FIRE RISK ASSESSMENT

The Old Works

St Bartholomew's Place,

New Road,

Rochester.

ME11 1TW

MCR National Homes Ltd
Universal Square,
3rd Floor, Building 2,
Devonshire Street North.
Manchester. M12 6JH

Live Safe Ltd
64 The Park,
Ealing,
London.
W5 5NP

Certificate number 12650
ISO 9001
OHSAS 18001

December 2024
FINAL Version

Report Produced For: MCR National Homes Ltd

Report Produced By: Andrew West

Date of Survey: 13/11/2024

Report Date: 10/12/2024

	Name	Signature	Date
Assessed by	A.W.		13/11/2024
Prepared by	A.W.		10/12/2024
Checked & Reviewed by	A.W.		10/12/2024
Issue Status	**FINAL**		
Purpose of Issue	**FINAL Issue**		
Document Reference	MCR/St Barts/101224b		
Amendments	10/12/24 – b: FINAL ISSUE		

Note: The above form is for Live Safe Ltd Client satisfaction system purposes only. This document has been sent to you confidentially and is only intended for distribution from Live Safe Ltd to its named client contact(s). As Live Safe Ltd client, you may need to distribute this document as part of the work being conducted; and upon any further distribution, Live Safe Ltd holds no liability for any incorrect recipient(s) gaining access to this document where distribution is not directly from Live Safe Ltd.

Executive Summary

Priority	No. of Actions	SLA
Low	3	3 months from the date of the FRA
Medium	6	2 months from the date of the FRA
High	4	1 month from the date of the FRA

Assessed Risk	**Tolerable**

Recommended Review	On or Before 13 November 2025

Acton Plan

FRA Action Plan

St Barts, Rochester

Date of FRA Survey 13/11/2024

To remedy the deficiences identified in the Risk Asessment, the following recommendations should be implemented in order to reduce the fire risk to, or maintain it at, the following level.

Trivial ☑ Tolerable ☐

Deficiency / Rectification	*Priority*	*Date to be Rectified*	*Date Rectified*	*Action by Whom?*
Commissioning / Maintenance certificates to be provided	Medium	13/01/2025		MCR
Undertake any PAT testing to portable equipment.	Low	13/02/2025		MCR
Housekeeping programme and records to be provided	Medium	13/01/2025		MCR
Install central communal door to the first floor communal area.	Medium	13/01/2025		MCR
Rendevous points to be established and communicated to residents.	Low	13/02/2025		MCR
Repair all fire doors	Medium	13/01/2025		MCR
Esnure easy access from New Road to the dry risers at the eastern and western ends of the building.	High	13/12/2024		MCR
Fire damper to be installed to the extract vent from the water tank room to the adjacent lobby.	Medium	13/01/2025		MCR
Undertake an internal investigation to confirm fire stopping. Provde a fire stopping register. Repair any defects identified.	High	13/12/2024		MCR
Send notice to residents advising of the dangers of faulty electrical equipment and fire.	Low	13/02/2025		MCR
Clear the derelict areas to the eastern, western and southern parts of the site - completely. Check for underground tanks / pipe work. Fence off.	High	13/12/2024		MCR
Determine the construction of the cladding to the top floor flats at the eastern end of the building. Inc. the presence of cavity barriers. Repair as necessary.	Medium	13/01/2025		MCR
Key fobs on the walkway sides of both access doors to be removed and replaced with with a simple thumb trun lock or similar.	High	13/12/2024		MCR

1. GENERAL INFORMATION

1.1 Scope of the report

This document has been prepared to report on the assessment of risks to life from fire in the common parts of the premises and, where appropriate, to make recommendations to ensure compliance with fire safety legislation. The assessment carried out to inform this report conforms to the description of a Type 1 fire risk assessment, as described in the Local Government Association guide: "Fire safety in purpose-built blocks of flats" in that a non-intrusive visual survey of the common areas of the premises were surveyed. No construction was opened-up during this survey and areas which were secured and therefore not accessible were not assessed. Any such areas are identified in the relevant section of this report.

The report does not address the risk to property or business continuity from fire.

This report constitutes neither a warranty of compliance nor an assurance against risk and represents the best judgement of the consultant who based its preparation in part, on the information provided by others.

Previous risk assessments have been undertaken by Commercial Fire Protection and Salvum. Both these are rejected as unsatisfactory by KentFRS.

1.2 Building Details

The Regulatory Reform (Fire Safety) Order 2005 (the FSO) applies to any workplaces within the premises and any parts of the premises shared by the occupants of more than one dwelling, while the Housing Act 2004 applies to the insides of the individual dwellings.

1.3 Guidance documents relevant to the premises

Local Government Association: *Fire safety in purpose-built blocks of flats*. This guidance document is specifically written to help landlords, managing agents, enforcing officers and those undertaking fire risk assessments to understand the legislative requirements relating to blocks of flats and to apply them in a consistent and reasonable manner.

Reference was also made to the procedures outlined in MHCLG guidance document: Fire Risk Assessment, Sleeping Guide.

1.4 Legislation

This fire risk assessment has been compiled using the PAS 79 methodology alongside relevant current guidance and best practices. It is designed to help reduce the risks to a tolerable level.

1.5 About the Assessor

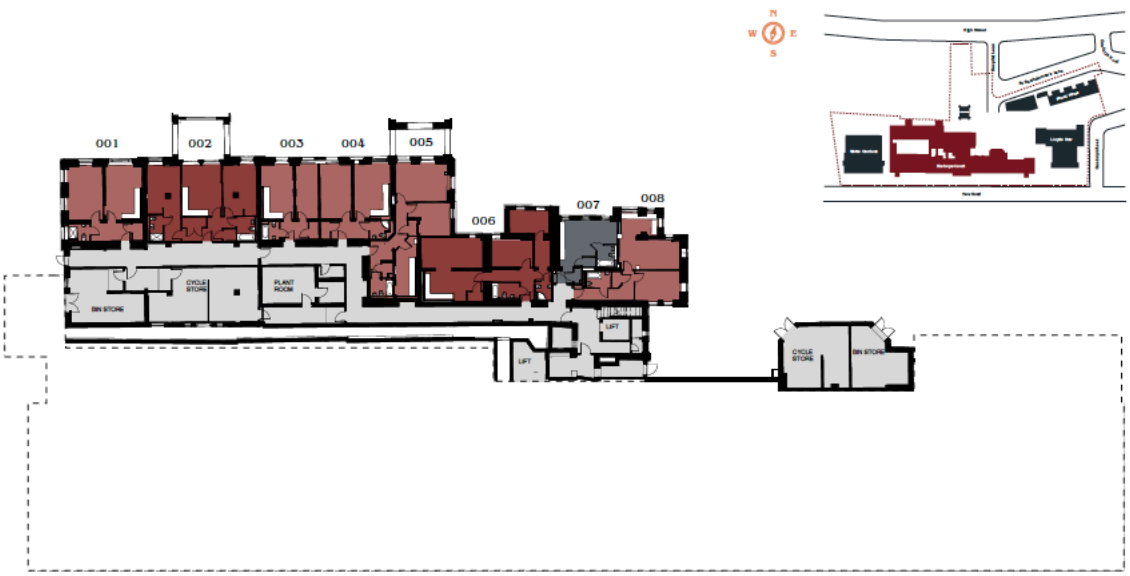
Name:	Andrew West
Qualifications:	BEng (Hons), MSc, C.Eng., MICE
Experience	35 years' experience in the Construction Industry in all aspects of the design and construction of both low rise and high rise multi-storey residential buildings together with associated infrastructure. Initially trained and worked as a civil engineer in a Blue-Chip consulting practice. Involved / responsible for the design and construction management of numerous office buildings, the Pepsi Max Big One rollercoaster in Blackpool, numerous power stations all over the works (inc. the design life extension of Hinkley Point A nuclear power station), numerous contamination remediation schemes & expert witness investigations. Design & Management of numerous multi-discipline technical teams, for private developers, delivering both low rise and high-rise multi-occupation buildings. Head of Development & Deliver for two large Housing Associations (each > 50,000 homes). Group Head of Technical responsible for Building Safety for Home Group's portfolio of buildings, including FRA, external wall, internal compartmentation, fire door inspections and building safety cases.

2. The Premises

2.1 Building Details

Name of the Business	St Bartholomew's Place Ltd
Full address	St Bartholomew's Place, New Road, Rochester. ME11 1TW
Number of floors	5 Floors. Please see the floor plans below.
Description	The hospital building was closed in 2016 and converted into residential accommodation. Building Control completion was achieved in Sept 2022. The building contains 5 storeys with the main entrance located on New Road via level 2. There are also exits from the building at level 1 and level 0. The building contains a range of maisonettes and apartments on all levels and building services located on Level 0.
Approximate Gross floor area (m^2):	5,000m^2.
Construction Type	Refurbishment of a Victorian hospital, comprising traditional, possibly, solid wall masonry and timber / concrete floors.
Does the premises have single or multiple occupancy?	Single

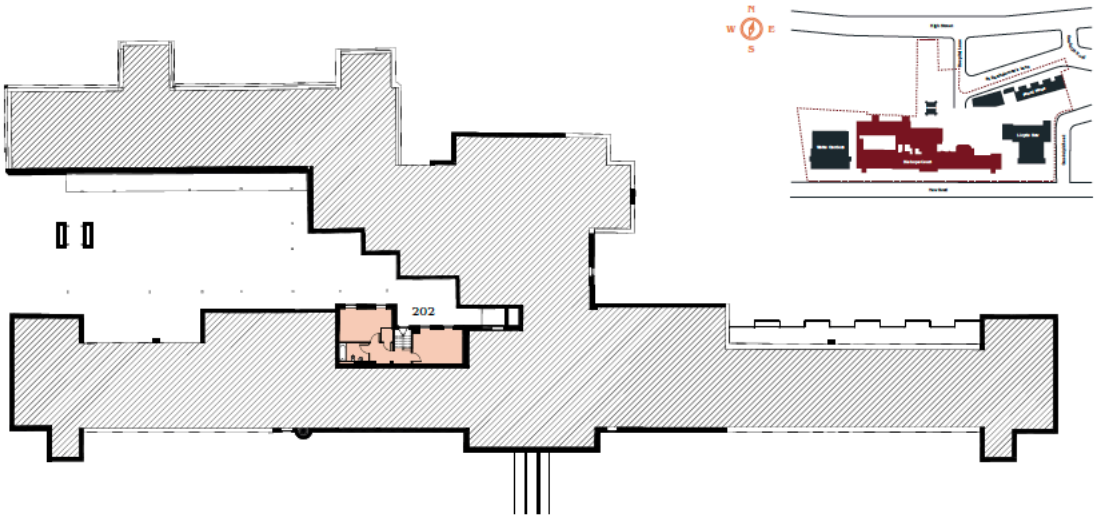
2.2 Floor Plans



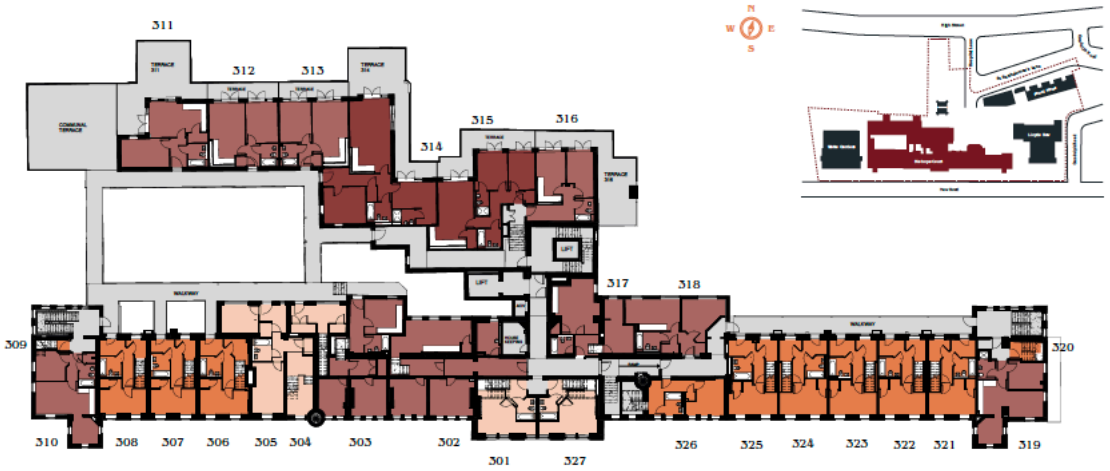
Ground Floor Plan

First Floor Plan

Second Floor Plan



Third Lower Floor Plan



Third Floor Plan

Fourth Floor PLan

3.0 FIRE HAZARDS AND THEIR ELIMINATION OR CONTROL

3.1 Electrical Sources of Ignition

		Comment
Are reasonable measures taken to prevent fires of electrical origin?	Yes	All electric service rooms and risers are tidy and clear flammable materials.
Are the fixed installations periodically inspected and tested?	Yes	The following Fixed Electrical Installations are present: 1. Communal Electrics 2. Residential Electrics 3. AOV System, 4. Communal Fire Alarm System 5. Sprinkler System 6. Passenger Lifts x2 7. Telecoms The communal and resident electrics are still in date from the original commissioning. All the above systems are the responsibility of the Client to maintain and current maintenance certificates are in place.
Are portable appliances tested (PAT) within acceptable frequencies	N/A	CCTV monitor to be PAT tested.
Is there a suitable policy regarding the use of personal electrical appliances?	No	
Are electrical leads and extension cables well managed and carefully positioned?	N/A	No extension cables were present at the time of the investigation.
General comments:		

3.2 Smoking

		Comment
Is smoking permitted on the premises	No	Smoking is not permitted within common areas of the building. No smoking signs are provided throughout the building. Confirmation is required regarding the policy regarding smoking in flats. It is presumed that smoking is allowed in private flat areas.
Does smoking occur in areas that are not designated as smoking areas?	No	There are no areas of discarded cigarette butts around the building.
Within designated smoking areas are smokers' materials disposed of safely?	N/A	There is a dedicated cigarette disposal area at the back of the building which is used and kept tidy.
General comments:		

3.3 Arson

		Comment
Does basic security against arson by outsiders appear reasonable?	Yes	Access into the common areas of the building is controlled with a fob. Access to the apartments is by lock and key. It is understood, through communication with MCR Homes, that the main front door and rear door do not always close. Both utilise an overhead closer.

		Both doors were tested during the inspection, and this did not seem to be a problem. All the service risers, the plant room, the maintenance room and the post room are all locked and only accessible by the Client. To the rear and both sides of the building there is derelict land that is owned by the client. The client intends to build apartments on this soon. These areas are heavily overgrown, inconsistently bounded and partially separated from the site of the building that is part of this FRA with Heras fencing and timber hoarding. They all contain small amounts of general demolition rubble. To the west of the building there is an area that contains a scaffold platform and scaffold stairs that do not seem to serve any purpose. The rear of the building is relatively open with easy access through damaged / open fence panels adjacent to the bin store. Immediately adjacent to the northern boundary at the rear of the building there is redundant building. MCR Homes own this and intent of refurbish it in the future. This is redundant and anecdotal evidence suggest that there have been incidences of people utilising the buildings. CCTV is present in the communal corridor areas of the building.
General comments:		

3.4 Fixed & Portable Heating Provisions

		Comment
What fixed heating installations are used to heat the premises?		Electric boiler with a MVHR and wet radiator water and space heating system is provided to all flats. There is panel heating in corridors.
Are fixed heating installations subject to regular maintenance?	Yes	The residents heating and MVHR are the responsibility of the residents to maintain. At the point of first move in the client has confirmed that every flat was provided with a manual that outlined the need and frequency of maintenance of their boilers and MVHR. The Client has advised that the panel heaters were installed less than 1 year ago. Consequently, the first round of maintenance is not yet due. Maintenance inspections will be undertaken on the first anniversary of installation.
Are additional portable heating appliances in use?	No	
Is their use suitably controlled to minimise the risk of a fire to an acceptable standard?	Yes	There do not appear to be any issues.
General comments:		

3.5 Cooking

	Comment
What type of cooking facilities are provided at the premises?	No communal cooking facilities. Electric cookers are present in the resident's flats.

Are reasonable measures taken to prevent fires as a result of cooking?	Yes	Smoke and heat alarms are present in the flats. The leases for the building specifically exclude the use of the apartments as Airbnb. However, the residents may be ignorant to this.
Are suitable extinguishing appliances available in the cooking facilities?	Unknown	N/A for the communal areas. Sprinklers are present in each of the flats.
General comments:		

3.6 Lightning

		Comment
Do the premises have a lightning protection system?	Yes	Testing due again in February 2025
General comments:		

3.7 Housekeeping

		Comment
Is the standard of housekeeping in the communal areas adequate?	Yes	All areas were clear of flammable materials.
Are there any waste products present in the communal or ancillary areas?	No	

Do furniture and furnishings in the communal areas meet FFFSR standards?	Yes	
General comments: There are no records of the housekeeping inspections. The client advised that these are available.		

3.8 Sources of Oxygen

Are there storage of any oxygen supplies other than air present?	None.

3.9 Fire Loss Experience

Fire calls in the past 12 months	1 x call out for crews to assist SECAmb 0 x false alarm activation calls 2 x alleged fire safety risks (complaints)

3.10 Summary of Fire Ignition Hazards

1. Faulty residential and communal electrics.
2. Faulty communal area panel heaters
3. Smoking in Flats
4. Cooking in Flats
5. Flats used as Airbnb
6. Arson in communal areas Communal Corridors, Bin /Cycle Store
7. Arson in derelict land / buildings to the sides and rear of the building
8. Arson to the western end top floor external walk immediately in front of the aluminum cladding

9. Faulty electric boilers / MVHR system within the flats.
10. Faulty electrical appliances within the flats

4. The Occupants

4.1 Occupant Numbers

Approximate maximum number of occupants in the building	228 (assuming 2x persons & 1 visitor per flat)
Approximate number of employees at any one time	Zero.
Maximum number of members of public at any one time	None.
Do external contractors regularly work on the premises?	No.

4.2 Use of the Premises

Residential accommodation.	
Tenure & Management Arrangements	All the apartments are sold on a leasehold basis. The management of the communal areas is the responsibility of MCR Living Ltd.

4.3 Associated Times / Hours of Occupation

The accommodation may be occupied on a 24-hour 7 day a week basis.

4.4 Occupants Especially as Risk

Are there any sleeping occupants on the premises?	Yes	

Is the premises used by anyone with a disability?		MCR have been communicating with the residents to determine if any have disabilities or vulnerabilities. To date they have not identified However, this information is not available at the moment.
Do young person's use the building (younger than 18 years old)	Yes	Families are present in the building.
Are there any other vulnerable persons especially at risk from fire?		Please see above.

5. FIRE PROTECTION MEASURES

5.1 Means of Escape from Fire

		Comment
Is the premises provided with reasonable means of escape in case of fire?	Yes	The means of escape generally comply with Building Regulations. However, there are a few anomalies. 1. Flats open directly on the protected staircases at the eastern and western ends of the building. 2. There should be a fire door installed at approximately mid-point in the communal corridor between the central lift / protected staircase and the exit doors. The final exit routes from the eastern and western ends of the building are not directly away from the building. There is no clear location from people / rendezvous points identified.
Are there enough exit routes for the number of people in the building?	Yes	
Are all exits easily and immediately openable where necessary?	No	The doors from the main building on to the external walkway areas on the upper floors operate as a dual door and AOV. A fob is used to open the door when walking from the external walkway into the building. The doors from the external walkway areas at eastern side of the building only open with a fob when walking from the gangway into the building. The access controls will also disengage when the smoke detectors in the internal areas are activated.

Are escape routes unobstructed?	Yes	There were no obstructions on any of the escape routes.
Are all travel distances within acceptable levels?	Yes	There should be a fire door installed at approximately mid-point in the communal corridor between the central lift / protected staircase and the exit doors to the first floor communal areas.
Are there suitable fire provision for all inner rooms?	N/A	No inner rooms.
Are arrangements for means of escape for disabled people reasonable?	No	There were no requirements for specific arrangements required for disabled people from the upper floors. All the lifts are passenger lifts and there were no refuge points in any of the stairwells.
Are external escape staircases and gangways subject to a suitable maintenance schedule?	Unknown	There are large areas of external walkways / connecting balconies that provide access to some flats. These are all constructed of steel and exposed. These are visually checked during the routine housekeeping. A full structural maintenance routine will be required for these. Details of a full structural inspection routine has not been provided.
General comments		

5.2 Measures to Limit Fire Spread & Development - Internal

		Comment
Is the compartmentation of a reasonable standard?	Yes	A visual inspection with the risers and selected communal ceiling locations showed that all fire stopping was in place.

		The fire stopping was undertaken by a registered contractor as certificates are present. A fire stopping register has not been provided. There is an extract vent from the ground floor water tank room that extracts into the adjacent lobby. It does not look a damper is fitted to this. Access to a damaged ceiling area in one of the flats revealed that there was limited fire stopping to the underside of the structural floor.
Do walls provide suitable protection to escape routes?	No	The external walkway to the top floor at the western end of the building is immediately adjacent to a section of aluminium cladding. As explained later, the construction of this is unknown and may comprise the means of escape.
Are fire doors in good condition, providing good compartmentation?	Yes	A fire door survey has been undertaken on the majority of the flat front doors and also on all but one of the communal doors. In total 55 doors were surveyed. Of the doors surveyed, only one was considered competent and 54 required minor repairs to bring them up to a suitable standard, MCR have a copy of certificate for the door that passed and worksheets for the remainder. There is an assessed high risk of fire spread due fire doors not meeting the required standard.
Are fire shutters in good condition, providing good compartmentation?	Not Applicable	None present.
Do ducts that pass- through fire separating walls have dampers fitted?	Yes	Dampers are provided at numerous locations around the building. No maintenance details were provided.
General comments:		

5.3 Measures to Limit Fire Spread & Development - External

		Comment
Are reasonable measures in place to prevent rapid fire spread across the external surfaces of the building?	Yes	The external wall construction is traditional masonry (probably solid), except for the top floor flats in the southwestern area. These are clad with a zinc or aluminium cladding. The construction of this (including cavity barriers) is unknown.
Has the outer face of the building been provided with an insulating cladding system?	Yes	Please see above.
Is the external cladding system in a good state of repair, capable of resisting a fire from an external source?	Yes	
Are there features of the building construction which might assist a fire to spread vertically?	No	
Are balconies present and are they constructed in such a way as to minimise the spread of fire from balcony to balcony?	Yes	No balconies are present but there are external walkways at the eastern and western ends of the building. These are constructed from mild steel. A maintenance routine for this has not been established,
General comments:		

5.4 Emergency Escape Lighting

		Comment
Has a reasonable standard of emergency escape lighting been provided?	Yes	Emergency lighting provided on all floors at a reasonable spacing sufficient for emergency exit.

Cause & Effect known	Yes	Failure of the power supply will activate the emergency lighting.
Testing and maintenance	Provided	The latest commissioning certificate is provided in the Appendix.
General comments:		

5.5 Fire Safety Signs & Notices

		Comment
Is there a reasonable standard of fire safety signs and notices?	Yes	
General comments:		

5.6 Means of Giving Warning in Case of Fire

	Comment
What alarm system has been installed on the premises.	- Studio flats are provided with an LD2 alarm. - Flats with open plan arrangements are provided with an LD1 alarm. - Maisonettes with a floor above 4.5m are provided with a LD 1 or LD2 depending on the internal arrangements. - An L5 system is installed throughout the remainder of the buildings, constituting detection within:

		• Common corridors and stairs (with coverage equivalent to Category L3 as a minimum). • Plant rooms; and • Refuse stores, cycle stores and cleaners stores. There is no communal alarm / sounder to the communal roof area on southwestern corner of the 3rd floor.
Is the means of giving warning, in case of fire, appropriate for the occupancy and fire risk?[1]	Yes	
Cause & Effect known	Yes	A document outlining the cause and effect has not been provided.
Are sound levels, of the alarm system, adequate throughout the premises?	N/A	
Testing and maintenance	Yes	Current commissioning certificates are provided in the appendix
General comments:		

5.7 Manual Fire Extinguishing Appliances

		Comment
Is there reasonable provision of portable fire extinguishers?	No	None required in common areas of this building.
Are all fire extinguishing appliances readily accessible?	N/A	

Testing and maintenance	N/A	N/A
General comments:		

5.8 Automatic Fire Extinguishing

		Comment
Is there automatic fire extinguishing on the premises?	Yes.	In the residential areas only
Cause & Effect known	Yes	
Testing and maintenance	No	Maintenance details have been provided and the certificate is shown in the Appendix,
General comments:		

5.9 Smoke Control

		Comment
Is there a smoke control system installed on the premises?	Yes	AOV at the head of all staircases. Natural smoke shaft ventilation or AOV to all communal corridors All connected to the fire panel by the main entrance.
What is the purpose of the smoke control system?	Yes	The smoke control system is designed to minimise smoke build up in the

		common areas of the building. Smoke control is appropriate for the building.
Cause & Effect known	Yes	Activation of the smoke detectors will open the AOV on the floor of the fire and the AOV at the head of the protected staircases
Testing and maintenance	Provided	Commissioning & maintenance are provided in the appendix.
General comments:		

6. MANAGEMENT OF FIRE SAFETY

6.1 FIRE STRATEGY DOCUMENTATION / PROVISIONS

		Comment
What is the evacuation strategy for the building?		Stay put for residential areas and simultaneous evacuations for communal and ancillary areas.
Who is responsible for the management of fire safety on the premises?		MCR National Homes Ltd.
Are there suitable arrangements for summoning the fire and rescue service?	Yes	The fire alarm panel is connected to a 24/7 monitoring facility that will contact the FRS. Activation of the sprinklers in the residential areas will send a signal to communal fire panel.
What arrangements have been made for ensuring that the premises has been evacuated?	Not Applicable	The building operates a stay put strategy.
Is there a suitable fire assembly point?	No	Rendezvous locations have been identified.
Are there adequate procedures for evacuation of any disabled people who are likely to be present?	No	
Are there routine in- house inspections of fire precautions?	Yes	The client has advised that routine inspections are undertaken.
Is a suitable defect reporting and change management system in place	Yes	
General comments:		

7. FIRE SERVICE ACCESS & INFORMATION

7.1 Information for the Fire Service

		Comment
Is an information pack available for handover to the fire service?	Yes	This has been produced in accordance with NFCC Code of Practice.
Is information available on the luminous discharge (neon) signs?	N/A	None present.
Is information available on the photovoltaic generating system?	No	No PV.
General comments:		

7.2 Access & Water Supply

		Comment
Is vehicular access for the fire service acceptable?	No.	There are three dry riser locations (one at the rear and one at each end of the building). The dry risers at each end are accessed from New Road. The dry riser at the rear is accessed from St Bartholomew's Lane. The two risers at each end cannot presently be accessed from New Road due to fencing and a significant change in the ground level. This needs to be addressed urgently.

