London Borough of Enfield

Client Brief for Distributed Street Properties (2020)

Installation of Flat/Communal Automatic Fire Detection Systems (AFDS) and Emergency Lighting

Housing and Regeneration
Place
2020

BRIEFING DOCUMENTATION TO SERVICE PROVIDERS FOR THE LBEs' HOUSING & REGENERATION DEPARTMENT

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1. PURPOSE AND SCOPE OF THE COMMISION

1.1 The London Borough of Enfield (LBE) wishes to appoint a contractor to design and install Automatic Fire Detection Systems (AFDS) and associated Emergency Lighting Systems within the communal areas of the distributed street properties (DSP) and a select number of low-rise blocks within the LBE. The purpose of this Client Brief is to provide information and direction to facilitate the production of a Project Execution Plan (PEP) (as defined within the suggested JCT MTC Contract 2016 by the Service Provider for further review by LBE prior to issue of a Pre-Commencement Order (PCO).

1.2 This section covers the general works required for the properties that are included in the project.

1.3 Non-intrusive inspections have been carried out to conversion dwellings over the past 12 months to generally establish the fire safety issues that currently exist within these blocks. In most cases, access was not made to dwellings and the inspections were limited to the common parts of the buildings. Very few of the blocks have had an inspection carried out within the dwellings. These inspections include Fire Risk Assessments.

1.4 The contractor is expected to carry out a pre-inspection survey to confirm the condition of the communal areas of the blocks and current landlords electrical services and to confirm before commencement on-site, the suitability of the landlords system to accommodate the installation of the proposed detection and emergency lighting installations.

1.5 In addition, the report will briefly describe the visual inspection of the building and it will show the diverse range of building types that may cause some issues when it comes to fine-tuning a specification, but the strategy shall remain the same.

2 COMPENTENCY REQUIREMENTS

2.1 The contractor will hold a BAFE SP203-1(AFD) and SP203-4 (Emergency Lighting) and produce evidence of other memberships that apply to the scope of these works.

2.2 Contractors to be **Aico Approved Expert Installers** with registered operative numbers. It is expected that Aico equipment to be installed that can be remotely monitored.

2.3 The successful contractors shall deliver a high-quality service offering value for money to residents and also provide and secure continuous improvements across all of the works.

3 ACCESS AND BUILDING SAFETY INFORMATION

3.1 The contractor is to confirm prior to site attendance a list of any information required from the client. All certificates proving competency as highlighted in in Section 2 will be provided to LBE prior to commencing any installations on site.

3.2 Access to fobs and keys to voids will be supplied to the Contractor, where present.

3.3 The contractor is responsible for coordinating access to inspect individual dwellings directly with residents (contact details will be supplied).

3.4 The contractor will be provided with the latest asbestos report. The contractor shall allow for any subsequent R&D survey, as required during the progress of the works.

3.5 The contractor is to ensure that engineers have access to all tools and equipment required to fulfil the contract requirement.

3.6 LBE will provide details of all potentially violent residents and their associates prior to site visits taking place and the contractor must demonstrate that they have appropriate safe systems of work in place to control risks to lone workers.

3.7 The contractor is to make provision for safe working arrangements following all guidelines in respect to COVID-19 or pandemics generally.

4. CLIENT REQUIREMENTS

4.1 The contractor will carry out a survey of the blocks listed below in Appendix 1 and will be provided with copies of the council's existing electrical test certificates for background information on the blocks. The contractor is to pre-inspect all blocks before providing the estimated costs and PEP. The contractor is to allow within the survey for fully scoping the works required and ascertain all requirements to fully deliver the installation requirements.

4.2 The Contractor is to provide an outline programme for the successful delivery of the Project. The delivery programme should be developed on a risk basis commencing with any block where no AFDS is installed and the height of the building is above 4.5 metres. Thereafter, the Contractor is to provide written bi-monthly update reports to include 'no access' addresses.

