2.1.4 Comments

The existing supply capacity and arrangement is sufficient to serve the basement maximum electrical demand as it stands.

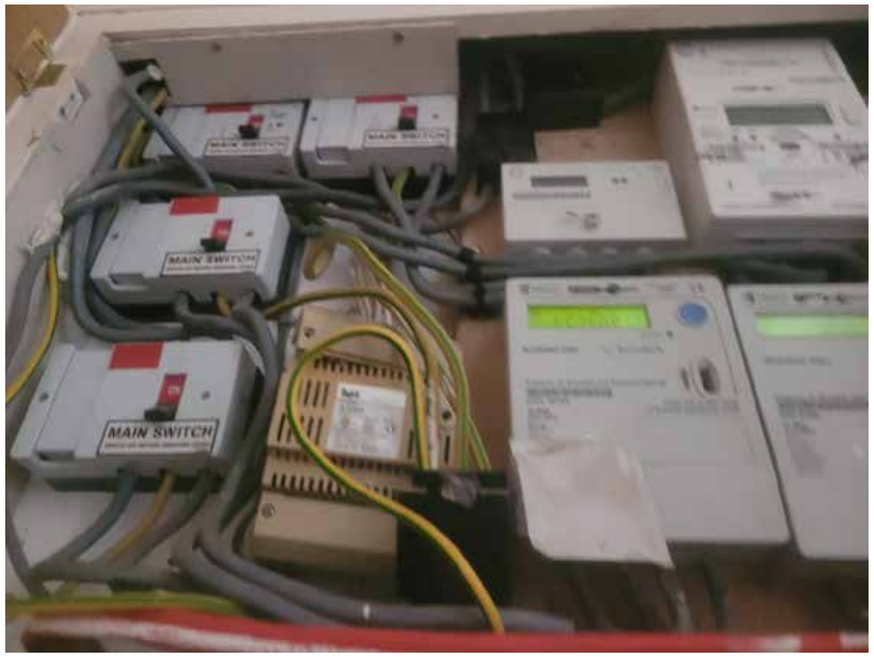
2.1.5 Recommendations

If the basement flat is to be let as a residential unit, then the existing supply can be retained. However, if the basement is to be contained within one facility along with the ground, first and

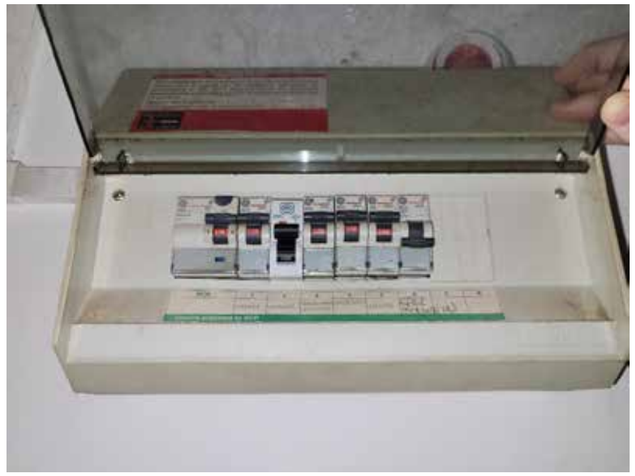
2.3 MAIN DISTRIBUTION EQUIPMENT

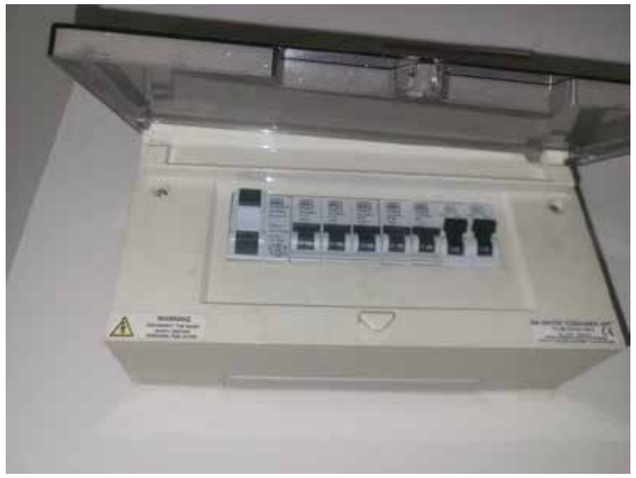
2.3.1 Apartment - Description of the Installation

