

Fire Statement

30 – 36 Clarendon Road

London. N8 0DJ



Design stage:

RIBA Stage 2: Concept design

17th October 2022

MUK10027 – Issue 01

Client: Paul Simon Magic Homes, 5-11 Green Lanes, Palmers Green, London N13 4TN

Revision	Date	Description
01	17.10.22	Initial issue

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The London Plan 2021

Mu.Studio (UK) Ltd have been commissioned to provide fire safety consultancy services for the proposed mixed-use residential development at 30 – 36 Clarendon Road in Haringey, north London.

This Fire Statement report is provided both to fulfil the expectations of the London Plan 2021 [1] for a ‘major development’, as well as to support the client and design teams with developing their project information into detailed and technical design. The report includes completed Form 1 and Form 3 pro-forma as provided within the Greater London Authority document “London Plan Guidance – Fire Safety” (February 2022 version, draft for consultation). The remainder of the document provides more detailed information to substantiate the completed pro-forma and to assist the client with the further development of the scheme.

Further supporting fire strategy information as developed to date is included within the main body and subsequent appendices of this report, offering technical content which may be of relevance to consultees during the planning process (such as the London Fire Brigade or Health and Safety Executive).

General information

Item	Description
Site address	30 – 36 Clarendon Road, London. N8 0DJ
Description of development	Demolition of the existing building and construction of a part two, six, eight and eleven storey building, with basement, to provide 51 residential units and 560 sqm of commercial floorspace, with access, landscaping and car and cycle parking.
Name, qualifications, professional memberships, and experience of author	Mr Andrew O.M. Ballantyne BArch MEng CEng MIFireE PMSFPE , Director of Mu.Studio (UK) Ltd. Andy is a Chartered Engineer registered with the Engineering Council by the Institute of Fire Engineers, being a Full Member of the Institute of Fire Engineers with membership number 00056660. Andy graduated from the University of Edinburgh with the First-Class Master’s degree in Structural and Fire Safety Engineering. Prior to this, Andy also received a Bachelor’s degree in Architectural Design from the University of Dundee. Following graduation, Andy has worked in fire safety engineering for circa 8 years, based primarily in the London area and undertaken numerous commercial, residential, and governmental projects of varying scale and complexity.
Has a Gateway One Statement been submitted?	This development is also within the scope of Planning Gateway One, and a Gateway One Statement has been submitted alongside this report.
Declaration of Compliance*	
The technical content produced for this planning application is considered to suitably comply with the relevant legislation and requirements of London Plan Policies D5(B5), D12A and D12B, subject to suitable development and implementation during the Building Regulations process, construction, and occupation. Signed:  Digitally signed by Andy Ballantyne Date: 2022.10.17 19:03:05 +08'00'	
* Note – a combined declaration for Policies D5(B5) and D12 is included to facilitate use of a digital signature	

Form 1: Fire Statement – Policy D12A & D12B

Item	Detail	See also:
The building’s construction: methods, products, and materials used		
Structure	Non-combustible concrete structural frame	-
Internal walls	Generally, a combination of masonry or gypsum dry-lining walls. Internal wall lining classifications to be accordance with BS 9991 / BS 9999	Section 4.1
External walls and attachments	External walls and specified attachments to be Class A1 or A2-s1, d0 materials to BS EN 13501-1 to meet Regulation 7(2) of the Building Regulations, excluding the allowable exemptions set out in Regulation 7(3) of the Building Regulations. External balconies and terraces are to meet BS 8579.	Section 5.1
Roof coverings	Roofing systems meeting either BROOF(t4) to BS EN 13501-5, or green (inc. brown or sedum) roofs design in accordance with the GRO code.	Section 5.2
Means of escape for all building users and the evacuation strategy		
Design basis	Means of escape from residential and ancillary areas based on BS 9991. Escape from stand-alone small commercial units expected to use ADB Vol.2.	Section 1.2
Evacuation regime	A defend-in-place regime is used for the residential apartments. Simultaneous evacuation from the various ancillary and non-residential areas.	Section 3.1
Escape from within apartments	Open-plan design provisions in accordance with BS 9991 and supplementary research, supported by automatic suppression and a high standard of fire detection and alarm.	Section 3.3
Escape through common areas	Internal protected common corridors serve all apartments, supported by mechanical smoke control designed based on the expectations of BS 9991. Two stairs are provided in the building. The firefighting stair will serve each of the above-ground floors and provides escape from each of these levels. The basement stair supports escape from the basement level only. Though this stair also serves up to the 2 nd floor, this is to support access only where this stair is not designed as a protected means of escape route from these levels.	Section 3.4
Escape within non-residential areas	Means of escape from residential ancillary areas based on limited travel distances and sufficiently sized exits in accordance with the recommendations of BS 9991. Commercial areas as designed using ADB Vol.2 guidance for small units.	Section 3.5
Final exits	The escape stairs will discharge to outside at Ground floor via the residential entrance lobby, which is to be retained as fire sterile aside from non-combustible postboxes and a limited desk area. An undercroft parking area connects to the basement stair lobby, which also connects to the firefighting lobby via an internal door. This is considered a suitable arrangement where the undercroft area has venting to outside air and is suppressed, and the lobby area is provided with mechanical smoke control using the above-ground common corridor equipment, allowing the provision of a performance-based smoke control system to offer additional protection to the double-entry firefighting lift and final escape route from the firefighting stair.	Section 3.6
Evacuation lift	An evacuation lift is provided alongside a firefighting lift within the central circulation core of the building, to support escape by disabled occupants.	Section 3.7

Passive and active fire safety measures		
Structural fire resistance	Structural elements required to be fire-resisting are to achieve a fire resistance rating of 120 minutes throughout	Section 4.3
Compartmentation and fire-resisting walls	Fire resistance ratings provided in accordance with BS 9991. Compartment walls and floors, and protected shafts (incl. stairs, lifts, and service risers) are to have a fire resistance rating of 120 minutes. Apartments and common corridors will be separated from one another by fire-resisting construction rated to at least 60 minutes.	Section 4.4
Fire detection and alarm	Grade D1 Category LD1 detection and alarm to BS 5839-6 within arrangements. Evacuation alert system to BS 8629 also provided within apartments. Category L5 system to BS 5839-1 provided throughout the common and ancillary areas of the residential building, in support of the smoke control systems and to support building management in monitoring the building. Stand-alone commercial demises to have separate systems, with the sprinkler system to allow residential building management to monitor these areas for fire.	Section 3.2
Smoke control	Mechanical smoke extraction from the common residential corridors, with single extract point and limited travel distances (up to 15 m) based on BS 9991. An AOV is also provided at the head of the firefighting stair. Additional AOVs are provided at each above-ground lift lobby, offering venting to the evacuation lift waiting area and a source of make-up air to the mechanical extract system. Mechanical smoke extract fans to meet BS EN 12101-3, AOVs to outside air to meet BS EN 12101-2, and vents to smoke shafts to meet BS EN 12101-8.	Section 3.4
Automatic suppression	A Category 4 sprinkler system to BS 9251 inc. the design density in Footnote C) of Table 2 and water supplies for 60 minutes. Protection of non-residential areas based on BS 9251 Tables 3 and 4 with 30 minutes supply duration. Sprinklers will not be included within fire-sterile common corridors or stairs, based on the recommendations within ADB and issued by DLUHC.	Section 4.2
Stand-by power	Stand-by power is currently expected to be provided using a diesel generator.	Section 6.7
Access and facilities for the fire and rescue service		
Building access	External doors are provided around the building, offering street level access to the firefighting shaft and to those commercial and ancillary areas having direct access from outside.	Section 6.2
Fire hydrants	Existing fire hydrants are available, with the nearest hydrant located approximately 20 m west of the site adjacent to Clarendon Road.	Section 6.3
Firefighting shafts	A firefighting shaft is provided within the central portion of the building, featuring a firefighting stair, firefighting lobby, firefighting lift, dry rising main, evacuation lift, and emergency voice communication panels.	Section 6.4
Firefighting lifts	One firefighting lift in accordance with BS EN 81-72.	
Rising mains	A dry rising main to BS 9990.	
Smoke control	As per means of escape provisions, which also support firefighting	
Basement venting	None proposed in residential areas, supported by limited floor area, low-risk use, and availability of mechanical smoke extract.	Section 6.5
Car park venting	Undercroft car parking provide with ample natural venting to external air. May also be supported by impulse fans if deemed necessary during detailed design.	Section 6.5

Site access for the fire and rescue service		
Access via public roads	Public highways provide the primary route of access to the development, with Clarendon Road being a generously sized road that would allow multiple appliances to access the building.	Section 6.2
Internal / private road access	Not applicable, where adjacent roads are all public roads.	
Hardstanding areas	Suitable appliance hardstanding areas will be available using Clarendon Road to the north and west of the building. This provides hardstanding areas that are located within 18 m and clear sight of main building entrance and dry riser inlet, in accordance with BS 9991 / BS 9990.	
Modifications to the development and the 'golden thread' of information		
During design and construction	Further development of the fire safety provisions within this Fire Statement are expected during the Building Regulations approvals process, including the selection of specific products, systems, or materials to fulfil the expectations of the Fire Statement. Modification to the fire safety provisions in this Fire Statement should not be incorporated unless agreed in writing by the appointed building control authority.	Section 7.1
Handover of information	The as-built fire safety strategy for the building, as agreed by the appointed building control authority, should be documented, and provided to the Accountable Person for the building as defined in the Building Safety Bill 2022 to meet the expectations of the Golden Thread of Information. This should include, but not be limited to: • This Fire Statement report • The as-built fire safety strategy report and associated fire strategy drawings • Manufacturer's literature for fire safety products and equipment • Drawings indicating the locations of fire safety products and equipment	
Storage of information	It is recommended that the above information is provided to the Accountable Person in a digital format that may be retained using a cloud-based or other remote service, to reduce the potential for loss of information.	
Use of information	The Accountable Person and their appointed Building Safety Manager are expected to ensure that periodic maintenance of the fire safety equipment is undertaken in accordance with manufacturer's recommendations. The information provided within the Regulation 38 documentation is to assist maintenance professionals in identifying the systems, spare parts, operational procedures, maintenance procedures, etc. for the various systems present. The Regulation 38 documentation will also assist the Accountable Person and / or their appointed advisors in the preparation of a 'Safety Case Report', which is to demonstrate how risks are being identified, mitigated, and managed on an ongoing basis.	
Future changes to the development	Any amendment to the fire safety provisions at the building will require consent from an appointed building control authority. The building owner should consult with a building control authority or fire safety professional prior to conducting any modification works, to ensure that these will meet any relevant fire safety legislation in force at that time.	

Form 3: Provision of evacuation lifts – Policy D5(B5))

Item	Detail
Details of the evacuation lift and shaft	
Design standard	To meet either BS EN 81-76 if / when published as a design standard, as well as being in accordance with Annex G.2 of BS 9999.
Location	Located in a protected shaft and accessed from a protected waiting space at each level. Signage directing occupants to the common escape stair will also direct occupants to the evacuation lift.
Waiting area	The lift waiting space is designed as a place of relative safety, included a level of smoke control equivalent to that typically expected for ambulant occupants within a protected stair. Communication equipment meeting BS 5839-9 is to be provided at waiting spaces.
Capacity assessment	
Size of cars	Evacuation lifts are sized in accordance with the recommendations of Part M of the Building Regulations, as well as to facilitate day-to-day maximum lift traffic and furniture removals. This is considered sufficient for the transportation of typical wheelchair or other less mobile users, plus potential for a lift operator. Should a resident have temporary or permanent additional requirements, such as being bed-bound or requiring medical equipment, a suitable evacuation plan via a PEEP is recommended to be developed in co-operation with building management for that specific individual.
Capacity of lifts	Specific guidance for undertaking capacity assessments for the evacuation of disabled occupants has not yet been developed / published. Each lift serving the residential levels of the building will be either an evacuation lift or a firefighting lift. This will meet the peak day-to-day capacity requirement and is considered as reasonably sufficient to support disabled users only in the event of a fire. The evacuation lift is located adjacent to the escape stair from the building, with all occupants at the residential levels being directed via this location to make their escape. As such, sufficient lifts are provided such that occupants making their escape would arrive at the evacuation lift where following provided escape signage also intended for ambulant users.
Evacuation strategy	
General philosophy	The building will utilise a defend-in-place evacuation strategy, with only the apartment of fire origin evacuating initially in the event of a fire. Other residents, including disabled residents, would remain within the building, where suitable fire-resisting construction and active fire safety measures support their safety during routine fire incidents. In the event of a large fire developing that causes concern, the full evacuation of the building may then be initiated by building management or the fire and rescue service.
Operation	BS 9999 guidance recommends that evacuation lifts are driven by trained members of staff. However, this would require the presence of 24hr management which is not generally expected for a development of this scale. Development of standards for automatic and remote evacuation lift operation are occurring as part of the development in BS EN 81-76. Use of such protocols would be preferred, allowing a resident to escape without reliance on management, and without requiring management staff to place themselves at heightened risk by attending the upper floor in the event of a fire. The method of evacuation lift operation is to be confirmed by the time of lift purchase, depending on the available technology and in accordance with best practice guidance. It is envisioned that this should offer an automatic or remote system if available at that time.
Use of lifts	It would be recommended that the evacuation lifts are used to support disabled occupants only in the event of a fire, with ambulant occupants using the stairs to escape. It would be recommended that where possible, an automatic or remotely operated evacuation lift be limited to occupants that require additional support only. However, this would be dependent on the available technology at the time of lift purchase.

Evacuation lift management plan	
Responsibility	The evacuation lift management plan must be developed by the building operator as part of the wider fire safety management plan. This should include consideration of the organisation’s fire safety policies and support tools, guidance provided by the manufacturer for operation of the evacuation lift, development of a general evacuation plan for unspecified occupants, a process for identifying and developing an evacuation plan for occupants with additional needs, and a plan for liaising with the fire service in an incident.
Roles	The required roles in support of the evacuation lift should be developed following best practice guidance for the type of lift available at installation. For an automatic or remotely operated lift, this would not be expected to require management staff to be present within the building during operation of the firefighting lift.
Maintenance	Contingency is available through the presence of a firefighting lift that could also be used to support disabled evacuation prior to firefighting operations commencing. It is expected that sufficient time prior to firefighting would be available to evacuate disabled occupants from the fire floor using the firefighting lift should the evacuation lift be unavailable. It is recommended that planned maintenance of the evacuation lift occurs during times when the building is less occupied, such as during normal work hours. Management is recommended to provides notification of planned or unplanned maintenance of evacuation lifts to disabled residents. In the event of residents having additional concerns, further contingency (such as evacuation chairs) could be considered.

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1. Introduction

1.1 General

- 1.1.1 Mu.Studio (UK) Ltd have been commissioned to provide fire safety consultancy services in support of the design of a new residential apartment building at 30 – 36 Clarendon Road in the London Borough of Haringey, as indicated in Figure 1.
- 1.1.2 This report may be used in support further detailed design development. It is not intended to portray detailed design information for fire safety systems or construction specifications and should be read in conjunction with the wider project documentation.
- 1.1.3 Any alternative design solutions suggested within this report are subject to agreement and eventual approval by the relevant authorities having jurisdiction (AHJs).