		The central riser could be accessed from the rear but the route not straightforward.
Are local water supplies sufficient for firefighting?	No.	There are fire hydrants in New Road are present in the adopted roads to the rear of the building.
General comments:		

7.3 Maintenance of Facilities, Equipment & Devices Provided for Firefighting

		Comment
Rising Mains	Yes	
Fire-fighting lifts	No	None present.
General comments:		

8. Risk Assessment

St Bartholomews Place
201 Bishops Walk, New Road,
Rochester
ME1 1TW

Fire Risk Assessment

Date of Survey	13/11/2024
Assessment By	Andrew West
Date of Assessment	09/12/2024
Reviewed By	Steve Diggines
Date of Review	09/12/2024

Revisions:

Potential Hazards	Can this Hazard be removed?	Will any fire be notified at an early stage?	Can the Residents Exit Safely	Will the fire spread before it can be extinguised by the residential sprinklers?	Will the fire Spread within a floor before the fire can be extinguished?	Can the Residents Exit Safely if it does?	Will the fire Spred to multiple floors before the fire can be extinguished?	Can the Residents Exit Safely if it does?	Structural Damage before it is extinguished	Risk Assessment L	S	RISK	Actions
Electrical Sources of ignition within Communal Corridors (inc Panel Heaters)	No. Although the risk can be significantly reduced by regular inspection and maintenance testing of the electrical equipment and panel heaters by a competent professionals together with regular housekeeping to ensure that there are no flamable materials present in these areas, it cannot be completely removed.	Yes - Smoke detectors are present in the communal corridors	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	N/A	The communal corridors have a false ceiling. As there is potentially missing fire stopping above these, the fire could spread. Additionally the communal and flat front doors need to be repaired. Any fire spreading to the flats would activate the sprinklers and keep the residents in there safer. Activation of the smoke alarms would open AOV's would open to clear any smoke. Access to the dry risers are the western and western ends of the building are compromised and this will delay the FRS service for extinguishing the fire.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	Possibly. As evidence has been found of poor compartmentation and a fire stopping register has not been provided.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	Unlikely	2	5	Medium	The electric commissioning certificate and the maintenance certificates for all other fixed appliances (inc the panel heaters) should be provided. Ensure that all smoke detectors are monitored regularly and that no flamable materials are present Install a communal door to the communeal corridor on the first floor. Undertake an internal investigation to confirm the fire stopping. Provide a fire stopping register. PAT testing to be undertaken to any portable equipment.
Electrical Sources of ignition within Risers and Ancillary Areas (Post Room, Cycle / Bin Store / Water Tank Room / Maintenance storage room)	No. Although the risk can be significantly reduced by regular inspection and maintenance testing of the electrical equipment by competent professionals together with regular housekeeping to ensure that there are no flamable materials present in these areas, it cannot be completely removed. PAT testing needs yobe undertaken on any prtable equipment.	Yes - Smoke detectors are present in the risers and ancillary areas (Bin stores, Water Tank Room, Cycle Store, Post Room)	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	N/A	The risers, the cycle/bin store and the water tank room ancilary rooms looked like they were adequately are fire stopped. The post room and the maintenance room have a false ceiling. As there is potentially missing fire stopping above, these the fire could spread. Additionally in all rooms the fire doors need to repaired to prevent fire spread. Any fire spreading to the flats would activate the sprinklers and the western and western ends of the building are compromised and this will delay the FRS service extinguishing the fire. There is an extract fan that exits the water tank room into the adjacent lobby. This does not look like it has a damper fitted and should have to stop fire spread. Any fire or smoke that penetrates a flat because of compartment issues or through the the defective flat front doors will activate the residential sprinklers.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	Possibly in the postal and maintenance rooms only. As evidence has been found of poor compartmentation and a fire stopping register has not been provided.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	Unlikely	2	2	Low	The electric commissioning certificate and the certificates for all other fixed appliances should be provided. Ensure that all smoke detectors are monitored regularly and that no flamable materials are present, Fire damper be be added to the extract vent from the water tank room to the adjacent lobby. Install a mid point communal fire door to the first floor communal corridor. Undertake an internal investigation to confirm the fire stopping. Repair all the fire doors Ensure that there is easy access for the FRS from New Road to the dry risers at the eastern and western ends of the building.
Electrical Sources of ignition within flat areas.	No	Yes. Smoke detectors and Fire alarms are present in the flats.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No	Yes.					2	2	Low	Sprinkler system to be maintained in accordance with recommendations. Housekeeping checks to be made. Send a notice out to residents to remind them of the dangers of fire and the importance of checking their fire alarms.
Smoking within flats	No	Yes. Fire alarms are present in all of the flats.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No						2	2	Low	Sprinkler system to be maintained in accordance with recommendations. Housekeeping checks to be made. Send a notice out to residents to remind them of the dangers of fire and the importance of checking their fire alarms.
Cooking within flats	No	Yes. Fire alarmd are present in all of the flats. Commissioning records are avilable.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The Layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No						2	2	Low	Sprinkler system to be maintained in accordance with recommendations. Housekeeping checks to be made. Send a notice out to residents to remind them of the dangers of fire and the importance of checking their fire alarms. Ensure rendevous points are provided and communicated to residents
Flats used as airbnb	No	Yes. Fire alarmd are present in all of the flats. Commissioning records are avilable.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No						2	2	Low	Sprinkler system to be maintained in accordance with recommendations. Housekeeping checks to be made. Send a notice out to residents to remind them of the dangers of fire and the importance of checking their fire alarms. Ensure rendevous points are provided and communicated to residents
Arson in Bin /Cycle Store	No	Yes. The smoke detectors in these areas will be activated.	Yes. However, there are no rendevous points identified. These need to be established. Consideration need to be given to disabled residents being able to reach the rendevous point safely from bin & cycle stores.	N/A	No. The bin/cycle store is on the ground floor and can be accessed by the FRS. The fire shooting is mandatory to limit the spread into a					2	2	Low	Rendevous point to be established.
Arson in general Communal Corridors	No	Yes. The smoke detectors in these areas will be activated.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	N/A	Yes. The risers at both ends of the building cannot be accessed. The eastern end is now restricted. This will delay access. Additional there may be compartment issues within the walls and floors. Any fire or smoke that penetrates a flat because of compartment issues or through the the defective flat front doors will activate the residential sprinklers.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	Yes	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No	2	5	Medium	An investigation is to be undertaken to determine the compertancy of the compartmentation. Any defets need to be rectified immediatley. All fire doors need to be repaired. Access routes need to be provided from New Road to the risers at each end of the building.
Arson in derelict land to the sides and rear of the building	Yes.												Clear all these areas. Please check for any underground fuel tanks or pipework. Ensure that there areas are fully fenced off - preferably with double clipped Heras fencing as this will provide visibility.
Arson to the western end top floor external walk immediately in front of the aluminum cladding	No	No	No. However, there is not rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. However, as the fire is outside smoke alarms will not be activated and therefore the exit doors will not automatically drawdown. Residents will be stuck on the walk ways. Although they could move away from the fire they will not be able to escape into a stairwell.	N/A	There confirmation of the construction of the cladding material nor the dets of cavity barriers being installed. The risers at each end of the building cannot be accessed and this will slow the response of the FrS down.	No. However, there is not rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. However, as the fire is outside smoke alarms will not be activated and therefore the exit doors will not automatically drawdown. Residents will be stuck on the walk ways. Although they could move away from the fire they will not be able to escape into a stairwell.	No		2	5	Medium	Determine the construction details of the cladding including the presece of cavity barriers. Repair as necessary. Ensure that the AOV system is fully maintained and checked on a monthly basis. Repair as necessary. Ensure that the AOV system is fully maintained and checked on a monthly basis. Key fobs on the walkway sides of both access doors to be removed and replace with with a simple thumb trun lock or similar. Access to the dry risers from the main road. Dry riser to be maintined every six months and checked every 4 weeks.
Fault electric boilers / MVHR systems within Flats	No	Yes.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The Layout means that any disabled residents will be able to move a significant distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No						2	2		Rendevous points to be confirmed and communicated to residents.
Faulty electrical appliances within flats	No	Yes.	Yes. However, there are no rendevous points identified. These need to be established at each final exit location. The layout means that any disabled residents will be able to move a significnt distance from a fire - including to outside locations. There is a missing mid point communal fire door on the first floor. This should be installed.	No						2	2	Low	Rendevous points to be confirmed and communicated to residents.
									AVERAGE	**2**	**3**	**Medium**	

9. PREMISES FIRE RISK RATING

The following simple fire risk level estimator is based on a commonly used health and safety risk level estimator:

Likelihood of Fire	Potential Consequences		
	Slight harm	Moderate harm	Severe harm
Low	Trivial	Tolerable	Moderate
Medium	Tolerable	Moderate	Substantial
High	Moderate	Substantial	Intolerable

A suitable risk-based control plan should involve effort and urgency that is proportional to risk. The following risk-based control plan is based on one that has been advocated for general health and safety risks:

Risk Level	Action and Timescale
Trivial	No action is required, and no detailed records need to be kept.
Tolerable	No major additional fire precautions required. However, there might be a need for reasonably practicable improvements that involve minor or limited cost.
Moderate	It is essential that efforts are made to reduce the risk. Risk reduction measures, which should take cost into account, should be implemented within a defined time period. Where moderate risk is associated with consequences that constitute extreme harm, further assessment might be required to establish more precisely the likelihood of harm as a basis for determining the priority for improved control measures.
Substantial	Considerable resources might have to be allocated to reduce the risk. If the premises are unoccupied, it should not be occupied until the risk has been reduced. If the premises are occupied, urgent action should be taken.
Intolerable	Premises (or relevant area) should not be occupied until the risk is reduced.

9.1 Likelihood of Fire

Taking into account the fire prevention measures observed at the time of this risk assessment, it is considered that the hazard from fire (likelihood of fire) at these premises is:

Low

There is a low likelihood of fire because of negligible potential sources of ignition.

9.2 Impact of Fire

Considering the nature of the premises and the occupants, as well as the fire protection and procedural arrangement observed at the time of this fire risk assessment, it is considered that the consequences for life safety in the event of fire would be:

Moderate Harm

An outbreak of fire could foreseeably result in injury (including serious injury) of one or more occupants, but it is unlikely to involve multiple fatalities.

9.3 Summary of Risk Rating

Accordingly, it is considered that the risk to life from fire at these premises is:

Tolerable

No major additional fire precautions required. However, there might be a need for reasonably practicable improvements that involve minor or limited cost.

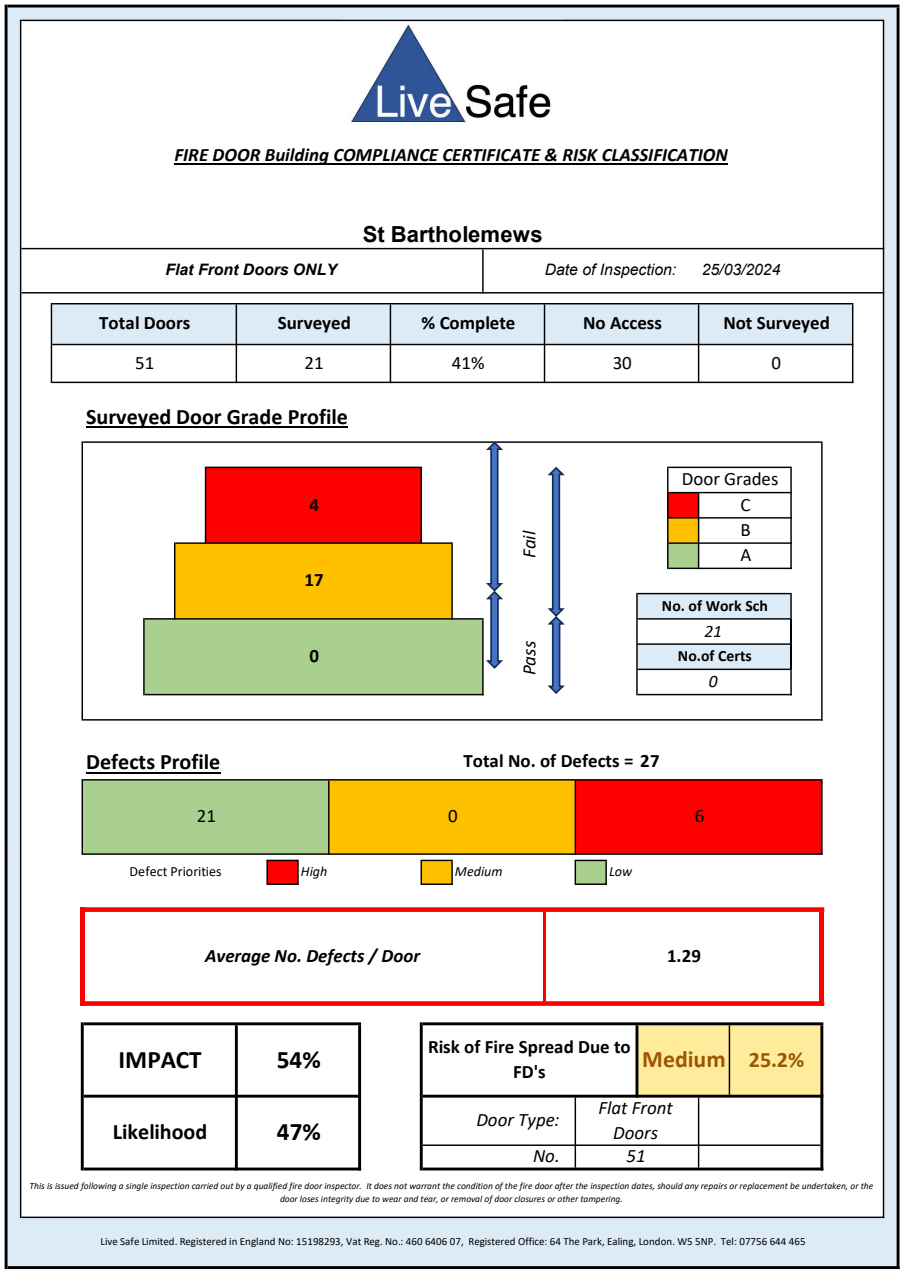
9.4 Recommended Review

It is recommended that this fire risk assessment is reviewed in 12 months time to assess progress.

Once the various remedial actions are completed, the recommended review period may be extended if appropriate.

Appendix A

Fire Door Survey Results



FIRE DOOR Building COMPLIANCE CERTIFICATE & RISK CLASSIFICATION

St Bartholemews

Flat Front Doors ONLY	*Date of Inspection: 25/03/2024*

Total Doors	Surveyed	% Complete	No Access	Not Surveyed
51	21	41%	30	0

Surveyed Door Grade Profile

Defects Profile **Total No. of Defects = 27**

Average No. Defects / Door	1.29

IMPACT	**54%**
Likelihood	**47%**

Risk of Fire Spread Due to FD's	**Medium**	**25.2%**
Door Type:	*Flat Front Doors*	
No.	*51*	

This is issued following a single inspection carried out by a qualified fire door inspector. It does not warrant the condition of the fire door after the inspection dates, should any repairs or replacement be undertaken, or the door loses integrity due to wear and tear, or removal of door closures or other tampering.

Live Safe Limited. Registered in England No: 15198293, Vat Reg. No.: 460 6406 07, Registered Office: 64 The Park, Ealing, London. W5 5NP. Tel: 07756 644 465

Live Safe

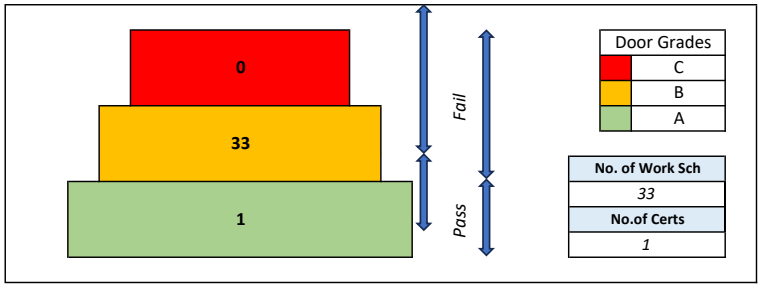
FIRE DOOR Building COMPLIANCE CERTIFICATE & RISK CLASSIFICATION

St Bartholemews

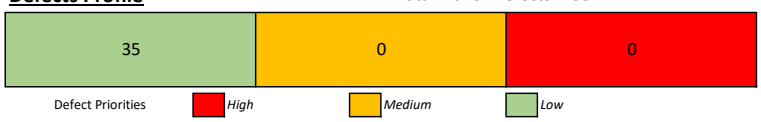
Communal Doors ONLY	*Date of Inspection: 29/10/2024*

Total Doors	Surveyed	% Complete	No Access	Not Surveyed
38	34	89%	4	0

Surveyed Door Grade Profile



Defects Profile **Total No. of Defects = 35**



Average No. Defects / Door	**1.03**

IMPACT	**54%**
Likelihood	**56%**

Risk of Fire Spread Due to FD's	**Medium**	**30.1%**
Door Type:		*Communal Doors*
No.		*38*

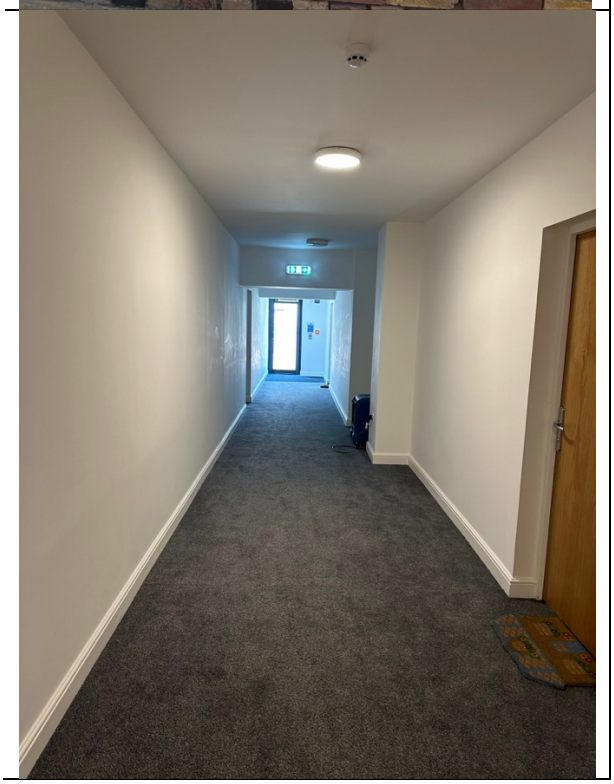
This is issued following a single inspection carried out by a qualified fire door inspector. It does not warrant the condition of the fire door after the inspection dates, should any repairs or replacement be undertaken, or the door loses integrity due to wear and tear, or removal of door closures or other tampering.

Live Safe Limited. Registered in England No: 15198293, Vat Reg. No.: 460 6406 07, Registered Office: 64 The Park, Ealing, London. W5 5NP. Tel: 07756 644 465

Appendix B

Photographs


Keep
out



Appendix C

Fire Strategy & Plans


Hydrock
St Bartholomew's Hospital
Fire Safety Strategy
For MCR Management Limited
Stage 5
Revision 04
For Information
Date: 6 September 2022
Doc ref: 17494-HYD-SBH-XX-RP-FE-0001

DOCUMENT CONTROL SHEET

Issued by	Hydrock Consultants Limited Over Court Barns Over Lane Almondsbury Bristol BS32 4DF Tel: 01454 619533 Fax: 01454 614125 www.hydrock.com	Client	MCR Management Limited
		Project name	Saint Bartholomew's Hospital
		Title	Fire Safety Strategy
		Doc ref	17494-HYD-SBH-XX-RP-FE-0001
		Project no.	17494
		Status	For Information
		Date	6 September 2022

Issue Number	Status	Date	Prepared By	Checked By	Approved By
00	Stage 3 For Comment	21.12.2020	Craig Lobban	Bernice Wong	Chris Allery
01	Stage 4 For Comment	25.05.2021	Craig Lobban	Bernice Wong	Chris Allery
02	Stage 4 Formal	06.08.2021	Craig Lobban	Bernice Wong	Chris Allery
03	Stage 4 Formal (AOV note added level 0)	11.08.2021	Craig Lobban	Bernice Wong	Chris Allery
04	Stage 5 - For Information	06.09.2022	Craig Lobban	Bernice Wong	Chris Allery

Hydrock

CONTENTS

Hydrock

EXECUTIVE SUMMARY

Building Description	St Bartholomew's Hospital is located in Rochester, Kent. The building was closed in 2016 and is being refurbished as a residential development. The building contains 5 storeys with the main entrance located on New Road via level 2. There are also exits from the building at Level 1 and Level 0. The building contains a range of maisonettes and apartments on all levels and building services located on Level 0. The building is to be occupied in phases and the phasing analysis is available in Appendix B of the fire strategy report.
Design Guidance and Legislation	The development is generally to be designed in accordance with BS9991:2015 for all areas. All deviations from this guidance with require agreement with the approving authority and local Fire Service.
Fire Detection & Alarm Systems	The minimum fire detection and alarm system category for the residential units is Grade D Category LD2. Fire detection and alarm systems within the residential units are to be designed, installed, and commissioned in accordance with BS5839-6:2019 and the category of system can vary as per Section 3.1.1. The common residential areas (lobbies, corridors and stairs) are to be provided with a Category L5 fire detection system design to activate the relevant smoke ventilation systems only (no sounders to be provided in these areas). This fire detection system is to be design and installed in accordance with BS5839-1:2017. The non-residential areas (plant, cycle store, refuse store and communal corridors serving these areas) are to be provided with at least an L5 fire detection and alarm system designed in accordance with BS5839-1:2017.
Evacuation Strategy	The evacuation strategy for the residential units is based on a 'stay-put' evacuation strategy where only the occupants within the unit of fire origin are to be alerted/evacuate and all other occupants within the building are to remain in place. Any additional evacuation is at the discretion of building management and the local Fire Service. The evacuation strategy for the non-residential areas is based on a single-stage simultaneous evacuation strategy where all occupants within these areas are to be alerted/evacuate immediately on fire detection.
Structural Fire Protection	Elements of structure throughout the building are to achieve at least 60 minutes fire resistance, with regard to load-bearing capacity – see Section 5.2 for further information.
Smoke Ventilation	The smoke ventilation in the building is to be natural or mechanical in the common corridor areas and the balcony approach areas are to include an AOV at the head of the stair.
Fire Service Access	The fire service is to gain access to the development via New Road or St Bartholomew's Lane and dry risers are to be installed in the main central stair, stair 2 and stair 3. Dry riser inlets are to be provided within 18m of the fire tender.
Alternative Approaches	The following areas deviate from the requirements of the relevant guidance. However, the proposed strategy is considered acceptable, subject to agreement with the approving authorities and local Fire Service: • Section 3.3.1 of the report – Open top floor of maisonettes; • Section 3.3.1 of the report – Open kitchens in flats greater than 8m x 4m; • Section 3.3.2 of the report – Flats opening directly into stairs 2 and 3; • Section 3.4.2 of the report – Stair discharge from stair 4; • Section 3.6 – Cupboard located in the main stair; • Section 5.1 – Protection to primary Steels; • Section 6.1.3 of the report – Elevation 3 overlooking Graveyard; • Section 6.2 of the report – Re-entrant corners next to common corridors; • Section 7.1 of the report – Flat 01 access; • Section 8.2.1.4 – AOV direct to external via corridor roof on Level 0. No fire service comments on the scheme as per the letter from Kent Fire and Rescue Service written the 12/11/2021 and full plans approval from STG building control were issued on the 04/10/2021.

Hydrock

1. INTRODUCTION

Hydrock has been engaged by MCR Management Limited to provide fire engineering services for the proposed refurbishment of Saint Bartholomew's Hospital in Rochester.

1.1 Purpose of Report

The purpose of this report is to demonstrate to the approving authorities that the proposed Saint Bartholomew's Hospital in Rochester satisfies all functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulations 2010 (as amended) and to outline the Fire Safety Strategy to the design team.

1.2 Basis of Report

This Fire Safety Strategy has been developed based on the information and drawings provided by architects Boyer as outlined in Table 1.

Table 1 Information on which the Fire Safety Strategy is based

Description	Drawing No.	Rev.	Date
Marketing Plans – Proposed Level 0	2930-CDA-Z1-00-DR-IM-3400	C	08.02.22
Marketing Plans – Proposed Level 01	2930-CDA-Z1-01-DR-IM-3401	C	06.09.21
Marketing Plans – Proposed Level 02	2930-CDA-Z1-02-DR-IM-3402	C	06.09.21
Marketing Plans – Proposed Level 03	2930-CDA-Z1-03-DR-IM-3403	C	10.09.21
Marketing Plans – Proposed Level 04	2930-CDA-Z1-04-DR-IM-3404	C	10.09.21
Penthouse – Proposed Sections	2930-CDA-Z1-XX-DR-IM-0815	-	04.06.21
Detailed Site Layout	171	C	17.09.19
Main Hospital Building Proposed Elevations–Front Elevation (south elevation)	406-1	-	03.10.19
Main Hospital Building Proposed Elevations–Rear Elevation (north elevation)	406-3	-	03.10.19
Main Hospital Building Proposed Elevations Side Elevation (east & west elevation)	406-2	-	03.10.19

1.3 Limitations of Report

1.3.1 Information Provided by Others

The Fire Safety Strategy represents only the best judgement of the consultants involved in its preparation, and is based, in part, on information provided by others. Under no circumstances is liability accepted for the accuracy of such information provided by others.

1.3.2 Alternative Methods of Compliance

Where the Fire Safety Strategy proposes alternative methods of compliance, that have been based on accepted codes of practice, to satisfy the functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulations 2010 (as amended), they will be subject to the agreement of the approving authorities and local Fire and Rescue Service.

1.3.3 Minimum Requirements

This report outlines the minimum requirements to satisfy the functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulation 2010 (as amended). However, whilst these satisfy the statutory imperatives, Hydrock advise consideration of additional fire safety measures.

1.4 Building Overview

St Bartholomew's Hospital is located in Rochester, Kent. The building was closed in 2016 and is being refurbished as a residential development. The building contains 5 storeys with the main entrance located on New Road via level 2. There are also exits from the building at level 1 and level 0. The building contains a range of maisonettes and apartments on all levels and building services located on Level 0. The site location is illustrated in Figure 1.

Figure 1 Site plan

1.4.1 General Arrangements

Level 0

Level 0 contains residential apartments, plant room, refuse store and a cycle store. There are also two exits direct to external and a stair for travel to the upper levels as illustrated in Figure 2.

Figure 2 Level 0 general arrangement

Level 1

Level 1 contains residential apartments and 4 stairs as illustrated in Figure 3.

Figure 3 Level 1 general arrangement

Level 2

Level 2 contains residential apartments and maisonettes and 4 stairs as illustrated in Figure 4.

Figure 4 Level 2 general arrangement

Level 3

Level 3 contains residential apartments and maisonettes and 4 stairs as illustrated in Figure 5.

Hydrock

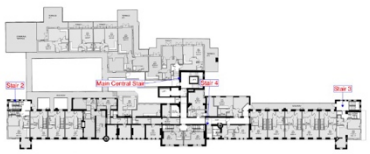


Figure 5 Level 3 general arrangement

Figure 7 Level 4 general arrangement

Level 3 Apartment 202

Apartment 202 is accessed from level 2 and the top level of the apartment is on level 3.

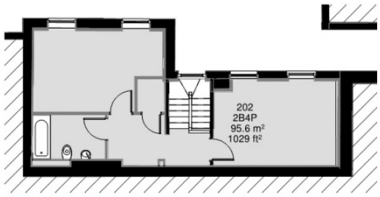


Figure 6 Level 3 apartment 202

Level 4

Level 4 contains the top level of all the maisonettes.

1.4.2 *Building Height*

For the purposes of the Fire Safety Strategy, it should be noted that the top occupied storey of the proposed building is approximately 15.3m above ground level, as illustrated in Figure 8, ground level of the main central stair to the highest common access level.

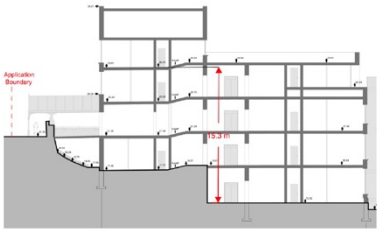


Figure 8 Section illustrating building height

2. LEGISLATION

The following sections provide an outline of the regulations and guidelines on which the Fire Safety Strategy is based.

2.1 The Building Regulations 2010

The building work will be subject to control under the restrictions of the Building Regulations 2010 (as amended). The Building Regulations are concerned with the life safety of persons in and around a building. The development will be designed and constructed to satisfy the functional requirements of Part B (Fire Safety) to Schedule 1 of the Building Regulations 2010 (as amended), which includes the following:

- B1 – Means of warning and escape
- B2 – Internal fire spread (linings)
- B3 – Internal fire spread (structure)
- B4 – External fire spread
- B5 – Access and facilities for the Fire Service

2.2 Guidance Documents

Guidance referred to in this report includes, but is not limited to the following:

- BS9991:2015 'Fire safety in the design, management and use of residential buildings (dwellings) – Code of practice;
- BS9999:2017 'Fire safety in the design, management and use of buildings – Code of practice';
- BS5839-1:2017 'Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in non-domestic premises';
- BS81-72:2015 'Safety rules for the construction and installation of lifts. Particular applications for passenger and goods passenger lifts. Firefighters lifts';
- BS5499-4:2013 'Code of practice for escape route signing';
- BR187:2014 'External Fire Spread – Building separation and boundary distances';
- BS5266-1:2016 'Emergency lighting. Code of practice for the emergency lighting of premises';
- BS9990:2015 'Non-automatic firefighting systems in buildings';
- BS EN 13501-1:2018 'Fire classification of construction products and building elements. Classification using data from reaction to fire tests';

Guidance for the fire precautions will generally follow the recommendations contained within BS9991:2015. Any deviations from these standards are to be provided with justification demonstrating that the functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulations 2010 (as amended) are met; however, these will be subject to approval from the approving authority and local Fire Service. Where no specific provision is mentioned in this document regarding any particular aspect, reference should be made to BS9991:2015. Consideration is also to be given to insurers and other stakeholders requirements.