Each apartment is supplied from its own dedicated supply meter located in the electrical service cupboard at the front door. There is a sub-main feeder cable installed to a Consumer Unit located at each apartment. This feeder cable is protected by a 60 amp Fused Switch (labelled Main Switch) as detailed in the image below:



As stated above, each apartment is fitted with a dedicated Consumer Unit. Example images are included below:

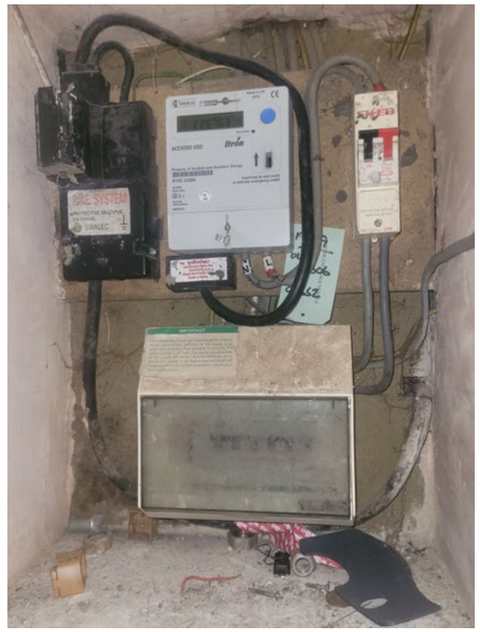




The consumer units are of the insulated type fitted with a 30milliamp Double Pole RCD Main Switch which provides additional earth fault protection which is required for all lighting circuits in a domestic type dwelling and socket outlet circuits rated at 32 amp or less. Miniature Circuit Breakers provide individual circuit protection against overload and short circuit faults between live conductors.

2.3.2 Basement Apartment – Description

The basement is provided with a dedicated consumer unit located within the basement electrical cupboard along with the DNO cutout and energy metering equipment AS detailed in the image below:



The consumer unit is of the insulated type fitted with a 30milliamp Double Pole RCD Main Switch which provides additional earth fault protection which is required for all lighting circuits in a domestic type dwelling and socket outlet circuits rated at 32 amp or less. Miniature Circuit Breakers provide individual circuit protection against overload and short circuit faults between live conductors.

2.4 WIRING SYSTEMS

2.4.1 Lighting & Small Power Circuits

The building is wired in PVC/PVC insulated cables which are generally concealed under the building fabric.

Apartment Circuits include the following:

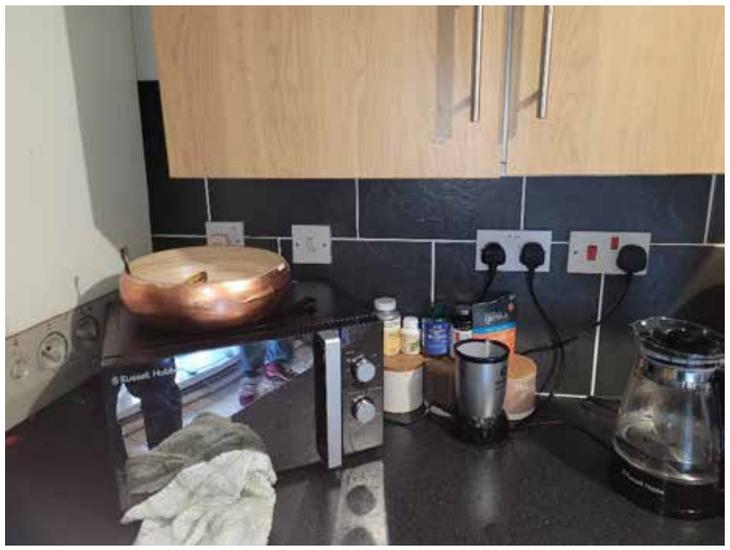
Cooker - 32 Amp
Shower - 50 Amp
Ring Final Circuit (Sockets) Kitchen – 32 Amp
Lights – 6 Amp