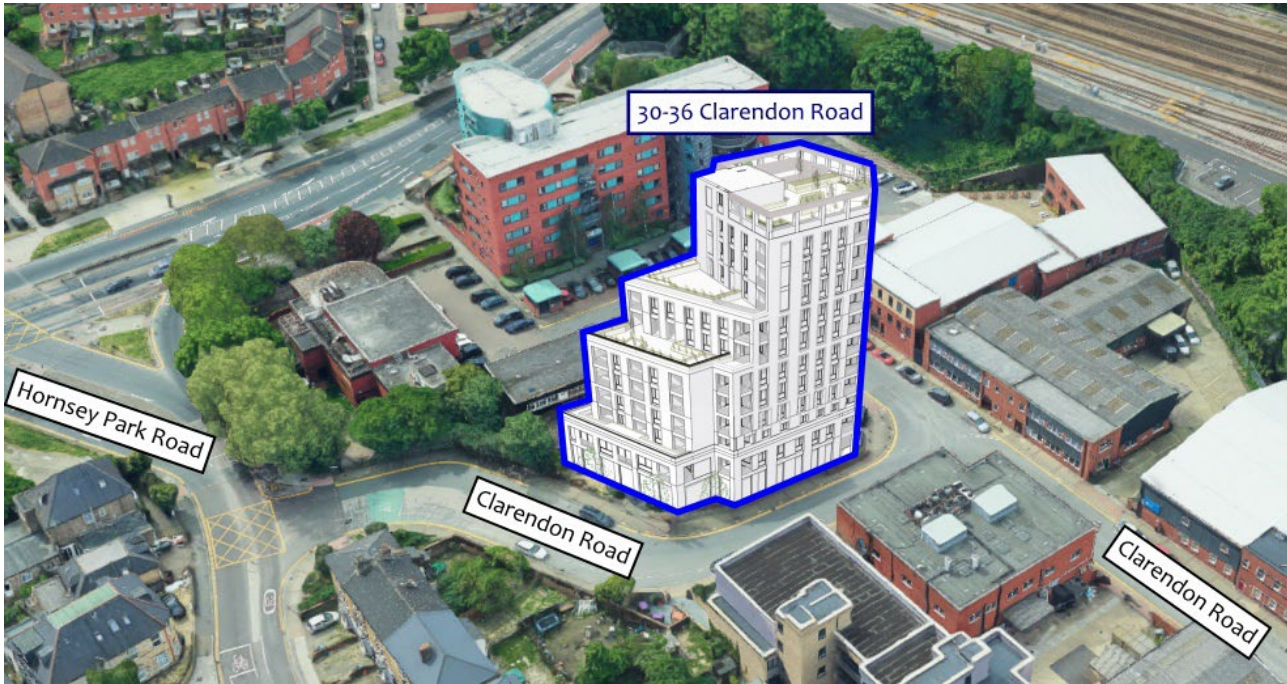


Figure 1 – Montage of site (background image from Google Maps)

1.2 Legislation and basis of design

- 1.2.1 This fire safety strategy is developed in cognisance of the fire safety expectations of the Building Regulations 2010 (as amended), including:
 - Regulation 7 – Materials and workmanship
 - Schedule 1, Part B1 – Means of warning and escape
 - Schedule 1, Part B2 – Internal fire spread (linings)
 - Schedule 1, Part B3 – Internal fire spread (structure)
 - Schedule 1, Part B4 – External fire spread
 - Schedule 1, Part B5 – Access and facilities for the fire and rescue service
- 1.2.2 The fire safety strategy has not been developed to include additional property protection enhancements or to meet the expectations of insurer requirements. However, fire safety provisions as required by the Building Regulations will, to some extent, assist with the protection of property in the event of fire.
- 1.2.3 This fire safety strategy does not address site fire safety during construction. The Health and Safety Executive (HSE) [2] and Fire Protection Association (FPA) [3] issue guidance on identifying and managing fire precautions on construction sites, which should be consulted by the Principal Contractor for the scheme.

- 1.2.4 The building will be designed in accordance with the recommendations of BS 9991 [4], including further documents and standards referenced therein. This will be augmented by recent updates to Approved Document B – Volume 1: Dwellings (ADB) [5], being above and beyond the expectations of BS 9991. Fire engineering principles may be employed to support alternative solutions where strict adherence to BS 9991 guidance would conflict with the aspirations of the scheme. Unless otherwise stated, fire safety provisions are expected to be in accordance with BS 9991 guidance as appropriate.

1.3 Reference information

- 1.3.1 This strategy is based on information provided as listed in Table 1 below. Additional contradictory information or subsequent design variations to the information supplied may render the findings and recommendations of this report invalid.
- 1.3.2 External references utilised in the generation of this report are summarised in Section 8.

Table 1 – Project design documentation

Description	Author	Document	Rev.
Basement Floor Plan	Stockwool Architects	3572_PL(20)1B1	P0
Ground Floor Plan		3572_PL(20)100	
First Floor Plan		3572_PL(20)101	
Second Floor Plan		3572_PL(20)102	
Third Floor Plan		3572_PL(20)103	
Fourth & Fifth Floor Plan		3572_PL(20)104	
Sixth Floor Plan		3572_PL(20)106	
Seventh Floor Plan		3572_PL(20)107	
Eighth Floor Plan		3572_PL(20)108	
Ninth & Tenth Floor Plan		3572_PL(20)109	
Roof Terrace Plan		3572_PL(20)111	
Roof Plan		3572_PL(20)112	
North Elevation		3572_PL(20)200	
East Elevation		3572_PL(20)201	
South Elevation		3572_PL(20)202	
West Elevation		3572_PL(20)203	
East + West Elevations		3572_PL(20)210	
North + South Elevations		3572_PL(20)211	

2. Development summary

2.1 Description of proposal

- 2.1.1 The proposed development will be a new mixed-use residential apartment building at 30 – 36 Clarendon Road in north London as illustrated in Figure 1. The building will be set over thirteen floors (B, G + 11), with commercial and ancillary areas at Basement and Ground floor, residential apartments, and common terraces at the above-ground levels as summarised in Table 2.
- 2.1.2 The uppermost floor of the building will be located at circa 36.9 m in height. As such, the building is considered a ‘relevant building’ by Regulation 7(4) of the Building Regulations, as well as being expected to be provided with a ‘firefighting shaft’. The building is also expected to be provided within automatic suppression and non-combustible external wall insulation materials in accordance with recent communication from MHCLG [6] / DLUHC [7] for buildings greater than 11 m to the uppermost level.
- 2.1.3 Figure 2 to Figure 7 provides an overview of the internal arrangement of the proposed building, with full fire safety mark-ups also included within Appendix A.

Table 2 – Summary of building accommodation

Level	Use
Roof	Shared communal roof terrace, rooftop plant areas
Ninth to Tenth Floors	4x Single level apartments
Eighth Floor	4x Single level apartments, Shared communal terrace
Seventh Floor	5x Single level apartments
Sixth Floor	4x Single level apartments, Shared communal terrace
Third to Fifth Floor	6x Single level apartments
First to Second Floors	6x Single level apartments (affordable)
Ground Floor	Residential entrance, refuse stores, bicycle stores, plant, 3x commercial units
Lower Ground Floor	Bicycle stores, plant, 3x commercial units

2.2 Occupancy

- 2.2.1 For the residential areas, the defend-in-place regime is expected to result in only a small number of occupants from the apartment of fire origin escaping. As such, the maximum occupancy of the apartments need not be utilised for the sizing of means of escape routes using BS 9991.
- 2.2.2 The apartments will be for domestic residential use only. No additional fire safety features to support disabled or assisted living have been requested, and this fire strategy has been developed premised on the minimum expectations of Part B in Schedule 1 of the Building Regulations only.
- 2.2.3 It will be the responsibility of residents to develop an escape plan from their apartments in the event of a fire. Where elderly, immobile, or young children need assistance to escape, the fire safety provisions provided may assist in maintaining tenable escape conditions for a reasonable duration. In particular:
- A high standard of detection and alarm will provide early warning to residents, assisting in the rousing of sleeping occupants and supporting investigation of the fire prior to untenable conditions developing.
 - Suppression provided throughout the dwellings may assist in restricting fire growth.
- 2.2.4 The commercial units at Ground floor will be fully separated from the residential areas. Means of escape from the commercial unit will be based on the size and occupancy of the unit, as discussed in Section 3.5.

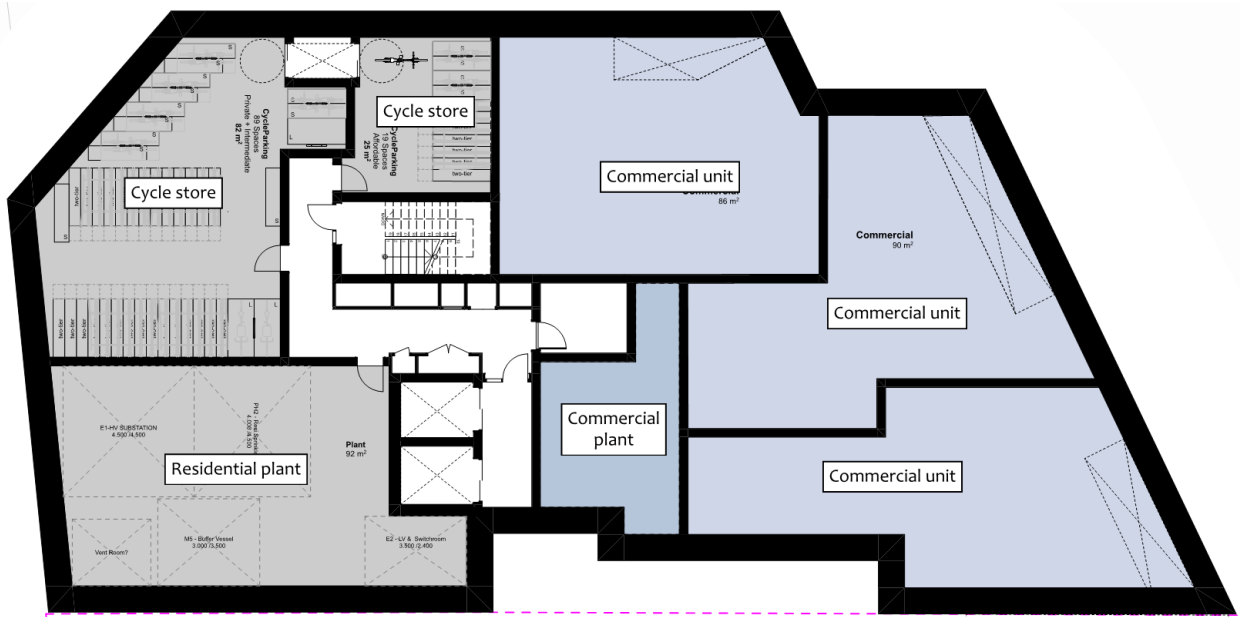


Figure 2 – Basement level

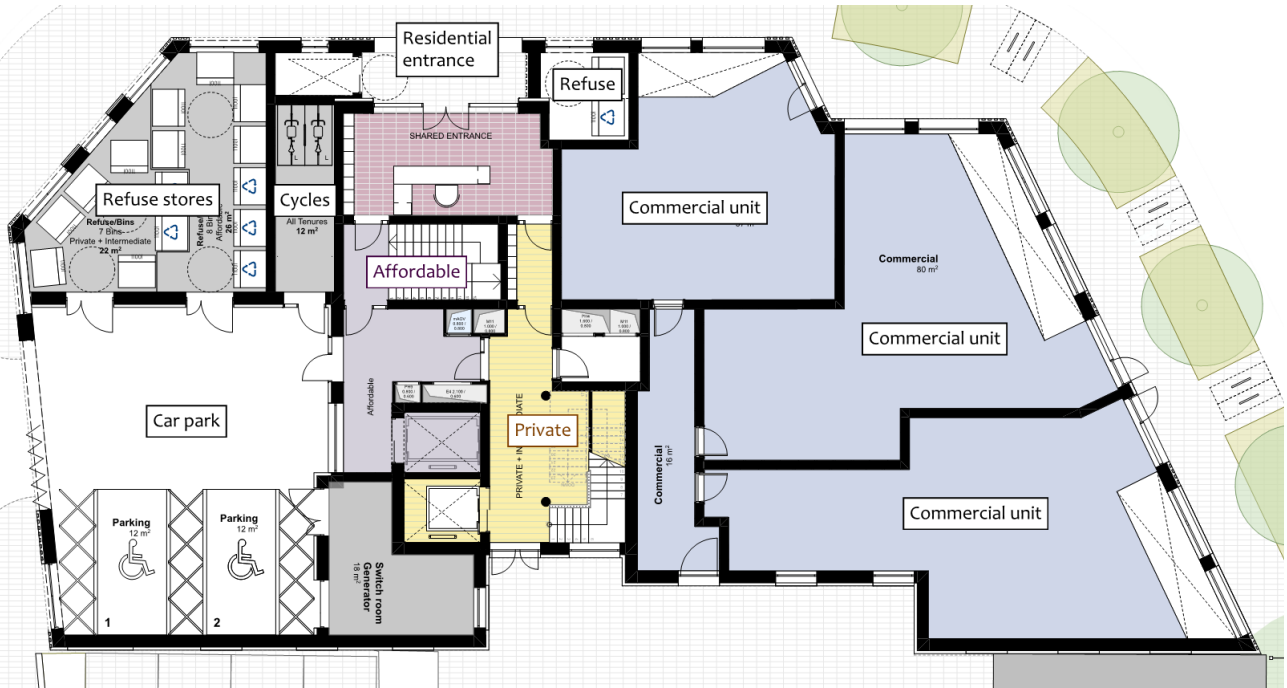


Figure 3 – Ground floor plan



3. Means of warning and escape

3.1 Evacuation philosophy

- 3.1.1 The residential areas of the building will utilise a defend-in-place evacuation strategy, whereas the non-residential and ancillary areas will utilise a simultaneous evacuation strategy from the various demises.
- 3.1.2 In the event of a residential apartment fire, only the unit of fire origin will receive a signal to evacuate. No other flats will receive an automatic alert notification, though should residents become aware of a fire in another flat they may leave the building if they wish to do so.
- 3.1.3 If a fire were to spread beyond the apartment of fire origin, the wider evacuation of the building could be initiated and managed by the London Fire Brigade using the residential evacuation alert system.
- 3.1.4 The commercial units will operate as stand-alone demises under separate management. Simultaneous evacuation would occur from a unit in the event of a fire occurring within that unit.

3.2 Means of detection and alarm

- 3.2.1 Apartments are to be fitted with an automatic fire detection system to meet Grade D1 Category LD1 in BS 5839-6 [8], in support of the open-plan arrangements detailed in Section 3.3. This will include heat detection in the kitchen area, and smoke detection throughout living areas, corridors, and bedrooms. A Grade D1 system is included such that these apartments would be suitable for renting and well as owner-occupation.
- 3.2.2 Suitable means of warning are to be provided to private balconies where these are accessed directly via the kitchen / living areas only. With balconies having a view of the internal space, it would be considered that external alarms or beacons would not be necessary, to avoid creating public nuisance during false alarms.
- 3.2.3 The residential common and ancillary areas of the building will be provided with a Category L5 detection and alarm system in accordance with BS 5839-1 [9]. The BS 5839-1 system is to be fully addressable, allowing early identification and investigation of an activated detector head.
- 3.2.4 The Category L5 detection and alarm system is to be provided as follows:
 - Smoke detection will be provided in the residential common corridors at to activate the associated smoke ventilation equipment (see Section 3.4). Alarm sounders and manual call points need not be provided in common residential lobbies and corridors.
 - The external common terraces at Sixth floor, Eighth floor, and roof level should be provided with sounders and beacons which activate upon smoke detection in the common corridor at that level.
 - The residential ancillary areas will be provided with smoke detection in the shared entrance lobby, cycle stores, refuse stores, and electrical plant rooms, with heat detection within the mechanical plant room. Activation of an ancillary area detector head at Ground floor would result in the sounding of the alarm within that room only. Activation of a detector head at Basement level would result in the sounding of the alarm throughout the ancillary areas at Basement level.
 - Visual beacons should be provided in rooms where the background sound level could be louder than an audible fire alarm (e.g., in plant rooms).
 - The fire alarm panel for the BS 5839-1 system is recommended to be located at the residential shared entrance lobby at Ground floor. Remote monitoring of the fire detection and alarm system could be considered by building management, providing automated alert in the event of fire.
- 3.2.5 An evacuation alert system in accordance with BS 8629 [10] is to be provided to each of the apartments based on the expectations of a circular letter issued by DLUHC on the 1st of June 2022.
- 3.2.6 It is recommended that the residential sprinkler system (see Section 4.2) is either interfaced with the common area fire alarm panel or have a separate sprinkler alarm panel in the residential lobby area, to provide warning in the event of a sprinkler activation. A single sprinkler flow switch is to be provided to each residential floor, where the Category LD1 detection and alarm within apartments would then allow the location of the sprinkler activation to be identified via the audible alarm in the apartment of fire origin.

- 3.2.7 Automatic detection and alarm would not be provided within the commercial units as part of the base-build design. This would be installed as part of the fit-out design by the incoming tenant in support of their fit-out fire strategy arrangement. Monitoring of the commercial units for fire by the overall building management would be facilitated through these areas being covered by the shared sprinkler system.

