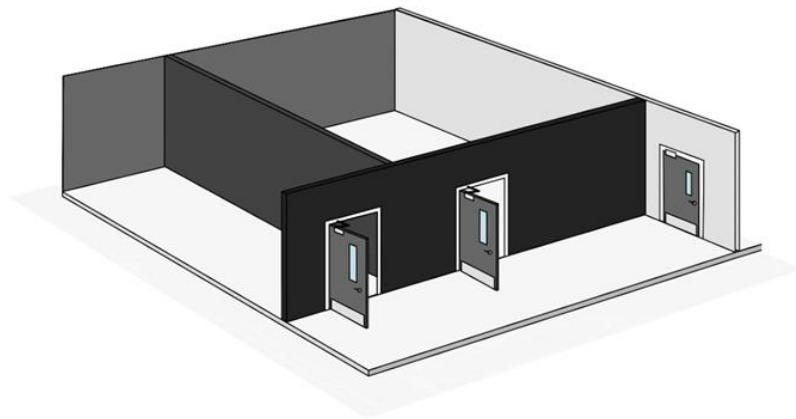
# A common issue

- More and more, we see closers deliberately disengaged or removed
- 30-45% of relevant housing may suffer these issues
- response to residents struggling with the 'weight' of fire doors.
- Disengaging the closer eliminates the resistance that makes doors feel heavy.
- This is the kind of situation where a free-swing device may be more appropriate than a retainer.
- Sometimes it's an operational decision!





**Closed fire doors**



**Open fire doors**

# Free-swing or retainer?



- Free-swing devices give doors a full range of movement with none of the weight/resistance associated with fire doors.



- Ideal for bedroom doors and flat entry doors or where people struggle with heavy fire doors.
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- Door retainers hold doors open in a fixed position, fitted to the top or bottom of the door.



- They are ideal for improving access and ventilation or to combat door wedging.

# Method of actuation



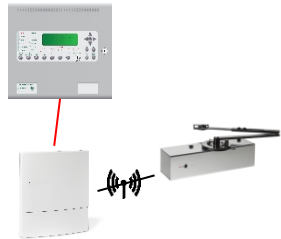
## Hardwired

- Time consuming
- Expensive
- Reliant on relevant FD&A



## Acoustically operated door release mechanisms (AODRM's)

- Cable free install
- Least expensive option
- Might not offer relevant levels of compliance (on paper)



## Radio Frequency

- Cable free install
- Less expensive than hardwiring
- Reliant on relevant FD&A

# A Compliance Paradox

*“the problem with the application of BS 7273-4 is that it can be a very demanding standard that can be difficult to meet due to the different needs and requirements of different doors throughout the building” - FIA Guidance*

# What is BS 7273-4?

- BS 7273-4:2015 (+A2:2022) - Code of practice for the operation of fire protection measures; actuation of release mechanisms for doors
- Guidance, not prescriptive law.
- Ideally would be used in conjunction with a suitable and sufficient risk assessment
- Personal preference is not the same as compliance



# BS 7273-4:2015 + A2:2023

## **Clause 4 - Categories of actuation**

**Critical Category** (Formally Category A) – Devices linked directly to fire alarm. Intended for “high risk” doors.

**Standard Category** (Formally Category B) – Some requirement for a direct link to fire alarm but can include acoustically actuated devices.