4.2 All items installed to be collated into LBE's asset database Apex for the client's maintenance schedule. Each component installed shall be clearly noted.

4.3 The blocks forming part of this brief that require upgrade or replacement systems can be found in the table below.

4.4 The LBE reserves the right to amend, add to, omit from, revise or withdraw all or any part of this requirement during the procurement exercise.

5. PERFORMANCE SPECIFICATION

5.1 Automatic Fire Detection System – See Typical Layouts in Appendix 1

a) Within each flat – Radio Interlinked to communal system

A fire alarm system conforming to BS 5839-6:2019, and comprising of multi-sensor detectors in the kitchen, lounge and the circulation space within the hall. Each detector to be interlinked. Each detector head is a stand-alone smoke

detector so even if some detectors are not functioning the main system will still operate.

In addition, the communal alarm system conforming to the various parts of BS 5839-1:2017 will be extended into the flat by means of a multi sensor detector within the kitchen and within the hall circulation space. If a fire was to occur within the lounge, the occupant will be alerted by the alarm, which will sound within the flat of origin only. If the fire spreads and is picked up by the heat detector in the hall then this will send a signal to the communal panel and the alarm will be activated throughout the communal areas and flats to alert occupants to evacuate. The possible inclusion of a hush button will allow occupants to silence false alarms without disturbing other residents, but in the event of a more serious fire or if the flat is empty at the time, the heat detector will activate and sound throughout the building for an evacuation to take place. As well as the provision for smoke and heat detection, CO detectors will also be installed where gas appliances exist within the flat.

b) Within the Escape route

The system will conform to BS 5839-1:2017 and will provide Multi-Sensor detectors in the circulation space on each landing within the building. This system will be interlinked with the two detector heads in the kitchen and hall within each flat. The system will be interlinked to a panel situated within the main block entrance. The Grade of system will not always be A. For example, where no landlord supply exists Grade F shall be installed. In the event of a fire in the kitchen of any flat the heat detector will immediately send a signal to the panel which will activate the alarm to that will alert occupants to evacuate. The alarm will sound within the communal areas and the hall and kitchen of each flat. Within 3 storey buildings and above, a Manual Call Point (MCP) with transparent cover will be situated within the main entrance to the building to enable evacuating residents to raise the alarm to others within the block.
It should be borne in mind that this system is designed to give an early warning to residents of buildings where compartmentation cannot be guaranteed, and the design is based upon life risk.

All Installations require a landlord's electricity supply so that hardwired systems can be operated for AFD and for emergency lighting. Several blocks have been previously identified as having no landlords supply and a decision has been made that Grade F systems will be installed. This approach should be adopted for two storey low risk blocks only. LBE should also be identified of such installations before commencement. There are 5 varying options on installation specifications for converted street properties. These can be found in Appendix 3 and each variation shall be priced accordingly.

5.2 Emergency Escape Lighting

If the mains lighting fails in a building, emergency escape lighting should be provided to enable safe exit from the building where the escape routes are complicated or where there is no alternative lighting likely to be available. Contractors should consider the

buildings and their current lux levels and design and install emergency light to comply with BS 5266:2016, ICEL 1003 and TM12.

The minimum standard of installation shall provide an average level of illuminance at floor level of 2 Lux on all escape routes for a period of three hours.

DALI Emergency Lighting System Specification

The Emergency lighting control system shall be DesignPath or similar approved and utilise the DALI communication protocol (IEC62386) to undertake the compliance testing for both Function and Duration tests. All components including the Emergency Luminaire and Emergency control system will need to include devices that adhere to the DALI standard and allow for communication to send and receive information across the DALI network.

The system shall provide 2-way communication to DALI addressable devices adhering to a 64 per DALI subnet. The Emergency lighting control system will have a Touchpanel that can be used for system configuration, used for accessing device status, provide an indication of any faults by a visual change on screen and access for compliance reports.