3.3 Means of escape from within apartments

- 3.3.1 The apartments are typically designed and specified in accordance with the recommendations of Section 9.7 in BS 9991 for open-plan apartments. To meet these expectations, based on the findings of the NF19 study for NHBC [11], open-plan apartments are to meet the following guidance:
 - Apartments are to be set over a single level only.
 - The area of the flat is not to exceed 192 m² (i.e., 16 m x 12 m). Kitchens in apartments exceeding 32 m² (i.e., 8 m x 4 m) should be enclosed. The ceilings will have a minimum height of 2.25 m.
 - Automatic suppression is to be provided throughout the apartments in accordance with BS 9251.
 - A Grade D1 Category LD1 system is to be provided to meet BS 5839-6.
 - Adequate separation is to be provided between escape routes and cooking equipment.
- 3.3.2 To support the used of open-kitchen arrangements in larger apartments, further research by BRE (who undertook the initial NF19 study) was commissioned by Trenton Fire and publicly disseminated [12]. This research concluded that open-plan kitchens may be utilised within the maximum sized apartments considered in the study (three bedrooms, 192 m²), while also justifying the use of concealed sprinkler heads in open-plan apartments.
- 3.3.3 The revised specification is utilised for the design of all open-plan residential apartments, as follows:
 - Apartments are to be set over a single level.
 - The area of each apartment will not exceed 192 m² (i.e., 16 m x 12 m), which may include open kitchens. Ceilings within the apartments will have a minimum height of 2.25 m.
 - Automatic suppression will be provided throughout the apartments in accordance with BS 9251 (see Section 4.2), and this may utilise concealed sprinkler heads.
 - A Grade D1 Category LD1 system will be provided in apartments to meet BS 5839-6.
 - Adequate separation is to be provided between escape routes and cooking equipment, generally recommended to be a minimum of 1.8 m clear to a 0.75 m wide channel for occupants.
- 3.3.4 Escape from the private balconies will be via the open-plan living area, prior to reaching the apartment entrance. In accordance with Section D.3 of BS 9991, cooking appliances are to be positioned such that these do not prejudice the escape routes from external balconies (with separation as per Section 3.3.3).

3.4 Means of escape through common residential areas

- 3.4.1 The common corridor arrangements are based on the guidance in Section 7.4 and Figure 6(b) of BS 9991, though also including consideration for the incorporation of an evacuation lift (see Section 3.7).
- 3.4.2 At First and Second floors, the affordable apartments are provided access using separate stair. However, as this stair will not feature ventilation, this is not considered suitable for means of escape and is not utilised in the means of escape strategy. As such, means of escape from each of the residential floor will be via the main firefighting stair that serves each of the above ground floors.
- 3.4.3 Means of escape from apartments will initially be via a mechanically ventilated common corridor, before reaching the protected lift lobby and firefighting stair as illustrated in Figure 8. Travel distances within the common corridor to the lift lobby (and common stair) are no greater than 15 m, meeting Figure 6(b) in BS 9991 for a sprinklered building.

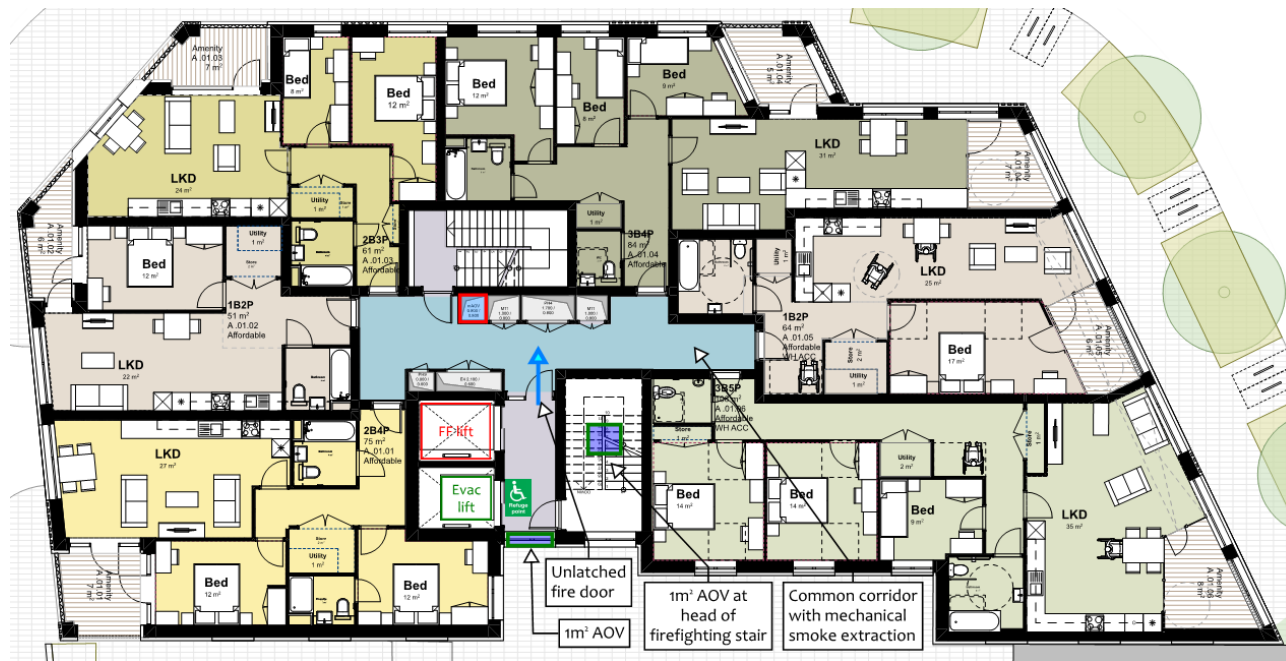


Figure 8 – Typical common area arrangement (1st floor shown)

- 3.4.4 The common corridors will be provided with mechanical smoke extraction by an extract shaft having an area of at least 0.6 m². The performance of the mechanical extract shaft is to be demonstrated during detailed design through a computational fluid dynamics (CFD) study to illustrate equivalent or better performance than would be expected where compared to a natural smoke shaft that would need the expectations of Section 14.2.3.2 of BS 9991. Smoke extract fans are to meet BS EN 12101-3 [13].
- 3.4.5 Natural inlet air will be provided to the lift lobbies and at the head of the protected stair using automatically opening vents (AOVs) certified to BS EN 12101-2 [14], sized in accordance with Section 14.1.3(a) of BS 9991. This expects that vents to outside air having a geometric free area of at least 1.0 m² at the head of the stair, with lift lobby vents to also meet this sizing to offer equivalent protection to the evacuation lift waiting area.
- 3.4.6 Unlatched fire doors are to be provided between the lift lobbies and common corridors, to allow make-up air to the mechanical smoke extraction shaft during the means of escape period. This will allow use of a fixed-rate extract system (rather than variable rate system control by pressure sensors), being a simpler and more-cost effective system, while also offering greater potential for smoke clearance of the common corridor during the earlier stages of a fire. The stair doors will be latched fire doors, maintaining the robustness of protection to the primary means of escape route from the upper floors of the building.
- 3.4.7 The primary escape stair will have a clear width of at least 1,100 mm, to suit the expectations for a firefighting stair, with handrails allowed to project up to 100 mm each side of the stair without affecting the clear width. In the event of the full evacuation of the building on activation of the evacuation alert system (see Section 3.2.5), the holding capacity of the common stair would be ~360 people based on the guidance in Section 3.18 of Approved Document B Volume 2 [15] (ADB2). This would be sufficient for the entirety of the expected building population, where conservatively assuming 4 persons per apartment for each of the 51 flats.

3.5 Means of escape from ancillary and non-residential areas

- 3.5.1 Escape from the residential ancillary areas are to be in accordance with the recommendations for travel distance limits provided in Table 14 of BS 9991, summarised as follows:
- Places of special fire hazard: Up to 9 m in a single direction to the room exit, 18 m where available in multiple directions.
 - Other areas: Up to 18 m where in a single direction, and up to 45 m where escape is available in multiple directions.

- 3.5.2 At Ground floor, separation between the firefighting stair and the undercroft car park is provided using the mechanical smoke extract system that also serves the above ground levels, with the car park also having ample natural venting direct to outside air as indicated in Figure 9. This would allow a performance-based smoke control system to be provided to protect the common stair, being above-and-beyond the expectations of BS 9991 and considered as offering a suitable alternative means of ensuring protection of the common escape route. Automatic suppression will also be provided throughout the ancillary areas (see Section 4.2), further limiting fire development and supporting this arrangement.
- 3.5.3 Escape from each of the commercial units is expected to be supported using limited unit floor areas and travel distances within two storey units based on Diagram 4.1 or 4.2 in ADB2. For small premises designed using Section 4 in ADB2, the maximum occupancy of the unit is assumed to be inherently limited by the area of the space and management controls need not be applied.
- 3.5.4 The two storey units will be limited to a maximum area of 90 m² per level, with a void provided to allow installation of an internal stair. The head of the connecting stair is to be located within 3 m of a final exit from the unit, to facilitate use of an accommodation stair within these small commercial premises (note: use as a licenced restaurant or bar would require protection to be provided to the stair).

3.6 Final exits and onward escape

- 3.6.1 The protected common escape stair is provided with a protected escape route from the base of the stair and evacuation lift. The common stair is proposed to be open to the lift area at Ground floor only, where the lift lobby is not expected to form a protected waiting area or vented smoke lobby at this level.
- 3.6.2 The shared entrance lobby is to be a minimally furnished area featuring post boxes and a concierge desk only. The post boxes are to be constructed using non-combustible material and integrated such that no objects can be stored or accumulate above or below these. Alternative escape from the base of the common stair via the car park area would also be available should escape through the shared entrance not be available.
- 3.6.3 It is considered that a final exit width of 850 mm would be sufficient for the small number of occupants expected to escape at any one time, with this being the minimum width for unassisted use of the exit by wheelchair users. In the event of larger numbers escaping during the wider evacuation of the building, this door width would continue to be considered as sufficient, where simultaneous escape from a residential building is expected to occur over a prolonged period due to the large range of likely pre-movement times.
- 3.6.4 Travel beyond the final exits of the building and toward a place of ultimate safety should not be jeopardised by unprotected openings. This is achieved by the provision of fire-resisting construction up to the point at which exit paths leading away from the building are available in multiple directions.

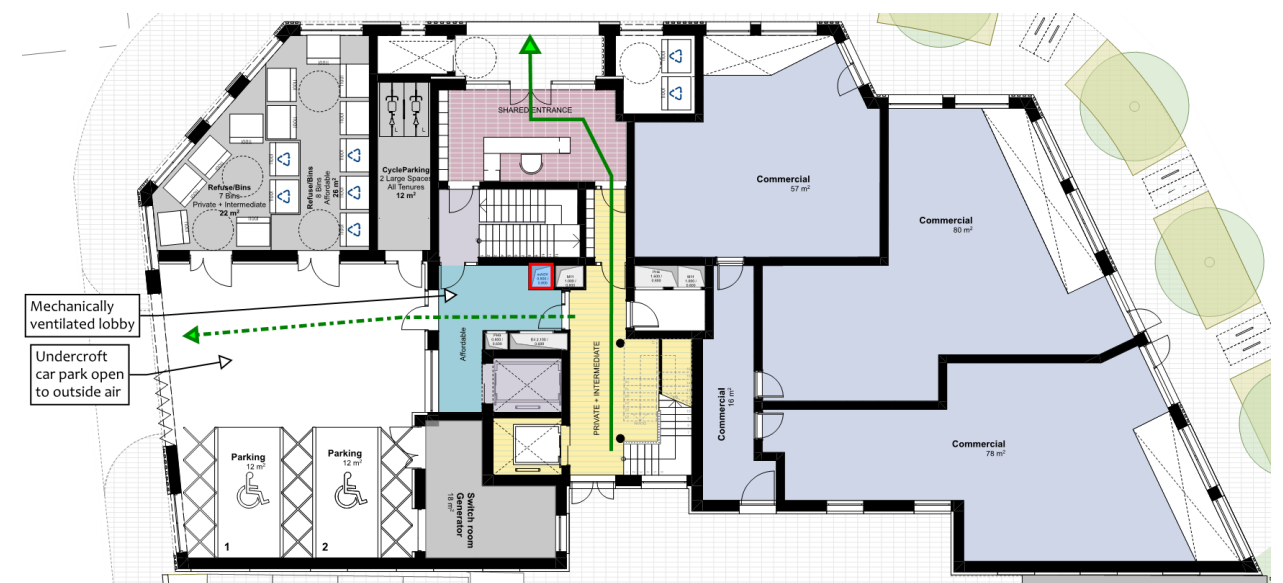


Figure 9 – Ground floor ancillary and non-residential areas

3.6.5 Assembly areas are not required to be designated for residential buildings. However, in the event of a fire incident, residents are recommended to retreat to a safe distance from the building and away from fire service access routes. The management of the commercial units will be responsible for identifying suitable assembly areas for their premises, expected to be located at a nearby area of public pavement.

3.7 Means of escape for disabled persons

- 3.7.1 In accordance with the expectations of Policy D5(B5) of the London Plan, evacuation lifts are to be provided to all areas of a development served by a lift. As such, the residential floors will each have access to an evacuation lift.
- 3.7.2 A firefighting lift will also be provided at the development, as discussed in Section 6.4. This may be required to support firefighting operations within the building and as such, cannot be relied upon for support of disabled evacuation. However, suitable controls to allow use as an evacuation lift are recommended to be provided within the firefighting lift such that this may also be utilised to support disabled egress until such time that it is required by firefighters.
- 3.7.3 The evacuation lift (and firefighting lift) will be accessed from a common lobby that is protected from smoke, arranged to offer a similar level of protection to the lift waiting area as provided to ambulant residents escaping via the protected stair (see also Section 3.4 regarding smoke control).
- 3.7.4 Evacuation lifts are recommended to be in accordance with BS EN 81-20 [16], BS EN 81-70 [17], and BS EN 81-76 [18] (once released) as relevant. The car should be at least Type 2 under BS EN 81-70 to support the evacuation of persons with disabilities. It is expected that the evacuation lift would utilise either an automatic or remote evacuation procedure as discussed in Section 5.4.3.2 of the draft version of BS EN 81-76.
- 3.7.5 If the evacuation lifts are required to be procured prior to full release of BS EN 81-76, then these should be in accordance with the expectations of Section 8.4 in BS 9991 and Annex G.2 in BS 9999 [19].
- 3.7.6 Refuge points for disabled occupants are not expected in the common residential areas, where occupants are expected to wait within their apartments under the 'defend-in-place' evacuation regime. However, with evacuation lifts provided, the lift lobby will offer a suitable waiting space should disabled occupants seek to leave the building in an emergency.
- 3.7.7 The waiting areas for the evacuation lift are to be provided with emergency voice communication (EVC) between the waiting area and a suitable position in accordance with BS 5839-9 [20], subject to confirmation of lift operation method (automatic or remote).
- 3.7.8 Management and maintenance staff should consider whether they could adequately escape from the building in the event of a fire. For any member of staff having restricted mobility, it is recommended that a Personal Emergency Evacuation Plan (PEEP) is developed and practised in support of their work at the site.
- 3.7.9 A General Emergency Evacuation Plan (GEEP) should also be developed in accordance with any future guidance resulting from the recommendations of the Grenfell Enquiry and the ongoing review of emergency evacuation plans for residential buildings. Further information can also be found in BS 8300-2 [21] and the DCLG Publication "Fire Safety Risk Assessment Supplementary Guide – Means of Escape for Disabled People".

3.8 Doors on escape routes

- 3.8.1 All doors on escape routes in common areas will either not be provided with a securing device or be provided with a securing device that is easily openable without the use of a key and without having to manipulate more than one mechanism.
- 3.8.2 Any doors fitted with an electronic latch (e.g., operated by a swipe card reader) on the un-secure side should have door latches operated by a handle on the secure side (so people inside the room will always be able to escape without the need for a key in an emergency).
- 3.8.3 Doors on escape routes will generally be hung to open in the direction of exit, apart from certain instances where the doors will serve less than 60 people, will open not less than 90° and have a swing which is clear of any change in level, other than a threshold or single step on the line of a doorway.

3.8.4 Any fire doors fitted with hold-open devices should release on:

- actuation of the fire alarm system or local smoke detector head,
- manual operation or operation of a switch fitted in a suitable position, if necessary, or
- failure of the electricity supplies.