The Fire Safety Strategy is to be read in conjunction with the Fire Strategy Drawings in Appendix A.

2.3 Other Applicable Legislation

2.3.1 The Regulatory Reform (Fire Safety) Order 2005

The Regulatory Reform (Fire Safety) Order (RRFSO) regulations shall apply to this development and are the landlord's responsibility. The RRFSO came into force in 2006 with the aim of resolving the overlap caused by a number of previous legislations. Therefore, a large number of legislations were rationalised and consolidated into the RRFSO with the result that it also rationalised the number of enforcement authorities involved in fire safety matters.

The RRFSO applies to all workplaces and other non-domestic areas and premises, requiring the 'Responsible Person' to undertake an assessment of the fire risk in their premises and to keep this assessment under review. It requires that where the 'Responsible Person' does not have the relevant training and experience to undertake such an assessment they must appoint a suitable 'Competent Person' to undertake the Risk Assessment.

The main focus of the Risk Assessment is to ensure that the premises is safe for the occupants to use and that all fire safety measures are adequate and appropriately maintained. In new buildings, the Fire Risk Assessment ensures that the fire safety provisions required under the Building Regulations 2010 are maintained, whereas in existing buildings it ensures that despite any modifications undertaken throughout the building's history, it is still safe for use. It is therefore important that the Fire Safety Strategy for more complex buildings (regardless of age) is clear and well documented.

2.3.2 Regulation 38

In conjunction with the RRFSO, Regulation 38 requires that information relating to the fire safety provisions within a building is provided to the 'Responsible Person' so that they (or an appointed 'Competent Person') can undertake the Fire Risk Assessment required under the RRFSO. It is therefore of paramount importance that the fire safety information for a building that falls under the requirements of the Building Regulations 2010 is kept up to date and a true reflection of the completed building.

Hydrock

This report does not form the Risk Assessment required under the RRFSO, nor does it absolve the client from exercising their duties under Regulation 38. However, the aim of this Fire Safety Strategy is to demonstrate how the project complies with the requirements of the Building Regulations 2010 (as amended) and therefore should form part of the information provided to the 'Responsible Person' in order for them to undertake and maintain the Fire Risk Assessment for the project.

2.4 Additional Information on Guidance

In light of the current climate there have been a number of changes to guidance to satisfying the functional requirements of the Building Regulations 2010 (as amended) and the RRFSO.

2.4.1 Independent Review of Building Regulations and Fire Safety

Dame Judith Hackitt released the interim report for the 'Independent Review of Building Regulations and Fire Safety' in December 2017 and the final report in May 2018.

The interim report identified shortcomings of the Building Regulations and Fire Safety industry. The final report proposed to introduction of a 'new framework' designed to create a more simple and effective mechanism for driving building safety and provide stronger oversight of duty holders. Key elements of the new framework are summarised as follows; however, reference should be made to the 'Independent Review of Building Regulations and Fire Safety: Final Report' for further details:

- A new regulatory framework focused, in the first instance, on multi-occupancy higher risk residential buildings (HRRB's) that are 10 storeys or more in height;
- A new Joint Competent Authority (JCA) comprising Local Authority Building Standards, fire and rescue authorities and the Health and Safety Executive to oversee better management of safety risks in these buildings (through safety cases) across their entire life cycle;
- A set of rigorous and demanding roles and responsibilities for "dutyholders" (i.e. building owners, estate managers etc.) to ensure a stronger focus on building safety;
- Obligating the creation of a digital record for new HRRB's from initial design intent through to construction and including any changes that occur throughout occupation (golden thread);
- A package of regulations that is simpler to navigate but genuinely reflects the level of complexity of building work.

2.4.2 EWS1 Certificate

The Royal Institution of Chartered Surveyors (RICS), The Building Societies Association (BSA), and UK Finance have introduced a new industry-wide valuation designed to help people buy and sell homes and re-mortgage in buildings with a storey more than 18m above ground level or where specific concerns exist.

The new, standardised External Wall Fire Review process requires a fire safety assessment to be conducted by a suitably qualified and competent professional. This is aimed at delivering assurance for lenders, valuers, residents, buyers and sellers and assist in the valuation of high-rise properties, with actual or potential combustible materials in external wall systems and balconies.

The industry is actively encouraging building owners and estate managers of these buildings to proactively pursue independent testing of external wall materials to safely speed up the process for buyers and sellers.

2.4.3 MHCLG Consolidated Advice

Updated guidance i.e. *'Advice for Building Owners of Multi-storey, Multi-occupied Residential Buildings'* was issued by the Ministry of Housing, Communities and Local Government (MHCLG) on 20th January 2020. This consolidated note brings the Expert Panel's previous advisement together in a single document and supersedes the existing Advice Notes (1 to 22).

Requirement B4 of Schedule 1 to the Building Regulations 2010 (as amended) requires that *"...the external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and location of the building."* The MHCLG Consolidated Advice Note confirms that the need to assess and manage the risk of external fire spread applies to buildings of any height.

The document also advises that the risk of external fire spread should be considered as part of the fire risk assessment for residential buildings. The fire risk assessment should take in to account a number of factors other than height and material type, including the vulnerability of residents, location of escape routes, and the complexity of the building.

In summary, this document advises that, even where guidance for the combustibility of external wall construction on residential buildings is less specific in prescriptive guidance documents (e.g. Approved Document B and BS9991:2015), for buildings with no storey more than 18m above ground level, consideration should be given to whether the provision of any combustible material within the external wall construction presents a risk to health and safety and satisfies the functional requirement B4 of Schedule 1 to the Building Regulations.

2.4.4 *Fire Safety Bill*

The Fire Safety Bill (Bill 121) was introduced to the House of Commons on 19.03.2020. This Bill amends article 6 of the Fire Safety Order.

The clauses of the Bill are intended to provide clarity that the external wall construction and any attachments to the external wall are within the scope of the RRFSO and that the fire and rescue authorities can take enforcement action against responsible persons if they have failed to comply with their duties under the Fire Safety Order in relation to these parts of such premises.

In June 2019, the Home Office published a Call for Evidence on the Fire Safety Order, inviting views on the application of the Fire Safety Order in England and seeking to gather evidence to inform next steps and ensure high and proportionate standards of fire safety in all regulated premises. This complemented the "Building a Safer Future" consultation, launched simultaneously by the Ministry for Housing, Communities and Local Government, and was the first step in a process to ensure that the Fire Safety Order continues to be fit for purpose. The Home Office has published a summary of responses to the Call for Evidence at the same time as the introduction of this Bill.

The clauses in the Bill will be brought into force by means of commencement regulations made by the Secretary of State for premises in England and the Welsh Ministers for premises in Wales enabling the provisions to be brought into effect as is considered appropriate. The provisions within the Bill will be applicable to England and Wales.

Refer to Bill 121 for further details on provisions and applicability.

Hydrock

3. MEANS OF WARNING AND ESCAPE

Means of escape provisions are generally to be in accordance with BS9991:2015. Where the proposed means of escape strategy deviates from this guidance document it will require agreement with the approving authority and local Fire Service.

3.1 Fire Detection and Alarm System

Fire detection and alarm systems are designed to give warning of fire at an early stage to enable all occupants to evacuate the building safely, before the escape routes are impassable owing to the presence of fire, smoke or toxic gases.

3.1.1 Residential Apartments

The absolute minimum level of detection within apartments with protected entrance halls is Grade D Category LD2 designed in accordance with BS5839-6:2019. The arrangement of the flats determines the level of the fire detection and alarm system required as per the following:

- Open Plan Flats – Grade D LD1;
- Studio Apartments, Flats with Protected Entrance Halls – Grade D LD2;
- Maisonettes with a floor above 4.5m – Grade LD1 or LD2 depending on the selected arrangement as per Section 3.3.

3.1.2 Communal Residential Areas

It is proposed to provide an L5 fire detection and alarm system within the common residential areas (i.e. common corridors, lobbies and stairways) for the purpose of activating the relevant smoke ventilation systems only (sounders are not to be provided within these areas). The fire detection and alarm system in the common residential areas is to be designed, installed and commissioned in accordance with BS5839-1:2017.

3.1.3 Communal Roof Gardens/Terraces

In accordance with Clause D.6 of BS9991;2015, travel distance is not limited where there is no enclosure to a communal roof garden or terrace. Roof terraces are to be provided with an alarm which is audible throughout the terrace. The alarm is to be sounded upon activation of any fire detection system in the stairs or lobby/corridor access space (connected to L5 communal system designed to BS5839-1:2017).

3.1.4 Non-Residential Areas

Fire detection and alarm systems in the ancillary accommodation areas (plant room, cycle store and refuse stores), and communal escape corridors serving these areas, are required to be installed with an L5 system to be designed, installed and commissioned in accordance with BS5839-1:2017. The L5 fire alarm and detection system will alert occupants within these areas on detection of fire within any of these areas.

3.1.5 Fire Alarm System Interfaces

An automatic fire alarm system will have interfaces and links as necessary to operate equipment/devices and a number of examples are indicated below; for more information see BS5839-1:2017:

- Electromagnetic hold-open devices on fire doors – released to closed position;
- Security systems on exit doors – released as required;
- Gas supply valves (plant areas) – isolate;
- Smoke ventilation systems – relevant system activates depending on location of detection;
- Heating, ventilation and air conditioning systems – shut down to restrict spread of smoke and hot gases.

3.2 Evacuation Strategy

The evacuation strategy for the residential units is based on a 'stay-put' evacuation strategy where only the occupants within the unit of fire origin are to be alerted/evacuate and all other occupants within the building are to remain in place. Any additional evacuation is at the discretion of building management and the local Fire Service.

The evacuation strategy for the non-residential areas is based on a single-stage simultaneous evacuation strategy where all occupants within these areas are to be alerted/evacuate immediately on fire detection (plant, cycle store and refuse).

3.3 Horizontal Means of Escape

3.3.1 Internal Unit Layouts

Open Plan Flats

The open plan flats should be designed to Clause 9.7 of BS9991:2015 which includes:

- A Grade D LD1 fire detection and alarm system;
- An Automatic Water Fire Suppression System (AWFSS);

Hydrock

- The open plan flat will not exceed 16m x 12m;
- The open plan flats will be on a single level only;
- The ceilings will have a minimum height of 2.25m;
- The kitchen will be enclosed in flats exceeding 8m x 4m;
- Hob locations should not to be adjacent to the flat entrance.

It should be noted the open-plan arrangement for apartment 309 is provided with a protected internal stair so the flat does not open directly into the stair, see section 3.3.2 of this report for flats opening directly into the stair.

It should also be noted in flats greater than 8x4m (32m^2), it is considered acceptable not to enclose the kitchens within the flats as the majority of the open plan flats including flats, 105-107,122,123, 205-207 and 221-223 are marginally over 32m^2, max approx. 34m^2, as they only marginally exceed the size requirements and there are large sterile bathrooms within the space and half of the flat space is shielded from the kitchen already via the bedroom as per Figure 9, therefore the space where the kitchen is located is already limited.

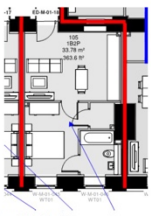


Figure 9 Open Plan Flat

This also includes apartment 309 which is marginally over 34m^2 measured as 36.21m^2, an isolated corner of the apartment is made up of the bathroom which is sterile and 5.36m2 as per Figure 10, therefore as almost 5.4m2 of the apartment is shielded from the kitchen anyway which is sterile it can be considered acceptable not to enclose the kitchen subject to BCO and local fire service approval.

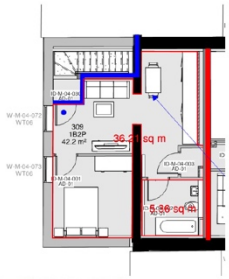


Figure 10 Open Plan Flat apartment 309

Studio apartments

Studio apartments are to be designed in accordance with Clause 9.4.2-part a) of BS9991:2015:

- The travel distance from any point in the apartment to the entrance door is not to exceed 9m, where the travel distance is exceeded, the travel distance can be extended to 20m with an LD1 fire detection and alarm system and an Automatic Water Fire Suppression System (AWFSS) is installed;
- The fire detection and alarm system is to be at least Grade D LD2;
- Bedrooms are not to be inner rooms to the room containing cooking facilities;
- Cooking facilities are to be located remote from the entrance door and internal escape route.

Apartments with protected entrance halls

As per Clause 9.4.2-part b) of BS9991:2015, apartments with a protected entrance hall will achieve the following:

- The protected internal entrance hall is to be protected by 30 minutes with FD 30 doors;
- The travel distance within the protected internal entrance hall (from the habitable room doors to the entrance door) will not exceed 9m;
- The fire detection and alarm system will achieve at least Grade D LD2.

Maisonette with a floor more than 4.5m above ground level

As per Clause 9.5.2 of BS9991:2015, for maisonettes one of the following arrangements should be provided:

- an alternative exit from any habitable room that is not on the entrance level of the maisonette (or a protected stairway enclosure serving all habitable rooms and one alternative exit from every floor level other than the entrance level; or
- a protected stairway enclosure and an LD1 fire detection and fire alarm system in accordance with BS5839-6:2013, if no floor is more than 7.5m above or below the level of the entrance of the maisonette; or
- a protected stairway enclosure and an Automatic Water Fire Suppression System (AWFSS) with the addition of sprinklers any potential fire growth is reduced in significance from the room of origin reducing the potential of smoke logging the internal stair as low.

Where the top level of the maisonette does not contain any bedrooms and is open to the internal escape stair this is a deviation from the guidance. It is considered acceptable (subject to agreement with the approving authority) providing the following conditions are met:

- all accommodation at the lower level (bedrooms, etc.) is separated from the internal escape stair by 30-minute fire rated construction and FD30 fire doors;
- the discharge from the apartment is from the lower level (i.e. same level as the bedrooms);

This arrangement is considered acceptable (subject to agreement with the approving authority) based on the following:

- The arrangement is considered similar to that of an open-plan apartment (i.e. bedrooms are inner rooms to the living/kitchen accommodation and discharge from the apartment is from the same level as the bedrooms. However, the living/kitchen accommodation is on a level above the bedrooms and is, therefore, less risk of blocking escape from the bedrooms (longer smoke fill time to affect occupants escape at the lower level). The risk of smoke impacting the escape route from the upper levels via the stair in the event of a fire in the lower-level accommodation is considered no higher than a compliant arrangement since the accommodation is separated from the stair by fire rated construction.

Apartments with a private balcony

In accordance with Clause D.2 and D.3 of BS9991:2015 no store (unless provided within a 30 min enclosure) or other fire risk should be erected externally on a balcony. Balconies no more than 4.5m above ground level are to be in accordance with Clause 5.1c)3) of BS9991:2015. The ground beneath the window or balcony will be clear of any obstructions (such as iron railings or horizontally hung windows) and will be of a size and material that is suitable and safe for supporting a ladder.

Where balconies more than 4.5 m above the ground level will meet the following recommendations:

- The escape route from the balcony will not pass through more than one access room;
- The interior of the access room will be clearly visible from all parts of the balcony unless provided by a fire detection and alarm system in accordance with BS 5839-6:2013;
- Any cooking risk in the access room will be enclosed with fire-resisting construction unless:
  - the open cooking risk is remote from the balcony and positioned in such a way that it does not prejudice the escape route through the access room; and
  - a fire detection and fire alarm system in accordance with BS 5839-6:2013 is provided to the access room with an alarm system on the balcony.
- Where the travel distance from the balcony access door to the furthest point on the balcony exceeds 7.5m, it will be provided with an alternative escape route without going via the same access room, or the access room will be provided with automatic smoke detection. Any cooking risk in the access room will be enclosed with fire-resisting construction unless:
  - the open cooking risk is remote from the balcony and positioned in such a way that it does not prejudice the escape route through the access room; and
  - a fire detection and fire alarm system in accordance with BS5839-6:2013 is provided to the access room with an alarm system on the balcony.

3.3.2 *Common Corridors / Layouts*

Internal Corridors

The internal layout of the corridors is based on Figure 7 of BS9991:2015. The travel distance from apartment doors to the stair door is not to exceed 7.5m (where escape is available in a single direction only) or 30.0m (where escape is available in alternative directions). Where a corridor provides access to multiple escape stairs it will be provided with a cross-corridor door approx. midway between the storey exits. This cross-corridor door may be omitted where the travel distance from the further apartment door does not exceed 15.0m to the stair door. The ventilation to the corridors is stated within section 8.2.1 of this report.

Flats Directly opening into the stair

It should be noted apartments 108,208,309 and 310 open into stair 2 and apartments 121,220,319 and 320 open into stair 3.

This is considered acceptable using the principles of a small single stair building as per clause 7.5 of BS9991:2015 and figure 8 part b) where no more than two flats at any level can open directly into the stair with protected entrance halls, all flats opening into the stair 2 and 3 will have protected entrance halls and will be sprinkler protected and open into a stair which serves only 3 stories above ground and an 1m² AOV is to be installed at the head of the stair to operate on activation of the L5 fire detection and alarm system if smoke is detected in the stair, other apartments within the development also have multiple directions of escape and therefore can turn their back on an effected stair, therefore the apartments opening into stairs 2 and 3 are considered acceptable subject to BCO and fire service approval.

Balcony Approach

A large portion of the corridors within the development are based on balcony approach.

The balcony approach areas within the building are to be designed in accordance with Clause 7.3 of BS9991:2015 (Figure 5 of BS9991:2015). The majority of areas are designed as per a) of Figure 5, however there are balcony approach dead end areas designed as Figure 5-part b).

The following should be noted for all balcony approach areas to the apartments:

- There are no travel distance restrictions on access balconies to the apartments;
- Where escape is available along an access balcony in a single direction only the balcony will be protected from the apartments by 30 minutes fire rated construction and FD30 fire doors up to a height of 1.1m above floor level unless the access balcony is located at least 1.8m away from the apartment facade. Where escape is available along an access balcony in multiple directions the balcony need not be protected from the apartments by fire rated construction;
- The stair door will be self-closing and fire rated to FD30S.

The following requirements should also be achieved:

- The structure, including the floor, will be protected by 30-minute fire-resisting construction (integrity and insulation);
- The walking surface will be imperforate (i.e., there will be no holes or perforations in the structure so that users are protected from the effects of heat or smoke from below);
- The sectional profile should be such that any fire plume breaking out of a flat or maisonette is directed outwards and upwards, and will be arranged such that smoke does not leak laterally along the soffit. Balconies will be as open as possible to allow for the dispersal of smoke originating in a flat. At least 50% of the vertical section is to be open and the area of opening will be uniformly spread around the surface. The opening for ventilation is to be at least between the top of the balustrade at 1.1m and the soffit to the balcony above;
- The soffit above a balcony or deck having a width of more than 2m will be designed with down-stands placed at 90° to the face of the building (on the line of separation between individual flats or maisonettes). Down-stands are to project 0.3 m to 0.6 m below any other beam or down-stand parallel to the face of the building;
- Balconies providing a single direction of escape will be further safeguarded by the following provisions:
  - The face of the building (excluding window openings) will provide at least 30 min fire resistance;
  - Doors opening onto the balcony will be FD30 self-closing doors;
  - Window openings will not extend below a height of 1.1 m above the deck level;
  - The external balustrade will be imperforate;
  - Surface materials of the facing wall, balcony soffit and balustrade will be of a Class 0 rating.
- The length of balconies will be such that no point in any flat or maisonette is more than 45m from a rising main landing valve or the approach position of a fire appliance (measured along the fire-fighting route of access).

3.3.3 *Ancillary Accommodation*

Travel Distances

Travel distance is the actual distance a person needs to travel from any point within a building to the nearest storey/final exit.

In accordance with BS9991:2015, the maximum travel distances within each ancillary residential area of the building are outlined in Table 2.

Table 2 Maximum permitted travel distances

Area	Maximum Permitted Travel Distance (m)			
	With Only One Escape Route Available		With Alternative Escape Routes Available	
	Layout Known	Layout Unknown	Layout Known	Layout Unknown
Plant/Refuse	9	6	18	12
Cycle store	18	12	45	30

As illustrated in the Fire Strategy Drawings in Appendix A, all ancillary residential areas of the building are considered acceptable with regard to maximum permitted travel distances in accordance with BS9991:2015.

Escape Route Widths

In accordance with BS9999:2017 the total door widths for the ancillary accommodation is to be:

- Not less than required to serve the expected occupancy; and
- Not less than 850mm where unassisted wheelchair access is necessary; and
- Not less than 800mm regardless of risk profile.

The minimum door widths are acceptable for the ancillary accommodation areas 850mm for wheelchair access due to the low occupancy nature of the cycle store which is for residents only and stores less than 60 bikes. The plant room would be accessed for contractors and would only have up to 2 at any time.

3.3.4 *Door Opening Directions*

Where an exit may be expected to be required to serve more than 60 persons for escape in a fire scenario it should be arranged to open in the direction of escape.

3.3.5 *Ancillary Accommodation in Multi-Stair Buildings*

As per Clause 37-part C) of BS9991:2015, In multi-stair buildings, ancillary accommodation should be separated from any common corridors by a protected lobby where the escape route is in a single direction.

At Level 0, escape is possible in two directions and there is no dead-end and the common corridor is to be ventilated as it connects to the main central stair.

3.4 Vertical Means of Escape

3.4.1 *Protected Stairways*

A protected stairway needs to be relatively free of potential sources of fire. In accordance with Clause 21.1 of BS9991:2015, access hatches to service risers will not be situated within a means of escape stair unless providing smoke control or pressurisation for that staircase.

3.4.2 *Stair Discharge*

In accordance with Clause 34.a of BS9991:2015, residential stairs are to discharge to external directly or via a protected route which is lobby protected from any adjacent accommodation.

It should be noted the main central stair, stair 2 and stair 3 discharge direct to external. Stair 4 is an internal access stair which discharges via the entrance lobby at Level 2. The arrangement of the stair 4 access stair is considered acceptable not to discharge direct to external or via a protected lobby based on the following subject to agreement with the approving authority and local fire service, agreement was accepted on the 04/10/2021 with full plans approval from STG: :

- The stair is provided with multiple alternative discharge routes (in the event of a fire in the entrance lobby blocking the primary discharge route) via Stair 3 at Level 2 or direct to external at Level 1, etc.
- It is considered reasonable to assume, based on the provision of fire rated separation, that the alternative discharge routes from Stair 4 would be available in the event of a fire at Level2 in the entrance lobby blocking the primary discharge route.

3.4.3 *Required Stair Widths*

As the stairs serve residential areas only, the stairs will achieve a minimum width of 750mm (unobstructed) measured between walls or balustrades as per Figure 28 of BS9999:2017.

3.5 Escape Signage

Escape signage is to be provided within the common escape routes. Escape signage is to be designed and installed in accordance with BS5499-4:2013. Signage utilised throughout the building is to be consistent and in accordance with BS ISO 3864-1:2011.

3.6 Cupboards located in Stairs

In the main central stair, there is cupboard at level 0, it is considered acceptable to provide a cupboard in the stair which is low risk and will be fire rated to 30 minutes with an FD30S door and all flats within the vicinity of

the main stair have an alternative route out of the building, this is to be agreed with building control and the local fire service.

It should also be noted on level 3 an additional lobby will be installed to separate the cupboard from stair 4 (stair 4 has flats opening directly into the stair and acts as a small single stair), the lobby requires to be ventilated with a 1m^2 permanent opening as per table 13 of BS9991:2015.

Hydrock

4. INTERNAL FIRE SPREAD (LININGS)

4.1 Internal Fire Spread (Linings)

The interior wall and ceiling surfaces in a building may have a significant influence on how fast a fire may develop. The Building Regulations require that internal linings shall adequately resist the spread of flame over their surfaces and, if ignited, have either a heat release rate or a rate of fire growth which is reasonable in the circumstances.

It is particularly important that in circulation spaces, where the rapid spread of fire is most likely to prevent occupants from escaping, the surface linings are restricted by making provision for them to have low rates of heat release and surface spread of flame.

The internal surface linings are to be in accordance with Table 3 throughout the building.

Table 3 Internal lining requirements

Location	British Standard Performance Class [1]	European Performance Class [2]
Non-residential rooms having an area not more than 30m²	3	D-s3, d2
Residential rooms having an area not more than 4m²	3	D-s3, d2
All other rooms	1	C-s3, d2
Circulation spaces within dwellings	1	C-s3, d2
Other circulation spaces	0	B-s3, d2

Notes
1. Relates to performance measures in BS476 Parts 6 & 7 criteria
2. Relates to performance determined in accordance with BSEN13501-1:2018

The surface linings of the walls and ceilings should generally conform to the classifications outlined in Table 3. However, parts of walls in rooms may be of a lower class but not lower than Class 3 (national class) or Class D-s3, d2 (European class) provided that the total of those parts in any one room does not exceed 50% of the floor area of the room (subject to a maximum of 60m² in non-residential areas and 20m² in residential areas).

For the purposes of internal surface lining requirements, the following definitions should be noted:

Room An enclosed space within a building that is not used solely as a circulation space. The term includes not only conventional rooms, but also cupboards that are not fittings and large spaces such as warehouses and auditoria. The term does not include voids such as ducts, ceiling voids and roof spaces;

Circulation space A space (including a protected stairway) mainly used as a means of access between a room and an exit from the building or compartment.

Table 15 outlines the inclusions/exclusions regarding the definitions for walls and ceilings for the purposes of internal surface spread of flame requirements.

Table 4 Internal lining requirements

	Walls	Ceilings
Definition includes	• The surface of glazing (except glazing in doors) • Any part of a ceiling which slopes at an angle of more than 70o to the horizontal	• The surface of glazing • Any part of a wall which slopes at an angle of 70° or less to the horizontal • The underside of a mezzanine or gallery • The underside of a roof exposed to the room below
Definition excludes	• Doors and door frames • Window frames and frames in which glazing is fitted • Architraves, cover moulds, picture rails, skirtings and similar narrow members • Fireplace surrounds, mantle shelves and fitted furniture	• Trap doors and trap door frames • The frames of windows or rooflights and frames in which glazing is fitted • Architraves, cover moulds, picture rails, exposed beams and similar narrow members

Hydrock

5. INTERNAL FIRE SPREAD (STRUCTURE)

5.1 Elements of Structure

For the purposes of the Fire Safety Strategy, the top occupied storey of the building (excluding levels consisting of plant only) is 15.3m above ground level. Therefore, the required fire resistance for the elements of structure is 60 minutes (with regard to load-bearing capacity) in accordance with Table 4 of BS9991:2015.

The structure of the roof and the structure that supports only the roof need not to be fire rated unless the roof:

- Forms part of an escape route; or
- Function as a floor; or
- Is part of a portal frame structure where the roof and the supporting stanchions form a single element of structure; or
- Is integral to the stability of a fire-resisting external wall.

In the penthouse sections of the building, it is proposed to fire rate the room internally to protect the SFS with 2 layers of 15mm fire board and a CP board to the floor to provide 60 minutes fire rated construction to manufacturer's instructions. The apartment below the penthouse will also have a fire rated ceiling with 2 layers of fire board to provide 60 minutes fire resistance in accordance with manufactures instructions. Therefore, it is proposed the primary steels supporting the penthouse SFS are not fire rated as the primary steels are protected from a fire in the flat below by 60 minutes and the penthouse internally by 60 minutes fire resistance, this solution is to be agreed with building control and the local fire service.

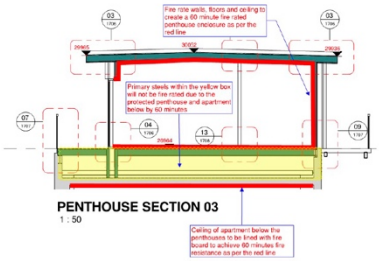


Figure 11 Penthouse fire rating

5.2 Compartmentation

In accordance with Clause 17 of BS9991:2015:

- All floors containing residential units are to be designed as compartment floors achieving the same level of fire resistance as required for elements of structure;
- All residential units are to be separated from all other areas of the building by at least 60-minute fire rated construction (FD30S fire doors on to common corridors).