**Indirect Category** (Formally Category C) – Intended for low risk doors.

BS 7273-4:2015+A1:2021



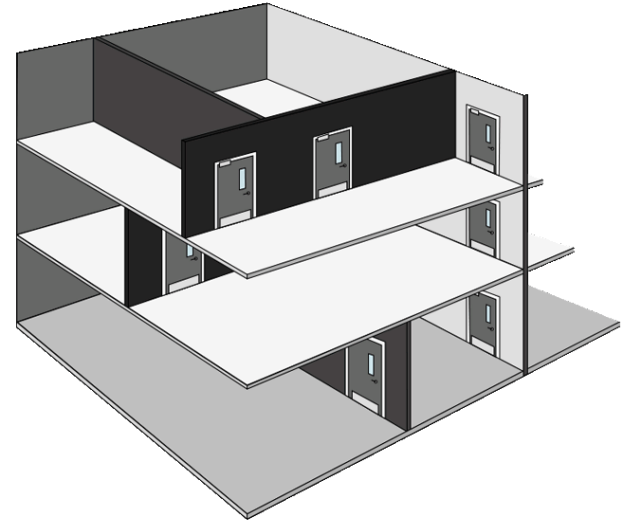
BSI Standards Publication

**Code of practice for the operation of fire protection measures**

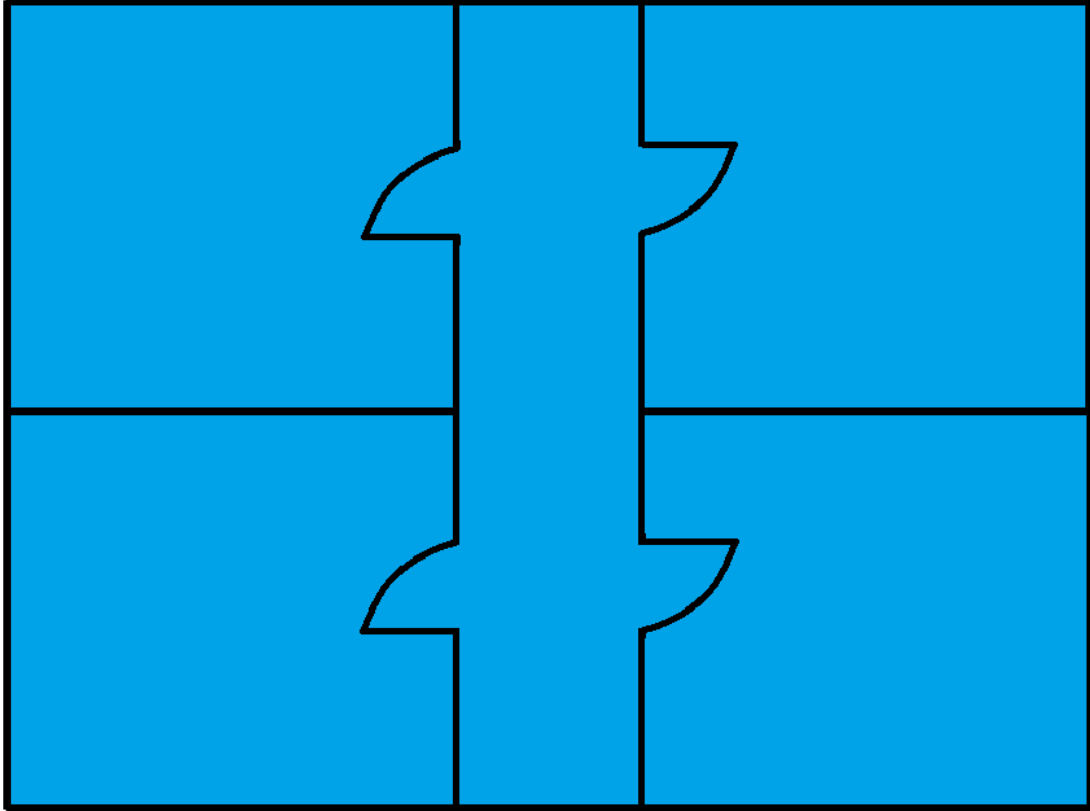
Part 4: Actuation of release mechanisms for doors