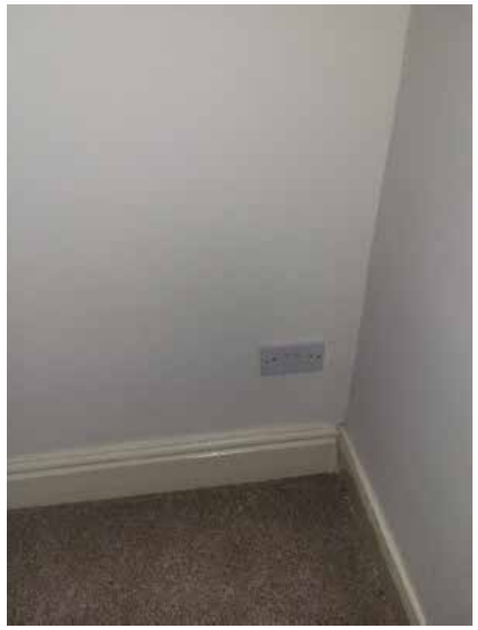
Communal/Landlord area lighting and socket outlets are connected to the adjacent apartment circuits.

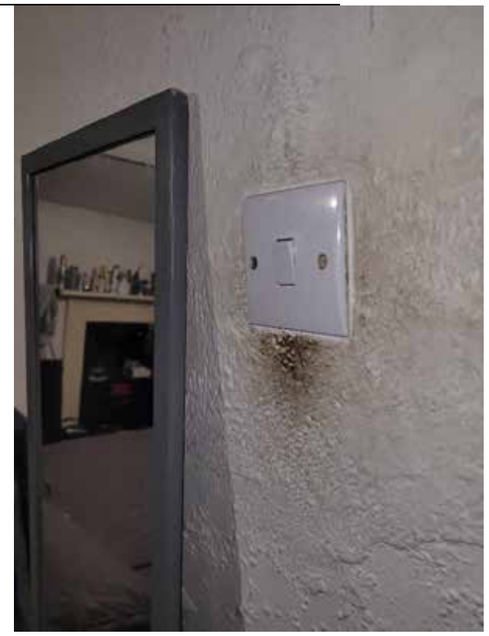
2.4.2 Accessories and Light Fittings

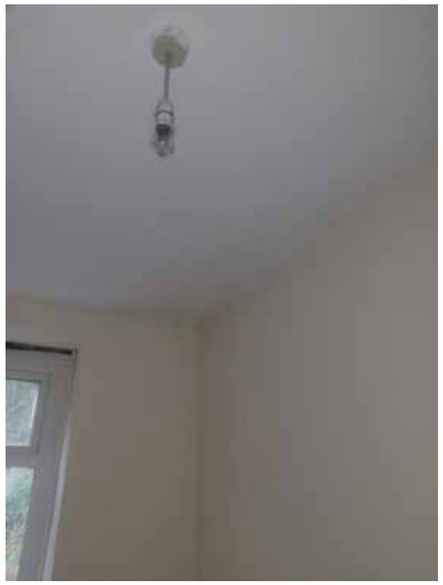
Accessories are compliant with the relevant British Standard and of a white finish. The condition of the accessories is generally satisfactory however some are showing signs of wear and tear.

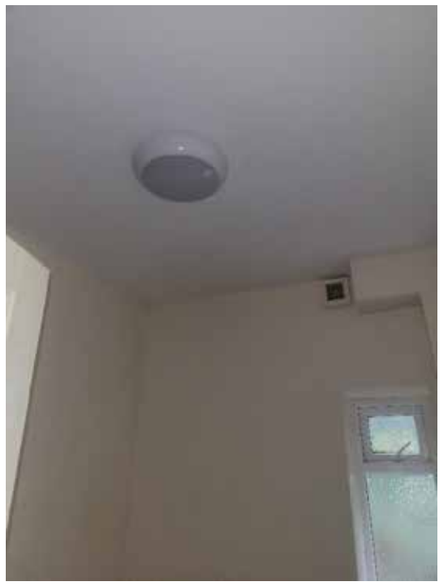
Light Fittings consist of Pendant Drops, batten lamp holders and enclosed opal bulkhead fittings in Bathrooms.