5.3 Additional Fire Resistance Requirements

Fire resistance to achieve the required compartmentation and protection to escape routes is to be provided in accordance with BS9991:2015 as outlined in Table 5.

Hydrock

Table 5 Fire resistance requirements

Space		Minimum Fire Resistance [1] (minutes)			Method of Exposure
		Load-bearing Capacity (R)	Integrity (E)	Insulation (I)	
Structural Frames, Beams and Columns		[2]	-	-	Exposed faces
Load-bearing Wall Elements		[2]	-	-	Each side separately
Floors		[2]	[2]	[2]	From underside
Compartment Floors		[2]	[2]	[2]	From underside
Compartment Walls	Enclosing Residential Units	60	60	60	Each side separately
	Other Compartment Walls	[2]	[2]	[2]	Each side separately
Roofs	Any part forming part of an escape route	30	30	30	From underside
	Any part forming the function of a floor	[2]	[2]	[2]	From underside
External Walls	Any part within 1m of a relevant boundary	[2]	[2]	[2]	Each side separately
	Any part more than 1m from a relevant boundary	[2]	[2]	15	From inside building
	Any part within 1.8m of an external escape route	30	30	-	From inside building
Protected Shafts	Between shaft and protected lobby or corridor	30	30	30	Each side separately
	Between shaft any other accommodation	[2]	[2]	[2]	Each side separately
Protected Lobbies and Corridors		30	30	30	Each side separately
Protected Internal Entrance Halls		30	30	30	Each side separately
Corridor Sub-Division		30	30	30	Each side separately
Ancillary Accommodation		[4]	[4]	[4]	Each side separately

Notes
1. When tested in accordance with the relevant parts of BS476 or equivalent European standard
2. Equivalent to that required for elements of structure as defined in Section 5.1
3. This does not apply to allowable unprotected openings calculated within in 6.1
4. Refer to Section 5.4

5.4 Ancillary Accommodation

The required fire rated enclosures to areas of ancillary accommodation are outlined in Table 6.

Table 6 Ancillary accommodation fire resistance requirements

Space	Minimum Fire Resistance [1] (minutes)
Store Rooms	30
Cycle Store	30
Plane/Refuse	60

Notes
1. When tested in accordance with the relevant parts of BS476 or equivalent European standard

5.5 Fire Doors

Fire doors are to be provided in all fire rated partitions noted in Section 5.3. The fire resistance requirements for the doors are outlined in Table 7.

Table 7 Fire door fire resistance requirements

Location		Minimum Fire Resistance [1] (minutes)
Compartment Wall	Between residential unit and common space	FD30S
	Enclosing a protected shaft forming a protected stair wholly or partly above ground level	FD30S
	Enclosing a protected shaft forming a protected stair below ground level	[2]
	Enclosing a protected shaft forming a lift well or service shaft	[3]
	All other compartment walls	[3] [4]
Compartment Floor		[5]
Within Protected Stairway (separating upward and downward flights or a basement stair)		FD30S
Common Protected Lobby / Corridor		FD30S
Protected External Escape Route		FD30
Protected Internal Entrance Hall / Stairway		FD30
Corridor Sub-Division		FD30S
Ancillary Accommodation		[5]

Notes
1. When tested in accordance with the relevant parts of BS476 or equivalent European standard
2. At least half the period of fire resistance required of the wall in which it is fitted but not less than FD30 and with a smoke seal (S)
3. At least half the period of fire resistance required of the wall in which it is fitted but not less than FD30
4. Smoke seal only required where compartment wall is utilised for progressive horizontal evacuation
5. As for the wall or floor in which it is fitted

Hydrock

A fire door that is required to resist the passage of smoke at ambient temperature conditions (i.e. with suffix 'S') should either:

a. have a leakage rate not exceeding 3m3/h/m, when testing in accordance with BS476-31.1 with a threshold taped and subjected to a pressure of 25Pa; or
b. meet the classification requirement of Sa when tested in accordance with BSEN1634-3.

5.6 Ductwork

Where air handling ducts pass through compartmentation / fire-resisting construction the integrity of these compartments should be maintained. There are four basic methods in order to prevent smoke and flame spread through the building or compartment. For more information see Clause 33.4.3 of BS9999:2017.

The requirements for each option are as follows:

Method 1 – Thermally actuated fire dampers

- Fire dampers are not suitable for protected escape routes;
- Fire dampers that are thermally operated can be provided where ductwork goes through fire-resisting construction.

Method 2 – Fire-resisting enclosures

- Method 2 can only be used on ductwork that passes through an escape route, providing the ductwork does not serve the escape route it passes through;
- The fire resisting enclosures should achieve the same fire resistance as the wall the ductwork penetrates, which then forms a compartment known as a protected shaft. This allows a multiplicity of services to be transferred together within the duct to traverse a number of compartments within the building without the need for further sub divisions. Fire dampers (thermally or actuated by automatic fire detector – AFD) will only be required where the ductwork enters or leaves the protected shaft.

Method 3 – Protection using fire-resisting ductwork

- The ductwork itself forms a protected shaft. The ductwork should achieve the same fire resistance as the wall the ductwork penetrates. The fire resistance can be achieved by the ductwork material itself or through the application of a protective material;
- Method 3 can only be used on ductwork that passes through an escape route, providing the ductwork does not serve the escape route it passes through.

Note: The supporting hangers should be capable of supporting the ductwork for not less than the period of fire resistance of the ductwork.

Method 4 – Automatically actuated fire and smoke dampers triggered by smoke detectors

- Method 4 may be used for extract ductwork passing through the enclosures of protected escape routes, both where the ductwork does and does not serve the escape route.

Note: Methods 1 and 4 are not suitable for ductwork serving kitchen extracts.

5.7 Fire Stopping

If the fire separating element is to be successful, every joint or imperfection of fit, or opening to allow services to pass through the element, should be adequately protected by sealing or fire stopping so that the fire resistance of the element is not impaired. Fire stopping is to be provided at the following locations:

- In line with fire rated walls and floors where there is a penetration of the wall/floor in order to maintain the fire resistance integrity of the wall/floor;
- Between fire rated walls/floors and an external wall to ensure the fire resistance integrity of the wall/floor is maintained to the external wall.

Where fire stopping is provided, it is to achieve the same level of fire resistance as required for the wall/floor it replaces. For more information see Clause 24.4 from BS9991:2015.

5.8 Cavity Barriers

In accordance with BS9991:2015 cavity barriers are to be provided in the cavity of:

- an external wall at all cavity edges and around all openings in the external wall (i.e., windows);
- an external wall in line with a compartment floor where it meets the external wall;
- an external wall in line with a compartment wall where it meets the external wall;
- an internal cavity wall at the junction with a fire rated wall/floor.

It should be noted that cavity barriers need not be provided within internal or external cavity walls where the following conditions are met:

- Cavity barriers are provided around all edges and openings in the cavity wall; and
- The cavity is enclosed within two leaves (one either side) of either concrete or masonry each at least 75mm thick.

Cavity barriers should also be provided in cavities to prevent the excessive spread of unseen fire and smoke. Cavity barriers are to be provided to ensure the maximum dimensions of undivided concealed spaces do not exceed the requirements outlined in Table 8.

Table 8 Ancillary accommodation fire resistance requirements

Location of Cavity	Class of Surface/Product Exposed in Cavity		Maximum Distance In Any Direction
	National Class [1]	European Class [2]	
Between Roof and Ceiling	Any	Any	20m
Any Other Cavity	Class 0 or Class 1	Class A1, Class A2, Class B or Class C	20m
	Any Other Class	Any Other Class	10m

Notes
1. Relates to performance measures in BS476 Parts 6 & 7 criteria
2. Relates to performance determined in accordance with BSEN13501-1:2018

Cavity barriers in a stud wall or partition, or provided around openings, may be formed of the following;

- Steel at least 0.5mm thick;
- Timber at least 38mm thick;
- Polyethylene sleeved mineral wool or mineral wool slab (both require to be under compression when used in cavity barrier construction); or
- Calcium silicate, cement based or gypsum plaster boards at least 12mm thick.

Where provided, cavity barriers are to achieve at least 30 minutes fire resistance for integrity and 15 minutes fire resistance for insulation. Refer to Clause 19.1 of BS9991:2015 for further information with regard to cavity barrier provisions, construction and fixing requirements.

Hydrock

6. EXTERNAL FIRE SPREAD

6.1 Fire Spread to Adjacent Properties

In order to prevent fire, spread between properties it should be ensured sufficient separation distance is provided between fire compartments within the building and the relevant boundaries based on the extent of unprotected area to the fire compartments.

External fire spread analysis has been conducted based on the enclosing rectangle method as described in BR187:2014.

6.1.1 Enclosing Rectangle Method

The enclosing rectangle method considers each fire compartment within the building separately. The methodology for this analysis is summarised as follows:

- A plane of reference is defined which 'touches' the elevation under consideration at least once but does not pass through it;
- A rectangle is constructed enclosing all unprotected areas on the elevation. The dimensions of this rectangle are then rounded up to the nearest dimensions defined in the tables of BR187:2014;
- The unprotected area on the elevation projecting on to the plane of reference is taken as a percentage of the area of the 'enclosing rectangle';
- The tables in BR187:2014 are then used to determine the required minimum distance between the plane of reference and the relevant boundary based on the dimensions of the enclosing rectangle and the percentage of unprotected area;
- The methodology of the enclosing rectangle analysis may also be carried out in 'reverse' based on a known boundary distance to determine the maximum percentage unprotected area on the elevation.

6.1.2 Enclosing Rectangle Analysis Assumptions

External fire spread analysis in accordance with BR187:2014 is based on the following assumptions:

- All parts on the elevation to the fire compartment are considered 'unprotected' except the following:
  - All parts of the elevation that meet the fire resistance requirements for elements of structure with regard to integrity (i.e., 60 minutes) and 15 minutes for insulation, as the brick façade is two layers thick and existing it is considered non-combustible for surface spread of flame and protected for external fire spread calculations;
  - Small unprotected areas (less than $1m^2$) and groups of unprotected areas (within an area not exceeding $1m^2$) that are separated from all other unprotected areas on the compartment elevation by at least 4m (reduced to 1.5m where one of the unprotected areas does not exceed $0.1m^2$);
  - Unprotected areas to protected shaft that is enclosed within at least 60-minute fire rated construction;
- The relevant boundary distance is taken from the plane of reference to the adjacent site boundary except where the adjacent boundary is to a public roadway or river etc. In the case the adjacent boundary is a public roadway or river the relevant boundary distance may be taken to the middle of the road or river etc;
- The relevant boundary distance between two buildings is taken half way between the two buildings which will be considered as the notional boundary;
- Analysis for each fire compartment is to be conducted based on the relevant occupancy characteristic of the compartment (i.e. residential, etc.);
- The analysis will consider the 'worst-case' scenario for each elevation (i.e. compartment with greatest extent of unprotected area closest to the relevant boundary). Providing the analysis for the worst case demonstrates compliance it is considered acceptable to assume all other compartments on the elevation are also acceptable with regard to external fire spread;
- Where unprotected areas on the elevation are 'set-back' from the plane of reference they will have a reduced impact with regards to external fire spread therefore in accordance with BR187:2014 a reduction factor may be applied to these areas. This reduction factor is calculated in accordance with BR187:2014 as follows:

$$R = \left[\frac{2.B_0}{2.B_0 + r}\right]^2 \qquad \text{Eq. 1}$$

where;

B_0 is the minimum boundary distance calculated in accordance with BR187:2014 assuming none of the unprotected are set back from the plane of reference;

r is the distance the unprotected area is set back from the plane of reference.

The external fire spread analysis is then re-calculated based on the factor reduced areas.

Hydrock

6.1.3 External Fire Spread Analysis

Relevant Boundary Distances

The maximum relevant boundary distances from each elevation/analysis are illustrated on the site plan in Figure 12.

The legal site boundary is illustrated in red; the main hospital building outline is illustrated in blue and the elevations correspond to the labelled numbers.

Figure 12 Maximum relevant boundary distances

Elevation 1

The 'worst-case' compartment on this elevation is considered to be apartment 46, based on the extent of the unprotected area and proximity to the relevant boundary. The extent of unprotected area is illustrated in Figure 13.

Figure 13 Elevation 1 analysis

The plane of reference for this analysis is taken to the middle of New Road. The unprotected area of this compartment elevation is approximately 12.6m² within an enclosing rectangle of 6.3m (9.0m) high x 5.0m (6.0m) wide (total enclosing rectangle of 54m²). Therefore, the percentage of unprotected area within the enclosing rectangle is 23.33%, resulting in a minimum required boundary distance of 1.33m. The actual distance from the plane of reference to the adjacent relevant boundary is 13.8m; therefore, this elevation is considered acceptable with regard to external fire spread.

Elevation 2

The 'worst-case' compartment on this elevation is considered to be apartment 35, based on the extent of the unprotected area and proximity to the relevant boundary. The extent of unprotected area is illustrated in Figure 14.

Figure 14 Elevation 2 analysis

The plane of reference for this analysis is taken to the national boundary between the neighbouring building parallel to the elevation. The unprotected area of this compartment elevation is approximately 9.9m² within an enclosing rectangle of 2.7m (3.0m) high x 5.9m (6.0m) wide (total enclosing rectangle of 18m²). Therefore, the percentage of unprotected area within the enclosing rectangle is 55%, resulting in a minimum required boundary distance of 1.75m. The actual distance from the plane of reference to the adjacent relevant boundary is 2.85m; therefore, this elevation is considered acceptable with regard to external fire spread.

Elevation 3

The 'worst-case' compartment on this elevation is considered to be apartment 62, based on the extent of the unprotected area and proximity to the relevant boundary. It should be noted the apartment is also setback by 1.5m from the elevation due to the terrace, therefore the boundary distance is (4.1m+1.5m) 5.6m. The extent of unprotected area is illustrated in Figure 15.

Figure 15 Elevation 3 analysis

The plane of reference for this analysis is taken parallel to the elevation to the site boundary. The unprotected area of this compartment elevation is approximately 18.1m² within an enclosing rectangle of 2.7m (3.0m) high x 6.8m (9.0m) wide (total enclosing rectangle of 27m²). Therefore, the percentage of unprotected area within the enclosing rectangle is 67.04%, resulting in a minimum required boundary distance of 2.5m. The actual distance from the plane of reference to the adjacent relevant boundary is 5.6m including the setback and 4.1m from the face of the brickwork for apartments below; therefore, this elevation is considered acceptable with regard to external fire spread.

It should also be noted parts of elevation 3 are within 1m of the site boundary, however subject to BCO and local fire service approval, as the elevation overlooks the graveyard it is considered acceptable not to meet external fire spread requirements between buildings as the land adjacent to elevation 3 is unlikely to be built on due to the historical and religious nature of the site and the distance to the nearest building is over 10m which would mean there are no external fire spread requirements between neighbouring buildings to be met. It should also be noted that all apartments on this elevation within 1m of the relevant boundary are to be provided with sprinkler protection reducing the risk of fire spread.

Elevation 4

The 'worst-case' compartment on this elevation is considered to be apartment 34, based on the extent of the unprotected area and proximity to the relevant boundary. The extent of unprotected area is illustrated in Figure 16.

Figure 16 Elevation 4 analysis

The plane of reference for this analysis is taken to the national boundary between the neighbouring building parallel to the elevation. The unprotected area of this compartment elevation is approximately 9.2m^2 within an enclosing rectangle of 2.2m (3.0m) high x 9.0m (9.0m) wide (total enclosing rectangle of 27m^2). Therefore, the percentage of unprotected area within the enclosing rectangle is 34.1%, resulting in a minimum required boundary distance of 1.2m. The actual distance from the plane of reference to the adjacent relevant boundary is 5.0m; therefore, this elevation is considered acceptable with regard to external fire spread.

Elevation 5

The 'worst-case' compartment on this elevation is considered to be 27, based on the extent of the unprotected area and proximity to the relevant boundary within the courtyard area. The extent of unprotected area is illustrated in Figure 17.

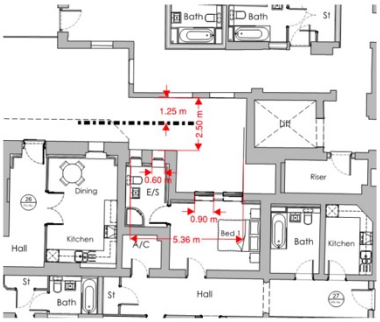


Figure 17 Elevation 5 analysis

The plane of reference for this analysis is taken to the national boundary between the neighbouring building parallel to the elevation. The unprotected area of this compartment elevation is approximately (0.6x2.7 + 0.6x2.7 + 0.9x2.7 +0.9x2.7) 8.1m^2 within an enclosing rectangle of 2.7m (3.0m) high x 5.36m (6.0m) wide (total enclosing rectangle of 18m^2). It should be noted that this analysis is based on an assumed window height of 2.7m in this area (this is to be confirmed by architect). Therefore, the percentage of unprotected area within the enclosing rectangle is 45%, resulting in a minimum required boundary distance of 1.5m. The actual distance from the plane of reference to the adjacent relevant boundary is 1.25m; therefore, this elevation is not considered acceptable with regard to external fire spread.

However, when taking into account set back distances, the 0.9m wide windows are set back 1.97m from the elevation plane of reference. As per Table 9 the 0.9m windows are considered part of 'zone 2' and the 0.6m windows are considered part of 'zone 1'.

Hydrock

Table 9 Elevation 5 set-back external fire spread analysis

Zone	Unprotected Area (m^2)	Set-Back (m)	Reduction Factor	Factor Reduced Unprotected Area (m^2)
Zone 1	3.24	0.00	1.00	3.24
Zone 2	4.86	1.2	0.51	2.48
Total	8.1	-	-	5.72

Therefore, the 'factor reduced unprotected area' of this compartment elevation is approximately 5.72m^2 within an enclosing rectangle of 2.7m (3.0m) high x 5.36m (6.0m) wide (total enclosing rectangle of 18m^2). The percentage of unprotected area within the enclosing rectangle is 31.8%, resulting in a minimum required boundary distance of 1.09m. The actual distance from the plane of reference to the adjacent relevant boundary is 1.25m; therefore, this elevation is considered acceptable with regard to external fire spread.

6.2 Re-Entrant Corners

The building design should prevent fire spread from occurring around walls/floors required to be fire rated via an external corner in the façade (i.e. re-entrant corners). Therefore, where the internal angle of a corner in the façade is less than 135°, unprotected areas to areas of separate sides of a fire rated wall/floor are to be separated by at least 1800mm as illustrated in Figure 18.

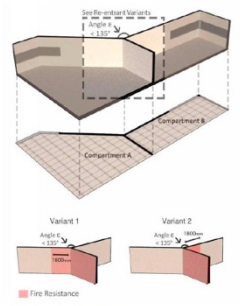


Figure 18 Re-entrant corner requirements

A number of locations on the site have re-entrant corners between apartments and communal corridors, however, it is considered acceptable to fire rate apartments up to the window section as per Figure 19 as there are always two directions of escape (except for flats opening directly into stairs 2 and 3 where this scenario does not apply) and the risk of fire spreading in the communal corridor is low due to the sterile nature of it. This is considered acceptable subject to BCO and local fire service approval.

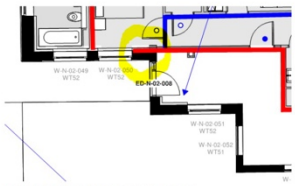


Figure 19 Re-entrant corner between communal corridors

Hydrock

6.3 Building Façade

External walls should be constructed using a material that does not support fire spread and therefore endanger people in or around the building. Flame spread over or within an external wall construction should be controlled to avoid creating a route for rapid fire spread bypassing compartment floors or wall. It should also be ensured external walls close to relevant boundaries are not readily ignitable to avoid fire spread between buildings.

In accordance with BS9991:2015 external walls should either meet the performance criteria of BR135 when testing accordance with BS8414-1 or BS8414-2 or should meet the following requirements:

- Where the external wall is within 1m of a relevant boundary the external surface is to achieve the following requirement:
  - Class B-S3, d2 or better (European class). Profiled or flat steel sheet at least 0.5mm thick with an organic coating of no more than 0.2mm thickness is also acceptable;
- Where a part of the building is considered assembly or recreation all external wall surfaces up to 10m above ground level and up to 10m above a roof any part of the building to which the public have access to are to achieve the following requirement:
  - Class B-S3, d2 or better (European class). Profiled or flat steel sheet at least 0.5mm thick with an organic coating of no more than 0.2mm thickness is also acceptable;
- Cavity barriers are to be provided as outlined in Section 17;

Where the top storey of a residential building is more than 18m above ground level all materials used in the external wall construction (including attachments) should be Class A2-s1, d0 or Class A1 in accordance with The Building (Amendment) Regulations 2018.

Where the top storey of a residential building is not more than 18m above ground level there are no explicit restrictions on the combustibility of the external wall construction noted within BS9991:2015. However, in line with the MHCLG Consolidated Advice Note (released 20.01.2020) consideration should be given to the use of materials of limited combustibility (A2-s3, d2, or better) in the external wall construction to ensure the functional requirement B4 of Schedule 1 to the Building Regulations is met. Refer to Section 2.4.3 for further details.

It is noted the top storey of the building (common access level) is less than 18m above ground level, the majority of the façade is solid brick and existing, it is considered non-combustible surface spread of flame and protected for external fire spread. However, it is to be ensured all primary materials (insulation products, filler materials, cladding panels where applicable, etc.) achieve Class A2 or better. Combustible insulation may be incorporated into the external walls where the insulation is between two leaves of masonry (each at least 75mm thick).

Hydrock

7. FACILITIES FOR FIREFIGHTING

The following section describes the arrangements for firefighting provisions in the event of a fire in order to comply with B5 of Schedule 1 to the Building Regulations 2010 (as amended).

7.1 Firefighting Access

As the top storey of the building is less than 18m above ground level, as per clause 50.2.1 of BS9991:2015, fire-fighting shafts are not required.

Firefighting access to the main hospital building will be via New road and St Bartholomew's Lane. Fire Service access is available to the building via the main entrance on level 2 (new Road) or at level 0 (St Bartholomew's Lane) via the stairs adjacent to the east and west elevations via new road or into the main central stair at level 0 via saint Bartholomew's lane. See Figure 20 for the illustrated entrances.

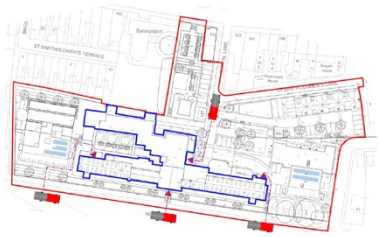


Figure 20 firefighting access

It is proposed to provide dry risers within the main central stair, stair 2 and stair 3. It is not considered necessary to provide a dry riser in Stair 4.

All apartments are within 45m, measured along a route suitable for laying a hose, except apartment 01. However, this arrangement is considered acceptable, subject to agreement with the approving authority and local Fire Service, based on the following:

- The door to each habitable room within apartment 01 is within 45m of a dry riser outlet;
- All apartments are to be provided with sprinkler protection which will reduce fire growth rate and increase time available for fire service arrival/intervention.

It should also be noted that the closest dry riser outlet from apartment 01 is the outlet within Stair 2 rather than the outlet within the main central stair.

The fire tender should not reverse more than 20m unless a hammerhead or turning circle is provided.

7.2 Fire Mains

In accordance with BS9991:2015 all areas of the building are to be either be within 45m of a fire tender accessible location or within 45m of a fire main within a protected stair measured along a route suitable for laying a hose (refer to Section 7.1 for further details). It is proposed to provide a dry rising main within the escape stairs (main central stair, stair 2 and 3) serving every level. The dry rising mains should be provided within the stair enclosure with a landing valve at each level. The fire main is to be designed, installed and commissioned in accordance with BS9990:2015.

The dry riser inlets are to be provided at a location visible from and within 18m of a fire tender accessible location in accordance with Clause 50.1.3 of BS9991:2015.

Kent fire and rescue service have recommended a minimum flow rate of 1500 L/min in accordance with BS9990:2015 for dry riser outlets.

7.3 Fire Hydrants

In accordance with BS9991:2015, it is to be ensured a fire hydrant is provided within 90m of the dry riser inlets serving the development, however it can be 100m from existing hydrants.

Figure 21Fire Hydrant Locations

8. FIRE PROTECTION SYSTEMS

This section describes the fire protection systems to be provided with the development in order to ensure the safety of occupants and Fire Service personnel in the event of a fire.

8.1 Emergency Lighting

Emergency lighting is to be provided throughout the development designed, installed and commissioned in accordance with BS5266-1:2016.

8.2 Smoke Ventilation

8.2.1 Residential common corridors

In accordance with BS9991:2015 all residential common corridors providing direct access to an escape stair are to be provided with smoke ventilation. Where residential stairs are accessed directly from the residential common corridor the smoke ventilation system is to serve the entire common corridor however if the stair is accessed via a protected stair lobby (which does not communicate with any apartments directly) the smoke ventilation system need only serve the stair lobby (i.e. residential common corridors need not be provided with smoke ventilation).

The residential common corridors / stair lobbies are to be provided with smoke ventilation achieved by any of the following means:

8.2.1.1 Mechanical Smoke Shaft Ventilation:

Where the travel distance within a residential common corridor is compliant in accordance with BS9991:2015 it may be provided with mechanical smoke shaft ventilation consisting of the following:

- A 0.6m^2 (free area) mechanical smoke shaft is to be provided communicating with the common corridor / stair lobby via a 0.6m$_2$ (free area) automatic opening vent (AOV);
- Duty / standby fans are to be provided serving the mechanical smoke shaft;
- A 1.0m^2 (free area) automatic opening vent is to be provided at the head of the stair;
- On detection of smoke within a residential common corridor / stair lobby the vent into the smoke shaft at the level of detection is to open, vents to the smoke shaft at all other levels are to be closed and the vent at the head of the stair is to open (allowing supply air for the smoke ventilation system into the stair);
- Either:
  - the door to the stair at each level is to open into the residential common corridor / stair lobby and is to be calibrated to allow the smoke ventilation system to 'pull' the door open and permanently allow supply air from the stair into the corridor / lobby where smoke is being extracted. In this case fans may be fixed speed; or
  - the doors between the common corridors / stair lobbies and stair need not open into common corridors / stair lobbies and pressure sensors are to be provided within common corridors / stair lobbies to control the speed of the fans and prevent over-depressurisation of the corrido / lobby when the stair door is closed. In this case fans are to be variable speed;
- The automatic opening vent at the head of the stair should also open on detection of smoke within the stair enclosure.

8.2.1.2 Natural Smoke Shaft Ventilation

Where the travel distance within a residential common corridor is compliant in accordance with BS9991:2015 it may be provided with natural smoke shaft ventilation consisting of the following:

- A 1.5m2 (free area) natural smoke shaft is to be provided communicating the common corridor / stair lobby via a 1.0m2 (free area) automatic opening vent at each level. The natural smoke shaft is to have a minimum dimension of 0.85m;
- In accordance with BS9991:2015 the smoke shaft is to extend at least 2.5m above the ceiling of the top level served therefore consideration is to be given to the following:
- In lieu of being served by the natural smoke shaft the top level is to be served by a 1.5m2 (free area) automatic opening vent direct to external;
- The natural smoke shaft is to extend at least 0.5m above any construction within a 2m radius of the smoke shaft;
- A 1.0m2 (free area) automatic opening vent is to be provided at the head of the stair;
- On detection of smoke within a residential common corridor / stair lobby the vent into the smoke shaft at the level of detection is to open, vents to the smoke shaft at all other levels are to be closed and the vent at the head of the stair is to open;
- The automatic opening vent at the head of the stair should also open on detection of smoke within the stair enclosure;
- No services other than those relating to the smoke shaft should contained within the smoke shaft;
- The smoke shaft should be located at the remote end of the corridor away from the staircase.