3.8.5 Doors opening onto stairways or corridors will be sited not to encroach on the effective width of any stairway, landing, or corridor.

3.8.6 Vision panels are to be provided in doors subdividing corridors on escape routes.

3.8.7 Fire doors are to be specified in accordance with Section 4.4 and Table 4.

3.9 Emergency lighting

- 3.9.1 Emergency lighting will illuminate all occupied areas (excluding within apartments), common evacuation routes (internal and external as necessary), and essential areas including plant areas. It will illuminate a safe exit route including fire exits, fire alarm call points, changes in level or direction and firefighting equipment.
- 3.9.2 Emergency lighting will be installed in accordance with the recommendations of BS 5266 [22], BS EN 1838 [23], and BS EN 60598-2-22 [24]. Lighting to escape stairs should be on a separate circuit from that supplying any other part of the escape route.
- 3.9.3 Primary and emergency lighting will also be required for any external escape routes that will not be lit by surrounding street lighting.
- 3.9.4 Discharge lighting installations may operate at voltages that are a hazard to firemen. An exterior discharge lighting installation, or an interior discharge lighting installation operating unattended, operating at a voltage exceeding low voltage (as defined in Statutory Instrument number 1018, part of the Building Regulations), should be controlled by a fire-fighter's emergency switch.

3.10 Fire safety signage

- 3.10.1 Fire safety signs will be installed where necessary to provide clear identification of fire precautions, fire equipment and means of escape in a fire. All parts of the development will be fitted with appropriate fire safety signage to comply with The Health and Safety (Signs and Signals) Regulations 1996, i.e., signage to be specified in according to BS ISO 3864-1 [25], BS 5499-4 [26] and BS 5499-10 [27].
- 3.10.2 The purpose of fire signs is to direct persons towards fire exits, or to provide specific information or warning about equipment, doors, rooms, or procedures. They should be recognisable, readable, and informative, as they convey essential information to regular and infrequent users of the premises, and the fire and rescue service. Fire notices should be permanently displayed in conspicuous positions throughout the building, including storey exits, and should provide information specific to the building.
- 3.10.3 All fire doors, other than apartment entrance and internal doors and lift landing doors, will be marked with an appropriate fire safety sign conforming to BS 5499-1 [28] (white on blue) according to whether the door is:
- to be kept closed when not in use ('FIRE DOOR - KEEP SHUT').
 - to be kept locked when not in use ('FIRE DOOR - KEEP LOCKED').
 - held open by an automatic release mechanism ('AUTOMATIC FIRE DOOR - KEEP CLEAR').
- 3.10.4 Any emergency securing device fitted to doors on escape routes are to be provided with instruction notices, adjacent to the device, indicating the method of operation.
- 3.10.5 In accordance with recent updates to guidance in Section 15.13 to 15.16 in ADB, wayfinding signage for the fire and rescue service is to be provided within the residential common areas, including:
- Floor identification signs at each landing of the protected stair and each common lobby accessed from the firefighting lift, formatted in accordance with Section 15.14 and 15.15 in ADB.
 - Flat indicator signs, located beneath the floor indicator signs and indicating the flats present and each level. These should be formatted in accordance with Section 15.16 in ADB.

4. Internal fire spread

4.1 Internal wall and ceiling linings

- 4.1.1 During the development of a fire in a building, the choice of material for the lining of walls and ceilings can significantly affect the spread and growth of fire. Restrictions are placed on the wall and ceiling lining materials within certain areas of buildings to limit the spread of fire and production of smoke in these areas.
- 4.1.2 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.
- 4.1.3 All wall and ceiling linings in the building should meet the recommendations summarised in Table 3 below.
- 4.1.4 The surface linings of walls and ceilings should generally conform to the classification recommended above for the appropriate location. However, parts of walls in rooms may be of a lower class but not lower than European Class D-s3, d2, provided that the area of linings having the lower classification does not exceed half of the floor area of the room, subject to a maximum of 20 m² in residential areas and 60 m² in non-residential areas.
- 4.1.5 No thermoplastic rooflights shall be used at the development.

Table 3 – Reaction to fire classification expectations

Location	Minimum classification to BS EN 13501-1 [29]
Within apartments:	
Small rooms ≤ 4 m ²	Class D-s3, d2
Other rooms	Class C-s3, d2
Within communal / non-residential areas:	
Small rooms ≤ 4 m ²	Class D-s3, d2
Circulation spaces (including walls, balustrades, and soffits adjacent to deck access balconies)	Class B-s3, d2
Other rooms	Class C-s3, d2

4.2 Automatic fire suppression

- 4.2.1 The uppermost floor at the development is circa 36.9 m above access level. As such, the building features a floor at greater than 11 m above ground level and automatic suppression is considered as necessary based on the expectations of the May 2020 amendment to ADB for residential apartment buildings.
- 4.2.2 Automatic suppression will be provided by a BS 9251 [30] sprinkler system in accordance with the recommendations of Table 2 in BS 9991 and Table 1 in BS 9251, supporting both the open-plan apartment arrangements and the building height. A Category 4 system using the design density in Footnote C) of Table 2 in BS 9251 is to be provided throughout the building, except for the areas set out in Section 5.4 of BS 9251.
- 4.2.3 This fire safety strategy does not consider it necessary for sprinklers to be installed within the common corridors, which should be maintained as fire sterile. This view is supported by guidance in Note 2 of Table B4 of ADB and in a circular letter from MHCLG in May 2020. Note D in Table 2 of BS 9251 provides a recommendation for sprinklers within corridors only when these are requested as necessary by the fire strategy and Authorities Having Jurisdiction.
- 4.2.4 The non-residential and ancillary areas of the building are suppressed in accordance with additional expectations of Sections 5.5 and 5.6 and Tables 3 and 4 of BS 9251. As all ordinary hazard areas have uses as set out in Table 4 of BS 9251 are no greater than 100 m² in area, these may each be served by the BS 9251

system. It would be considered that the covered play space at Sixth floor could be suppressed as per the recommendations for a limited office space or foyer space within Table 3 of BS 9251.

- 4.2.5 Protection from frost may be required to sprinklers within the car park area and covered play space at Sixth floor, where these would be outside the thermal line of the building.
- 4.2.6 In accordance with Table 2 in BS 9251 a minimum water supply duration of 60 minutes is to be provided for the Category 4 sprinkler system. A water supply duration of 30 minutes is considered appropriate for the ordinary hazard areas in Table 4 of BS 9251 in accordance with the guidance in Note E in Table 2 of BS 9251, where the ancillary areas are located at Ground floor and Basement only.
- 4.2.7 The residential sprinkler system may be shared with the boosted cold-water system where arranged in accordance with the expectations of BS 9251. The volume of stored sprinkler water may also be reduced should suitable infill water be available. Further review of the required stored water volume would be expected during detailed design following planning.

4.3 Structural fire resistance

- 4.3.1 Elements of structure should generally be designed and / or protected to achieve 120 minutes fire resistance and be supported by automatic suppression throughout the building in accordance with Table 4 of BS 9991 where featuring a floor at greater than 30 m in height.
- 4.3.2 Elements of structure that only support a roof do not generally require fire resistance. Structure is considered to support more than only a roof if it supports a load other than the roof itself (e.g., rooftop plant), or is essential to the stability of a compartment or other fire resisting wall (internal or external).
- 4.3.3 When determining the elements required to be fire-resisting, the structural engineer may utilise safety factors for the fire design loading case. These are typically less onerous than for the maximum ambient design loading case for primary members, or less onerous than the wind design loading case for stabilising members such as cross-bracing.

4.4 Fire-resisting construction and fire doors

- 4.4.1 All residential floors should be constructed as compartment floors where the building contains apartments. All shafts (e.g., risers, lift shafts and stair cores) are to be constructed as protected shafts where these will pass through compartment floors.
- 4.4.2 Compartment walls are to be provided to separate the residential and commercial uses within the building.
- 4.4.3 The fit-out of the commercial units will need to incorporate a means of maintaining compartmentation around floor voids, in support of use of the residential suppression system within these areas by limiting to floor area of any one compartment to a maximum of 100 m².
- 4.4.4 Elements of fire-resisting construction will be provided in accordance with the recommendations in Table 4, and as indicated on the fire safety drawings included within Appendix A.
- 4.4.5 BR 128 [31] contains advice for the nominal fire-resistance ratings of masonry walls. New drylining partitions or floor systems should be selected using a manufacturer's guidance documents for complete systems (such as the White Book from British Gypsum or the Knauf Manual), which will also provide a fire-resistance rating for the selected build-up.
- 4.4.6 Fire door assemblies are to comply with BS 476-22 [32] or BS EN 1634-2 [33] for fire resistance, and where applicable BS 476-31 [34] or BS EN 1634-3 [35] for smoke leakage.
- 4.4.7 Doors within residential dwellings are not required to have self-closing devices. It is recommended that doors are closed at night, or in the event of a fire alarm activation the first occupant to respond then closes any doors which may assist with containing the fire.

Table 4 – Periods of fire resistance for fire-separating elements (in minutes, for loadbearing, integrity, and insulation where exposed from each side separately unless otherwise stated)

Element requiring fire-resistance	Fire resistance rating	Fire doors
Elements of structure	120	N/A
Compartment floors	120 (from underside)	N/A
Compartment walls	120	N/A
External walls (if required by Section 5.3): Less than 1,000 mm from a point in the relevant boundary More than 1,000 mm from the relevant boundary	120 120 integrity, 15 insulation	FD120 N/A
Protected shafts – firefighting stairs	120	FD60S
Protected shafts – firefighting and evacuation lift shafts	120	E60 (Note 1)
Protected shaft – smoke extract shaft	120	120 (Note 2)
Protected shaft – service risers	120	FD60S
Separating apartments from each other and from the common residential corridors	60	FD30S
Lower-risk ancillary areas (cycle stores)	60	FD60
Higher-risk ancillary areas (refuse stores)	120	FD120
Enclosure of life safety plant	120	FD120
Substation enclosure (if required)	240	FD240
Cavity barriers	30 integrity, 15 insulation	N/A

Note 1: Lift doors may also be tested to BS EN 81-58 [36]

Note 2: Smoke shaft to be enclosed by mechanical smoke dampers in accordance with BS EN 12101-8 [37] and achieving a fire resistance rating to match the construction of the smoke shaft (i.e., 120 minutes)

4.5 Concealed spaces and cavity barriers

- 4.5.1 Cavity barriers are provided in concealed spaces to prevent the rapid spread of unseen fire or smoke in voids, and to prevent the spread of fire around compartmentation via voids.
- 4.5.2 All cavity barriers are to have a fire resistance rating of at least 30 minutes for integrity (E) and 15 minutes for insulation (I). Cavity barriers should be at no greater than 20 m centres in cavities with Class C-s3, d2 linings or better to BS EN 13501-1, as well as being located to align with fire-resisting construction as indicated in Figure 10. For other linings, the spacing between cavity barriers should be reduced to 10 m.
- 4.5.3 Cavity barriers provided around openings may be formed of:
- steel at least 0.5 mm thick or timber at least 38 mm thick (excluding within external walls); or
 - polythene-sleeved mineral wool, or mineral wool slab under compression when installed cavity; or
 - calcium silicate, cement-based or gypsum-based boards at least 12 mm thick.

4.6 Fire-stopping and penetrations through fire-resisting construction

- 4.6.1 Fire-stopping should be provided at the junction of fire-separating walls and external walls to maintain the fire resistance period of fire-separating walls and prevent a fire from travelling around the junction and into the neighbouring space. Penetrations through lines of fire-resisting separation should also be fire-stopped using a product or system that will achieve the same fire resistance rating as the penetrated wall or floor.

- 4.6.2 To maintain the fire resistance rating of separating construction, any pipe or cable penetrations through lines of fire-resisting separation should be fire-stopped in accordance with one of the following methods set out by Section 19 in BS 9991, unless located within a protected shaft. Figure 11 is provided to assist in the interpretation of the above recommendations.

- for pipes of any diameter, a proprietary seal which has been shown by test to meet the fire-resistance rating of the wall, floor, or cavity barrier for the penetration circumstance; or
- for pipes with a restricted diameter, keeping the opening as small as possible and providing fire-stopping around the pipe. The nominal interior diameter of the pipe should not be more than the relevant dimensions given in Table 10 in BS 9991.