The Touchpanel will be provided with 2 DALI subnets for the connection of the DALI emergency luminaires each subnet shall be capable of controlling 64 devices for a total of 128 in total.

In accordance with BS5266-1 that outlines the requirements for the monthly Function Test and an annual Duration Test. The responsible persons must ensure regular testing, maintenance and recording of the test results. To help facilitate this requirement, the emergency lighting control system shall provide test results to the touchscreen device and by email. The system shall provide detailed information of device status of the emergency components including the DALI invertor, lamp and battery status.

The Emergency lighting system shall initiate tests of the DALI Emergency devices automatically at specified times and dates as required. The Emergency Luminaire will be put into battery mode by power cycle by the DALI invertor. The Function test will run for a time period of less than 30sec. The Duration test shall be initiated once per year allowing for a full 3Hr test to take place. The tests shall be undertaken at an agreed time and date to ensure the minimal disruption to site occupants.

The individual DALI Emergency Luminaires shall also provide a device status using a bi-colour LEDs that will indicate Normal, Function test / Duration test in operation, Battery charge and Lamp failure by indication with the blinking or static Red and Green LED indicators.

The Emergency test system will provide notification by email the reports for compliance purposes for both the Duration and Function tests, providing the result of test and information for reason of failure. The system shall also provide notification of any faults

that occur on the DALI emergency luminaires connected to a subnet immediately to the local Touch panel and in turn by email notification.

To facilitate the reporting of email notification the Touch panel will have an Ethernet connection point available to allow for connection to a building network. If a building network access point is not provided, then a 4G Router with Sim will need provided as part of the system. Any associated costs for mobile data shall be the responsibility of the building owner / responsible person.

EL Luminaires

The EL luminaire units shall be surface mounted/semi recessing, general purpose, vandal resistant bulkhead luminaire. White polycarbonate base with clear ribbed diffuser. (Semi recessing kit to have white finish.)

Suitable for through wiring with (8W T5 fluorescent lamp*/High intensity LED light source*) and capable of accepting sign pictogram kit. 230V±10% ac 50/60 Hz input.

Emergency lighting versions to have three hours emergency duration rechargeable battery with six-year warranty and to incorporate fully automatic, self-testing facility and status indication through single multi-function, dual-colour LED indicator.

All emergency lighting versions to be Design Plan Mini-Quad or similar approved.

6 PROPOSAL & PRICING

6.1The Client requires the contractor to have completed the installation programme within 12 months of commencement.

6.2 The client will advise the contractor when voids become available at the buildings listed.

6.3 All meetings and site visits that are required to complete the provision of any part of the services detailed above will be deemed to be included within the submission price.

6.4 The supplier must submit a written proposal of not more outlining; their skills and knowledge to undertake the commission; their proposed methodology for undertaking the intrusive works, the availability of resources to deliver the commission in line with the client's requirements. This is set out in the provided quality questions.

6.5 Information supplied by the LBE (whether in the Tender Documents or otherwise) is provided for general guidance in the preparation of the tender. The Tenderer must satisfy themselves as to the conditions affecting the supply and cost of labour, the availability and prices of materials and all other conditions of the locality in which the works the subject of the framework agreement are to be carried out insofar as the same might affect their tender.

6.6 The price for the scope and specification for the above works will be submitted in the following tables overleaf but should be completed in the pricing schedule in excel. All prices should be fully inclusive of all labour, materials, preliminaries, overhead and profit. All prices should be exclusive of VAT. All prices will be fixed for the full duration of the project.

