

Summary Report of Fraser Walker Associates Findings

Senior Living Fire Alarm Upgrades

Purpose

The following report aims to summarise the findings of Fraser Walker Associates, following surveys they completed on fire alarm systems at Blunden Court, Bowring House, Dower House, Moat Lodge and Shepherds Court. These surveys were completed 14th December 2022.

Site Details

The below table summarises details of the current fire alarm system at each site. See appendix 1 for details on classification terms.

Site	Type of System	Age of System	Communal Classification	Flat Classification
Blunden Court	Conventional, Multiple Zones	At least 15 years	L4 (assumed)	LD2 (advised)
Bowring House	Conventional, Multiple Zones	At least 15 years	L4 (assumed)	LD2 (advised)
Dower House	Conventional, Multiple Zones	At least 10 years	L4 (assumed)	LD2 (advised)
Moat Lodge	Conventional, Multiple Zones	At least 10 years	L4 (assumed)	LD2 (advised)
Shepherds Court	Conventional, Multiple Zones	At least 15 years	L4 (assumed)	LD2 (advised)

Findings

Below is an extract showing the defects identified at all five sites.

Deviations observed

- There is a lack of detection in communal areas*
- Insufficient detection either side of fire doors with hold open devices*
- The distance between detectors is greater than permitted in some areas*
- There are no beacon sounders in the disabled toilets or boiler room.*
- The travel distances between Manual Call Points (MCP) appear greater than permitted in some areas – Note: Good practice is to install MCP's at reduced travel distances and changes of direction in buildings of this type where residents may be infirm or confused.*

In addition to the above defects, some site-specific issues were also identified. These have been noted below.

- Bowring House-
 - The day centre has no detection on the staircase from the mezzanine floor to the ground floor.
- Moat Lodge-
 - No detection was observed in the accessible void spaces.
 - No detection was observed in part of the basement.
 - The detector in the basement boiler room is obscured by pipework.
 - A MCP is not fitted in the basement.
- Shepherds Court-
 - There is a lack of detection in some areas, in particular two staircases were observed to have no detection fitted.
 - All MCP's are mounted higher than approved by BS5839-1 and may not be accessible to all.
 - Remote indicators outside each flat have been removed.

Recommendations

Across all five sites Fraser Walker Associates have made the same recommendations. An extract of their recommendations is provided below.

We recommend a fully addressable fire alarm system is installed to communal areas, voids where there is a risk of fire spread and associated high risk areas complying with BS 5839-1:2017 to provide L2 standard of coverage:- Category L2: systems installed only in defined parts of the building. A Category L2 system ought to include the coverage necessary to satisfy the recommendations of this standard for a Category L3 system; the objective of a Category L2 system is identical to that of a Category L3 system, with the additional objective of affording early warning of fire in specified areas of high fire hazard level and/or high fire risk;

Category L3: systems designed to give a warning of fire at an early enough stage to enable all occupants, other than possibly those in the room of fire origin, to escape safely, before the escape routes are impassable owing to the presence of fire, smoke or toxic gases;

NOTE 1 To achieve the above objective it is normally necessary to install detectors in rooms which open onto an escape route.

We understand a stay put policy is currently in place however a system designed to the above standard would provide early warning of fire developing within a flat should the Tunstall system be inoperative such escape route integrity is maintained should a general evacuation become necessary. This also could be programmed to warn residents of an impending evacuation if deemed necessary by the fire service or site manager.

In addition the functional integrity of the Tunstall system should be investigated. An additional smoke detector should be added to hallways and heat detector to kitchens

where necessary to achieve BS5839-6:2019 Category LD 2 Additional Protection - Escape routes plus high risk rooms.

Appendix 1- Fire Alarm Classifications

Life protection fire alarm systems are classified from L1 to L5, depending on the level of coverage. Below provides a brief summary of the level of protection offered.

L1 provides for Automatic Fire Detection (AFD) to be installed into all areas of a building.

L2 provides Automatic Fire Detection (AFD) as defined in L3 as well as high risk or hazardous areas. Examples of this could be Kitchens, boiler rooms, sleeping risk, storerooms if not fire resistant or if smoke could affect escape routes.

L3 Automatic Fire Detection (AFD) with smoke detection should be installed on escape routes with detection in rooms opening onto escape routes.

L4 provides Automatic Fire Detection (AFD) within escape routes only.

L5 is installed in building with a specific risk that has been identified. An example of this would be if there was an area of high risk that requires detection the category would be L5/M.

Within domestic settings, fire alarm detection are classified from LD1 to LD3, depending on level of coverage. Below provides a brief summary of the level of protection offered.

Category LD1 – Maximum life protection for a domestic property

LD1 alarm systems are installed throughout domestic premises. Detectors are fitted in all areas that form escape routes and in all rooms and other areas, other than those that have a low risk of ignition, such as bathrooms and toilets. The goal is to provide the earliest possible warning for occupants to ensure the preservation of life.

Category LD2 – Additional life protection for a domestic property

LD2 fire alarm systems require detectors to be installed in circulation areas that form part of the escape routes, and in certain rooms or areas that present a high risk of fire to occupants. This would include a kitchen and a key habitable room in the building.

Category LD3 – Standard life protection for a domestic property

Category LD3 systems feature detectors in all areas that form escape routes from the property. Unlike LD2 systems, LD3 systems do not have to place alarms close to high-risk sources of ignition.