# What type of alarm systems are used In social housing?

- Care homes - BS 5839 Part 1 detection throughout
- Purpose built student accommodation / halls of residence will also often use Part 1 detection throughout
- Sheltered schemes - commonly, a combination of Part 1 detection in communal areas and BS 5839 Part 6 detection in accommodations. Sometimes Part 1 throughout.
- General needs / purpose built - no detection in communal areas. Part 6 detection in accommodations.
- Other forms of detection - sprinkler systems, AOV



**Some Sheltered, Care Homes, Hotels etc..**

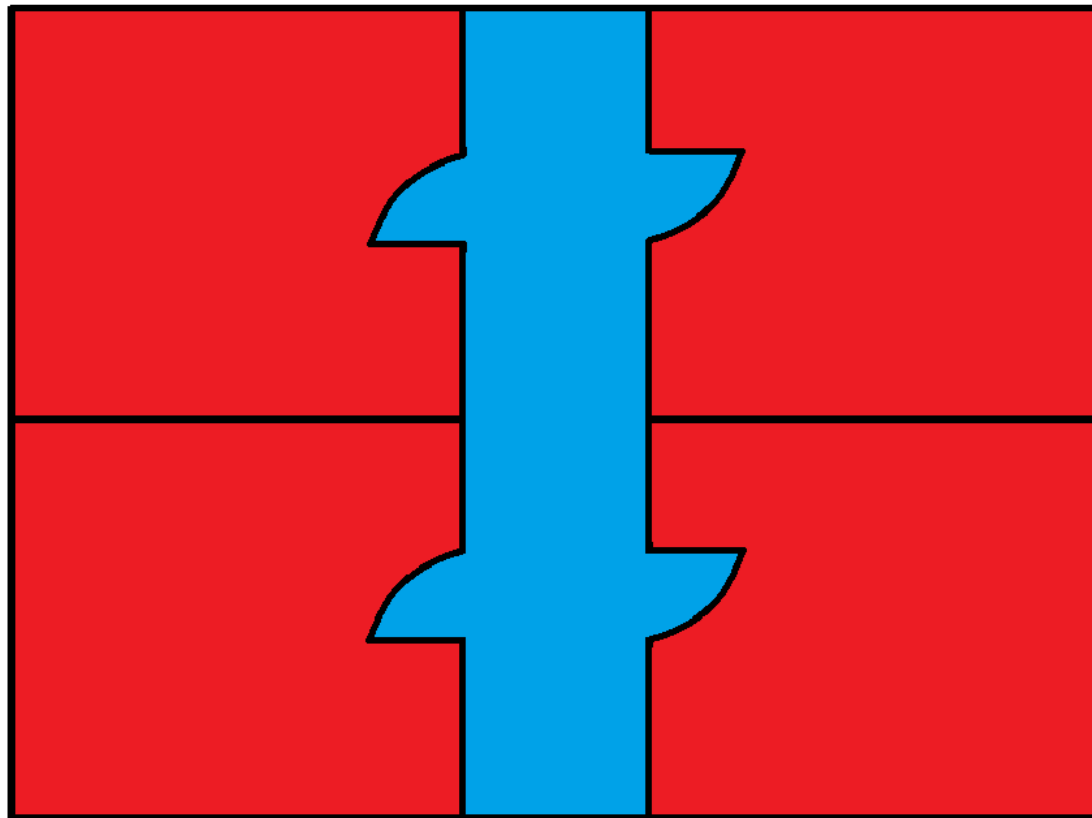


BS5839-1



~~BS5839-6~~

# Typical Sheltered Housing

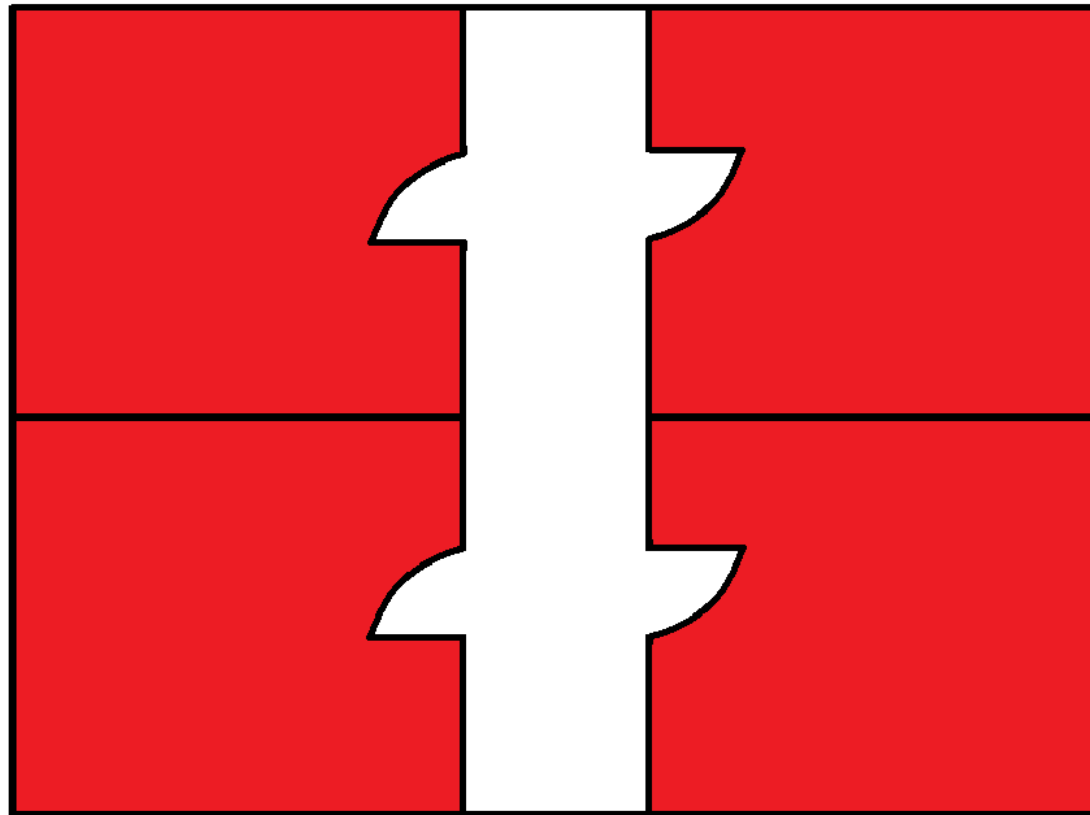


BS5839-1



BS5839-6

## General needs

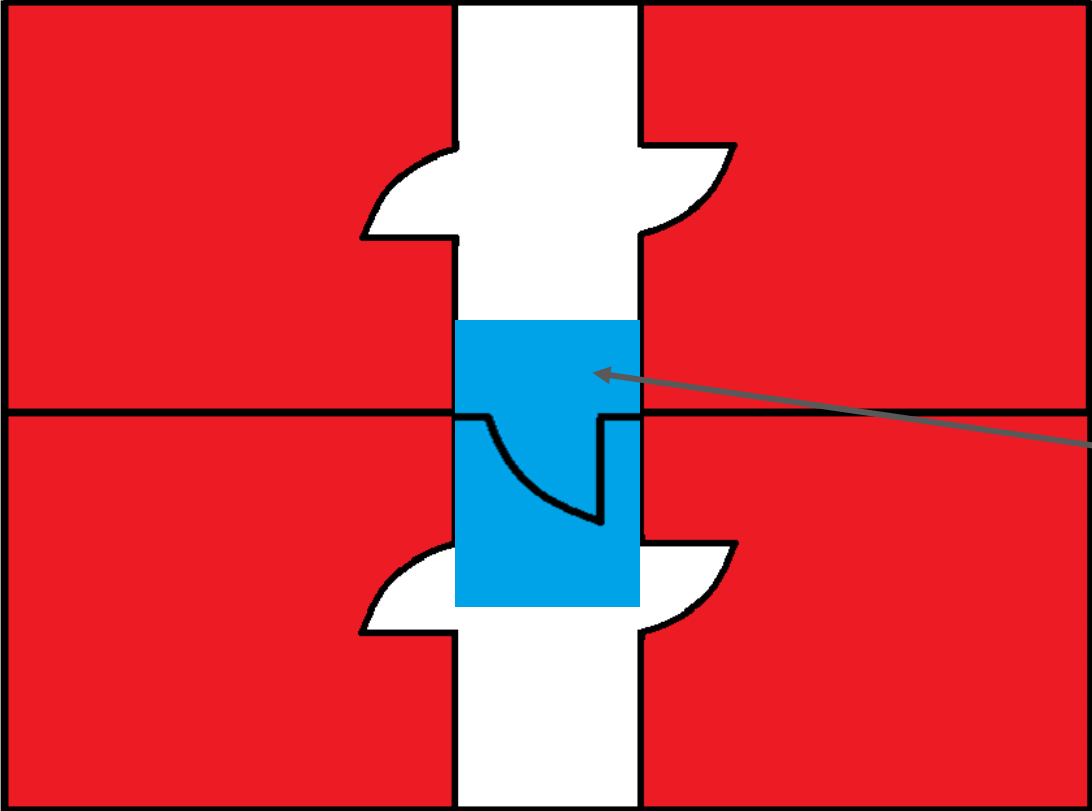


~~BS5839-1~~



BS5839-6

**General needs**



BS5839-1



BS5839-6

Sprinkler/AOV?