	Estimated Cost - Two Storey Block				
Specification and Scope	**Combination 1**	**Combination 2**	**Combination 3**	**Combination 4**	**Combination 5**
Design, supply and commission the Automatic Fire Detection System					

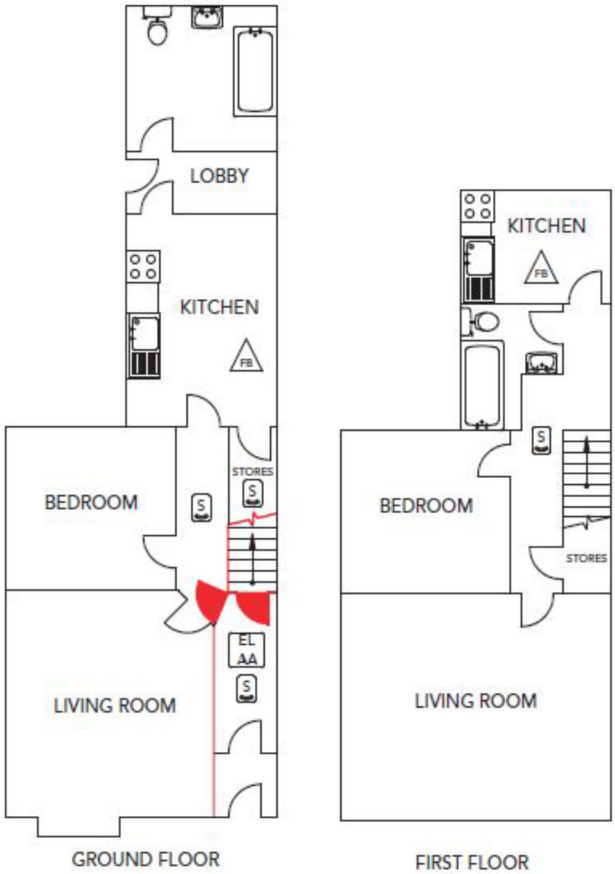
Design, supply and commission the Emergency Lighting System					
Two sessions of staff training for AFDS					
Strip out costs if required for any decommissioning system and cables					
TOTAL COST					

	Estimated Cost - Three Storey Block				
Specification and Scope	**Combination 1**	**Combination 2**	**Combination 3**	**Combination 4**	**Combination 5**
Design, supply and commission the Automatic Fire Detection System					
Design, supply and commission the Emergency Lighting System					
Two sessions of staff training for AFDS					
Strip out costs if required for any decommissioning system and cables					
TOTAL COST					

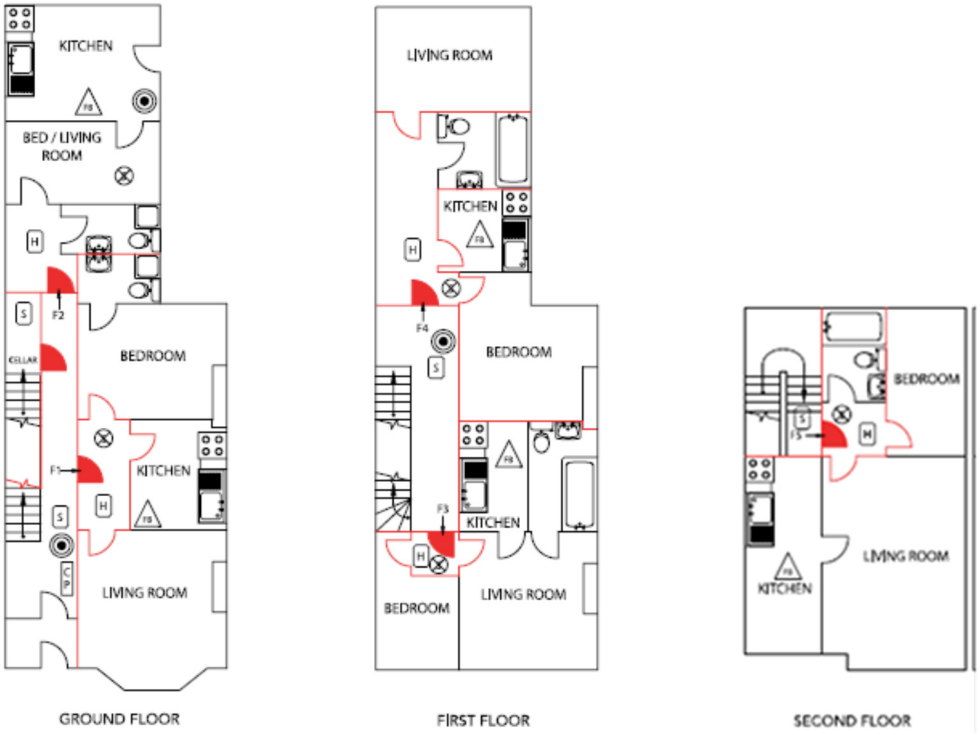
	Estimated Cost - Four Storey Block				
Specification and Scope	**Combination 1**	**Combination 2**	**Combination 3**	**Combination 4**	**Combination 5**
Design, supply and commission the Automatic					