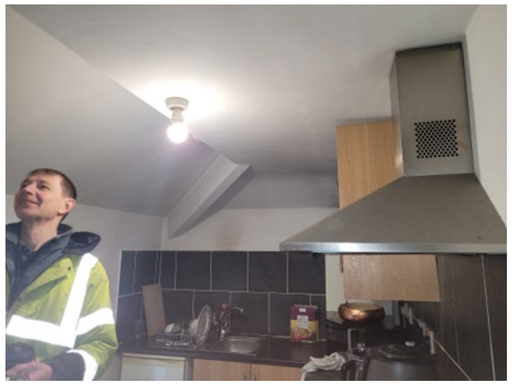












2.4.3 Design Analysis

Although in serviceable condition the consumer units do not comply with the requirements of the current version of BS 7671:2018. IET Wiring regulations 18th Edition – Requirements for Electrical Installations.

The current regulations require that distribution equipment located in escape routes are either manufactured from non-combustible materials or contained within and enclosure constructed form non-combustible materials.

Furthermore, a front end (main switch) Residual Current Device if activated due to an earth fault can cause inconvenience and possible danger in the event of a fault as the whole apartment will be plunged into darkness.

The electrical accessories are generally in a satisfactory condition, some show signs of ageing but are fit for purpose.

The wiring system where visible is in a satisfactory state and does not show any signs of thermal damage due to overloading.

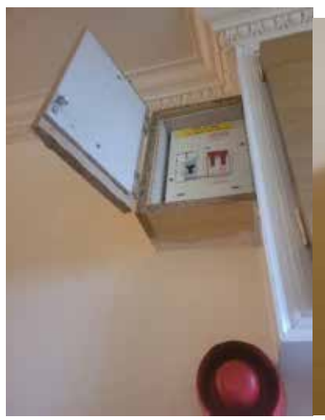
It was not possible to verify whether the electrical installations have been subjected to Fixed Wiring Inspection and Testing (EICR – Electrical Installation Condition Report) the periodic inspection labels (where fitted) on the distribution boards do not note the date of last inspection and date of next inspection.

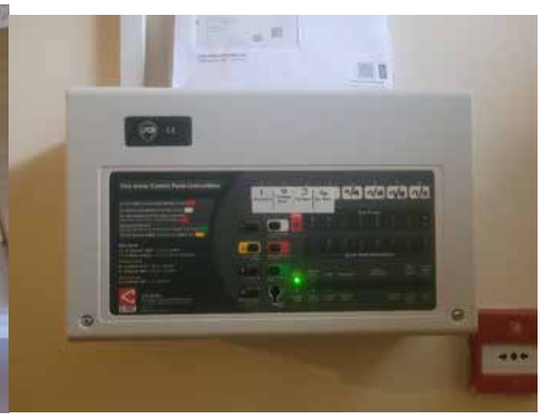
In Wales, landlords of rented properties must ensure that electrical fixed wiring inspection and testing are carried out every five years.

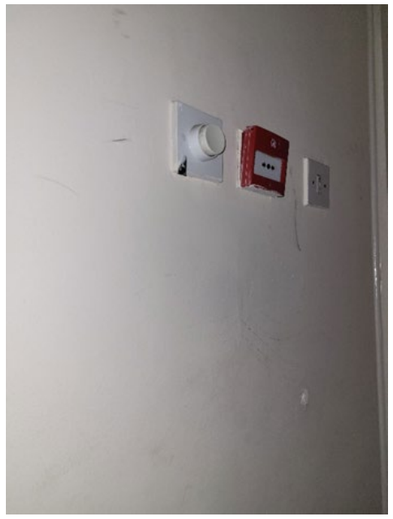
SECTION 3 – FIRE ALARM SYSTEM

3.1 GENERAL

The property is fitted with a conventional Fire Alarm system and the main panel is found at the main entrance. The panel is supplied from its own dedicated supply as recommended by BS 5839 Part 1 2017 – which is the code of practice for designing, installing, commissioning, and maintaining fire detection and alarm systems in non-domestic buildings.