## What have we learnt so far;

- Free swing products can resolve issues that lead to closers on FED's being tampered with
- Devices on FED's should form part of a critical system
- Critical systems rely on relevant AFD being present
- In some social housing, relevant AFD may not be available to form a critical system

## Compliance Paradox Complete!

*So what do you do in situations where there is no AFD?*

# SFAIRP - So Far As Is Reasonably Practicable

Legal principle in UK H&S law, applied when determining extent of safety measures

- Balance risk vs' cost & effort
- Risk Assessment
- Defending Compliance Actions
- Continuous Review
- Penalties for Non-Compliance



*“While a particular category of actuation might be desirable, the category of actuation might not be technically achievable or reasonably practicable in existing buildings” - BS 7273-4 Clause 4, Commentary*

# Variations

Change from 'deviation' to 'variation'

- Clarity of intent
- Regulatory Flexibility
- Legal and compliance precision
- Consistency with other standards



# Variations

BS 7273-4:2015+A2:2023, Clause 6

Variations should be;

- risk assessed
- noted clearly in specification OR clearly noted during installation
- detailed on Commissioning Certificate
- Agreement from all relevant parties



# General Needs block - Scenario 1a

## Mr Jones

- Mr Jones has lived in his 9th floor flat for 40+ years
- He raised his family there, who have long since moved out and
- Mrs Jones passed away some time ago and he now lives alone, unwilling to consider moving because of the attachments he has to his home
- Mr Jones struggles on a daily basis to get into his flat, but because there is no AFD, the RP has struggled to find a solution.
- Eventually, Mr Jones has his son disconnect the arm on the door closer, Mr Jones daily struggles to get in to his home are over.