Fire Detection System					
Design, supply and commission the Emergency Lighting System					
Two sessions of staff training for AFDS					
Strip out costs if required for any decommissioning system and cables					
TOTAL COST					

Appendix 1 - Typical Floor Plans – Two Storey Converted into Two flats



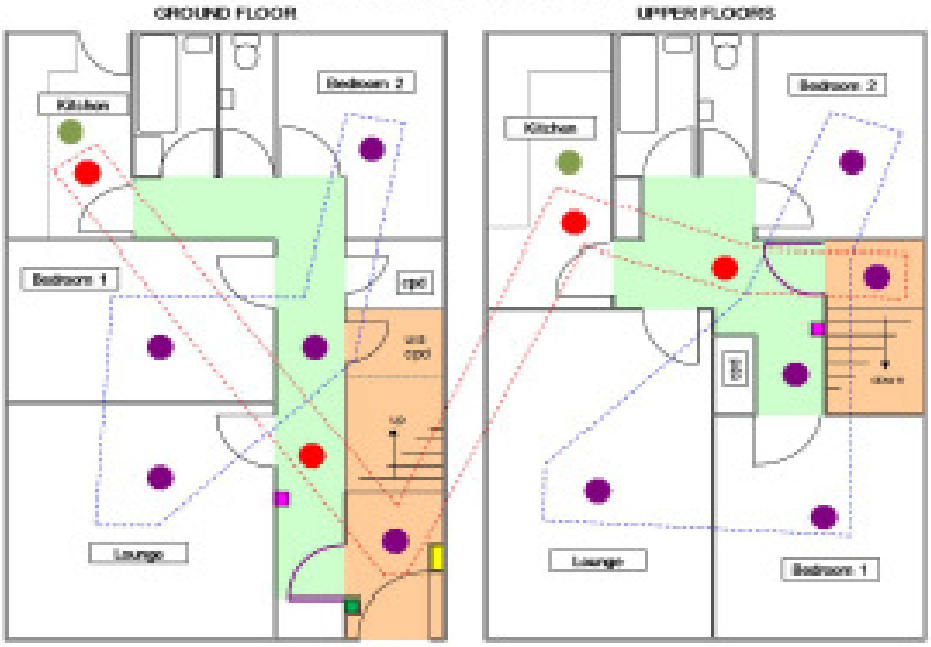
Three Storey Converted into Five flats



For the system to provide comprehensive 'whole house' protection, it is recommended that the system be fitted to Leaseholder dwellings as well as tenanted dwellings and communal areas. In order to encourage leaseholder take-up of the system it is proposed to provide a Lithium battery powered system to avoid the problems of disturbance of surface finishes and possible issues of interconnection with existing power supply within dwellings.

By providing latest technology, good quality detectors and strategic siting of heat detectors it is expected that unwanted activations will be greatly reduced.