Hydrock

8.2.1.3 Natural Smoke Ventilation

Where the travel distance within a residential common corridor is compliant in accordance with BS9991:2015 it may be provided with natural smoke ventilation consisting of the following:

- A 1.5m2 (free area) automatic opening is to be provided within the common corridor / stair lobby communicating directly with external, this can be a window or potentially a door;
- A 1.0m2 (free area) automatic opening vent is to be provided at the head of the stair;
- On detection of smoke within a residential common corridor / stair lobby the vent at the level of detection is to open and the vent at the head of the stair is to open;
- The automatic opening vent at the head of the stair should also open on detection of smoke within the stair enclosure.

8.2.1.4 Proposed Stair Lobby/Corridor Ventilation Proposals

The following common corridors are to be ventilated per below:

- Level 0 corridor to the main stair –1.5m2 AOV direct to external via the corridor roof (it should be noted this is similar to an stair AOV as it only serves 1 level (smoke shafts are generally for multiple levels), this is considered acceptable subject to BCO and local fire service approval;
- Level 1 corridor directed to external from main central stair – AOD direct to external;
- Level 1 corridor between main stair and stair 4 – Natural Smoke Shaft;
- Level 1 corridor between stair 4 and balcony approach area- AOV direct to external;
- Level 2 corridor directed to external from main central stair – AOD direct to external;
- Level 2 corridor between main stair and stair 4 – Natural Smoke Shaft;
- Level 2 corridor between stair 4 direct to the balcony approach areas – AOD direct to external;
- Level 3 corridor directed to external from main central stair – AOD direct to external;
- Level 3 corridor between main stair and stair 4 – Natural Smoke Shaft;
- Level 3 corridor between stair 4 direct to the balcony approach areas – AOD direct to external;
- All refuse lobbies accessed off of common corridors are to be provided with 0.2m^2 permanent ventilation to the external or a mechanical equivalent;
- The heads of all stairs to be provided with a 1m2 AOV.

8.2.2 Balcony approach

Due to the high degree of ventilation, balcony approach areas do not require additional smoke ventilation, however, the head of stairs 2 and stair 3 should be provided with an Automatic Openable Vent (AOV) to operate on activation of detectors in the stair lobby above the minimum requirement of an Openable Vent because flats open directly into the stair.

8.3 Automatic Water Fire Suppression Systems (AWFSS)

In the May 2020 Amendment to Approved Document B Volume 1:2019, the trigger height for sprinklers has been reduced from 30m to 11m. In accordance with Clause 7.4 blocks of flats with a top storey more than 11m above ground level (see diagram D6) should be fitted with a sprinkler system throughout the building in accordance with Appendix E of Approved Document B Volume 1:2019. This requirement took effect on the 26/11/2020. The 2019 edition of Approved Document B Volume 1 will continue to apply where a building notice or an initial notice has been given to, or full plans deposited with, a local authority before 26/11/2020 and either the building work to which it relates: has started before that day; or is started before 29th January 2021. Please note that 'building notice', 'initial notice' and 'full plans' have the meanings given in the Building Regulations 2010.

It should be noted although the building is designed to BS9991:2015, it will be updated to reflect exactly what is written in Approved Document B Volume 1:2019 (2020 amendments) with regards to trigger heights, therefore the design team should consider with the project timescales and this requirement, sprinklers are required throughout the building. Sprinkler system to be installed as per BS9251:2014, given that construction on site started before the amendment of BS9251:2021, therefore it was agreed with the design team/building control to continue with the BS9251:2014 system.

9. PROVISIONS FOR DISABLED OCCUPANTS

The Equality Act became law in October 2010. It replaced previous legislation (Disability Discrimination Act 1995) and provides employers and employees information on what they need to do to make their workplaces a fair environment and comply with the law.

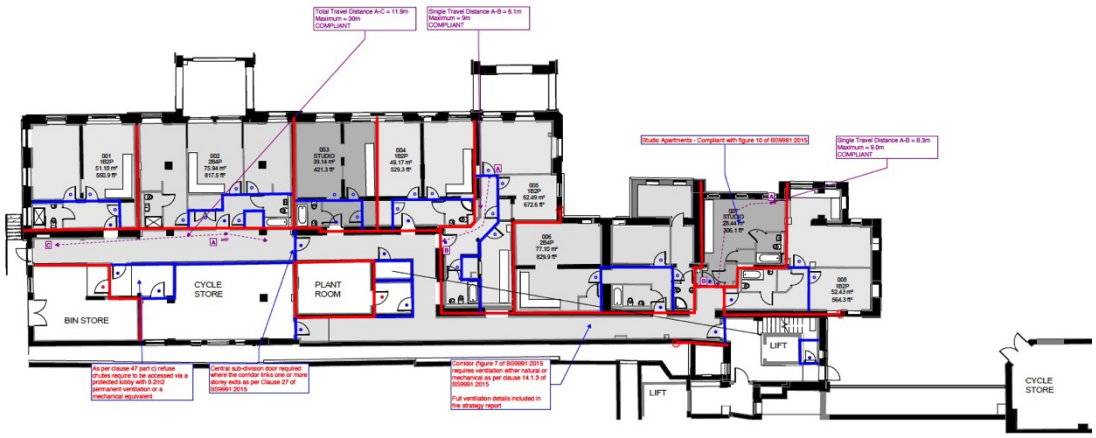
With regard to fire safety, it is generally assumed that disabled occupants will be able to escape to a place away from danger without assistance from the Fire Service. However, there will be a certain proportion of building occupants, such as those who are non-ambulant disabled, i.e. wheelchair users, who will not be able to negotiate stairs unaided; therefore, an evacuation management procedure for disabled occupants will need to be incorporated into the Fire Safety Management Strategy. This is the responsibility of the end user of the building or 'The Responsible Person'.

Fire safety procedures will therefore, where appropriate, make provision for occupants who might need assistance to make their way to a place of ultimate safety in a fire. If there is a need to make specific arrangements, then it is assumed that consultation with the individual(s) or representative organisations should take place at the earliest opportunity.

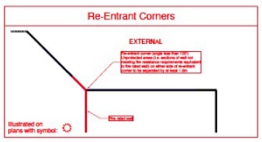
9.1 Disabled Refuge Areas

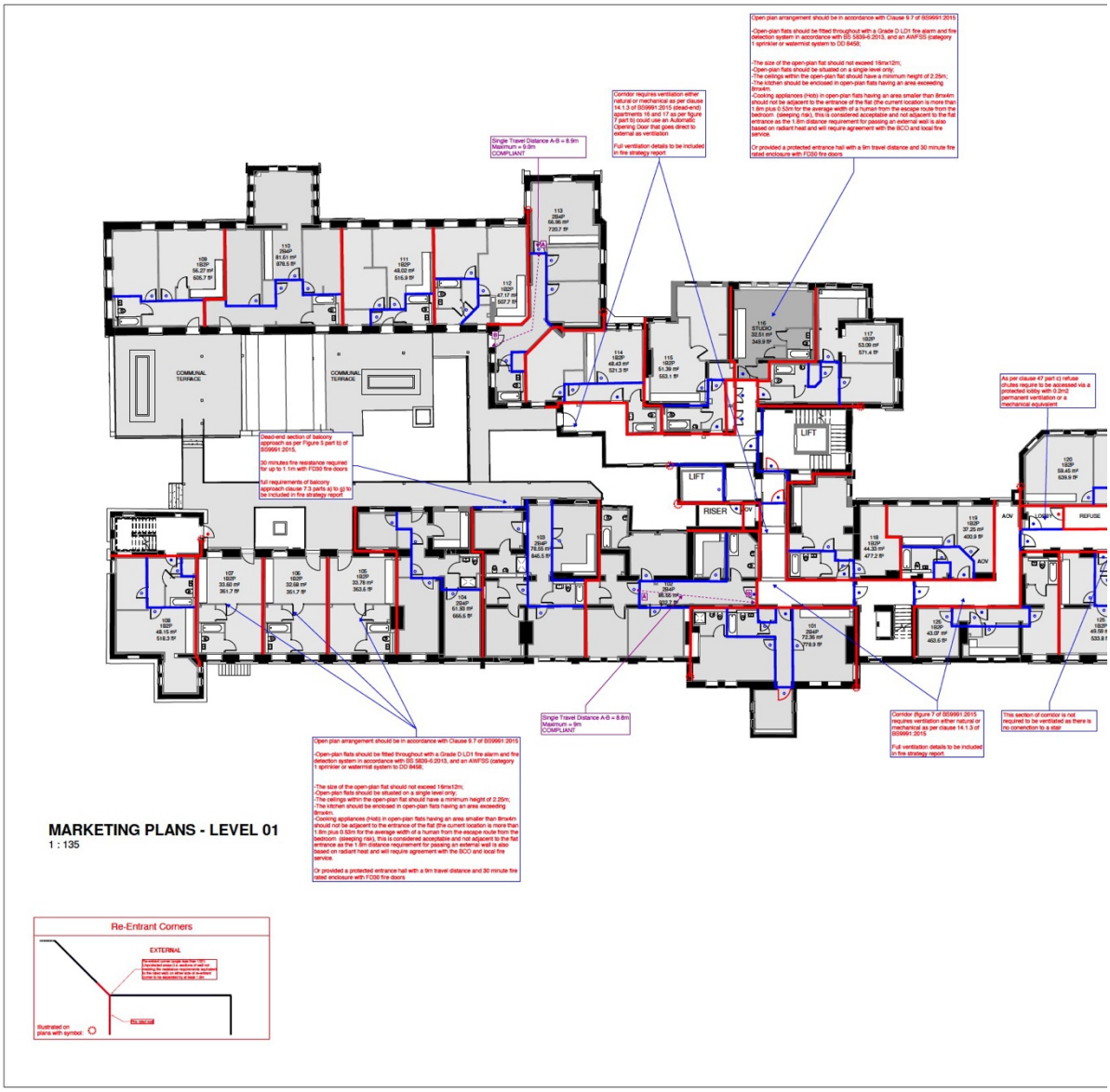
Disabled refuge areas are not required in the main hospital building.

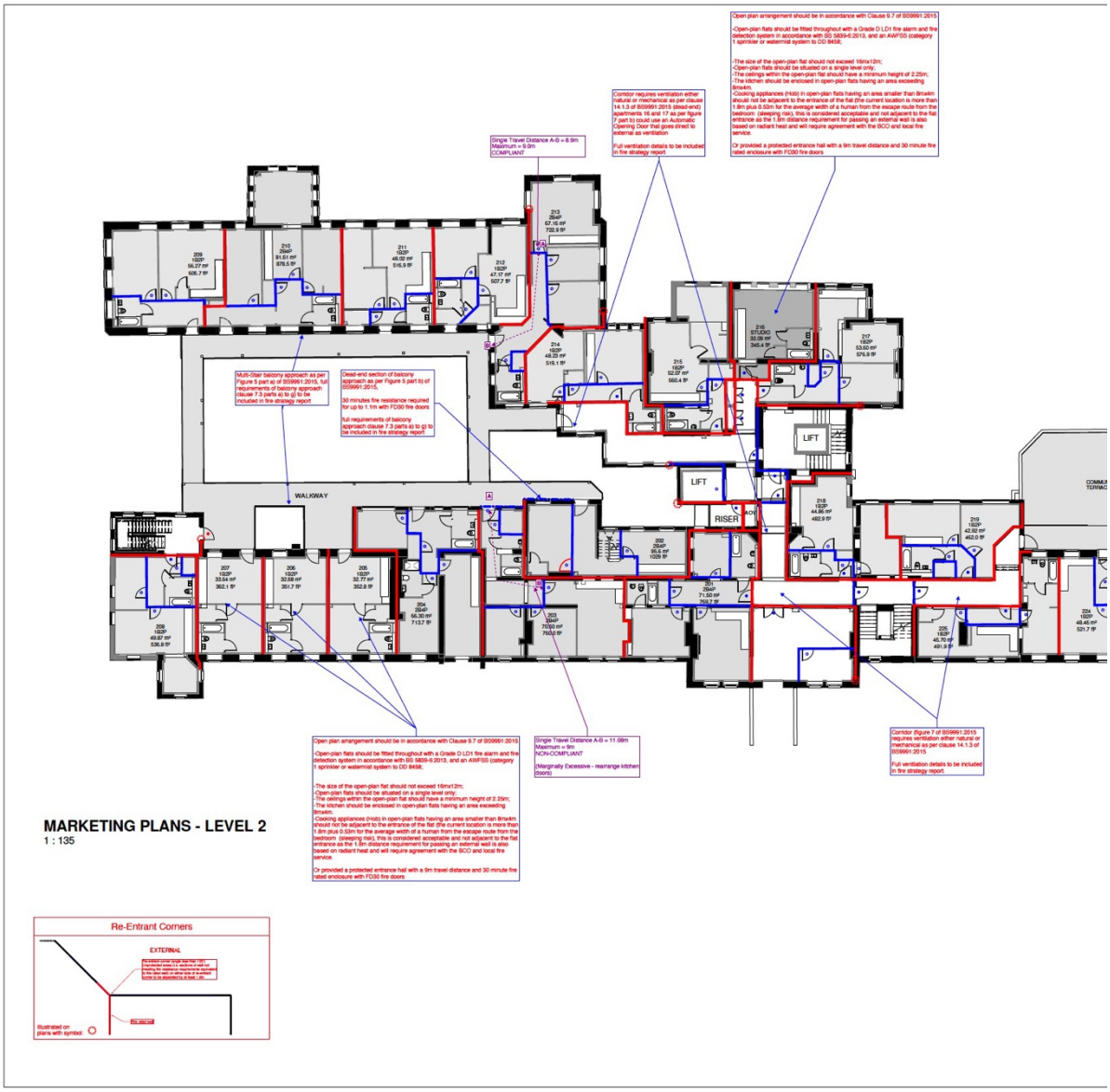
APPENDIX A – FIRE STRATEGY DRAWINGS

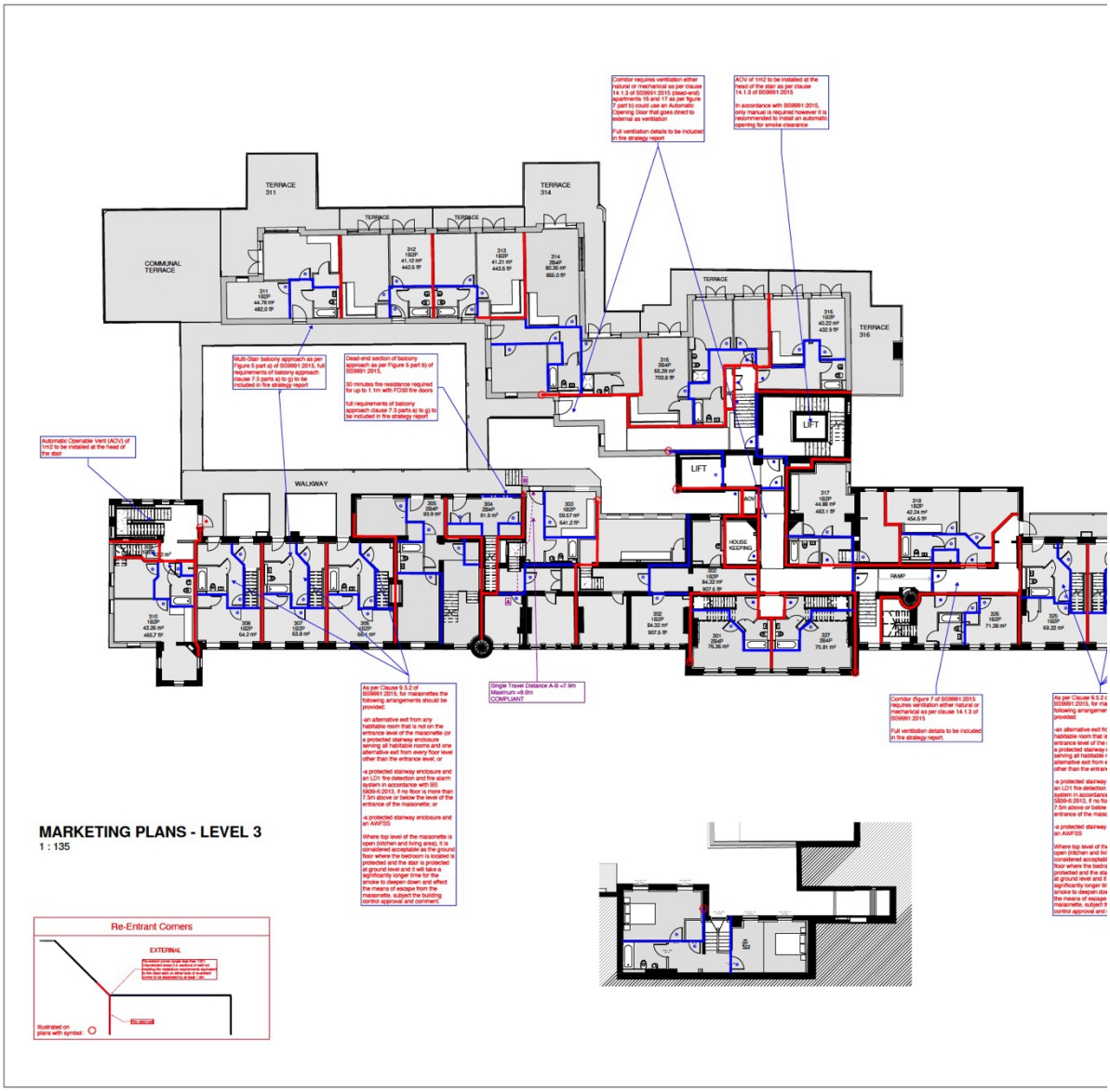


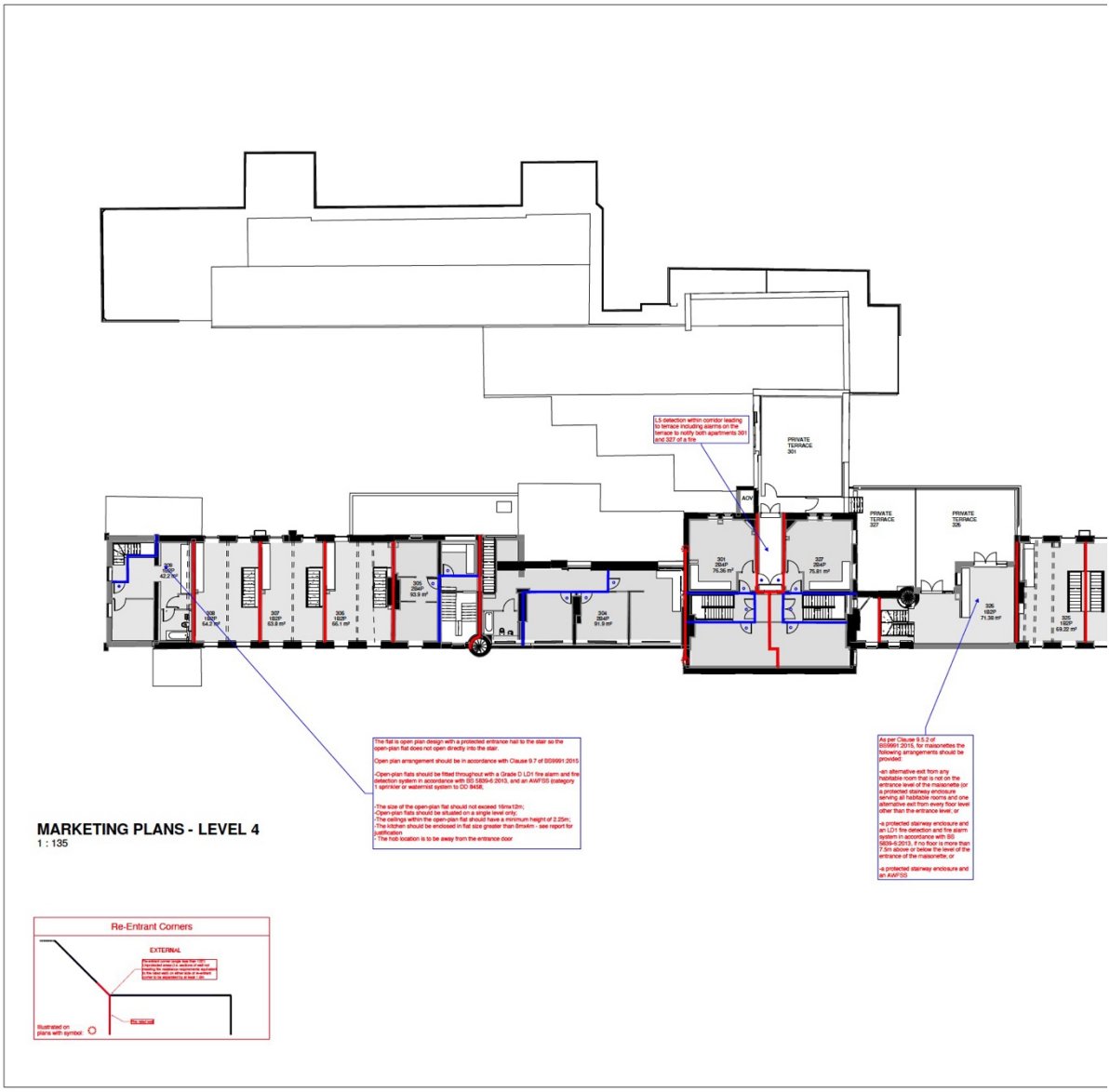
MARKETING PLANS - LEVEL 0
1 : 135




MARKETING PLANS - LEVEL 01
1 : 135
Re-Entrant Corners
EXTERNAL
COMMUNAL TERRACE
COMMUNAL TERRACE
LIFT
LIFT
RISER
Single Travel Distance A-B = 8.9m Maximum = 9.0m COMPLIANT
Corridor requires ventilation either natural or mechanical as per clause 14.1.3 of BS9991 2015 (dead-end) apartments 16 and 17 as per figure 7 part b) could use an Automatic Opening Door that goes direct to external as ventilation
Full ventilation details to be included in fire strategy report
Open plan arrangement should be in accordance with Clause 9.7 of BS9991 2015
Single Travel Distance A-B = 8.8m Maximum = 9m COMPLIANT
Corridor (figure 7 of BS9991 2015 requires ventilation either natural or mechanical as per clause 14.1.3 of BS9991 2015
Full ventilation details to be included in fire strategy report
This section of corridor is not required to be ventilated as there is no connection to a stair
As per clause 47 part c) refuse shtules require to be accessed via a protected lobby with 0.2m2 permanent ventilation or a mechanical equivalent
REFUSE
AOV
AOV


Open plan arrangement should be in accordance with Clause 9.7 of BS9991:2015
Corridor requires ventilation either natural or mechanical as per clause 14.1.3 of BS9991:2015 (dead-end) apartments 16 and 17 as per figure 7 part b) could use an Automatic Opening Door that goes direct to external as ventilation
Full ventilation details to be included in fire strategy report
Single Travel Distance A-B = 8.9m Maximum = 9.0m COMPLIANT
Multi-Stair balcony approach as per Figure 5 part a) of BS9991:2015, full requirements of balcony approach clause 7.3 parts a) to g) to be included in fire strategy report
Dead-end section of balcony approach as per Figure 5 part b) of BS9991:2015,
30 minutes fire resistance required for up to 1.1m with FD30 fire doors
full requirements of balcony approach clause 7.3 parts a) to g) to be included in fire strategy report
WALKWAY
LIFT
LIFT
RISER
Open plan arrangement should be in accordance with Clause 9.7 of BS9991:2015
Single Travel Distance A-B = 11.08m Maximum = 9m NON-COMPLIANT (Marginally Excessive - rearrange kitchen doors)
Corridor figure 7 of BS9991:2015 requires ventilation either natural or mechanical as per clause 14.1.3 of BS9991:2015
Full ventilation details to be included in fire strategy report
MARKETING PLANS - LEVEL 2
1 : 135
Re-Entrant Corners
EXTERNAL


MARKETING PLANS - LEVEL 3
1 : 135
Re-Entrant Corners
EXTERNAL
TERRACE 311
TERRACE 314
TERRACE 316
COMMUNAL TERRACE
WALKWAY
LIFT
RAMP
HOUSE KEEPING
Automatic Openable Vent (AOV) of 1m2 to be installed at the head of the stair
Single Travel Distance A-B =7.9m
Maximum =9.0m
COMPLIANT


LS detection within corridor leading to terrace including alarms on the terrace to notify both apartments 301 and 327 of a fire
PRIVATE TERRACE 301
PRIVATE TERRACE 327
PRIVATE TERRACE 326
AOV
The flat is open plan design with a protected entrance hall to the stair so the open-plan flat does not open directly into the stair.
Open plan arrangement should be in accordance with Clause 9.7 of BS9991:2015
-Open-plan flats should be fitted throughout with a Grade D LD1 fire alarm and fire detection system in accordance with BS 5839-6:2013, and an AWFSS (category 1 sprinkler or watermist system to DD 8458.
-The size of the open-plan flat should not exceed 16mx12m;
-Open-plan flats should be situated on a single level only;
-The ceilings within the open-plan flat should have a minimum height of 2.25m;
-The kitchen should be enclosed in flat size greater than 8mx4m - see report for justification
- The hob location is to be away from the entrance door
As per Clause 9.5.2 of BS9991:2015, for maisonettes the following arrangements should be provided:
-an alternative exit from any habitable room that is not on the entrance level of the maisonette (or a protected stairway enclosure serving all habitable rooms and one alternative exit from every floor level other than the entrance level, or
-a protected stairway enclosure and an LD1 fire detection and fire alarm system in accordance with BS 5839-6:2013, if no floor is more than 7.5m above or below the level of the entrance of the maisonette, or
-a protected stairway enclosure and an AWFSS
MARKETING PLANS - LEVEL 4
1 : 135
Re-Entrant Corners
EXTERNAL
Illustrated on plans with symbol

Appendix D

Latest Commissioning Certificates and Management Arrangements

CERTIFICATE

EPG SERVICES
ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

ELECTRICAL INSTALLATION CERTIFICATE

CERTIFICATE No: EICS-20220802143007

This is to certify that the electrical installation at the following address complies with the requirements of BS7671:2018+A2:2022 (18th Edition)

219 Bishops Court, St Bartholomews Place, New Road
Rochester
Kent
ME1 1TW

The following work was carried out at the address above

Whole Dwelling

This Certificate deems the installation to be in the following condition:

SATISFACTORY

Company issuing this Certificate

Electrical Plumbing & Gas Services Ltd
5-6 Nelrose, Princess Rd
Manchester
Greater Manchester
M20 2LT
0161 8811883
danny@elecplumbgas.co.uk
CPS Enrolment No: 043992

Issued on

29/07/2022

Inspected by	Reviewed by
Paul Spinks	Daniel Hall

Recommended re-test

5 Years from date of issue

Certificate generated by electraform® 2022 | www.electraform.co.uk

EPG SERVICES ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

CERTIFICATE NO: EICS-20220802143007

ELECTRICAL INSTALLATION CERTIFICATE (SHORT)

Requirements for electrical installations (BS7671:2018+A2:2022 (18th Edition))

DETAILS OF THE CLIENT

Intro Developments ltd
Building 2. Universal Square. Devonshire St
Manchester
-
M12 6JH

: 01612743330
: -
: -
: Intro Developments ltd

DETAILS OF THE INSTALLATION

-
219 Bishops Court, St Bartholomews Place, New Road
Rochester
Kent
ME1 1TW

: -
: -
: -
: -

EXTENT OF INSTALLATION COVERED BY THIS CERTIFICATE

Extent of the electrical installation covered by this certificate

Whole Dwelling

Description of premises

- [x] Residential
- [ ] Commercial
- [ ] Industrial
- [ ] Other

-

Installation is

- [x] New
- [ ] An addition
- [ ] An alteration

DETAILS OF DEPARTURES AND PERMITTED EXCEPTIONS

Details of departures and permitted exceptions BS 7671 (Regs 120.3, 133.5, 411.3.3). ☐ ***Risk assessment included.***

-

COMMENTS ON EXISTING INSTALLATION (in the case of an addition or alteration see Regulation 644.1.2)

FOR DESIGN, CONSTRUCTION AND INSPECTION AND TESTING

Electrical Plumbing & Gas Services Ltd
5-6 Nelrose, Princess Rd
Manchester
Greater Manchester
M20 2LT

: 0161 8811883
: 07702559156
: danny@elecplumbgas.co.uk
: www.elecplumbgas.co.uk
Registration no: 043992

EPG SERVICES ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

I/We, being the person(s) responsible for the design, construction and inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction and inspection and testing, hereby **CERTIFY** that the work for which I have been responsible is to the best of my knowledge and belief in accordance with BS7671:2018+A2:2022 (18th Edition) as amended except for the departures, if any, detailed as follows.