# General Needs Block - Scenario 1b

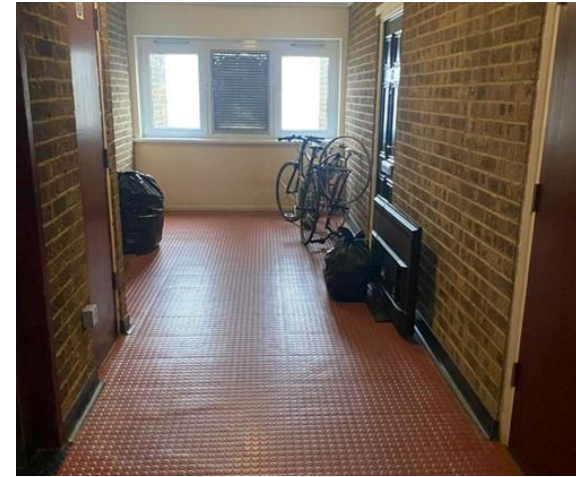
## Sam

- Sam is a young single parent with a 4 year old daughter and has been provided accommodation next door to Mr. Jones
- Coming home from the school run or with arms full of shopping, Sam always struggles to get into the flat.
- Sam speaks to the council about the issues and raises concerns that their daughter is likely to be injured by the door closing on them.
- Because there is no AFD, the RP is unable to find a solution.
- Taking pity on her, Mr. Jones' son performs the same action on Sams door closer.



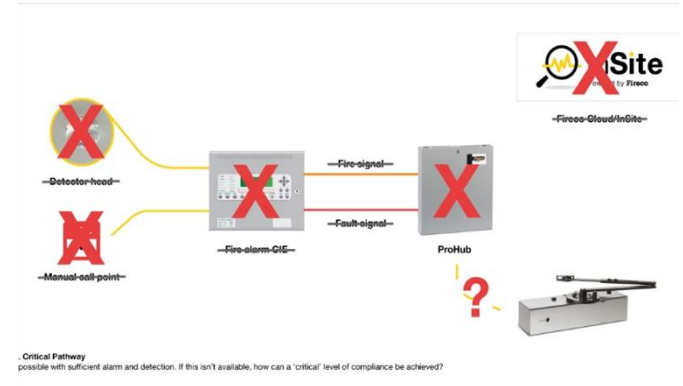
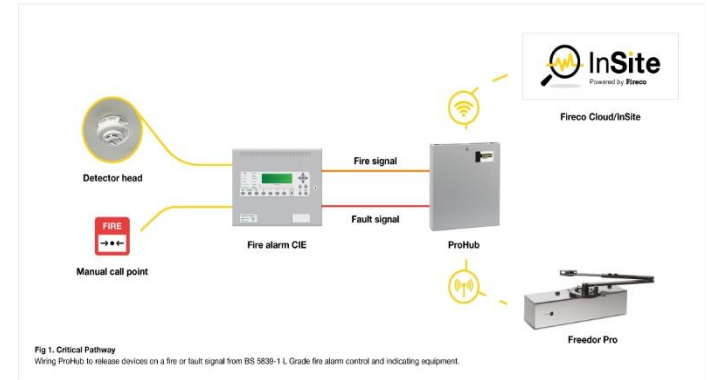
# Sheltered Housing - Scenario 2

- The resident has severe arthritis and it is too painful to open the front door by themselves.
- There are no on site staff overnight.
- The communal areas have an L4 Part 1 fire alarm but the flats have their own independent Part 6 detectors.
- The RP is struggling to find a solution as there is insufficient room for a hydraulic open with push button to activate.
- One of the other residents is a retired carpenter and offers to unscrew the closer arm from the door frame so that the door no longer offer resistance when opening.



# Is there a solution?

- Lack of AFD prevents a 'compliant' solution
- Would the addition of relevant AFD be reasonably practicable?
- A variation could help mitigate some of the risk
- Acoustic device could be used with part 6 detectors
- What level of risk is acceptable?



Additional considerations;

- Maintenance
- Testing
- Will I be trapped in my flat?
- Would a delayed release be useful?
- Continuous review
- Automatic door operators



## Summary;

- Non-functioning door closers are an emerging issue
- Free-swing devices could deal with the root cause
- The correct level of AFD is important
- Variations could be used where AFD isn't available
- You can only go 'so far as is reasonably practicable'

*Any questions or comments? Grab me for a chat later or email [pete.davies@fireco.uk](mailto:pete.davies@fireco.uk)*