Example layout of proposed AFD system



Key

- Heat Detector (Radio linked to all heat doctors in house)
- Control Panel and Switched Input Module - Radio(LHK)
- Heat & Smoke Detector (Radio linked - whole house)
- Wireless interlink circuit (Heat and Multi-Head Detection)
- Wireless interlink circuit (Multi-Head Detection)
- Communal Entrance & Staircase Lobby
- Manual Call Point
- Dwelling internal escape route (Hall)
- Flat Entrance Door - Closer and smoke seals fitted
- Carbon Monoxide Alarm situated near boiler

Specification of detector unit

Multi-Head detection - Smoke and Heat alarms

Fixed temperature sensors for Heat alarms

Rechargeable Lithium cell battery back-up (10 year)

Radiolinkable to selected detectors/sounders in building

Single unit Test and Hush buttons on each detector unit

Appendix 2 – List of properties

Date of FRA	Risk Rating	UPRN	Address	Floors	Units	Post Code	Year Built
06/11/2018	High	FBK00069-1	Belsize Avenue 62a-62	3	2	N13 4TJ	
		FBK00136-1	Bury Street 193-193A	2	2	N9 9JE	1900
12/03/2018	High	FBK00178-1	Chase Green Avenue 27a-c	3	3	EN2 8EA	
	HIGH	FBK00197-6	Church Street 112,112A,112B EVENS	4	3	N9 9AS	1982
12/03/2018	High	FBK00197-1	Church Street 94, 94a, 94b	4	3	N9 9AS	
08/11/2018		FBK00197-2	Church Street 96, 96a, 96b, 98, 98a, 98b	4	6	N9 9AS	1982
18/12/2017	HIGH	FBK00200-1	Churchbury Lane 88-90 1-4	2	4	EN1 3UN	1959
12/03/2018	High	FBK00216-1	Conway Road 46a-b	2	2	N14 7BE	
12/03/2018	High	FBK00261-1	Derwent Road 31a-c	2	3	N13 4PY	
		HLS00023-1	Fox Lane 34-34A	2	2	N13 4AL	1910
12/03/2018	High	FBK00338-1	Fyfield Road 21a-b	2	2	EN1 3TT	
12/03/2018	High	FBK00371-1	Grovelands Road 34a-c	2	3	N13 4RH	
	HIGH	FBK00511-1	Latymer Road 8-8a	2	2	N9 9PU	1930
06/11/2018	High	FBK00528-1	Lodge Drive 21a-b	2	2	N13 5LA	
12/03/2018	High	FBK00542-1	Maidstone Road 158a-b	2	2	N11 2JP	
12/03/2018	High	FBK00600-1	Natel Road 33a-b	2	2	N11 2HU	
12/03/2018	High	FBK00606-1	New River Crescent 79a-b	2	2	N13 5RL	
12/03/2018	High	FBK00638-1	Osbourne 68a-b	2	2	N13 5PS	
12/03/2018	High	FBK00651-1	Park Avenue 81a-b	2	2	N13 5PH	
12/03/2018	High	FBK00652-1	Park Avenue 9a-b	2	2	N13 5PG	
12/03/2018	High	FBK00658-1	Parsonage Lane 173a-b	2	2	EN1 3UJ	
12/03/2018	High	FBK00773-1	St Andrews Road 12a-b	2	2	EN1 3UB	
10/08/2016	HIGH	FBK00774-1	St Andrews Road 16a-b	2	2	EN1 3UB	1906
01/07/2016	HIGH	FBK00775-1	St Andrews Road 18a-b	2	2	EN1 3UB	1906
12/03/2018	High	FBK00776-1	St Andrews Road 27a-b	2	2	EN1 3UA	