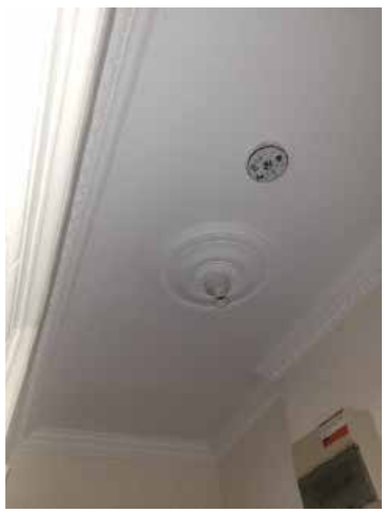




There is no documentation evident to verify that regular inspection and testing of the Fire Alarm System occurs.

The system is fitted with automatic detectors and manual call points and wall mounted sounder units.

There are also instances where smoke/heat detection devices have been removed. See image below:



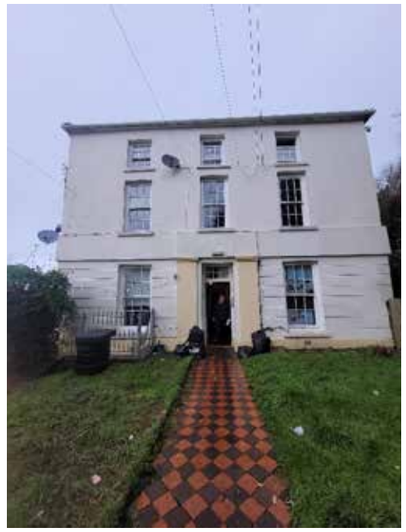
3.2 Design Analysis

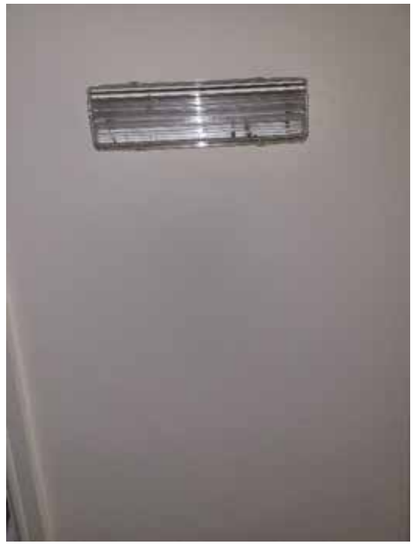
It is our considered opinion that based upon the visual survey undertaken that the Fire Alarm and Detection system does not comply with current British Standard requirements and a Fire Risk Assessment be carried out on the property as required by the Regulatory Reform Order (Fire) 2005.

SECTION 4 – EMERGENCY LIGHTING

4.1 – General

Emergency lighting is provided in the communal area and externally (above front door) by standalone non maintained bulkhead lighting, see image below:





4.2 Design Analysis

The presence of emergency lighting test switches was not evident during our visit and there was no evidence that the system is being subjected to regular inspecting and testing as laid out in BS 5266 part 1 2016: Emergency lighting. Code of Practice for the Emergency Lighting of Premises.

Again, it is recommended that the emergency lighting system be reassessed following the undertaking of the Fire Risk Assessment mentioned in Section 3.

SECTION 5 – CONCLUSION

This economic life expectancy is detailed in The Chartered Institute of Building Services Engineers (CIBSE) publication "**CIBSE Guide Part M - Maintenance Engineering & Management**" which states that 20/25 years is the general life expectance of an Electrical Installation. Ther are elements of electrical installation which are reaching this milestone and serious consideration should be given to rewiring to comply with current regulations if the building is to be retained for its current use as private rented dwellings.

Furthermore, the Fire Alarm and Emergency Lighting systems are also in need of upgrading to current standards. However, this should be undertaken following the completion Fire Risk Assessment which should be carried out by a competent Fire Engineer.

However, if the building is to be refurbished then the complete installation should be removed and new installation and systems should be designed, installed and commissioned to suit its proposed use and in compliance with all relevant British Standards and Building Regulations.

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MEP Building Services Consultants

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