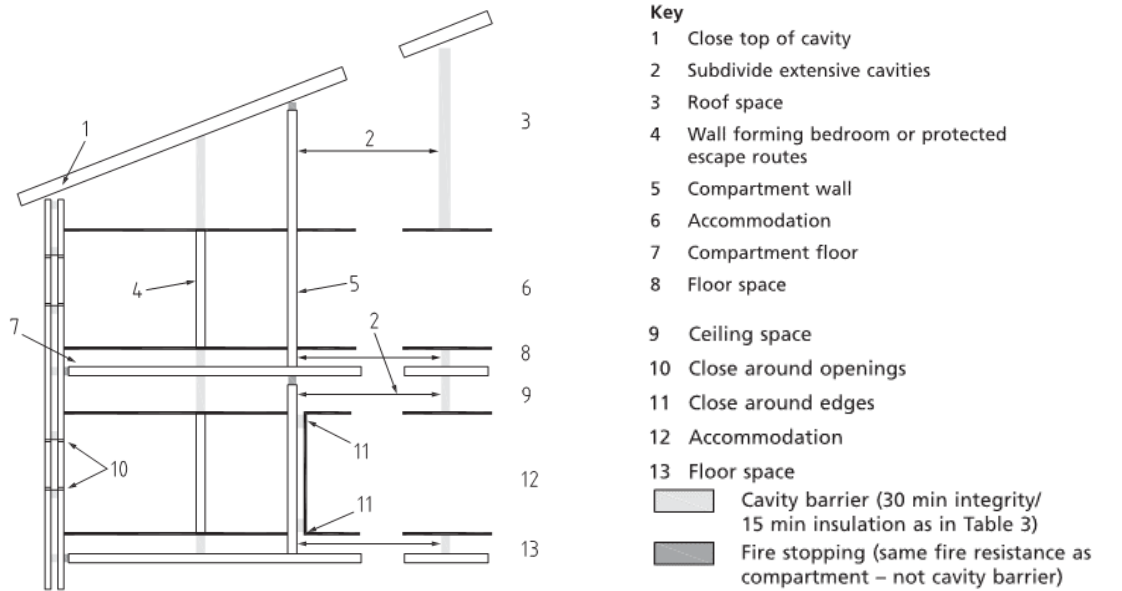


Figure 10 – Generic cavity barrier expectations

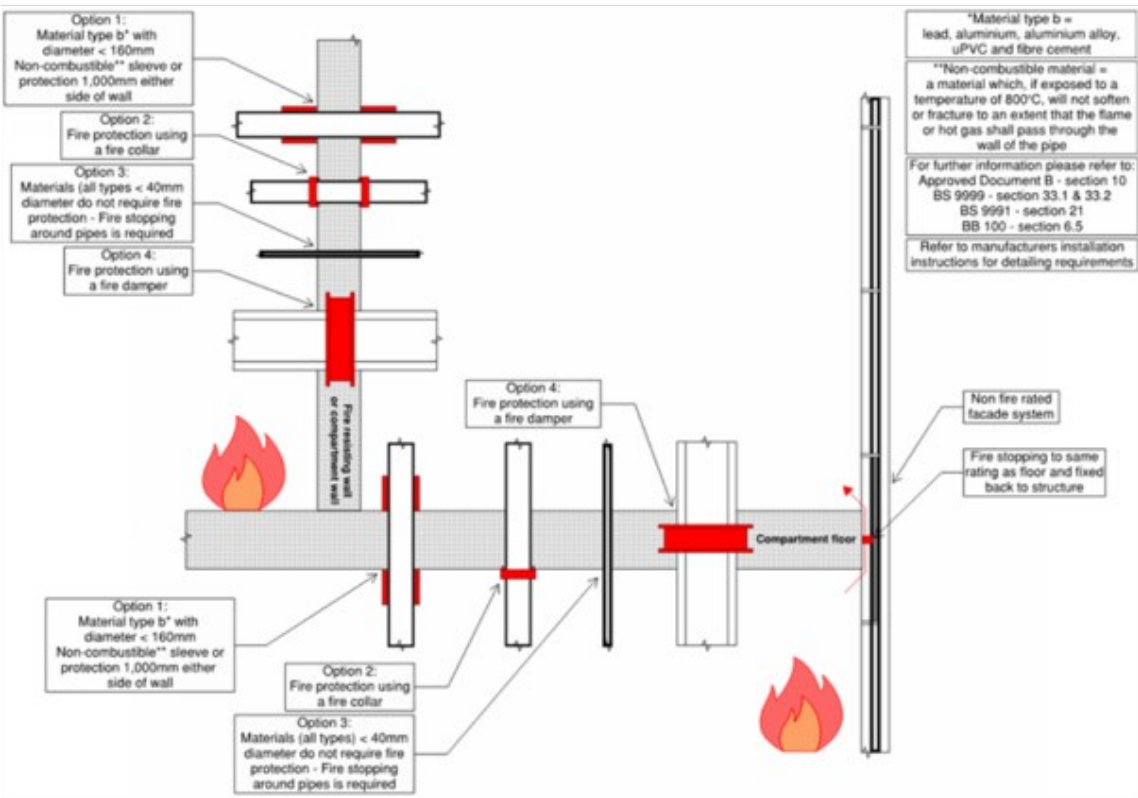


Figure 11 – Generic fire-stopping expectations

5. External fire spread

5.1 Construction and materials used for external walls

- 5.1.1 As the building will contain residential accommodation at a floor height greater than 18 m above ground level, it is classified as a 'Relevant Building' under Regulation 7(4) of the Building Regulations.
- 5.1.2 The building will comply with the requirements of Regulation 7(2), which states that: "building work shall be carried out so that materials which become part of an external wall, or specified attachment, of a relevant building are of European Classification A2-s1, d0 or A1, classified in accordance with BS EN 13501-1.
- 5.1.3 In accordance with Regulation 7(3) the following items are exempt from Regulation 7(2):
- Cavity trays when used between two leaves of masonry. Combustible cavity trays may also be used within other external wall systems for a period of 18 months commencing on the 1st of June 2022, as per the circular letter from DLUHC notifying industry of this relaxation.
 - Any part of a roof (other than any part of a roof which falls within paragraph (iv) of Regulation 2(6)) if that part is connected to an external wall.
 - Door frames and doors. Window frames and glass.
 - Electrical and fibre optic installations.
 - Insulation and water proofing materials used below ground or up to 300 mm above ground level.
 - Intumescent and fire-stopping materials where the inclusion of the materials is necessary to meet the requirements of Part B of Schedule 1 in the Building Regulations.
 - Membranes, seals, gaskets, fixings, sealants, and backer rods.
 - Thermal break materials where the inclusion of the materials is necessary to meet the thermal bridging requirements of Part L of Schedule 1 in the Building Regulations.
 - Components of solar shading devices, excluding those components for which their primary function is to provide shade.
- 5.1.4 In addition to the requirements set out by Regulation 7(2) above, the building should also meet Requirement B4 of the Building Regulations based on the following recommendations:
- External surfaces should meet the recommendations in Figure 17 of BS 9991. However, as these recommendations are less onerous than those in Regulation 7(2), the above requirements for Regulation 7(2) should be applied.
 - Cavity barriers should be provided in accordance with Section 4.5 of this report.
- 5.1.5 Particular attention is drawn to the following points:
- Though excluded from by Regulation 7(3), membranes used as part of the external wall construction more than 300 mm above ground level should achieve a minimum of Class B-s3, d0.
 - Internal linings of external walls should comply with the guidance provided in Section 4.1.
 - Any part of a roof should achieve the minimum performance as detailed in Section 5.2.
 - As per Regulation 7(3), window frames and glass (including laminated glass) are exempted from Regulation 7(2). Window spandrel panels, infill panels, and balcony balustrades must comply with Regulation 7(2).
 - Thermal breaks are small elements used as part of the external wall construction to restrict thermal bridging. There is no minimum performance for these materials, though they should not span two compartments and should be limited in size to the minimum required to restrict the thermal bridging.
 - Regulation 7(2) only applies to specified attachments, being attached balconies, solar shading devices, and solar panels. Shop signs and other attachments are not subject to the requirements of Regulation 7(2), though due consideration should be given to other attachments posing a risk of fire spread.

- 5.1.6 Any attachments to the external walls intended to support climbing plants at common terraces are to also be of Class A1 or Class A2-s1, d0 materials to meet the expectations of Regulation 7(2). Climbing plants should be suitably managed and maintained, including provision of means of automatic or manual irrigation, and with the design of these being cognisant of the risk associated with fire spread across external walls.
- 5.1.7 The external balconies are inset, unenclosed balconies to be constructed in accordance with Section 12.2 in BS 8579 [38] in addition to the expectations of Regulation 7(2). The balconies should feature an imperforate soffit to assist in the prevention of vertical fire spread between balconies, and walls separating inset balconies from adjacent apartments should be constructed as compartment walls.

5.2 Roof coverings

- 5.2.1 Roof coverings are to be resistant to fire spread where being either close enough to a boundary to be at risk of ignition from a fire in another building, or where needed to resist fire spread between compartments via the roof coverings above.
- 5.2.2 New roof coverings 1.5 m either side of a fire-resisting wall or within 3 m of an external wall should achieve an B_{ROOF}(t4) rating. The remaining new roof areas should meet the recommendations of Table 8 in BS 9991, as summarised in Table 5. In general, it would be recommended that all new roof areas achieve B_{ROOF}(t4).
- 5.2.3 Balustrades of terraces are recommended to be constructed from materials that would achieve Class A1 or Class A2-s1, d0 to BS EN 13501-1, though the use of laminated glazing may also be considered where supported by a suitable risk assessment as per Section 12.3 in BS 8579.
- 5.2.4 Roof coverings may constitute a number of materials (but does not include the roof structure as a whole). Therefore, the top covering material should be considered in tandem with the substrate(s) to assess the performance of the coverings. The covering system as a whole is to meet the provisions of Section 5.2.2.
- 5.2.5 Where green roofs (including brown or sedum roofs) are used at the development, as an alternative to the B_{ROOF}(t4) classification these are recommended to be in accordance with the GRO code [39], including:
- Having a growing medium / substrate of at least 80 mm thick.
 - Have a growing medium / substrate that features <20% organic content and no peat.
 - Having a growing medium / substrate that has been tested in accordance with BS 8616 [40].
 - Have fire breaks (i.e., gravel areas) of a least 300 mm around rooflights, soil pipes, rainwater outlets, and of at least 500 mm where adjacent to openable windows or doors.
- 5.2.6 Photovoltaic panels should also be in accordance with roof classification guidance. If the photovoltaic array results in live cables with a current / voltage that may pose a hazard to firefighters, a remote isolation switch should be provided to allow these to be disconnected prior to commencement of wet operations.

Table 5 – Limitations on roof coverings

Distance from boundary	Allowable roof covering classifications to BS EN 13501-5 [41]		
	B _{ROOF} (t4)	C _{ROOF} (t4)	D _{ROOF} (t4)
Less than 6 m	✓	✗	✗
At least 6 m	✓	✓	✗
At least 20 m	✓	✓	✓

5.3 Space separation and unprotected areas of the façade

- 5.3.1 Should a fire occur, heat will radiate through openings in the external walls. This heat can be enough to set fire to nearby buildings. To reduce the likelihood of this occurring, the Building Regulations guidance place limits on the area of the external elevation with no fire resistance, known as the unprotected area.
- 5.3.2 The building is to be designed and constructed with sufficient space separation and / or fire-resisting construction in the external façade to adequately limit the likelihood of fire spread to, or from, the adjacent relevant boundaries.
- 5.3.3 The relevant boundaries are the reference distances at which the potential for fire spread is considered, being the site boundary or a notional boundary created at the centreline of an adjacent road, railway, or other area with a sufficiently low likelihood of development.
- 5.3.4 Compartment walls and floors will reduce the extent of façade likely to be radiating at any one time. Following the recommendations of BR 187 [42], the lower emitted radiation of 84 kW/m² (reduced to 42 kW/m² on account of sprinklers) may be used for residential areas, with the higher value of 168 kW/m² (reduced to 84 kW/m² for sprinklers) used for plant and storage areas. Commercial areas are also considered using the higher value for radiation, for flexibility of occupation.
- 5.3.5 In this analysis, an arrangement with two commercial units is used for conservatism, being a design option that may be considered in future. This presents a more onerous situation for the design of the external façade compared to sub-division into three units, and to be incorporated into the planning stage design.
- 5.3.6 Using the methodology in BR 187, an analysis of the available distance between the building and the boundaries has been conducted as indicated in Figure 12 and Figure 13. The findings of this analysis for the various compartments are presented in Table 6, which calculates the percentage of the façade permitted to be unprotected based on the available separation distances.
- 5.3.7 Following this analysis, the provided space separation, compartmentation, and suppression will generally be sufficient for preventing external fire spread without support from fire-resisting areas of façade. The exception to this is the southern façade of the commercial unit at Ground floor facing the adjacent plot. This façade is to feature a maximum unprotected area of 50%, with fire-resisting construction rated to 120 minutes for integrity and 15 minutes for insulation used for solid areas of the external wall.

Table 6 – Summary of external fire spread assessment

Area (Façade)	Enclosing rectangle (m)		Distance to boundary (m)	Permitted % of unprotected area
	Width	Height		
Refuse store (GF, North)	11.1	≤4.2	6.0	100
Refuse store (GF, North)	2.9			
Commercial (GF, North)	6.5			
Commercial (GF, East)	≤10.0		>8.0	
Commercial (GF, South)	6.2	≤2.8	2.2	50
Car park (GF, West)	10.9		>6.0	100
Refuse store (GF, West)	11.1			
Apartments (North)	≤18.0		≥6.0	
Apartments (East)	≤9.0		≥8.0	
Apartments (South)	≤9.5		≥2.2	
Apartments (West)	≤7.0		≥6.0	

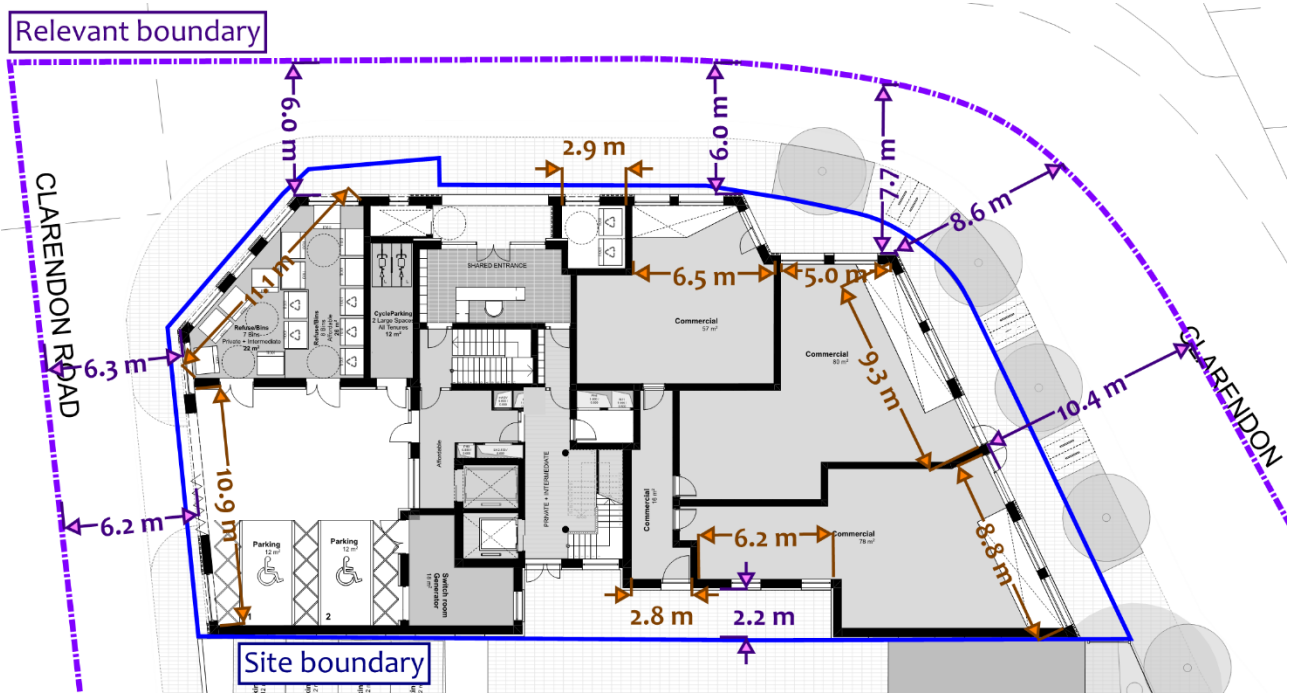


Figure 12 - Compartment dimensions and distances to relevant boundaries at Ground floor

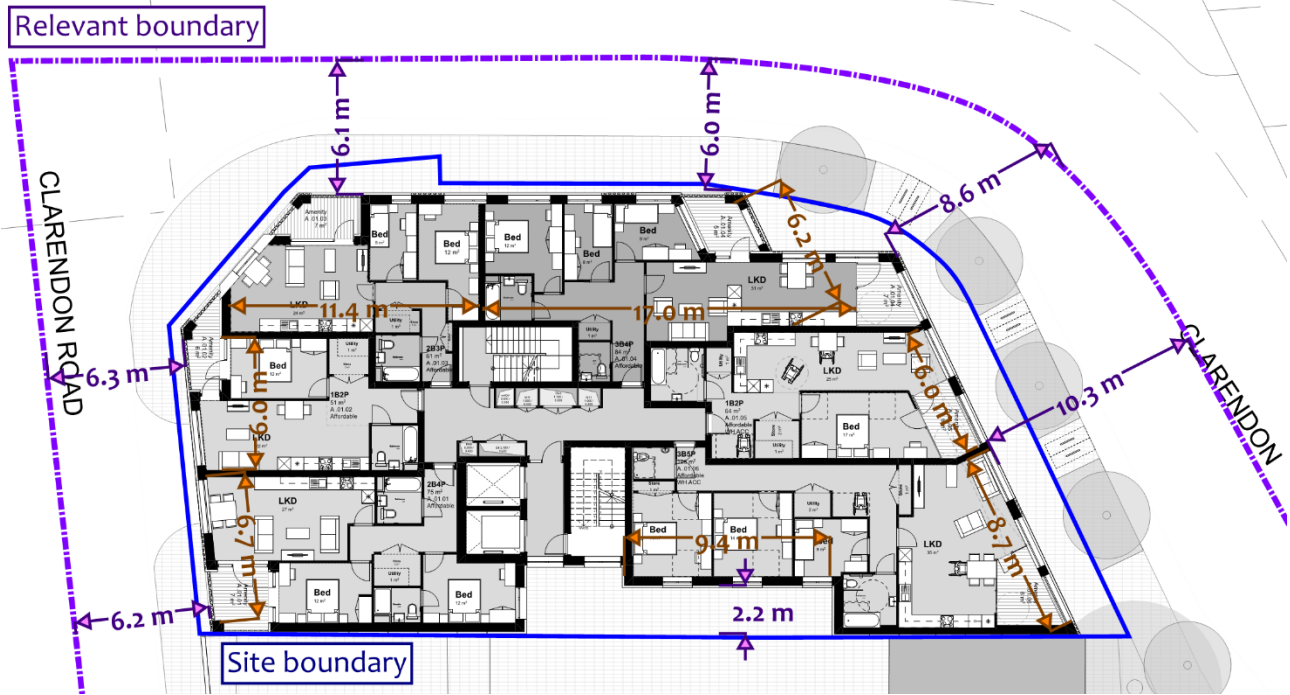


Figure 13 - Compartment dimensions and distances to relevant boundaries at First floor (worst-case)

6. Fire service access and facilities

6.1 Notification and information for the fire and rescue service

6.1.1 In the event of a fire, the local Fire and Rescue Service (FRS) are expected to be notified by a member of building management, building resident, or commercial unit staff member upon witnessing the fire.

6.2 Fire appliance access to the site

6.2.1 Vehicle access for fire appliance will be retained as per the existing condition at site, being available around the building via Clarendon Road as indicated in Figure 14. This meets the fire appliance access guidance given in London Fire Brigade Guidance Note 29 [43], as summarised in Table 7.

6.2.2 The building is to be provided with a dry rising main (see Section 6.4). As such, fire appliance access is to be provided to a location that is within 18 m of and having clear view of the dry riser inlet. This will be achieved as the site as also indicated in Figure 14.