12/03/2018	High	FBK00777-1	St Andrews Road 28a-b	2	2	EN1 3UB	
18/07/2016	HIGH	FBK00778-1	St Andrews Road 29a-b.	3	2	EN1 3UA	1906
12/03/2018	High	FBK00779-1	St Andrews Road 31a-b	2	2	EN1 3UA	
12/03/2018	High	FBK00796-1	Sterling Way 102a-b	2	2	N18 1QU	
		FBK00797-1	Sterling Way 94a-b	2	2	N18 1QU	1900
12/03/2018	High	FBK00797-2	Sterling Way 96a-b	2	2	N18 1QU	
		FBK00797-3	Sterling Way 98a-b	2	2	N18 1QU	1900
	HIGH	FBK00810-1	Sydney Road 21-21A CONS	2	2	EN2 6TS	1897
	HIGH	FBK00811-1	Sydney Road 23A-23B ODDS	2	4	EN2 6TS	1897
	HIGH	FBK00811-2	Sydney Road 25A-25B ODDS	2	2	EN2 6TS	1897
	HIGH	FBK00812-1	Sydney Road 41-41A CONS	2	2	EN2 6TS	1897
		FBK00819-1	The Generals Walk 1-2a	2	4	EN3 6BX	1870
12/03/2018	High	FBK00826-1	The Limes Avenue 10a-b	3	2	N11 1RG	
12/03/2018	High	FBK00827-1	The Limes Avenue 45a-b	2	2	N11 1RD	
12/03/2018	High	FBK00830-1	The Limes Avenue 86a-b	2	2	N11 1RH	
		FBK00831-1	The Mall 27 a-b	2	3	N14 6LR	1914
	HIGH	FBK00856-1	Wakefield Road 18a-b	2	2	N11 2SU	1906
12/03/2018	High	FBK00861-1	Warwick Road 109a-b	2	2	N11 2SU	
12/03/2018	High	FBK00883-1	Windsor Road 8a-b	2	2	N13 5PR	

Appendix 3 - Street Property AFDS Conversion Options

Two Storey Block Combinations

Combination	Requirement	Description	Communal Area	Entry into the flat
1	Full power supply	Grade D1 Mains communal with Gateway and Grade D1 mains in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF)
2	If no mains power in communal area	Grade F1 communal with Gateway and Grade D1 mains in flat	Grade F1 Battery Optical Sensor alarm with built in Radio Frequency interconnection (Model Ei650RF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF)
3	Leaseholder not allowing mains power in flat or electrics not to standard	Grade D1 Mains communal with Gateway and Grade F1 Heat in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF)
4	No main power in communal area and Leaseholder not allowing mains	Grade F1 communal with Gateway and Grade F1 Heat in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF)	Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF)

	power in flat or electrics not to standard		Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	
5	No communal area	No communal area and Gateway	Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF) or Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF) Ei428 Radio Frequency relay to Strobe light external of flat SAABC

Three Storey Block Combinations

Combination	Requirement	Description	Communal Area	Entry into the flat
1	Full power supply	Grade D1 Mains communal with Gateway and Grade D1 mains in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF)
2	If no mains power in communal area	Grade F1 communal with Gateway and Grade D1 mains in flat	Grade F1 Battery Optical Sensor alarm with built in Radio Frequency interconnection (Model Ei650RF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF)
3	Leaseholder not allowing mains power in flat or electrics not to standard	Grade D1 Mains communal with Gateway and Grade F1 Heat in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF) Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF)
4	No main power in communal area and Leaseholder not allowing mains power in flat or	Grade F1 communal with Gateway and Grade F1 Heat in flat	Grade D1 Mains powered Multi-Sensor alarm (Model Ei3024) with Radio Frequency interconnection (Model Ei300MRF) Alarm Controller (Model Ei450)	Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF)

	electrics not to standard		All connected to Aico Gateway (Model Ei1000G)	
5	No communal area	No communal area and Gateway	Alarm Controller (Model Ei450) All connected to Aico Gateway (Model Ei1000G)	Grade D1 Mains powered Heat Alarm (Mode Ei3014) with Radio Frequency interconnection (Ei300MRF) or Grade F1 Battery Heat Sensor alarm with built in Radio Frequency interconnection (Model Ei603RF) Ei428 Radio Frequency relay to Strobe light external of flat SAABC