Inspected and tested by

Name	Signature
Paul Spinks	Paul Spinks

Position	Date
Contracts Manager	29/07/2022

Certificate authorised by

Name	Signature
Daniel Hall	

Position	Date
QS	29/07/2022

NEXT INSPECTION

I, recommend that this installation is further inspected and tested in: 5 Years

Certificate produced by electraform based on the MODEL FORM from BS7671:2018+A2:2022 (18th Edition)

CERTIFICATE NO: EICS-20220802143007

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

Earthing arrangements

TN-S	☐
TN-C-S	✓
TN-C	☐
TT	☐
IT	☐

Number and type of live conductors

AC	✓			DC	☐
1-phase (2 wire)	✓	1-phase (3 wire)	☐	2 pole	☐
2-phase (3 wire)	☐			3 pole	☐
3-phase (3 wire)	☐	3-phase (4 wire)	☐	Other	☐

Nature of supply parameters

Nominal voltage - U	230	V	Uo	230	V
Nominal frequency - f	50	Hz	No of supplies	1	
PFC - Ipf	1.7	kA	Supply polarity confirmed	✓	
Earth loop impedance - Ze	0.14	Ω	Maximum demand	50	A

Supply Protective Device

BS(EN)	1361-II
Type	II
Short circuit capacity (kA)	33
Rated current (A)	63

PARTICULARS OF INSTALLATION REFERRED TO IN THIS REPORT

Means of earthing

Distributor's facility	✓
Earth electrode	

Details of installation earth electrode (where applicable)

Type: eg rod, tape	N/A	Resistance to earth	N/A Ω
Location	N/A	Method of measurement	N/A

Main switch / switch fuse /circuit breaker / RCD

Type BS(EN)	60947-3	Voltage rating	230 V
No of poles	2	Rated current - In	100 A
Conductor material	Copper	Fuse/device rating or setting	- A
Conductor csa (mm^2)	25	RCD operating current, In	- mA
RCD time delay (ms)	- ms	RCD operating time at IΔn	- ms

Earthing conductor

Conductor material	Copper
Conductor csa (mm^2)	16
Continuity check	✓

Main protective bonding conductors

Conductor material	-
Conductor csa (mm^2)	-

Bonding of extraneous conductive parts

Water	N/A	Gas	N/A
Oil	-	Structural steel	-
Lightning protection	-	Other services	-

Bonding locations and measurements can be found on page ADDITIONAL BONDING INFORMATION at the end of this certificate.

BONDING OUTCOMES	Pass ✓	Not applicable N/A	No access 🔒

Location of main switch

Consumer Unit

SCHEDULE OF INSPECTIONS

Item No.	Description	Outcome	Item No.	Description	Outcome
1.0	Condition of consumer's intake equipment (Visual inspection only)	✓	8.0	Circuits (Distribution and final)	✓
2.0	Parallel or switched alternative sources of supply	N/A	9.0	Isolation and switching	✓
3.0	Protective measure: Automatic disconnection of supply	✓	10.0	Current using equipment (permanently connected)	✓
4.0	Basic protection	✓	11.0	Identification and notices	✓
5.0	Protective measures other than ADS	✓	12.0	Location(s) containing a bath or shower	✓
6.0	Additional protection	✓	13.0	Other special installations or locations	✓
7.0	Distribution equipment	✓	14.0	Prosumer's low voltage electrical installation(s)	N/A

Certificate produced by electraform based on the MODEL FORM from BS7671:2018+A2:2022 (18th Edition)

EICS-20220802143007

DB1 - Cylinder Cupboard - (HAGER) (12 ways)

Applies in every case				Characteristics at this board	
DB name	DB1	Supplied from	Origin	Supply polarity confirmed	✓
Location	Cylinder Cupboard	No of circuits	12	No of phases	1	Phase sequence confirmed	N/A

SPD Details	Type T1	Type T2	Type T3	SPD Operation status confirmed

Overcurrent protective device for the supply circuit

BS(EN) 1361-II | Rating (A) 63 | Voltage Rating (V) -

Measurements at this board

Zs (Ω) 0.14 | Ipf (kA) 1.7 | IΔn (ms) N/A

Main switch at this board

BS(EN) 60898-B | Rating (A) 100 | Voltage Rating (V) 230 | Fault current rating (kA) 2 | RCD Rating (mA) 30 | IΔn (ms) -

CIRCUIT DETAILS

					Conductors			Overcurrent devices						RCD
Cct No	Designation	No of points	Wiring type	Ref method	Live (mm^2)	cpc (mm^2)	Dis time (s)	BS(EN)	Rating (A)	Short circuit (kA)	Voltage Rating (V)	Max Zs (Ω)	IΔn (mA)
1	Hob	1	A	C	6	2.5	0.4	60898-B	32	6	230	1.37	30
2	Sockets - Rest of Flat	7	A	C	2.5	1.5	0.4	60898-B	32	6	230	1.37	30
3	Water Heater	1	A	C	2.5	1.5	0.4	60898-B	20	6	230	2.19	30
4	Lighting - Bedroom, Kitchen and Lounge	6	A	C	1	1	0.4	60898-B	6	6	230	7.28	30
5	Smoke Alarms	4	A	C	1	1	0.4	60898-B	6	6	230	7.28	30
6	Spare	-	-	-	-	-	-	-	-	-	-	-	-
7	Sockets - Kitchen	8	A	C	2.5	1.5	0.4	60898-B	32	6	230	1.37	30
8	Central Heating	4	A	C	2.5	1.5	0.4	60898-B	32	6	230	1.37	30
9	MVHR Fan	1	A	C	1	1	0.4	60898-B	6	6	230	7.28	30
10	Medial Cupboard Socket	1	A	C	2.5	1.5	0.4	60898-B	16	6	230	2.73	30
11	Lighting - Hallway, Bathroom and Cupboard	7	A	C	1	1	0.4	60898-B	6	6	230	7.28	30
12	Spare	-	-	-	-	-	-	-	-	-	-	-	-

EICS-20220802143007

TEST RESULTS DB1 - Cylinder Cupboard - (HAGER 12 ways)

		Ring final circuits (measured end to end)			At least one column to be completed		Insulation resistance						RCD		AFDD	
Cct No	Designation	(r1) (Ω)	(rn) (Ω)	(r2) (Ω)	R1+R2 (Ω)	R2 (Ω)	IR Test voltage (V)	L-L (MΩ)	L-E (MΩ)	Polarity	Meas Zs (Ω)	Meas kA	RCD at IΔn (ms)	RCD Test button	AFDD Test button	Circuit vulnerable to test
1	Hob	-	-	-	0.10	-	500	200	200	✓	0.24	-	161.9	✓	N/A	No
2	Sockets - Rest of Flat	0.48	0.49	0.82	0.69	-	500	200	200	✓	0.83	-	161.9	✓	N/A	No
3	Water Heater	-	-	-	0.06	-	500	200	200	✓	0.20	-	161.9	✓	N/A	No
4	Lighting - Bedroom, Kitchen and Lounge	-	-	-	0.96	-	500	200	200	✓	1.10	-	161.9	✓	N/A	No
5	Smoke Alarms	-	-	-	0.01	-	500	200	200	✓	0.14	-	161.9	✓	N/A	No
6	Spare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Sockets - Kitchen	0.60	0.63	1.03	0.86	-	500	200	200	✓	1.00	-	149.8	✓	N/A	No
8	Central Heating	0.44	0.45	0.90	0.67	-	500	200	200	✓	0.81	-	149.8	✓	N/A	No
9	MVHR Fan	-	-	-	0.06	-	500	200	200	✓	0.20	-	149.8	✓	N/A	No
10	Medial Cupboard Socket	-	-	-	0.07	-	500	200	200	✓	0.21	-	149.8	✓	N/A	No
11	Lighting - Hallway, Bathroom and Cupboard	-	-	-	1.05	-	500	200	200	✓	1.19	-	149.8	✓	N/A	No
12	Spare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ENGINEER AND TEST INSTRUMENTS

Multifunction	Continuity	Insulation resistance	EFLI Tester	RCD tester
8866060	-	-	-	-

Tested by (Capitals)	Signature	Date
Paul Spinks	Paul Spinks	29/07/2022

Certificate produced by electraform based on the MODEL FORM from BS7671:2018+A2:2022 (18th Edition)

EICS-20220802143007

ADDITIONAL BONDING INFORMATION

Water bond details

Water bond size - mm^2

Water bond measurement - Ω

Water bond location

-

Additional notes

-

Gas bond details

Gas bond size 10 mm^2

Gas bond measurement - Ω

Gas bond location

-

Additional notes

-

Oil bond details

Oil bond size - mm^2

Oil bond measurement - Ω

Oil bond location

-

Additional notes

-

Structural steel bond details

Steel bond size - mm^2

Steel bond measurement - Ω

Steel bond location

-

Additional notes

-

Lightning conductor bond details

Lightning conductor size - mm^2

Lightning conductor measurement - Ω

Lightning conductor location(s)

-

Additional notes

-

Other bond details

Other bonding conductor size - mm^2

Bonding conductor measurement - Ω

Other bonding conductor location(s)

-

Additional notes

-

Certificate produced by electraform based on the MODEL FORM from BS7671:2018+A2:2022 (18th Edition)

CERTIFICATE NO: EICS-20220802143007

ELECTRICAL INSTALLATION CERTIFICATE GUIDANCE FOR RECIPIENTS

This CERTIFICATE is an important and valuable document which should be retained for future reference.

- This safety Certificate has been issued to confirm that the electrical installation work to which it relates has been designed, constructed, inspected and tested in accordance with BS 7671.
- You should have received a Certificate without watermarks and the company should have retained a duplicate. If you were the person ordering the work, but not the owner of the installation, you should pass this Certificate, or a full copy of it including the schedules, immediately to the owner.
- This Certificate should be retained in a safe place and be shown to any person inspecting or undertaking further work on the electrical installation in the future. If you later vacate the property, this Certificate will demonstrate to the new owner that the electrical installation complied with the requirements of BS 7671 at the time the Certificate was issued. The Construction (Design and Management) Regulations require that, for a project covered by those Regulations, a copy of this Certificate, together with schedules, is included in the project health and safety documentation.
- For safety reasons, the electrical installation will need to be inspected at appropriate intervals by a skilled person or persons, competent in such work. The maximum time interval recommended before the next inspection is stated on Page 1 under "NEXT INSPECTION".
- This Certificate is intended to be issued only for a new electrical installation or for new work associated with an alteration or an addition to an existing installation. It should not have been issued for the inspection and testing of an existing electrical installation. An "Electrical Installation Condition Report (EICR)" should have been issued for such an inspection.
- This Certificate is only valid if the Schedule of Inspections has been completed to confirm that all relevant inspections have been carried out and where accompanied by Schedule(s) of Circuit Details and Test Results.
- Where the installation includes a residual current device (RCD) it should be tested six-monthly by pressing the button marked 'T' or 'Test'. The device should switch off the supply and should then be switched on to restore the supply. If the device does not switch off the supply when the button is pressed, seek expert advice. **For safety reasons it is important this instruction is followed.**
- Where the installation includes an arc fault detection device (AFDD) having a manual test facility it should be tested six-monthly by pressing the test button. Where an AFDD has both a test button and automatic test function, manufacturers instructions should be followed with respect to test button operation.
- Where the installation includes a surge protection device (SPD) the status indicator should be checked to confirm it is in operational condition in accordance with manufacturers information. If the indication shows the device is not operational, seek expert advice. **For safety reasons it is important this instruction is followed.**
- Where the installation includes alternative or additional sources of supply, warning notices should be found at the origin or meter position or, if remote from the origin, at the consumer unit or distribution board and at all points of isolation of all sources of supply.

CODES FOR TYPE OF WIRING								
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**O (Other)**
Thermoplastic insulated/sheathed cables	Thermoplastic cables in metallic conduit	Thermoplastic cables in non-metallic conduit	Thermoplastic cables in metallic trunking	Thermoplastic cables in non-metallic trunking	Thermoplastic / SWA cables	Thermosetting / SWA cables	MICC cables	Other cable types not listed here
FP	**TR**	**HT**	**SY**	**YY**	**CY**	**VIR**		
FP 200 - standard fire resistant cable	Tri-rated - BS 6231 high temperature - flame retardant cable	Hi Tuff - waterproof with a tough PVC sheathing for outdoor use	SY cable - flexible instrumentation cable with a galvanised steel wire braid	YY cable - flexible instrumentation cable with a galvanised steel wire braid	CY cable - flexible instrumentation cable with a galvanised steel wire braid and a PETP separator	VIR - Vulcanised Indian Rubber cable - no longer manufactured		

Certificate produced by electraform based on the MODEL FORM from BS7671:2018+A2:2022 (18th Edition)

CERTIFICATE

EPG SERVICES
ELECTRICAL PLUMBING GAS

APPROVED CONTRACTOR

DESIGN, INSTALLATION AND COMMISSIONING CERTIFICATE FOR FIRE DETECTION AND ALARM SYSTEMS

GRADES: C, D, F

CERTIFICATE No: FADW-20220803125332

This is to certify that the fire alarm installation at the address below complies with the requirements of BS 5839-6

326 Bishops Court, St Bartholomews Place, New Road
Rochester
Kent
ME1 1TW

The following work was carried out at the address above

Smoke Detection to Bedroom, Living, Ent Hall Fire Detection to Kitchen/ Dining Lounge

This Certificate deems the installation to be in the following condition:

SATISFACTORY

Company issuing this Certificate

Electrical Plumbing & Gas Services Ltd
5-6 Nelrose, Princess Rd
Manchester
Greater Manchester
M20 2LT
0161 8811883
danny@elecplumbgas.co.uk
CPS Enrolment No: 043992

Issued on

03/08/2022

Inspected by	Reviewed by
Paul Spinks	Daniel Hall

Certificate generated by electraform® 2022 | www.electraform.co.uk

EPG SERVICES ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

CERTIFICATE NO: FADW-20220803125332

CERTIFICATE OF DESIGN, INSTALLATION AND COMMISSIONING OF A FIRE DETECTION SYSTEM OF GRADE C, D OR F SYSTEMS

For systems to BS-5839-6:2019+A1:2020

DETAILS OF THE CLIENT

Client name	Intro Developments Ltd
Town	Devonshire Street North
Postcode	M12 6JH
Telephone	-
Address	Universal Square Building 2, 3rd Floor
County	Manchester
Mobile	-
Email	

DETAILS OF THE INSTALLATION

Occupier name	-
Address	326 Bishops Court, St Bartholomews Place, New Road
Town	Rochester
County	Kent
Postcode	ME1 1TW
Telephone	-

System is	✓ New	☐ A modification			
System Grade	☐ C	✓ D1	☐ D2	☐ F1	☐ F2
System Category	☐ LD1	✓ LD2	☐ LD3	☐ PD1	☐ PD2

Extent of the system covered by this certificate

Smoke Detection to Bedroom, Living, Ent Hall
Fire Detection to Kitchen/ Dining Lounge

COMMISSIONING AND TESTING IN ACCORDANCE WITH THE RECOMMENDATIONS OF BS-5839-6:2019+A1:2020, 23.3n

Test buttons checked	✓	Simulated smoke or aerosol test	✓	Dedicated circuit(s) provided	☐	All alarm warning devices operate	✓
Heat test	✓	Protective device labelled	✓	Silencing system checked	☐	Bedroom sound level (Clause 13.2)	☐
Audible and visual indications of mains failure	☐	Sound level instrument Model	-	Sound level instrument Serial	-		

INSTRUCTIONS IN ACCORDANCE WITH THE RECOMMENDATIONS OF BS-5839-6:2019+A1:2020, Clause 24 HAVE BEEN PROVIDED AS DETAILED:

I the undersigned declare that the occupier of the dwelling (or owner in the case of a house of multiple occupancy) has been provided with written information about essential aspects of the operation and maintenance of the system, as follows:

Operation of the system	✓	Routine testing of the system	☐	Checking the system on re-occupation after a vacation etc	☐
Action to be taken in the event of an alarm signal	☐	Servicing and maintenance of the system - (including intervals at which batteries should be replaced)	☐	The need to avoid contamination of detectors by paint	✓
Avoidance of false alarms and action in the event of a false alarm	✓	The need to keep clear spaces around all detectors and manual call points	☐	As fitted drawings	✓
Warning that apparent false alarm from carbon monoxide may not be false alarm	☐	Special precautions relevant to any lithium batteries used in the system	☐		

VARIATIONS *(None recorded on this certificate)*

Certificate produced by electraform® 2022 based on the MODEL FORM E1 from: BS-5839-6:2019+A1:2020

DETECTORS

CERTIFICATE NO: FADW-20220803125332

DETECTORS

Ref no	Location	Type	Make	Model	Power source	Interlink	Expiry date	Fit for use
001	Kitchen	Heat	Aico	Ei3014	Mains with battery	Wired		✓
002	Bedroom	Optical	Aico	Ei3016	Mains with battery	Wired		✓
003	Living	Optical	Aico	Ei3016	Mains with battery	Wired		✓
004	Ent Hall	Optical	Aico	Ei3016	Mains with battery	Wired		✓

CERTIFICATE NO: FADW-20220803125332

CERTIFICATE OF DESIGN, INSTALLATION AND COMMISSIONING

It is certificated that the fire detection and fire alarm system at the address overleaf complies with the recommendations of BS-5839-6:2019+A1:2020 for design, installation and commissioning of the Category and Grade signified overleaf, other than in the respect of any noted variations.

Trading title	**Postcode**	**Company email**
Electrical Plumbing & Gas Services Ltd	M20 2LT	danny@elecplumbgas.co.uk
Address	**Telephone no**	**Website**
5-6 Nelrose, Princess Rd	0161 8811883	www.elecplumbgas.co.uk
Town	**Mobile number**	
Manchester	07702559156	
County	**Enrolment no**	
Greater Manchester	043992	

Inspected and tested by		**Certificate authorised by**	
Name	Signature	Name	Signature
Paul Spinks	Paul Spinks	Daniel Hall	
Position	Date	Position	Date
Contracts Manager	03/08/2022	QS	03/08/2022

NOTES: CERTIFICATE OF DESIGN, INSTALLATION AND COMMISSIONING OF A FIRE DETECTION TO BS-5839-6:2019+A1:2020

This CERTIFICATE is an important and valuable document which should be retained for future reference.

- The electrical safety aspects of the fire detection and alarm system must also be certified in accordance with BS 7671: 'Requirements for Electrical Installations' by issuing an Electrical Installation Certificate (EIC), or where appropriate, a Minor Works Certificate.
- An instrument complying with BS EN 61672 Class 2, with slow response and A weighting (see Clause 13.2), is suitable for measuring the sound level.
- This certificate may be required by an authority responsible for enforcement of fire safety legislation, such as the building control authority or housing authority. The recipient of this certificate might rely on the certificate as evidence of compliance with legislation. Liability could arise on the part of any organisation or person that issues a certificate without due care in ensuring its validity.
- This Certificate should be retained in a safe place and be shown to any person inspecting or undertaking further work on the fire detection and alarm system in the future.

Certificate produced by electraform® 2022 based on the MODEL FORM E1 from: BS-5839-6:2019+A1:2020

CERTIFICATE

EPG SERVICES
ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

EMERGENCY LIGHTING CERTIFICATE

CERTIFICATE No: EML-20220905111006

This is to certify that the emergency lighting installation at the address below complies with the requirements of BS 5266-1:2016

Communal Bishops Court, St Bartholomew's Place, New Road
Rochester
ME1 1TW

The following work was carried out by

This Certificate deems the installation to be in the following condition:

SATISFACTORY

Company issuing this Certificate

Electrical Plumbing & Gas Services Ltd
5-6 Nelrose, Princess Rd
Manchester
Greater Manchester
M20 2LT
0161 8811883
danny@elecplumbgas.co.uk
CPS Enrolment No: 043992

Issued on

01/09/2022

Inspected by	Reviewed by
Paul Spinks	Daniel Hall

Recommended re-test

from date of issue

Certificate generated by electraform® 2022 | www.electraform.co.uk

EPG SERVICES ELECTRICAL PLUMBING GAS

NICEIC APPROVED CONTRACTOR

CERTIFICATE NO: EML-20220905111006

EMERGENCY LIGHTING COMPLETION CERTIFICATE

For NEW LARGE installations

DETAILS OF THE CLIENT

Client name	Intro Developments Ltd
Address	Universal Square Building 2, 3rd Floor
Town	Devonshire Street North
County	Manchester
Postcode	M12 6JH
Telephone	-
Mobile	-
Email	

DETAILS OF THE EMERGENCY LIGHTING INSTALLATION

Occupier name	-
Address	Communal Bishops Court, St Bartholomew's Place, New Road
Town	Rochester
County	-
Postcode	ME1 1TW
Telephone	-

Installation is

- [x] New
- [ ] An addition
- [ ] An alteration

Installation description

Residential Apartment Scheme - Common Areas - Installation Partially Complete Phase 1A

DETAILS OF DEVIATIONS FROM THE STANDARD

Deviation Number	Declaration (Design Installation or Verification)	Clause Number	Details of deviations

RELATED REFERENCE DOCUMENTS

This certificate is only valid when accompanied by current:

a. Signed declaration(s) of design, installation and verification, as applicable (see overleaf).
b. Photometric design data. This can be in any of the following formats but in all cases appropriate de-rating factors must be used and identified to meet worst case requirements.

- Authenticated spacing data such as ICEL 1001 registered tables**
- Calculations as detailed in Annex G and CIBSE/SLL Guide LG12***
- Appropriate computer print of results

c. Test log book

** Available from Industry Committee for Emergency Lighting, Ground floor, Westminster Tower, 3 Albert Embankment, London, SE17SL.
*** Available from Chartered Institution of Building Services Engineers, Delta House, 222 Balham High Road, London SW129BS.

Essential related reference documents accompanying this certificate

Log Book, Lighting Schedule, Design

DECLARATION OF CONFORMITY

In consequence of acceptance of the appended declarations I/we hereby declare that the emergency lighting system installation, or part thereof, at the above premises conforms, to the best of my/our knowledge and belief, to the appropriate recommendations given in BS5266-1:2016, Emergency lighting - Part 1: Code of practice for the emergency lighting of premises, BSEN 1838:2013 Lighting applications - Emergency lighting and BSEN 50172:2004, Emergency escape lighting systems, as set out in the accompanying declarations, except as stated below/overleaf.

Completed by		**Certificate authorised by**	
Name	Signature	Name	Signature
Paul Spinks	Paul Spinks	Daniel Hall	
Position	Date	Position	Date
Contracts Manager	01/09/2022	QS	01/09/2022

NEXT INSPECTION

Certificate produced by electraform® based on the MODEL FORM from BS5266:2016

CERTIFICATE NO: EML-20220905111006

DESIGN - DECLARATION OF CONFORMITY

Any failures of conformity should be covered by a deviation and recorded under the appropriate declaration on the Completion Certificate

BS 5266-1:2016 Clause Reference	Recommendations	System conforms
4.2	**D1** Accurate plans available showing escape routes, fire alarm control panel, call points and fire extinguishers	YES
5.2.9	**D2** Escape route signs in accordance with BSEN ISO 7010 and BS 5499-4 and other safety signs in accordance with BSEN ISO 7010 and BS 5499-10, clearly identifiable and adequately illuminated	YES
6.7	**D3** The luminaires conform to BSEN 60598-2-22	YES
5.2.8.1	**D4** Luminaires located at following positions **(NOTE - Near means within 2m horizontally)**	
	a) At each exit door intended to be used in an emergency	YES
	b) Near stairs so each tread receives direct light	YES
	c) Near any other changes of level	YES
	d) Externally illuminated escape route signs, escape route direction signs and other safety signs needing to be illuminated under emergency lighting conditions	YES
	e) At each change of direction	YES
	f) At intersections of corridors	YES
	g) Near to each final exit and outside the building to a place of safety	YES
	h) Near each first aid post	N/A
	i) Near each piece of fire-fighting equipment and call points	YES
	j) Near escape equipment provided for disabled people	YES
	k) Near refuges and call points, including two-way communication systems and disabled toilet alarm call positions	YES
	l) Near manual release controls provided to release electronically locked doors	YES
6.3	**D5** At least two luminaires illuminating each compartment of the escape route	YES
	D6 Additional emergency lighting provided where needed to illuminate:	
5.2.8.3	**a)** Lift cars	N/A
5.2.8.4	**b)** Moving stairways and walkways	N/A
5.2.8.5	**c)** Toilet facilities larger than $8m^2$ floor area or without borrowed light, and those for disabled use	N/A
5.2.8.6	**d)** Motor generator, control and plant-rooms	N/A
5.2.8.7	**e)** Covered car parks	N/A
6.7.3	**D7** Design duration adequate for the application	YES
10.6; 10.7; Clause 11	**D8** Operation and maintenance instructions and a suitable log book produced for retention and use by the building occupier	YES
5.2.5; 5.2.6;	**D9** At least the minimum illuminance provided for escape routes, open areas and high risk task areas	YES
5.2.7; 5.3.2	**D10** At least the minimum illuminance provided for emergency safety lighting	N/A

DECLARATION OF DESIGN

For and on behalf of: Electrical Plumbing & Gas Services Ltd

Telephone no 0161 8811883

Signature of person making design conformity declaration

Name (Capitals): Paul Spinks

Signature: Paul Spinks

Date: 01/09/2022

CERTIFICATE NO: EML-20220905111006

INSTALLATION - DECLARATION OF CONFORMITY

Any failures of conformity should be covered by a deviation and recorded under the appropriate declaration on the Completion Certificate

BS 5266-1:2016 Clause Reference	Recommendations	System conforms
Clause 5	**IN1** The system installed conforms to the agreed design	YES
6.1	**IN2** All non-maintained luminaires fed or controlled by the final circuit supply of their local normal mains lighting	YES
6.4	**IN3** Luminaires mounted at least 2m above the floor	YES
6.4	**IN2** Luminaires mounted at a suitable height to avoid being located in smoke reservoirs or other likely areas of smoke accumulation	YES
5.2.9	**IN5** Safety signs provided as follows:	
5.2.9.1	**a)** Escape route signs in accordance with BSEN ISO 7010 and BS 5499-4, adequately illuminated and identifiable	YES
5.2.9.2	**b)** Other safety signs in accordance with BSEN ISO 7010 and BS 5499-10, adequately illuminated and identifiable	YES
8.2	**IN6** The wiring of central power systems has adequate fire protection and is appropriately sized	N/A
8.3.5	**IN7** Output voltage range of the central power system is compatible with the supply voltage range of the luminaires, taking into account supply cable voltage drop	N/A
8.2.12	**IN8** All plugs and sockets protected against unauthorized use	YES
8.3.3	**IN9** The system has suitable and appropriate testing facilities for the specific site	YES
Clause 11	**IN10** The equipment manufacturers' construction and verification procedures satisfactorily completed	YES
Clause 8	**IN11** The system conforms to BS 7671	YES

DECLARATION OF INSTALLATION

For and on behalf of: Electrical Plumbing & Gas Services Ltd

Telephone no 0161 8811883

Address 5-6 Nelrose, Princess Rd

Mobile number 07702559156

Postcode M20 2LT

Enrolment no (if app) 043992

Signature of person making construction conformity declaration

Name (Capitals)	Signature	Date
Daniel Hall		01/09/2022

Certificate produced by electraform® based on the MODEL FORM from BS5266:2016

CERTIFICATE NO: EML-20220905111006

VERIFICATION - DECLARATION OF CONFORMITY

Any failures of conformity should be covered by a deviation and recorded under the appropriate declaration on the Completion Certificate

BS 5266-1:2016 Clause Reference	Recommendations	System conforms
4.2	**V1** Plans available and correct	YES
8.3.3	**V2** System has a suitable test facility for the application	YES
5.2.9	**V3** All escape route safety signs and fire-fighting equipment location signs, and other safety signs identified from risk assessment, visible with the normal lighting extinguished	YES
Clause5	**V4** Luminaires correctly positioned and oriented as shown on the plans	YES
6.7.1 and Annex F	**V5** Luminaires conform to BSEN 60598-2-22	YES
6.7.1 and Annex F	**V6** Luminaires have an appropriate category of protection against ingress of moisture or foreign bodies for their location as specified in the system design	YES
Clause 12	**V7** Luminaires tested and found to operate for their full rated duration	YES
Clause 12	**V8** Under test conditions, adequate illumination provided for safe movement on the escape route and the open areas, paths under safety emergency lighting, and operations within high risk task areas. NOTE This can be checked by visual inspection and checking that the illumination from the luminaires is not obscured and that minimum design spacings have been met	YES
Clause 12	**V9** After test, the charging indicators operate correctly	YES
8.2	**V10** Fire protection of central wiring system satisfactory	N/A
8.2.6	**V11** Emergency circuits correctly segregated from other supplies	YES
10.6; 10.7; Clause 11	**V12** Operation and maintenance instructions together with a suitable log book showing a satisfactory verification test provided for retention and use by the building occupier	YES

DECLARATION OF VERIFICATION

Trading title	**Postcode**	**Company email**
Electrical Plumbing & Gas Services Ltd	M20 2LT	danny@elecplumbgas.co.uk
Address	**Telephone no**	**Website**
5-6 Nelrose, Princess Rd	0161 8811883	www.elecplumbgas.co.uk
Town	**Mobile number**	
Manchester	07702559156	
County	**Enrolment no**	
Greater Manchester	043992	

EPG SERVICES ELECTRICAL PLUMBING GAS

Signature of person making verification conformity declaration

Name (Capitals)	Signature	Date
Daniel Hall		01/09/2022

Certificate produced by electraform® based on the MODEL FORM from BS5266:2016

Certificate No:
307863

KM 573948

Module Certificate - Maintenance Certificate of a Fire Detection and Fire Alarm System

IMPORTANT NOTE: Recipients of this BAFE Certificate are strongly advised to have their System(s) covered by a maintenance contract with an SP203-1 Certificated Organisation with maintenance included within their scope.