6.3 Firefighting water supplies

6.3.1 As a mature residential site, the existing water supply provisions for firefighting will continue to serve the site. This will be via a nearby public hydrant located adjacent to Clarendon Road as indicated in Figure 14.

6.3.2 Section 51.2(a) in BS 9991 recommends that at least one fire hydrant is located within a maximum of 90 m from the dry riser inlet. As illustrated on Figure 14, this is also achieved at the site where a hydrant is located at circa 20 m from the proposed dry riser inlet.

6.4 Firefighting facilities within the building

6.4.1 The building will feature an occupied floor greater than 18 m above ground level and will be provided with a firefighting shaft. The firefighting shaft will feature:

- Firefighting stairs having a clear width of at least 1,100 mm.
- A dry rising main outlet in accordance with BS 9990 [44] at each landing within the firefighting stair, including at Ground floor. The maximum hose laying distance at each floor will not exceed 60 m, in accordance with Section 50.2.2 of BS 9991 and as indicated on the fire safety mark-ups in Appendix A.
- Access to the firefighting shaft via either the resident's lobby or via the side entrance from the undercroft car park at Ground floor.
- Smoke control to the common corridors, lobbies, and stairs, as discussed in Section 3.4.
- A firefighting lift in accordance with BS EN 81-72 [45], with lift doors located within 7.5 m of the firefighting stair door. Additional controls to allow used in support of evacuation (see Section 3.7). Water protection to the lifts provided by threshold ramps, with a sump to also be provided beneath into which a pump could be lowered to support removal of water.
- An evacuation lift as per Section 3.7, also available to assist the fire and rescue service if required.
- Firefighting floor indicator signage as detailed within Section 3.10.
- An evacuation alert system, as detailed within Section 3.2.

6.5 Basement smoke clearance

6.5.1 The residential basement will have circa 200 m² of accommodation plus corridor area, is located ~3.1 m below ground level, and as such, Section 14.2.1.3.1 of BS 9991 would suggest that a basement smoke venting system should be provided. However, it is considered reasonable provide smoke venting from the basement area via the mechanical smoke shaft within the corridor only, on the basis of:

- The ancillary areas of the basement do not exceed the 200 m² threshold for which smoke venting is not expected. Furthermore, a substantial portion of this area is to be used for low-risk items such as the sprinkler system and boosted cold water system.
- The basement is only marginally deeper than the 3 m limit for which smoke venting is not expected.

- The basement will be sprinklered, limiting the likely fire size in this area and intensity of heat and smoke to be vented.
- Though the mechanical smoke extract shaft would not serve the individual rooms, this would offer more than the 10 air changes per hour recommended in Section 14.2.1.3.3 of BS 9991.

6.6 Car park smoke clearance

6.6.1 The building will feature an open-sided and sprinklered undercroft with two disabled parking bays. It is considered that ample venting may be provided through the façade from this area without the need for mechanical fans to support firefighters with smoke clearance, subject to further discussion and agreement with the building control body during detailed design.

6.7 Stand-by power supplies

- 6.7.1 All powered life safety systems will have emergency back-up power in accordance with BS 8519 [46].
- 6.7.2 The emergency lighting, internally illuminated signage, fire detection and alarm systems, and automatically opening vents are expected to utilised batteries capable of a continuous stand-by supply in accordance with the relevant design standard and be fully rechargeable within a period of 24 hours.
- 6.7.3 A stand-by generator is to be provided to supply back-up power to larger items of fire safety equipment, including the sprinkler system, firefighting and evacuation lifts, and smoke control systems.

Table 7 – Pump-type firefighting appliance access requirements from GN29

Minimum access route specification	Dimension
Width between kerbs	3.7 m
Width between gateways	3.1 m
Turning circle between kerbs	16.8 m
Turning circle between walls	19.2 m
Clearance height	3.7 m
Carrying capacity	14 tonnes
Maximum reversing distance	20 m

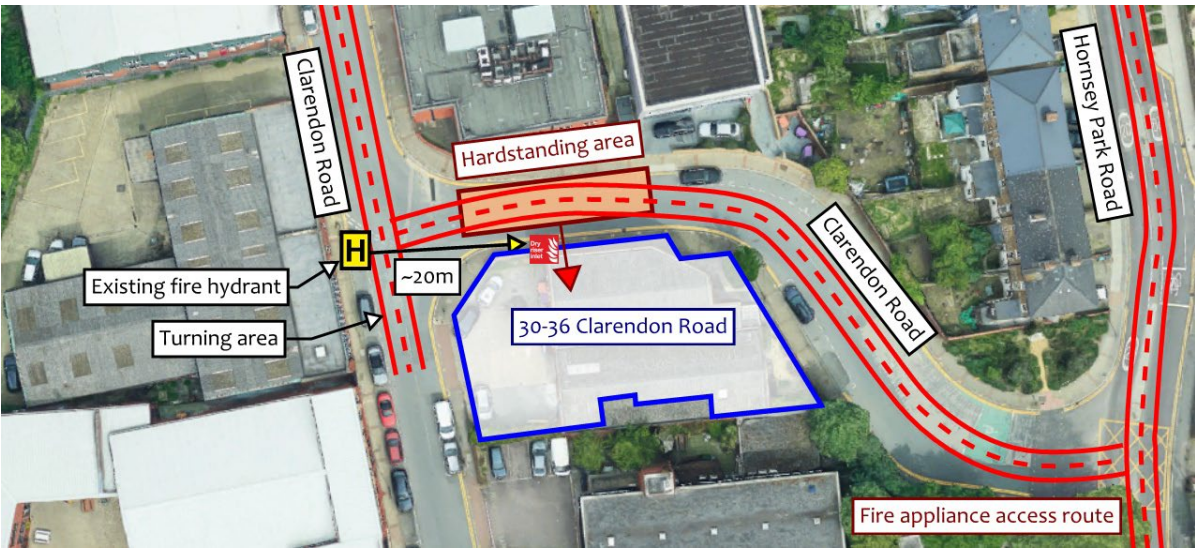


Figure 14 – Firefighting vehicle access and water supplies

7. Additional fire safety guidance

7.1 Fire safety information and future development

- 7.1.1 This Fire Statement details an appropriate level of information to support a planning application for a development of this scale and nature.
- 7.1.2 Following planning, this Fire Statement should be provided to the design team responsible for progressing the scheme through detailed and technical design. The design team will be required to seek approval for the development under the Building Regulations by the appointed building control authority, including consultation with the local fire and rescue service.
- 7.1.3 Further development of the fire safety provisions set out within this Fire Statement is expected during the Building Regulations approvals process, including the selection of specific products, systems, or materials to fulfil the expectations of the Fire Statement.
- 7.1.4 Where any modification to the fire safety provisions set out in Section 3 to 6 of this Fire Statement are proposed during further design, these should not be incorporated unless agreed in writing by the appointed building control authority.
- 7.1.5 The as-built fire safety strategy for the building, as agreed by the appointed building control authority, should be provided to the Accountable Person for the building, as defined in the Building Safety Bill 2022, to meet the expectations of Regulation 38 of the Building Regulations and principles of the Golden Thread of Information. This should be provided as part of a wider package of building information including, but not being limited to:
- This Fire Statement report
 - The as-built fire safety strategy report and associated fire strategy drawings
 - Manufacturer's literature for fire safety products and equipment provided at the building
 - Drawings indicating the installed locations of fire safety products and equipment
 - Manufacturer's literature detailing suitable methods of operation and maintenance of fire safety products and equipment
- 7.1.6 It is recommended that the above information is provided to the Accountable Person in a digital format that may be retained using a cloud-based or other remote service, to reduce the potential for loss of information in the event of fire, flooding, theft, etc.
- 7.1.7 The Accountable Person and their appointed Building Safety Manager are expected to ensure that periodic maintenance of the fire safety equipment in the building is undertaken in accordance with the manufacturer's recommendations. The information provided within the Regulation 38 documentation may be used to assist maintenance professionals in identifying the systems, spare parts, operational procedures, maintenance procedures, etc. for the various systems present.
- 7.1.8 The Regulation 38 documentation will also assist the Accountable Person and / or their appointed advisors in the preparation of a 'Safety Case Report', which is to demonstrate how risks are being identified, mitigated and managed on an ongoing basis.
- 7.1.9 Any subsequent amendment to the fire safety provisions at the building will require consent from an appointed building control authority. The building owner should consult with a suitable building control authority or fire safety professional prior to conducting any future modification works, to ensure that these will be in accordance with any relevant fire safety legislation in force at that time.

7.2 Management and maintenance of fire safety systems

- 7.2.1 Management of fire safety must be integrated with all other management systems. If this management is lacking, then there is a danger that all the other areas such as security measures and alarm systems will be ineffective. To ensure there is no doubt as to where the responsibility for fire safety rests, and to enable consistency of approach, it is important that each establishment appoints a designated Building Safety

Manager. It may be possible to appoint a professional to take on this role but that will depend on the size of the premises, costs, etc.

- 7.2.2 The appointed person should have the necessary authority and powers of sanction to ensure that standards of fire safety are maintained. The duties of the Building Safety Manager may include:
- management to minimise the incidence of fire (e.g., good housekeeping and security)
 - producing an Emergency Fire Plan
 - being aware of all fire safety features provided and their purpose
 - being aware of any particular risks on the premises (e.g., issues relating to hot work)
 - being aware of their responsibilities towards disabled people
 - liaising with, and where necessary seek the advice of, the fire authority, local council, or other relevant enforcing authorities
 - having powers to deal with individuals who sabotage or tamper with fire safety systems, who ignore any smoking policy or who block exits
 - liaising with other fire safety managers in a multi-occupancy arrangement
 - ensuring that residents, tenants, concessionaires, and caretakers are appropriately briefed
 - ensuring that appropriate communication systems are in place to deal with any fire incident
 - checking the adequacy of firefighting equipment and ensuring its regular maintenance
 - ensuring fire escape routes and fire exits are unobstructed and doors operate correctly
 - ensuring that fire detection or protection systems are maintained, tested, with records kept
 - ensuring any close down procedures are followed
- 7.2.3 Good housekeeping is to ensure that the effectiveness of the fire safety provisions are not adversely affected, including the adequate provision for the disposal of waste and / or rubbish.
- 7.2.4 Maintenance procedures are to be enacted so that equipment will be able to operate effectively. Maintenance staff are to be trained in the importance of the fire safety systems and planned maintenance.
- 7.2.5 Common escape routes should have wall and ceiling linings achieving a Class B-s1, d0 reaction to fire standard, apart from permitted exceptions noted in this report. These finishes must be maintained for the life of the building. Display features or items such as posters, artwork pieces, etc. may be included with appropriate consideration, justification, and on-going control.

7.3 Management access to apartments

- 7.3.1 To suitably maintain the common fire safety provisions within the building, management will require the ability to access and intervene with certain fire safety elements within dwellings. As such, it is recommended that contracts between building management and occupants (i.e., tenancy agreements, leaseholds, freeholds, building management agreements, etc.) include the ability from management to be able to inspect, repair or enforce repairs to fire safety items such as the following non-exhaustive list of items:
- Apartment entrance fire doors, being critical to the success of the means of escape strategy. These should be regularly reviewed by building management to ensure that these have not been damaged or altered, and that the self-closing device is operating correctly. Building management should retain the ability to enforce repairs or install new doors where flat entrance doors are found to be sub-standard.
 - Fire-resisting construction provided to separate flats or common areas is required to be maintained throughout the life of the building. Management should ensure that occupants of flats are not able to lower the fire-resistance ratings of separating walls or soffits through unapproved alterations.

- Sprinkler heads within apartments need to be able to operate effectively in order to limit fire growth and support means of escape within the common areas, prevention of fire spread between apartments, and firefighting operations. Management should ensure that sprinkler heads are not deactivated or impaired. Where concealed heads are used, particular care is required to ensure that these are not painted over as this may prevent the cover plate from releasing in the event of a fire.
- If dampers are installed to or between flats, where ductwork crosses fire-resisting construction between flats or common areas, management should be able to access, inspect, repair, or reset dampers.
- Fire spread between balconies or terraces presents a route via which fire may simultaneously affect apartments at multiple levels, placing the wider building at risk. Resident’s private balconies / terraces should not be used for storing combustible items. Management would be recommended to be able intervene should excessive fire load become apparent in these areas.

7.4 Hoarding

- 7.4.1 ‘Compulsive hoarding’ or ‘Hoarding’ is a mental health issue characterised by the accumulation of large quantities of goods within an occupant’s home. Amongst the number of health and safety issues associated with hoarding, this also poses a challenge with regards to fire safety.
- 7.4.2 The fire safety provisions provided within a building assume certain characteristics, including fire load. Hoarding may significantly increase the fire load above that which is typically assumed within a residential unit and present a greater likelihood of sheltered or deep-seated fires occurring which could pose a challenge to fire-resisting construction, suppression systems, or firefighting operations.
- 7.4.3 Should there be cause to believe an occupant is hoarding goods, it is recommended that this be reported to the local health or mental health service provider as well as to the local fire and rescue service.

7.5 Fire extinguishers and fire blankets

- 7.5.1 First-aid firefighting provisions should be assessed and provided as part of the fire risk assessment for the building, including consideration for the day-to-day management of these provisions. Suitable first-aid firefighting provisions can help with the extinguishment of small fires, preventing these from growing into significant fires.
- 7.5.2 In general, fire points should be provided within common areas and areas presenting a significant fire ignition risk, such as refuse stores and plant rooms. The fire risk assessment that should be undertaken upon occupation of the building may assist with the placement of suitable fire extinguishers.
- 7.5.3 Where provided, the type and size of extinguisher(s) are recommended to be chosen in accordance with the guidance given in BS 5306-8 [47], as summarised by Table 8 and the classification of fire fuel hazards summarised as follows:
- Class A – fires involving solid materials, usually of an organic nature (general hazards);
 - Class B – fires involving liquid or liquefiable solids (such as liquid fuels, lubricants, paints, etc.);
 - Class C – fires involving gases;
 - Class D – fire involving metals; and
 - Class F – fires involving cooking media (vegetable or animal oils or fats).
- 7.5.4 Fire blankets may be provided in kitchens for extinguishing cooking fires and should be affixed vertically to a wall or door to for ease of deployment in an emergency. The blanket should be located close to the cooking appliance, but far enough away such that a hob fire would not prevent access to the fire blanket.

Table 8 – Fire extinguisher types

Medium	Colour code	Application	Do NOT use for
Water	White	Class A fires	Liquid, electrical, metal or cooking fires
Powder	Blue	Class A, B or C fires	Metal or cooking fires
Foam	Cream	Class A or B fires	Electrical*, metal or cooking fires
CO ₂	Black	Class B fires	Metal or cooking fires
Wet chemical	Yellow	Class A or F fires	Liquid, electrical or metal fires
* AFFF Foam extinguishers may be used for electrical fires up to 35 kV (dielectric test) and where operated from a distance of at least 1 m.			

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Appendix A – Fire safety and fire-resisting construction mark-ups

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

FD120 Fire door

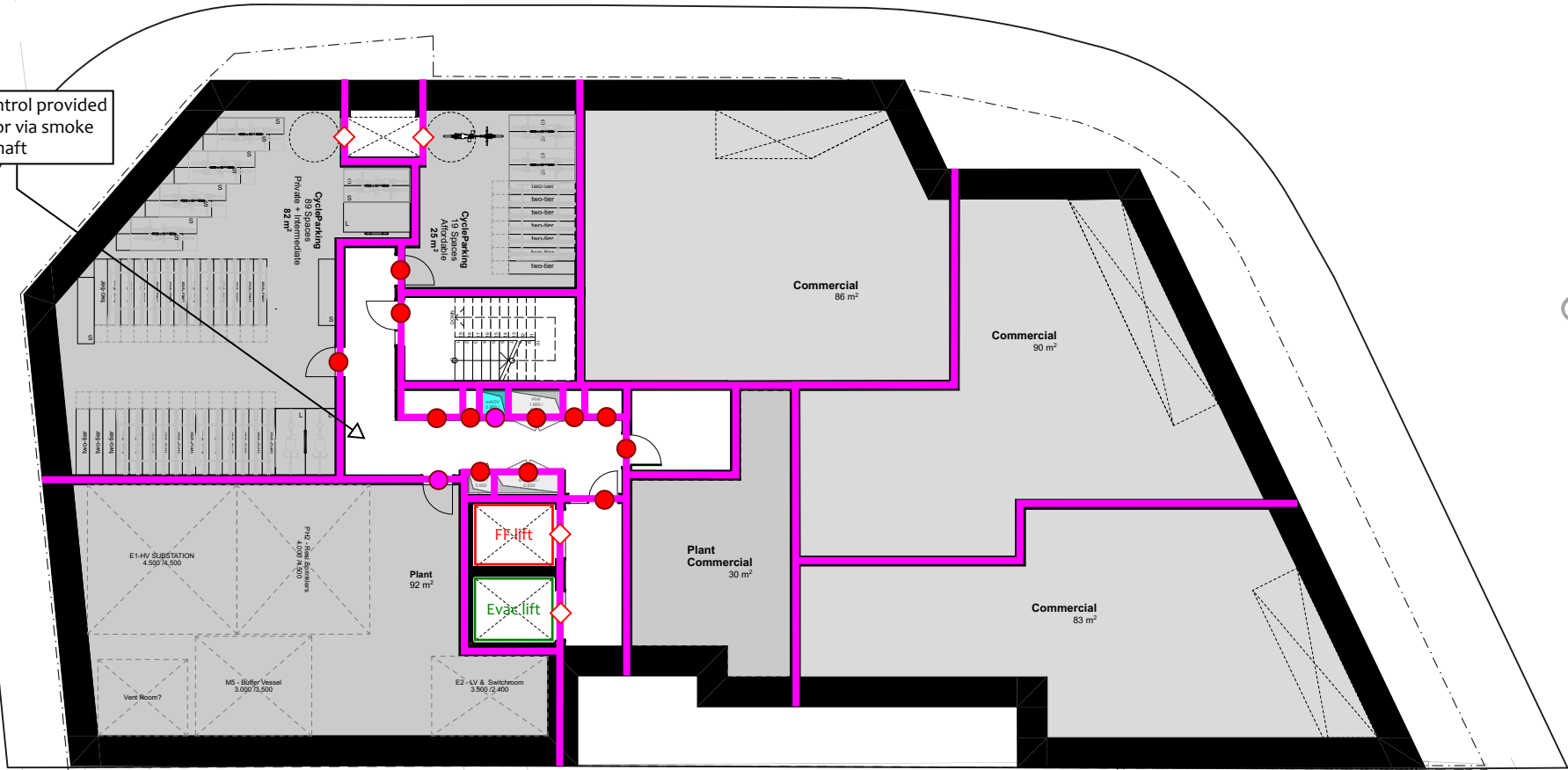
FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door

Some control provided to corridor via smoke extract shaft



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP	Work in Progress	Planning Submission
rev	date	description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

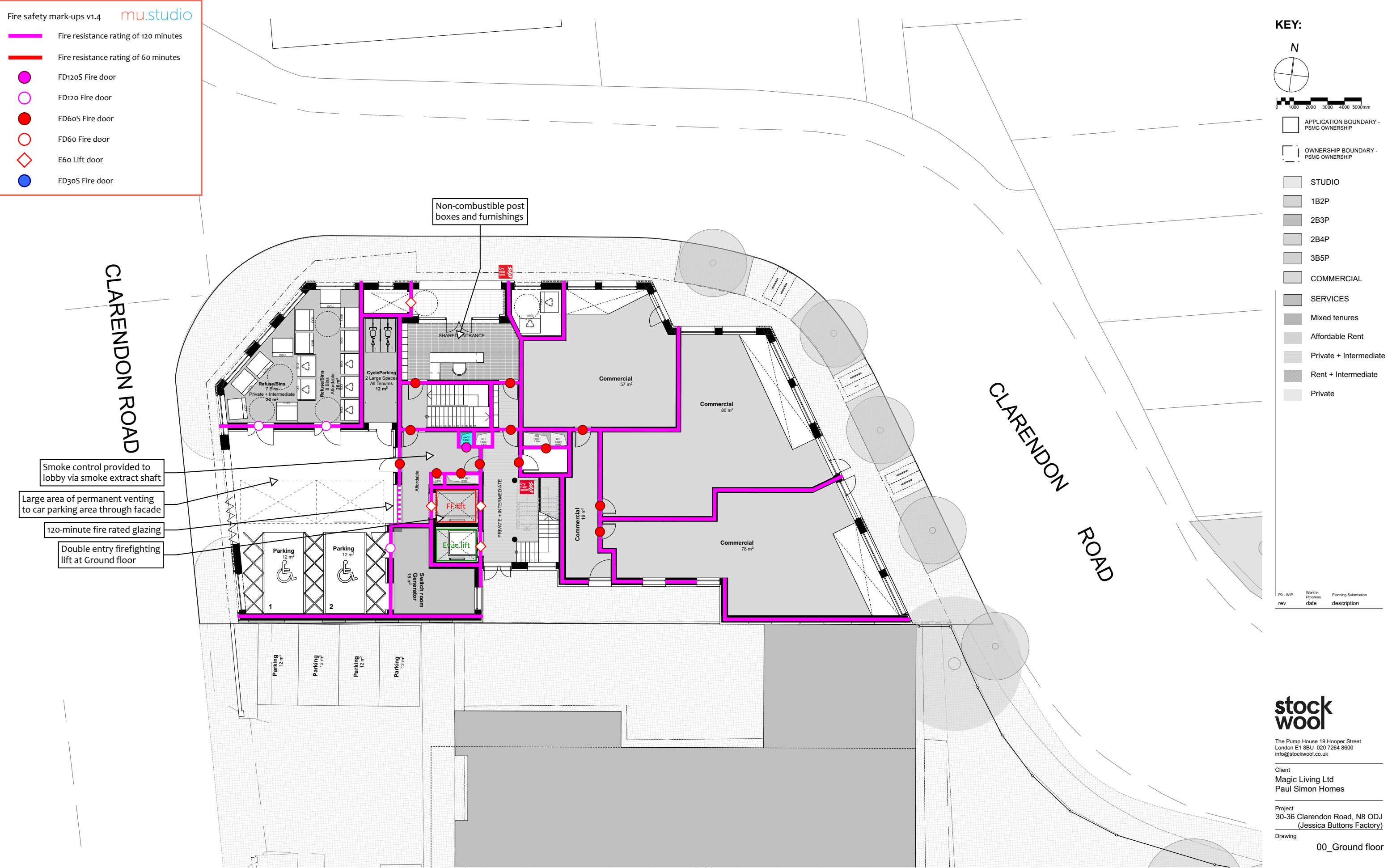
Drawing
B1_Basement Level

Project status
PLANNING

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CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)B1_P0 - WIP

BASEMENT LEVEL PLAN



Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door

KEY:

N

010002000300040005000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP	Work in Progress	Planning Submission
rev	date	description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
01_First Floor

Project status
PLANNING

Scale 1:100@A1
CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no. Drawing no. Revision
3572_PL(20)101_P0 - WIP

FIRST FLOOR PLAN

Fire safety mark-ups v1.4

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Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

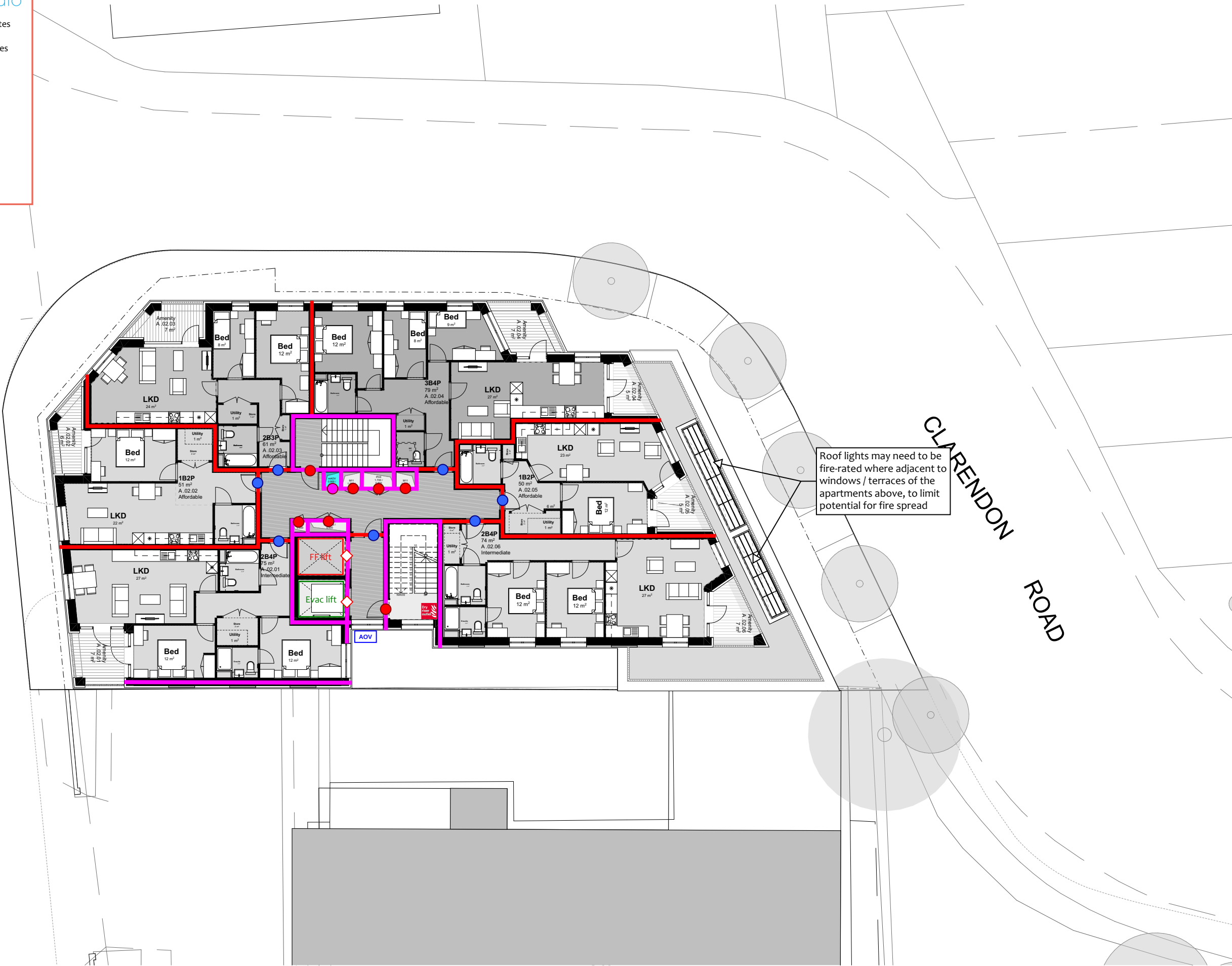
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP	Work in Progress	Planning Submission
rev	date	description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
02_Second Floor

Project status
PLANNING

Scale 1:100@A1
CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)102_P0 - WIP

SECOND FLOOR PLAN

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
03_Third Floor

Project status
PLANNING

Scale 1:100@A1

CAD File 3572 - Buttons Factory_MainFile_221005.pln

Date created 21.09.22

Drawn AB

Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)103_P0 - WIP

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

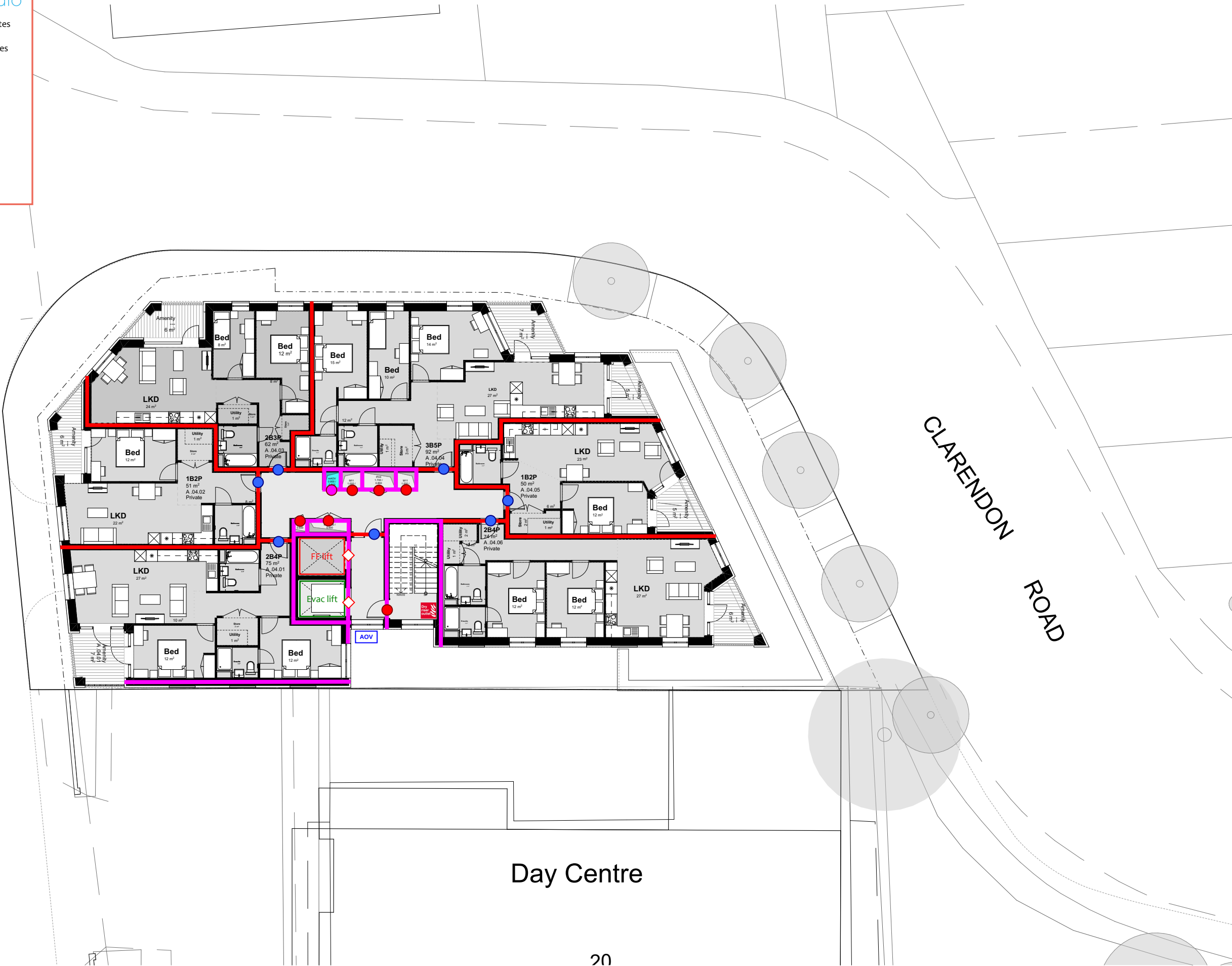
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