	SCHEDULE	
Part 1	**Name of company issuing this certificate**	**BAFE Reg No**
	Olympian Fire Protection Limited	100872
Part 2	**Name of Customer**	
	St Bartholomews Place Management Ltd	
Part 3	**Address of Protected Premises**	
	St Bartholomews Place New Road Rochcester ME1 1TW Kent	
Part 4	**4.1 Type of System and Applicable Standard/Code of Practice**	
	BS 5839-1 Fire Detection and Alarm System (Non-domestic premises)	
	4.2 Type of premises	
	Domestic	
	4.3 Detail of system/work undertaken	
	Inspection and Service	
	4.4 List of variations/modifications have been presented	
	Not applicable	
	4.5 Maintenance work undertaken	
	Not applicable	
Part 5	**Date of Handover of the system**	2022/11/25
	Date of last maintenance (if applicable)	
	Date of next maintenance	April 2024

We, being currently an BAFE SP203-1 'Certificated Organization' in respect of Fire Detection and Fire Alarm Systems of the type(s) we have identified in Part 4 of the above Schedule, certify that the system in the above Schedule complies with the Standard or Code of Practice identified in the above Schedule and with all other requirements as currently laid down within the SP203-1 Certification Scheme in respect of such a system.

Signed for and on behalf of the issuing organisation	
Print Name	Darren Morrell
Job Title	Managing Director
Date	2023/10/26

BSI Group, Kitemark House, Maylands Avenue, Hemel Hempstead, HP2 4SQ, United Kingdom
Telephone: 0345 080 9000 email: mk.customerservices@bsigroup.com web: www.bsigroup.com
BAFE, The Fire Service College, London Road, Moreton-in-Marsh, Gloucestershire GL56 0RH
Telephone: 0844 335 0897; email: info@bafe.org.uk; web: www.bafe.org.uk

Certificate No:
307863

KM 573948

Module Certificate – Maintenance Certificate of a Fire Detection and Fire Alarm System

Part 7	**Variations**
Part 8	**Comments** None

OLYMPIAN
FIRE PROTECTION LTD

NATURAL SMOKE VENTILATION SYSTEM SERVICE AND INSPECTION CERTIFICATE

Site Name/Address: St Bartholomew's Place
Client: St Bartholomew's Place Management Ltd, Universal Suare, 3rd Floor, Building 2, Devonshire St North, Manchester M12 6JH
Date of Service: 26/10/2023
Date of Last Service: N/A

Description of Service.
Annual service of the natural smoke vent system was completed in accordance with BS 9999 & BS9991:2005.

Equipment Summary

Equipment	Quantity	Description of Fault	Condition
C850 AOV Control Panels	15	N/A	Good/Operational
Folding arm door operators C/W brackets	7	N/A	Good/Operational
1000mm Chain Drive Actuators C/W brackets	4	N/A	Good/Operational
Series 54 Damper/Grilles/Motors 1.0m2 MFA	3	N/A	Good/Operational
Head of Shaft LAM 1.0M2 MFA	2	N/A	Good/Operational

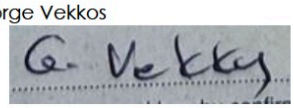
The Extent of liability of the signatory is limited to the system :- AOV Annual Service Inspection.

Extent of system covered by this certificate: All equipment as listed above

The following work / action is considered necessary: None

All works have been completed in accordance with BS 9999:2017 & BS 9991:2015

Engineer: George Vekkos

Signature: 

Date: 26/10/2023

ANNEX C. – ACKNOWLEDGEMENT AND DECLARATIONS

Table of Contents **Page**

Annex C. – Acknowledgement and Declarations

ACKNOWLEDGMENT OF INSTRUCTION MANUAL

LIFT IDENTIFICATION

Lift Serial no:	78NR1500	**Lift Location:**	St Barts Lift
Local Identification:	4 floors, 13 persons	**Address:**	Hospital Lane Rochester ME1 1DJ

Number / Name

Country:

Date of handover: 08/09/22

Owner: **Name:** – MICHAEL SCOTT

Address: – BISHOPS COURT, INTRO DEVELOPMENTS,

Country:

I confirm herewith the receipt of the Instruction Manual and acknowledgment of its content.

In the case where other persons use the building/lift, or if the ownership of the building/lift changes, the Instruction Manual must be passed on.

Place & Date: SITE

Place & Date: Site office as above 08/09/22

Signature of the Owner

Signature of the Installer:

(Owners copy)

Annex C. – Acknowledgement and Declarations

ACKNOWLEDGMENT OF INSTRUCTION MANUAL

LIFT IDENTIFICATION

Lift Serial no:	78NR1500	**Lift Location:**	St Barts Lift
Local Identification:	4 floors, 13 persons	**Address:**	Hospital Lane Rochester ME1 1DJ

Number / Name

Country: **Date of handover:** 08/09/22

Owner: **Name:** – MICHAEL SCOTT

Address: – BISHOPS COURT, INTRO DEVELOPMENTS.

Country:

I confirm herewith the receipt of the Instruction Manual and acknowledgment of its content.

In the case where other persons use the building/lift, or if the ownership of the building/lift changes, the Instruction Manual must be passed on.

Place & Date: SITE 08/09/22 **Place & Date:** Site office as above 08/09/22

Signature of the Owner **Signature of the Installer:**

(Otis copy)

Annex C. – Acknowledgement and Declarations

DECLARATION OF CONFORMITY FOR YOUR LIFT

NAME OF THE INSTALLER:	OTIS Ltd
ADDRESS OF THE INSTALLER:	Otis Vantage London 10th Floor, Great West Road Brentford TW8 9AG
PRODUCT:	Passenger Lift
MODEL:	Genesis Atrium - Madrid
TYPE:	Electric Traction
SERIAL N°:	78NR1500
YEAR OF INSTALLATION:	2020
LOCATION OF INSTALLATION:	St Barts Lift Hospital Lane Rochester ME1 1DJ
NOTIFIED BODY NAME:	Bureau Veritas UK Ltd.
ADDRESS:	2nd Floor Atlantic House, Atlas Business Park, Simonsway, Manchester M22 5PR
REFERENCE N°:	UKCA 0041 [CE 0041 / UKCA 0041 marks are both applicable to BV UK Ltd]
UK Lift Regulations 2016	For declarations signed on or after 1st January 2021

We hereby declare that this product, as far as it is within our scope of influence and responsibility, meets the following Lift Regulations & Designated Standards:

Lift Regulations	Designated Standards		(When appropriate also reference of the design certification)
UK Lift Regulations 2016	BS EN81-20	Yes	
	BS EN81-20	Yes	**ATI/ASC/001 R5**
	BS EN 81-28	Yes	-
	BS EN 81-58	Yes	
	BS EN 81-70	Yes	
	BS EN 81-71	-	
	BS EN 81-72	No	
	BS EN 81-73	Yes	
	BS EN 13015	Yes	
	BS EN 12015	Yes	
	BS EN 12016	Yes	
National Standards	BS9999		Evacuation
	-	-	-

Further Standards to which the declaration relates: - - -

The lift is intended to be used to transport the following: Passengers - 13

Place: Site office as above
Date: 08/09/22

Name of the responsible person: Ross Lockwood
Title: PM
Signature:

(Owners copy)

Page C3

ANNEX C. – ACKNOWLEDGEMENT AND DECLARATIONS

Table of Contents **Page**

Annex C. – Acknowledgement and Declarations

ACKNOWLEDGMENT OF INSTRUCTION MANUAL

LIFT IDENTIFICATION

Lift Serial no:	78NR1499	**Lift Location:**	St Barts Lift
Local Identification:	4 floors, 8 persons	**Address:**	Hospital Lane Rochester Kent ME1 1DJ

Number / Name

Country:

Date of handover: 08/09/22

Owner: **Name:** MICHAEL SCOTT

Address: BISHOPS COURT, INTRO DEVELOPMENTS

Country:

I confirm herewith the receipt of the Instruction Manual and acknowledgment of its content.

In the case where other persons use the building/lift, or if the ownership of the building/lift changes, the Instruction Manual must be passed on.

Place & Date: SITE 08/09/22

Place & Date: Site office as above 08/09/22

Signature of the Owner

Signature of the Installer:

(Owners copy)

Annex C. – Acknowledgement and Declarations

ACKNOWLEDGMENT OF INSTRUCTION MANUAL

LIFT IDENTIFICATION

Lift Serial no:	78NR1499	**Lift Location:**	St Barts Lift
Local Identification:	4 floors, 8 persons	**Address:**	Hospital Lane Rochester Kent ME1 1DJ
Number / Name			
Country:		**Date of handover:**	08/09/22
Owner:	**Name:** MICHAEL SCOTT		
	Address: BISHOPS COURT / INTRO DEVELOPMENTS		
	Country:		

I confirm herewith the receipt of the Instruction Manual and acknowledgment of its content.

In the case where other persons use the building/lift, or if the ownership of the building/lift changes, the Instruction Manual must be passed on.

Place & Date:	SITE. 08/09/22	**Place & Date:**	Site office as above 08/09/22
Signature of the Owner		**Signature of the Installer:**	

(Otis copy)

Annex C. – Acknowledgement and Declarations

DECLARATION OF CONFORMITY FOR YOUR LIFT

NAME OF THE INSTALLER:	OTIS Ltd
ADDRESS OF THE INSTALLER:	Otis Vantage London 10th Floor, Great West Road Brentford TW8 9AG
PRODUCT:	Passenger Lift
MODEL:	Genesis Atrium - Madrid
TYPE:	Electric Traction
SERIAL N°:	78NR1499
YEAR OF INSTALLATION:	2020
LOCATION OF INSTALLATION:	St Barts Lift Hospital Lane Rochester Kent ME1 1DJ
NOTIFIED BODY NAME:	Bureau Veritas UK Ltd.
ADDRESS:	2nd Floor Atlantic House, Atlas Business Park, Simonsway, Manchester M22 5PR
REFERENCE N°:	UKCA 0041 [CE 0041 / UKCA 0041 marks are both applicable to BV UK Ltd]
UK Lift Regulations 2016	For declarations signed on or after 1st January 2021

We hereby declare that this product, as far as it is within our scope of influence and responsibility, meets the following Lift Regulations & Designated Standards:

Lift Regulations	Designated Standards		(When appropriate also reference of the design certification)
UK Lift Regulations 2016	BS EN81-20	Yes	
	BS EN81-20	Yes	**ATI/ASC/001 R5**
	BS EN 81-28	Yes	-
	BS EN 81-58	Yes	
	BS EN 81-70	Yes	
	BS EN 81-71	-	
	BS EN 81-72	No	
	BS EN 81-73	Yes	
	BS EN 13015	Yes	
	BS EN 12015	Yes	
	BS EN 12016	Yes	
National Standards	BS9999		Evacuation
	-	-	-

Further Standards to which the declaration relates: - - -

The lift is intended to be used to transport the following: Passengers - 8

Place: Site office as above

Date: 08/09/22

Name of the responsible person: Ross Lockwood

Title: PM

Signature:

(Owners copy)

OTIS

Completion Certificate

CONTRACT WITH Intro developments

ADDRESS

POST CODE

SITE ADDRESS St Barts, Hospital lane
Rochester POST CODE ME1 1DU

We have completed our contract in full but in accordance with The Lift Regulations 1997 and the EN81 series of standards, the lift(s) cannot be put into service due to outstanding builder's items.

UNIT NUMBER	HANDOVER DATE
NK1499 NK1500	

The following finishes have been inspected and should be protected by you to avoid damage

	Yes	No	Comments
Lift Car	✓		
Lift Entrances	✓		
Other (Specify)	✓		

Authorised Representative	MICHAEL SCOTT	Otis Representative	ROSS LOCKWOOD
Signed		Signed	
Date	08/09/22	Date	08/09/22

Otis Limited, Registered Office: The Otis Building, 187 Twyford Abbey Road, London. NW10 7DG. Registered in London No. 147366

Copies: White (Master) to Owners Manual, Yellow to Construction File 78.9.48.184(11.05)

OTIS

Handover Certificate

CONTRACT WITH Intro developments

SITE NAME St Barts DATE 08/09/22

SITE ADDRESS Hospital lane, Rochester

Kent POST CODE ME1 1DJ

Unit Number(s)	Issued Key Number(s)	Unit Number(s)	Issued Key Number(s)
NK4499			
NK1500			

In relation to the scope of works under our contract, the responsible parties have completed regulatory items connected with the safe operation of the equipment. The units may now be enabled for use.

For follow-up maintenance purposes, please provide the end-user contact details (if known)

NAME

COMPANY

TEL NO. /EMAIL

ACCEPTED ON BEHALF OF THE CUSTOMER

SIGNATURE

PRINT NAME MICHAEL SCOTT

DATE 08/09/22

By signing I confirm that I have received the O&M Manual(s) for the unit(s) listed above

FOR OTIS LIMITED

SIGNATURE

PRINT NAME Lyss Lockwood

DATE 08/09/22

Our 24-hour freephone Otisline number is 0800 181 363

Otis Limited, Registered Office: The Otis Building, 187 Twyford Abbey Road, London. NW10 7DG. Registered in London No. 147366

Copies: White (Master) to Owners Manual, Yellow to Construction File, Pink to Contracts 78.9.48.185(01.08)

FIRE TECH DRY RISERS LTD
SUPPLY • INSTALL • MAINTENANCE

DRY RISER TEST CERTIFICATE

Carried out in accordance with BS 9990-2015

Firetech Dry Risers Ltd herby certify that the building set out below has been commissioned to meet current BS9990-2015 standards which covers the installation and maintenance of Dry Riser Systems. This certification is valid for 12 months from date from of issue and it is recommended the system shall have a hydraulic pressure test every 12 months and visually inspected every 6 months from date of commissioning.

Client	MCR Property
Date System Commissioned	05/09/2022
Next Hydraulic Inspection Due	05/09/2023
Building Location/Name	St Barts, Rochester, ME1 1DS
Type of Test Carried Out	12 Bar Hydraulic
System reference	North Block
Inlet Valve(s) Location	External Of Building Entrance
Does the system meet current standards?	Yes
Number of Landing Valves	3
Position of Landing Valves	Levels 1-3
Type Of System	Victaulic
Pipe and Bracketry in good condition?	Yes
Outlet Valve Type	Male Threaded
Inlet Valve Type	PN16 type flanged
Number of Cabinets	4
Correct Signage?	Yes
Automatic air release Checked	Yes
Number of drain Valves	1
Are the valves secured?	Yes
Pressure at Highest Point	Yes

Are the Instantaneous washers in good Condition	Yes
Caps and plugs intact?	Yes
System fully drained	Yes
Engineer(s)	C.Dobbs
System Test Witnessed	Yes
12 Bar Achieved at the Inlet Valve	Yes
System Status	Pass

Engineer Report

We supply an extended 5-year warranty on all parts and fittings installed by us, subject to an on-going annual maintenance agreement. The warranty is upheld subject to maintenance on an annual basis.

Registered office address
Hamill House, 112-116 Chorley New Road, Bolton, England, BL1 4DH

Email- sales@firetechdryrisers.co.uk

Tel- 0800 865 4313

Web- www.firetechdryrisers.co.uk

FIRE TECH
SUPPLY • INSTALL • MAINTENANCE
DRY RISERS LTD

DRY RISER TEST CERTIFICATE

Carried out in accordance with BS 9990-2015

Firetech Dry Risers Ltd herby certify that the building set out below has been commissioned to meet current BS9990-2015 standards which covers the installation and maintenance of Dry Riser Systems. This certification is valid for 12 months from date from of issue and it is recommended the system shall have a hydraulic pressure test every 12 months and visually inspected every 6 months from date of commissioning.

Client	MCR Property
Date System Commissioned	05/09/2022
Next Hydraulic Inspection Due	05/09/2023
Building Location/Name	St Barts, Rochester, ME1 1DS
Type of Test Carried Out	12 Bar Hydraulic
System reference	Central Block
Inlet Valve(s) Location	External Of Building Entrance
Does the system meet current standards?	Yes
Number of Landing Valves	3
Position of Landing Valves	Levels 1-3
Type Of System	Victaulic
Pipe and Bracketry in good condition?	Yes
Outlet Valve Type	Male Threaded
Inlet Valve Type	PN16 type flanged
Number of Cabinets	4
Correct Signage?	Yes
Automatic air release Checked	Yes
Number of drain Valves	1
Are the valves secured?	Yes
Pressure at Highest Point	Yes

Are the Instantaneous washers in good Condition	Yes
Caps and plugs intact?	Yes
System fully drained	Yes
Engineer(s)	C.Dobbs
System Test Witnessed	Yes
12 Bar Achieved at the Inlet Valve	Yes
System Status	Pass

Engineer Report

We supply an extended 5-year warranty on all parts and fittings installed by us, subject to an on-going annual maintenance agreement. The warranty is upheld subject to maintenance on an annual basis.

Registered office address
Hamill House, 112-116 Chorley New Road, Bolton, England, BL1 4DH

Email- sales@firetechdryrisers.co.uk

Tel- 0800 865 4313

Web- www.firetechdryrisers.co.uk

FIRE TECH DRY RISERS LTD
SUPPLY • INSTALL • MAINTENANCE

DRY RISER TEST CERTIFICATE

Carried out in accordance with BS 9990-2015

Firetech Dry Risers Ltd herby certify that the building set out below has been commissioned to meet current BS9990-2015 standards which covers the installation and maintenance of Dry Riser Systems. This certification is valid for 12 months from date from of issue and it is recommended the system shall have a hydraulic pressure test every 12 months and visually inspected every 6 months from date of commissioning.

Client	MCR Property
Date System Commissioned	05/09/2022
Next Hydraulic Inspection Due	05/09/2023
Building Location/Name	St Barts, Rochester, ME1 1DS
Type of Test Carried Out	12 Bar Hydraulic
System reference	South Block
Inlet Valve(s) Location	External Of Building Entrance
Does the system meet current standards?	Yes
Number of Landing Valves	3
Position of Landing Valves	Levels 1-3
Type Of System	Victaulic
Pipe and Bracketry in good condition?	Yes
Outlet Valve Type	Male Threaded
Inlet Valve Type	PN16 type flanged
Number of Cabinets	4
Correct Signage?	Yes
Automatic air release Checked	Yes
Number of drain Valves	1
Are the valves secured?	Yes
Pressure at Highest Point	Yes

Are the Instantaneous washers in good Condition	Yes
Caps and plugs intact?	Yes
System fully drained	Yes
Engineer(s)	C.Dobbs
System Test Witnessed	Yes
12 Bar Achieved at the Inlet Valve	Yes
System Status	Pass

Engineer Report

We supply an extended 5-year warranty on all parts and fittings installed by us, subject to an on-going annual maintenance agreement. The warranty is upheld subject to maintenance on an annual basis.

Registered office address
Hamill House, 112-116 Chorley New Road, Bolton, England, BL1 4DH

Email- sales@firetechdryrisers.co.uk

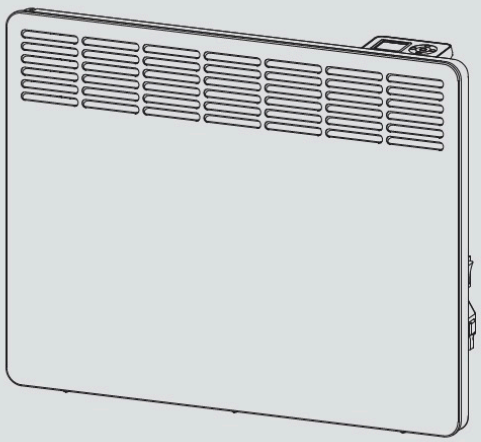
Tel- 0800 865 4313

Web- www.firetechdryrisers.co.uk

OPERATION AND INSTALLATION

Wall mounted convector heater

- CNS 50 TREND UK
- CNS 75 TREND UK
- CNS 100 TREND UK
- CNS 150 TREND UK
- CNS 200 TREND UK
- CNS 250 TREND UK
- CNS 300 TREND UK



STIEBEL ELTRON

SPECIAL INFORMATION

- Keep children under the age of 3 away from the appliance if constant supervision cannot be guaranteed.
- Children from the age of 3 to 7 may switch the appliance on and off, provided they are supervised or have been instructed in the safe operation of the appliance and understand any risks that may result. This is subject to the appliance having been installed as described. Children from the age of 3 to 7 must not plug the power cable into its socket or regulate the appliance.
- The appliance may be used by children aged 8 and older and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks.
- Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.
- Parts of the appliance can get very hot and may cause burns. Particular caution is advised when children or vulnerable persons are present.
- In order to avoid overheating, do not cover the heater.
- Never install the appliance directly below a wall socket.
- In the case of a permanent connection, the appliance must be able to be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.

- The power cable must only be replaced (for example if damaged) by a qualified contractor authorised by the manufacturer, using an original spare part.
- Secure the appliance as described in chapter "Installation / Installation".

OPERATION

1. General information

The chapters "Special information" and "Operation" are intended for both users and qualified contractors.

The chapter "Installation" is intended for qualified contractors.

Note
Read these instructions carefully before using the appliance and retain them for future reference.
Pass on the instructions to a new user if required.

1.1 Safety instructions

1.1.1 Structure of safety instructions

KEYWORD Type of risk
Here, possible consequences are listed that may result from failure to observe the safety instructions.
▶ Steps to prevent the risk are listed.

1.1.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

1.1.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

1.2 Other symbols in this documentation

Note
General information is identified by the adjacent symbol.
▶ Read these texts carefully.

Symbol	Meaning
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

1.3 Information on the appliance

Symbol	Meaning
	Never cover the appliance

1.4 Units of measurement

Note
All measurements are given in mm unless stated otherwise.

2. Safety

2.1 Intended use

This appliance is designed to heat living areas.

The appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in a non-domestic environment, e.g. in a small business, as long as it is used in the same way.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of the instructions for any accessories used is also part of the correct use of this appliance.

2.2 General safety instructions

WARNING Injury
- Keep children under the age of 3 away from the appliance if constant supervision cannot be guaranteed.
- Children from the age of 3 to 7 may switch the appliance on and off, provided they are supervised or have been instructed in the safe operation of the appliance and understand any risks that may result. This is subject to the appliance having been installed as described. Children from the age of 3 to 7 must not plug the power cable into its socket or regulate the appliance.
- The appliance may be used by children aged 8 and older and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks.
- Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.

WARNING Injury
In closed rooms, temperatures can rapidly reach high values. Ensure constant supervision if the appliance is operated in a small room and the persons within that room cannot regulate the appliance or leave the room on their own.

WARNING Burns
Never operate this appliance...
- if the distance from adjacent objects or other flammable materials would be less than the minimum permissible distance.
- in rooms where it is at risk of fire or explosion as a result of chemicals, dust, gases or vapours. Ventilate the room sufficiently before heating.
- in the direct proximity of pipes or receptacles that carry or contain flammable or explosive materials.
- if an appliance component is damaged, the appliance has fallen over or there is a fault.

WARNING Burns
- Never place any flammable, combustible or insulating objects or materials on the appliance or in direct proximity to it.
- Ensure that the air intake and discharge are never blocked.
- Never place any objects between the appliance and the wall.

WARNING Burns
The appliance is unsuitable for use as a floorstanding appliance. Only ever operate this appliance when mounted on the wall mounting bracket supplied (see chapter "Installation / Installation").

CAUTION Burns
Parts of the appliance can get very hot and may cause burns. Particular caution is advised when children or vulnerable persons are present.

WARNING Overheating
In order to avoid overheating, do not cover the heater.

Material losses
- Ensure that the power cable is not touching the appliance.
- Never stand on the appliance.
- Never operate the appliance in the open air.

2.3 Test symbols

See type plate on the appliance.

3. Appliance description

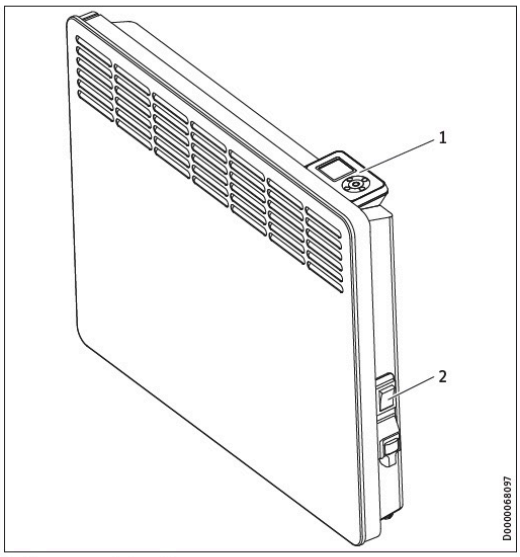
The appliance is a wall mounted electric direct heater.

The appliance is suitable for use as a standalone heating system, or can be used in spring and autumn and as a booster heater in smaller rooms.

The air inside the appliance is heated by a heating element and expelled via natural convection through the air discharge at the top. Cool indoor air is drawn in through the air intake on the underside of the appliance.

When the set room temperature is reached, it is maintained by periodic heating.

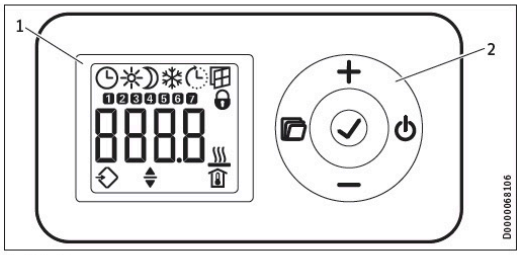
4. Operation



1 Programming unit
2 ON/OFF switch

4.1 Programming unit

The programming unit is located at the top right of the appliance.



1 Display
2 User interface

4.1.1 User interface

Button	Designation	Description
⏻	"Standby" key	Switch on the programming unit; Put programming unit and heating appliance into standby mode
✓	"OK" button	Selection; Confirm settings
▭	"Menu" key	Call up and exit menu
+	"+" key	Call up menu items; Change settings
−	"−" key	Call up menu items; Change settings

4.1.2 Display

If no user action occurs for 20 seconds, the backlight switches off. Press any button to switch the background lighting on again.