FOURTH & FIFTH FLOORS PLAN

KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
04_Fourth & Fifth Floors

Project status
PLANNING

Scale 1:100@A1

CAD File 3572 - Buttons Factory_MainFile_221005.pln

Date created 21.09.22

Drawn AB

Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)104_P0 - WIP

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

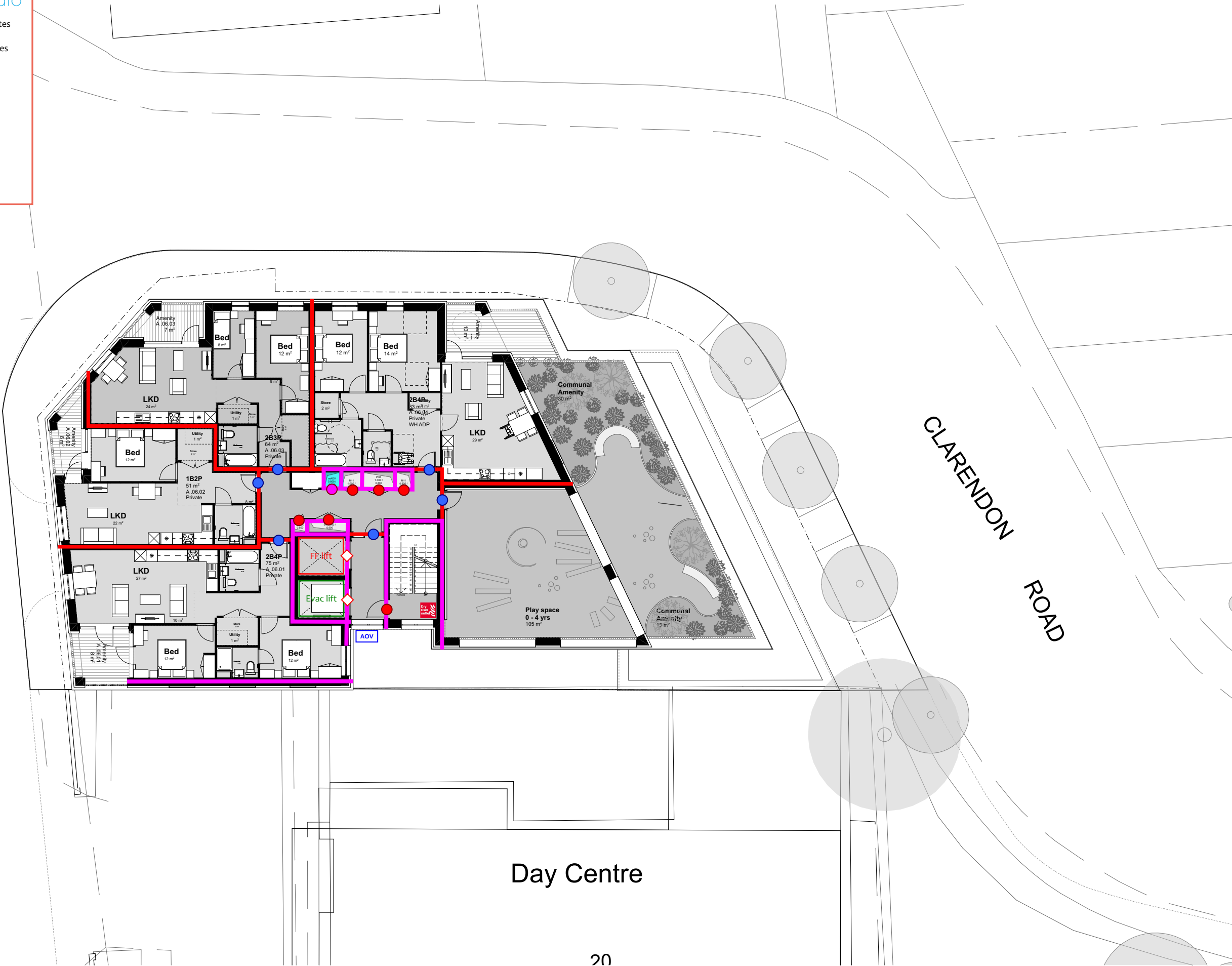
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

SIXTH FLOOR PLAN

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
06_Sixth Floor

Project status
PLANNING

Scale 1:100@A1

CAD File 3572 - Buttons Factory_MainFile_221005.pln

Date created 21.09.22

Drawn AB

Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)106_P0 - WIP

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

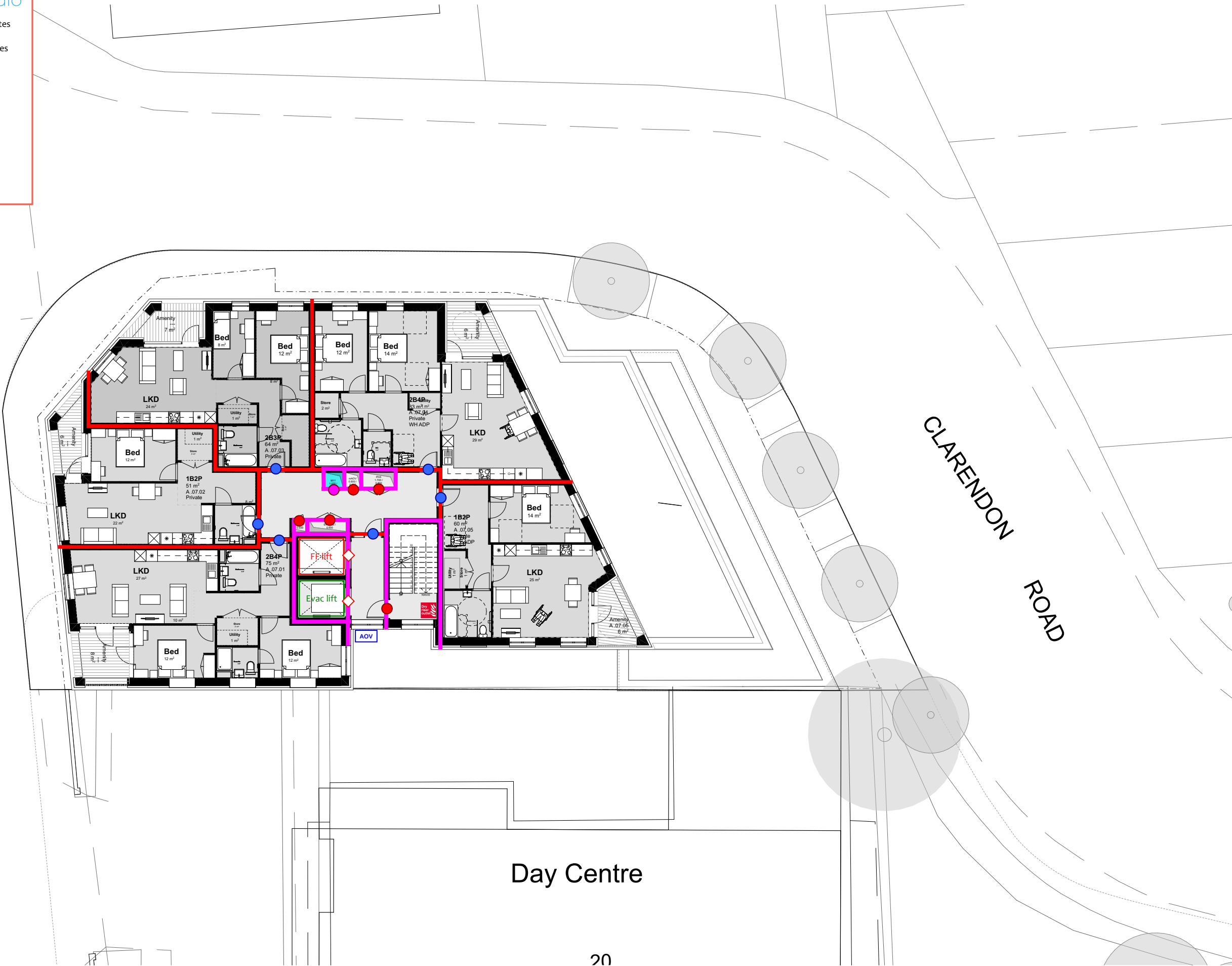
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
07_Seventh Floor

Project status
PLANNING

Scale 1:100@A1

CAD File 3572 - Buttons Factory_MainFile_221005.pln

Date created 21.09.22

Drawn AB

Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)107_P0 - WIP

SEVENTH FLOOR PLAN

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

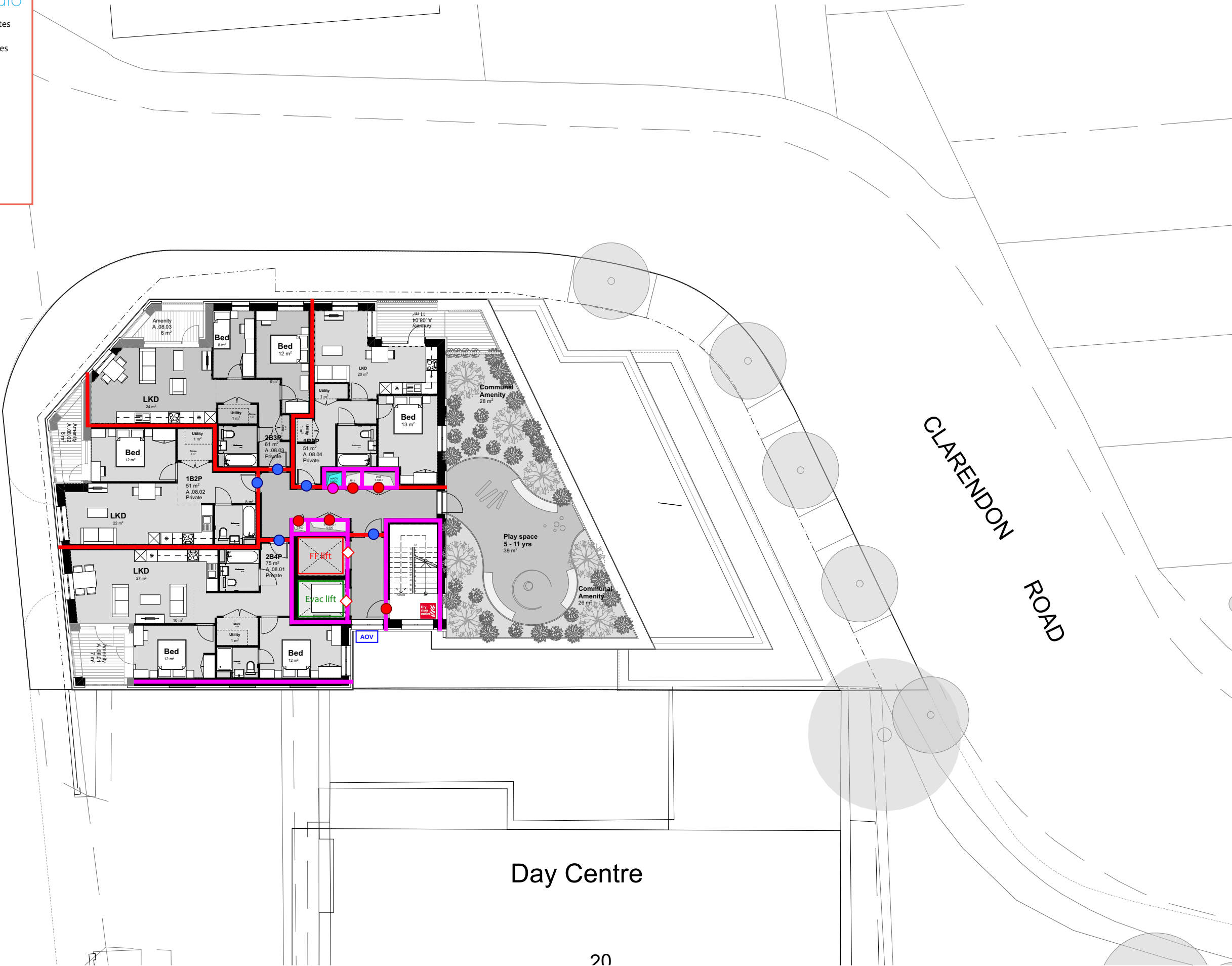
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

EIGHTH FLOOR PLAN

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
08_Eight Floor

Project status
PLANNING

Scale 1:100@A1
CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)108_P0 - WIP

- Fire resistance rating of 120 minutes
- Fire resistance rating of 60 minutes
- FD120S Fire door
- FD120 Fire door
- FD60S Fire door
- FD60 Fire door
- E60 Lift door
- FD30S Fire door

KEY:



APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

rev	date	description
P0 - WIP		

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
09_Ninth & Tenth Floors

Project status
PLANNING

Scale 1:100@A1
CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)109_P0 - WIP

NINTH FLOOR PLAN

Fire safety mark-ups v1.4

mu.studio

Fire resistance rating of 120 minutes

Fire resistance rating of 60 minutes

FD120S Fire door

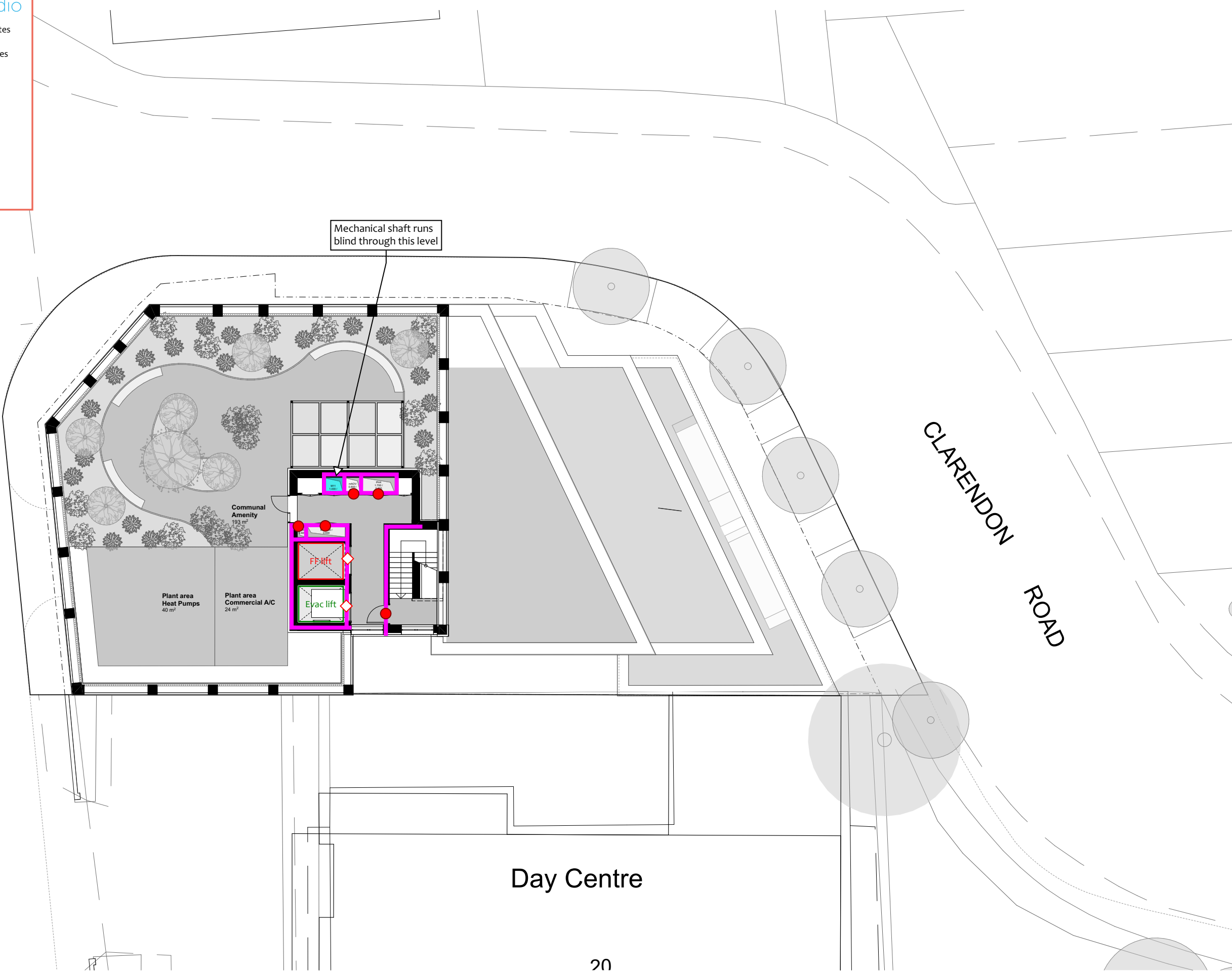
FD120 Fire door

FD60S Fire door

FD60 Fire door

E60 Lift door

FD30S Fire door



KEY:

N

0 1000 2000 3000 4000 5000mm

APPLICATION BOUNDARY - PSMG OWNERSHIP

OWNERSHIP BOUNDARY - PSMG OWNERSHIP

STUDIO

1B2P

2B3P

2B4P

3B5P

COMMERCIAL

SERVICES

Mixed tenures

Affordable Rent

Private + Intermediate

Rent + Intermediate

Private

P0 - WIP

Work in Progress

rev

date

Planning Submission

description

ROOF TERRACE PLAN

stock wool

The Pump House 19 Hooper Street
London E1 8BU 020 7264 8600
info@stockwool.co.uk

Client
Magic Living Ltd
Paul Simon Homes

Project
30-36 Clarendon Road, N8 ODJ
(Jessica Buttons Factory)

Drawing
11_Roof Terrace

Project status
PLANNING

Scale 1:100@A1
CAD File 3572 - Buttons Factory_MainFile_221005.pln
Date created 21.09.22
Drawn AB
Checked YUJW

Project no_Drawing no_Revision
3572_PL(20)111_P0 - WIP