Symbols

Symbol	Description
🕒	Time display: Indication of the current time or a programmed start time
	Timer mode: The appliance heats in accordance with the enabled time program.
✳	Comfort mode: The appliance maintains the set comfort temperature. Standard setting: 21.0 °C. Use this setting for comfortable room temperatures when someone is present.
☽	Setback mode: The appliance maintains the set setback temperature. Standard setting: 18.0 °C. Use this setting e.g. at night or when absent for several hours.
❄	Frost protection: The appliance maintains a room temperature of 7.0 °C. Use this setting to protect an unused room from frost damage.
	Adaptive start: In timer mode, the heating appliance switching times are adjusted to ensure that, at the programmed start time, the respective set room temperature is already reached. Conditions: The "adaptive start" function is enabled (see chapter "Settings / Standard menu").
	Window open detection: To avoid unnecessary energy consumption while venting, the appliance automatically switches to frost protection mode for one hour when a window is open. The "window open detection" symbol flashes. After venting, frost protection mode can be terminated manually by pressing "+", "−" or "OK". The appliance then heats to the set room temperature again. Conditions: Window open detection is enabled (see chapter "Settings / Standard menu").
	User interface lock: To lock or unlock the user interface, press and hold "+" and "−" simultaneously for 5 seconds.
	Heating enabled: The appliance is heating to maintain the set room temperature.
	Room temperature display
	Editable parameter: The parameter shown can be changed using "+" and "−".
	External input (FP): The appliance can be connected to an external control unit. Depending on the setting of the control unit, the appliance heats in comfort, setback or frost protection mode at specific times of the day.
1 ... 7	Days of the week: 1 = Monday, 2 = Tuesday ... 7 = Sunday

4.2 Switching the appliance on and off

Note
For a short time after initial start-up and after longer breaks in use, a smell may develop.

The appliance is ready for operation as soon as it has been fixed to the wall and plugged into the mains.

- ▶ Switch the appliance on or off using the ON/OFF switch on the right-hand side of the appliance.
- ▶ Switch the appliance off when not in use for longer periods (e.g. during the summer months).

All settings remain intact after switching off or after an interruption to the power supply. This appliance is equipped with a power reserve that ensures the day of the week and the time are saved for several hours.

Note
If the appliance was in timer mode before being switched off for a longer period of time, you will be prompted to set the day and time after switching it on. Until this setting is made, the appliance will operate in comfort mode.

4.3 Standby mode

Material losses
In standby mode, the appliance will not switch on heating under any circumstances. There will be no frost protection.

- ▶ To switch on the programming unit, press "Standby". The standard display appears.
- ▶ To put the programming unit and the heating appliance into standby mode, press "Standby". The display shows "----".

5. Settings

5.1 Standard display

The default display is continuously displayed. If no user action is performed for longer than 20 seconds while in the menu, the appliance automatically switches to the default display.

The default display shows the current set room temperature as well as the "Editable parameter" symbol. You can use "+" and "–" to change the set room temperature.

If the set room temperature corresponds to one of the values set for the comfort or setback temperature, the symbol for the corresponding operating mode (comfort mode, setback mode) appears in the menu bar.

The set room temperature can also be changed manually when in timer mode. The changed set room temperature is maintained until the next programmed switching point is reached.

5.2 Standard menu

To access the standard menu, briefly press "Menu". You can now call up the following menu items:

Display	Description
	Select day of the week and time
	Select comfort temperature
	Select setback temperature
	Switch "Window open detection" function on and off
	Select time program (off, Pro1, Pro2, Pro3) or external input (FP)
	Switch "Adaptive start" function on and off

Note
The comfort temperature must be set at least 0.5 °C higher than the setback temperature.

To change the setting of a menu item, call it up by pressing "+" and "–". Press the "OK" button.

As soon as the "Editable parameter" symbol appears, you can change the setting of the menu item with "+" and "–". Press "OK" to save the setting.

To exit the standard menu, briefly press "Menu". The standard display appears.

5.3 Configuration menu

Display	Description
I1-I2	Actual values
Pro1-Pro3	Time programs
P1-P5	Parameters

In the configuration menu, you can call up actual values, program time programs for timer mode and set parameters.

To access the configuration menu, press and hold "Menu". After approx. 3 seconds, actual value I1 is displayed.

Use "+" and "–" to switch between the individual actual values, time programs and parameters.

To exit the configuration menu, briefly press "Menu". The standard display appears.

5.3.1 Actual values

The following actual values can be called up:

Display	Description	Unit
I1	Actual room temperature	[°C] | [°F]
I2	Relative heating time (The counter can be reset via parameter P5.)	[h]

Note
The counter for relative heating time (I2) counts in complete hours how long the appliance heats for. When the appliance is switched off, any heating phase of less than 60 minutes is not recorded.

5.3.2 Time programs

There are three time programs available for using the appliance in timer mode. Time programs Pro1 and Pro2 are factory-set. Time program Pro3 can be set according to your individual requirements.

Display	Description
Pro1	Time program "Daily" - Repeated: Monday to Sunday
Pro2	Time program "Weekdays" - Repeated: Monday to Friday
Pro3	Time program "User defined" - up to 14 comfort phases, freely configurable

Note
To use timer mode, select the required time program in the standard menu (see chapter "Settings / Standard menu").

Note
Ensure the day of the week and the time are set correctly when setting the time programs.

Note
The following applies to all time programs (Pro1, Pro2, Pro3):
If the end time is later than 23:59 h, the end time will automatically be moved to the next day of the week. The comfort phase is maintained past midnight and will end on the next day at the set end time.

Time programs Pro1 and Pro2

You can specify the comfort mode start and end times with time programs Pro1 and Pro2. During this time period, the appliance heats to the set comfort temperature. Outside this specified time period, the appliance operates in setback mode. This results in a comfort and a setback phase that are repeated daily (Pro1) or every weekday (Pro2).

Theses phases are factory-set as follows:

- 08:00 h - 22:00 h: Comfort mode
- 22:00 h - 08:00 h: Setback mode

Note
When time program Pro2 is enabled, the appliance operates exclusively in setback mode during the weekend.

To adapt time programs Pro1 and Pro2 according to your needs, proceed as follows:

- ▶ In the configuration menu, use "+" and "–" to call up the required time program.
- ▶ Press the "OK" button.
  The start time for comfort mode is displayed.
- ▶ Use "+" and "–" to set the required start time.
- ▶ Press the "OK" button.
  The end time for comfort mode is displayed.
- ▶ Use "+" and "–" to set the required end time.
- ▶ Press "OK" to save.

Time program Pro3

You can use time program Pro3 to specify up to 14 separate comfort phases which are repeated weekly.

To configure a comfort phase in time program Pro3:

- ▶ In the configuration menu, use "+" and "–" to call up time program Pro3.
- ▶ Press the "OK" button.
  The display shows "3---".
- ▶ Press the "OK" button.
  A day of the week or a group of days is displayed.
- ▶ Use "+" and "–" to select the required day or group of days.
- ▶ Press the "OK" button.
  The start time for comfort mode is displayed.
- ▶ Use "+" and "–" to set the required start time.
- ▶ Press the "OK" button.
  The end time for comfort mode is displayed.
- ▶ Use "+" and "–" to set the required end time.
- ▶ Press the "OK" button.
  Comfort phase "3-01" has been configured.
- ▶ To configure a further comfort phase, use "+" and "–" in time program Pro3 to select display "3---". Proceed as describe above.

5.3.3 Parameters

You can call up the following parameters:

Display	Description	Options
P1	Room temperature offset	±3 °C | ±5 °F
P2	Time format	12 h | 24 h
P3	Temperature display units	°C | °F
P4	Reset time programs (timer mode).	on | off
P5	Reset relative heating time	on | off

To change the value of a parameter, use "+" and "–" to call up the relevant parameter. Press the "OK" button.

As soon as the "Editable parameter" symbol appears, you can change the parameter value with "+" and "–". Press "OK" to save the selected value.

P1: Room temperature offset

Uneven temperature distribution in the room can result in a difference between displayed actual temperature I1 and the room temperature you measure yourself. To compensate for this difference, a room temperature offset of ±3 °C can be set via parameter P1.

Example: The appliance indicates I1 = 21.0 °C. You have measured a room temperature of 20.0 °C. There is a difference of 1.0 °C.

- ▶ To compensate for the difference, select an offset of P1 = -1.0.

P2: Time format

Parameter P2 is used to specify whether to display the time in 12 hour or 24 hour format.

P3: Temperature display units

Parameter P3 is used to specify whether the room temperature is displayed in degrees Centigrade [°C] or in degrees Fahrenheit [°F].

P4: Reset time programs

Activating parameter P4 resets all time programs to the factory setting.

P5: Reset relative heating time

Activating parameter P5 resets the counter for relative heating time (I2).

6. Cleaning, care and maintenance

The appliance contains no user serviceable parts.

Material losses
- Never spray cleaning spray into the air slot.
- Ensure that no moisture can enter the appliance.

- If a pale brownish discolouration appears on the appliance casing, wipe it off with a damp cloth.
- Clean the appliance when cold with ordinary cleaning products. Avoid abrasive or corrosive cleaning products.

Note
We recommend having the control components checked as part of regular maintenance.
▶ Have a qualified contractor check the safety and control components no more than 10 years after commissioning.

7. Troubleshooting

Problem	Cause	Remedy
Room does not get warm enough. Appliance does not get hot.	Temperature set too low on the appliance.	Check the selected room temperature. Adjust if necessary.
	No power supply.	Check position of the ON/OFF switch, RCD and fuse/MCB in your fuse box.
Room does not get warm enough although the appliance is hot.	Overheating. High limit safety cut-out limits heating output.	Eliminate the cause (dirt or obstructions at the air inlet or outlet). Observe minimum clearances.
	The heat demand of the room is higher than appliance output.	Remove heat losses (Close windows and doors. Avoid constant venting.)
Room gets too hot.	Temperature set too high on the appliance.	Check the selected room temperature. Adjust if necessary.
	Detected room temperature does not match actual room temperature.	Avoid obstructions to air change between appliance and indoor air.
Window open detection does not respond.	Appliance does not detect a pronounced temperature drop due to venting. (Window open detection requires previously stable room temperature.)	Wait a while after making settings on the appliance, until the room temperature has fully stabilised.
		Avoid obstructions to air change between appliance and indoor air.
		Manually switch the appliance into standby mode for the duration of venting.
	Window open detection is not enabled.	Switch on window open detection in the standard menu.
"Adaptive start" function does not work as required.	This function is only effective in timer mode.	Use the timer mode for optimised heating convenience.
	Severely fluctuating room temperature or the appliance learning procedure has not been completed.	Wait a few days for behaviour to stabilise.
	"Adaptive start" function is not enabled.	Switch on the "Adaptive start" function in the standard menu.
Appliance is in "FP" program but does not respond to external input.	When the appliance does not detect a signal at the external input, it heats in comfort mode.	Check external control unit and its settings. Wiring must be installed correctly and with correct polarity.
"Err" or "E..." is displayed.	Internal fault detected.	Notify the qualified contractor.

If you cannot remedy the fault, contact your qualified contractor. To facilitate and speed up your request, provide the number from the type plate (000000-0000-000000).

INSTALLATION

8. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

8.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.

CAUTION Burns
- **Only mount the appliance on a vertical wall that is temperature-resistant to at least 85 °C.**
- **Maintain the minimum clearances to adjacent objects.**

Material losses
- Never install the appliance directly below a wall socket.
- Ensure that the power cable is not in contact with any appliance components.

8.2 Instructions, standards and regulations

Note
Observe all applicable national and regional regulations and instructions.

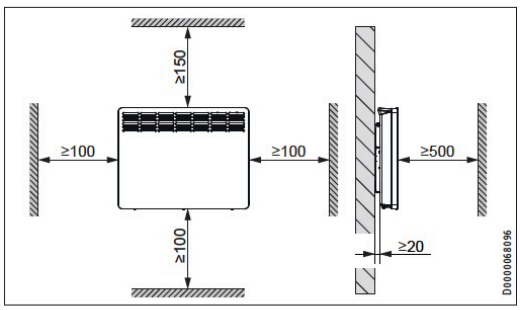
9. Appliance description

9.1 Standard delivery

The following are delivered with the appliance:
- Wall mounting bracket (hooked into the appliance)

10. Installation

10.1 Minimum clearances

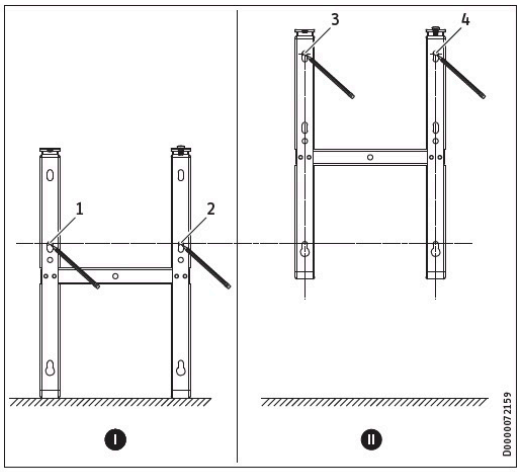


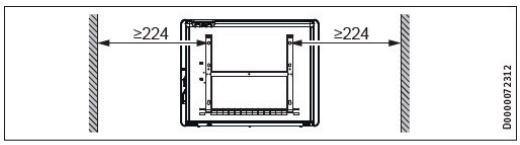
INSTALLATION
Installation

10.2 Installing the wall mounting bracket

The appliance is intended for wall mounting using the wall mounting bracket supplied. The appliance may only be installed horizontally.

Note
- The wall mounting bracket can be used as a template for wall mounting. This ensures sufficient clearance from the floor.
- Use a spirit level if the floor is uneven or sloping.

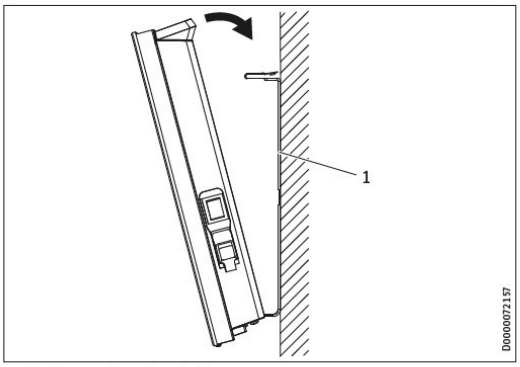




- ▶ Unhook the wall mounting bracket from the appliance.
- ▶ Place the centred wall mounting bracket horizontally on the floor. Mark holes 1 and 2.
- ▶ Lift up the wall mounting bracket so that its lower holes match up with the markings you have just made on the installation wall.
- ▶ Mark holes 3 and 4 on the installation wall.
- ▶ Drill the holes at the 4 markings.
- ▶ Secure the wall mounting bracket with suitable fixing materials (screws, rawl plugs). With the vertical slots, you can compensate for an offset fixing hole.

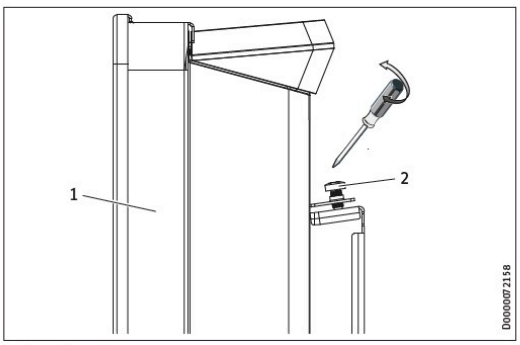
10.3 Appliance installation

- ▶ Hook the appliance onto the bottom tabs of the wall mounting bracket by the slots in the back of the appliance.
- ▶ Place the appliance in an upright position.
- ▶ Secure the appliance by pushing it towards the wall until it audibly snaps into place in the two upper springs on the wall mounting bracket.



1 Wall mounting bracket

- ▶ Secure the appliance against unintentional release using the supplied locking screw on the left-hand side of the wall mounting bracket.



1 Appliance
2 Locking screw

10.4 Removing the appliance

- ▶ Undo and remove the locking screw from the wall mounting bracket.
- ▶ To release the appliance, push down the springs at the top of the wall mounting bracket.
- ▶ Tilt the appliance away from the wall and lift it off the bottom tabs on the wall mounting bracket.

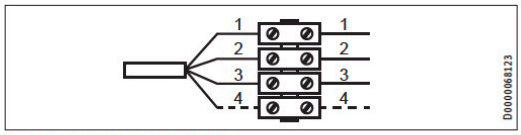
10.5 Electrical connection

WARNING Electrocution
- **Carry out all electrical connection and installation work in accordance with relevant regulations.**
- **In the case of a permanent connection, the appliance must be able to be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.**
- **Do not install the appliance with a fixed power cable.**

Note
- Observe the type plate. The specified voltage must match the mains voltage.
- Ensure the on-site supply cable has an adequate cross-section.

The appliance is delivered with a power cable without a plug.

▶ When wiring the appliance in permanently, connect the 4-core cable to a connection socket as illustrated:



1 Neutral conductor = blue
2 Live = brown
3 Earth conductor = green/yellow
4 Control cable = black

There are 3 possible ways to connect the appliance:

- Appliance connection without control cable

Unregulated appliance. The control cable is not connected. In this case, insulate the control cable.

- Temperature setback via control cable

To reduce the temperature to the set setback temperature, the black control cable is activated via an external electronic contact (e.g. a time switch).

- Control cable connected to external control unit

The appliance can be connected to any control unit that issues the following waveforms as control signals.

Instruction	Oscilloscope	Operating mode	Heating temperature
No electrical power		Comfort mode	Subject to set comfort temperature
Complete oscillation 230 V		Setback mode	Subject to set setback temperature
Semi-oscillation negative - 115 V		Frost protection	Frost protection temperature
Semi-oscillation positive + 115 V		Stop	None

Instruction	Oscilloscope	Operating mode	Heating temperature
Full oscillation 230 V for 3 seconds	5 min / 3 s	Comfort mode -1 °C	1 °C less than the set comfort temperature
Full oscillation 230 V for 7 seconds	5 min / 7 s	Comfort mode -2 °C	2 °C less than the set comfort temperature

11. Commissioning

The appliance is ready for operation as soon as it has been fixed to the installation wall and plugged into the mains.

▶ Remove the protective film from the programming unit.

12. Troubleshooting

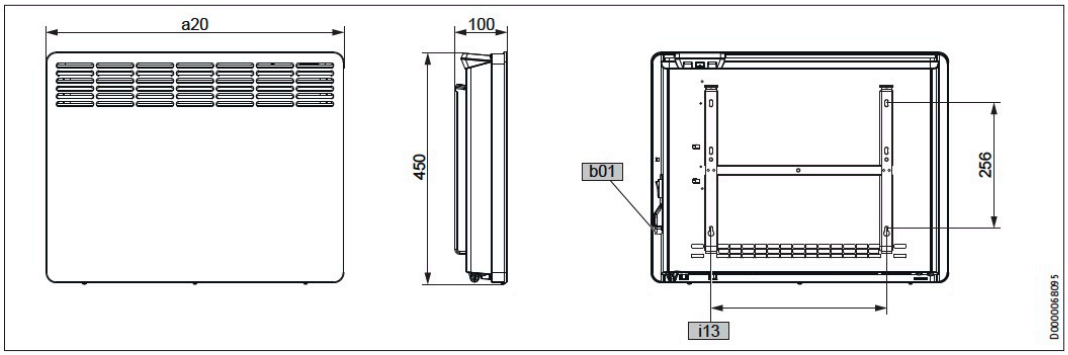
The power cable must only be replaced (for example if damaged) by a qualified contractor authorised by the manufacturer, using an original spare part.

13. Appliance handover

Explain the functions of the appliance to the user. Draw special attention to the safety instructions. Hand over the operating and installation instructions to the user.

14. Specification

14.1 Dimensions and connections



					CNS 50 TREND UK	CNS 75 TREND UK	CNS 100 TREND UK	CNS 150 TREND UK	CNS 200 TREND UK	CNS 250 TREND UK	CNS 300 TREND UK
a20	Appliance	Width	mm		348	426	426	582	738	894	1050
i13	Wall mounting bracket	Horizontal hole spacing	mm		101	179	179	335	491	647	803
b01	Entry electrical cables										

14.2 Energy consumption data

The product data complies with EU regulations relating to the Directive on the ecodesign of energy related products (ErP).

		CNS 50 TREND UK	CNS 75 TREND UK	CNS 100 TREND UK	CNS 150 TREND UK	CNS 200 TREND UK	CNS 250 TREND UK	CNS 300 TREND UK
		236559	236560	236561	236562	236563	236564	236565
Manufacturer		STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON
Heating output								
Rated heating output P_{nom}	kW	0.5	0.75	1.0	1.5	2.0	2.5	3.0
Minimum heating output (standard value) P_{min}	kW	0.5	0.75	1.0	1.5	2.0	2.5	3.0
Maximum continuous heating output $P_{max,c}$	kW	0.5	0.75	1.0	1.5	2.0	2.5	3.0
Auxiliary power consumption								
At rated heating output el_{max}	kW	0.000	0.000	0.000	0.000	0.000	0.000	0.000
At minimum heating output el_{min}	kW	0.000	0.000	0.000	0.000	0.000	0.000	0.000
In standby el_{SB}	kW	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Type of heating output/room temperature control								
Single stage heating output, no room temperature control		-	-	-	-	-	-	-
Two or more manually selectable stages, no room temperature control		-	-	-	-	-	-	-
Room temperature control with mechanical thermostat		-	-	-	-	-	-	-
With electronic room temperature control		-	-	-	-	-	-	-
Electronic room temperature control and time of day control		-	-	-	-	-	-	-
Electronic room temperature control and day of week control		x	x	x	x	x	x	x
Other control options								
Room temperature control with presence detection		-	-	-	-	-	-	-
Room temperature control with window open detection		x	x	x	x	x	x	x
With remote control option		-	-	-	-	-	-	-
With adaptive control of heating start		x	x	x	x	x	x	x
With operating time limitation		-	-	-	-	-	-	-
With black bulb sensor		-	-	-	-	-	-	-

INSTALLATION
Specification

14.3 Data table

		CNS 50 TREND UK	CNS 75 TREND UK	CNS 100 TREND UK	CNS 150 TREND UK	CNS 200 TREND UK	CNS 250 TREND UK	CNS 300 TREND UK
		236559	236560	236561	236562	236563	236564	236565
Electrical data								
Connected load	kW	0.5	0.75	1.0	1.5	2.0	2.5	3.0
Power supply		1/N/PE ~240V	1/N/PE ~240V	1/N/PE ~240V	1/N/PE ~240V	1/N/PE ~240V	1/N/PE ~240V	1/N/PE ~240V
Frequency		50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Dimensions								
Height	mm	450	450	450	450	450	450	450
Width	mm	348	426	426	582	738	894	1050
Depth	mm	100	100	100	100	100	100	100
Weights								
Weight	kg	4.0	4.6	4.6	6	7.7	9.2	10.9
Versions								
Frost protection setting	°C	7	7	7	7	7	7	7
Version		Wall mounted appliance	Wall mounted appliance	Wall mounted appliance	Wall mounted appliance	Wall mounted appliance	Wall mounted appliance	Wall mounted appliance
IP rating		IP24	IP24	IP24	IP24	IP24	IP24	IP24
Protection class		I	I	I	I	I	I	I
Colour		Alpine white	Alpine white	Alpine white	Alpine white	Alpine white	Alpine white	Alpine white
Values								
Setting range	°C	5-30	5-30	5-30	5-30	5-30	5-30	5-30

Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

Environment and recycling

We would ask you to help protect the environment. After use, dispose of the various materials in accordance with national regulations.

NOTES

NOTES

LiveSafe

Deutschland
STIEBEL ELTRON GmbH & Co. KG
Dr.-Stiebel-Straße 33 | 37603 Holzminden
Tel. 05531 702-0 | Fax 05531 702-480
info@stiebel-eltron.de
www.stiebel-eltron.de

Verkauf Tel. 05531 702-110 | Fax 05531 702-95108 | info-center@stiebel-eltron.de
Kundendienst Tel. 05531 702-111 | Fax 05531 702-95890 | kundendienst@stiebel-eltron.de
Ersatzteilverkauf Tel. 05531 702-120 | Fax 05531 702-95335 | ersatzteile@stiebel-eltron.de

Australia
STIEBEL ELTRON Australia Pty. Ltd.
6 Prohasky Street | Port Melbourne VIC 3207
Tel. 03 9645-1833 | Fax 03 9645-4366
info@stiebel.com.au
www.stiebel.com.au

Austria
STIEBEL ELTRON Ges.m.b.H.
Gewerbegebiet Neubau-Nord
Margaritenstraße 4 A | 4063 Hörsching
Tel. 07221 74600-0 | Fax 07221 74600-42
info@stiebel-eltron.at
www.stiebel-eltron.at

Belgium
STIEBEL ELTRON bvba/sprl
't Hofveld 6 - D1 | 1702 Groot-Bijgaarden
Tel. 02 42322-22 | Fax 02 42322-12
info@stiebel-eltron.be
www.stiebel-eltron.be

China
STIEBEL ELTRON (Guangzhou) Electric Appliance Co., Ltd.
Rm 102, F1, Yingbin-Yihao Mansion, No. 1 Yingbin Road
Panyu District | 511431 Guangzhou
Tel. 020 39162209 | Fax 020 39162203
info@stiebeleltron.cn
www.stiebeleltron.cn

Czech Republic
STIEBEL ELTRON spol. s r.o.
K Hájům 946 | 155 00 Praha 5 - Stodůlky
Tel. 251116-111 | Fax 235512-122
info@stiebel-eltron.cz
www.stiebel-eltron.cz

Finland
STIEBEL ELTRON OY
Kapinakuja 1 | 04600 Mäntsälä
Tel. 020 720-9988
info@stiebel-eltron.fi
www.stiebel-eltron.fi

France
STIEBEL ELTRON SAS
7-9, rue des Selliers
B.P 85107 | 57073 Metz-Cédex 3
Tel. 0387 7438-88 | Fax 0387 7468-26
info@stiebel-eltron.fr
www.stiebel-eltron.fr

Hungary
STIEBEL ELTRON Kft.
Gyár u. 2 | 2040 Budaörs
Tel. 01 250-6055 | Fax 01 368-8097
info@stiebel-eltron.hu
www.stiebel-eltron.hu

Japan
NIHON STIEBEL Co. Ltd.
Kowa Kawasaki Nishiguchi Building 8F
66-2 Horikawa-Cho
Saiwai-Ku | 212-0013 Kawasaki
Tel. 044 540-3200 | Fax 044 540-3210
info@nihonstiebel.co.jp
www.nihonstiebel.co.jp

Netherlands
STIEBEL ELTRON Nederland B.V.
Daviottenweg 36 | 5222 BH 's-Hertogenbosch
Tel. 073 623-0000 | Fax 073 623-1141
info@stiebel-eltron.nl
www.stiebel-eltron.nl

Poland
STIEBEL ELTRON Polska Sp. z O.O.
ul. Działkowa 2 | 02-234 Warszawa
Tel. 022 60920-30 | Fax 022 60920-29
biuro@stiebel-eltron.pl
www.stiebel-eltron.pl

Russia
STIEBEL ELTRON LLC RUSSIA
Urzhumskaya street 4,
building 2 | 129343 Moscow
Tel. 0495 7753889 | Fax 0495 7753887
info@stiebel-eltron.ru
www.stiebel-eltron.ru

Slovakia
TATRAMAT - ohrievače vody s.r.o.
Hlavná 1 | 058 01 Poprad
Tel. 052 7127-125 | Fax 052 7127-148
info@stiebel-eltron.sk
www.stiebel-eltron.sk

Switzerland
STIEBEL ELTRON AG
Industrie West
Gass 8 | 5242 Lupfig
Tel. 056 4640-500 | Fax 056 4640-501
info@stiebel-eltron.ch
www.stiebel-eltron.ch

Thailand
STIEBEL ELTRON Asia Ltd.
469 Moo 2 Tambol Klong-Jik
Amphur Bangpa-In | 13160 Ayutthaya
Tel. 035 220088 | Fax 035 221188
info@stiebeleltronasia.com
www.stiebeleltronasia.com

United Kingdom and Ireland
STIEBEL ELTRON UK Ltd.
Unit 12 Stadium Court
Stadium Road | CH62 3RP Bromborough
Tel. 0151 346-2300 | Fax 0151 334-2913
info@stiebel-eltron.co.uk
www.stiebel-eltron.co.uk

United States of America
STIEBEL ELTRON, Inc.
17 West Street | 01088 West Hatfield MA
Tel. 0413 247-3380 | Fax 0413 247-3369
info@stiebel-eltron-usa.com
www.stiebel-eltron-usa.com

STIEBEL ELTRON

4 017212 722640