100 Avenue Road

Fire Statement

February 2025

REGAL

100 Avenue Road, London, NW3 3HF AF4517

Client	Regal Avenue Road Limited	Issue	06
Project Name	100 Avenue Road, London, NW3 3HF		
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Authors	Oliver James Ryan BEng(Hons) AIFireE Graduate Fire Engineer		
Checked	Gabriel Risco BSc MSc MSc CEng MCIBSE MIFireE MSFPE - Associate		
Approved	Harry McDaid BSc BSc(Hons) CEng MCIBSE MIFireE MIEI Director		

1 Introduction

1.1 Background & purpose of this report

1.1.1 Ashton Fire has been commissioned by Regal Avenue Road Limited to provide fire safety consultancy services for the 100 Avenue Road development.

1.1.2 This report outlines the minimum fire safety provisions for the development along with the key fire safety challenges, highlighting risks and opportunities and ensures that the high-level design meets the functional requirements of the Building Regulations 2010 (as amended).

1.1.3 This concept fire safety strategy has been prepared to support the Section 73 Amendment Application. This document is specific to RIBA Stage 2, and as such it is a high-level outline document only and is not intended to be used for the Building Regulations application.

1.2 Fire safety guidance

1.2.1 The fire strategy has been developed to satisfy parts B1 – B5 of The Building Regulations 2010, as summarised below:

- B1 – Means of warning and escape - The building shall be designed and constructed with adequate fire warning systems and safe, effective escape routes to a secure location at all times.
- B2 – Internal fire spread (linings) - To limit fire spread within the building, internal linings must effectively resist surface flame spread and have a reasonable rate of heat release and fire growth if ignited.
- B3 – Internal fire spread (structure) - The building shall be designed and constructed to maintain stability for a reasonable period in the event of fire and prevent the unseen spread of fire and smoke within concealed spaces. Fire spread within the building shall be inhibited through fire-resistant sub-divisions.

- B4 – External fire spread - The building's external walls and roof shall effectively resist the spread of fire both within the building and to adjacent structures, considering the building's height, use, and position.
- B5 – Access and facilities for the fire and rescue service - The building shall be designed to provide adequate facilities for firefighters to protect life, and the site shall allow fire appliances to access the building.

1.2.2 Compliance with B1-B5 will be achieved primarily through adherence with Approved Document B Volume 1 (ADB), and the codes of practice referenced therein for the residential areas. For the non-residential areas (e.g. commercial and community spaces), guidance within BS 9999 has been followed.

1.2.3 Where strict adherence with ADB / BS 9999 may conflict with the wider aspirations for the proposed development, alternative design solutions are proposed. Such departures from the standard design guidance are identified and solutions described herein. In accordance with the fire safety engineering principles detailed in the BS 7974: 2019 codes of practice, all fire precautions are determined based on there being one seat of fire.

1.2.4 The proposed route to compliance with Requirement B1 is described in Sections 4, 5, 6 & 7. A high-level summary of items required to comply with B2-B4 is provided in Section 3.3, which require further development at the next design stage. The proposed route to compliance with Requirement B4 & B5 is described in Section 8 and Section 9 respectively.

1.2.5 A separate qualitative design review (QDR) will be developed at the next stage of the design for the tower block, given the uncommon building situation by nature of being very tall (>50m), to identify challenges and complexities and set out proposed approaches to address them in subsequent design stages. The QDR is also intended to establish whether the recommendations in ADB are appropriate or whether additional measures are required to achieve an adequate level of safety.

1.3 The London Plan 2021

1.3.1 The London Plan sets out various planning requirements to be applied to new and refurbished buildings. It contains relevant policies for fire safety that are considered further within this report, such as Policy D5 and Policy D12.

1.3.2 Policy D5 states that the integration of inclusive design principles is essential to ensuring that fire safety measures accommodate all building users, including those with disabilities and mobility impairments. Development proposals should:

- Be designed taking into account London's diverse population.
- Provide high quality people focused spaces that are designed to facilitate social interaction and inclusion.
- Be convenient and welcoming with no disabling barriers, providing independent access without additional undue effort, separation or special treatment.
- Be able to be entered, used and exited safely, easily and with dignity for all
- be designed to incorporate safe and dignified emergency evacuation for all building users. In all developments where lifts are installed, as a minimum at least one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building.

1.3.3 Policy D12 states, in the interest of fire safety and to ensure the safety of all building users, all developments proposals must achieve the highest standards of fire safety and ensure that they:

- Identify suitably positioned, unobstructed outside space:
    - For fire appliances to be positioned on.
    - Appropriate for use as an evacuation assembly point.
- Are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire; including appropriate fire alarm systems and passive and active fire safety measures.
- Are constructed in an appropriate way to minimise the risk of fire spread.
- Provide suitable and convenient means of escape, and associated evacuation strategy for all building users.
- Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in.
- Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.

1.3.4 100 Avenue Road is a major development and therefore, the proposals should be submitted with a Fire Statement. The Fire Statement is fully integrated within this fire strategy. This fire strategy has been prepared to demonstrate how the requirements of the London Plan D5 & D12 have been satisfied. Information is also contained in other design documentation which should be read in conjunction with this report. D5 and D12 requirements are:

- The building's construction: methods, products and materials used, including manufacturers' details.
- The means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach.
- Features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans.
- Access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and position of equipment, firefighting lifts, stair and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these.
- How provision will be made with the curtilage of the site to enable fire appliances to gain access to the building.
- Ensuring that any potential future modification to the building will take into account and not compromise the base build fire safety / protection measures.

1.3.5 This document has been prepared in line with the above items and is deemed suitable to be adopted as the Fire Statement that is referenced in Policy D12 of the London Plan. However, as this document is intended to serve as strategic guidance, detailed design information such as the methods of construction or the selection of specific products will not be included within this document and can be obtained from other members of the design team.

1.3.6 In accordance with Policy D5 (Inclusive Design) of the London Plan, safe and dignified emergency evacuation is required to be incorporated into the building for all building users. As the building will have passenger lifts installed, the aforementioned policy stipulates that the lifts should be suitably sized for evacuation.

1.3.7 Fire evacuation lifts and associated provisions will be appropriately designed and constructed and include the necessary controls suitable for the intended purposes. Furthermore, the operation of the lifts will be supported by appropriate management procedures. The end client will need to understand and provide a suitable management plan for the evacuation lifts within the building.

1.3.8 This document is a performance-based strategic document which is used to inform other members of the design team. As such, when reviewing the Policy D12 requirements, this document should be read in line with other supporting documentation produced by other members of the design team.

1.3.9 The relevant experience of the authors and reviewers of this document are indicated in Table 1 below.

Table 1 - Qualifications and relevant experience

Name	Role	Academic qualifications	Membership of professional bodies	Relevant experience
Oliver Ryan	Graduate Fire Engineer	BEng (Hons) Mechanical Engineering	Associate Member of the Institution of Fire Engineers (AIFireE)	Degree in engineering and over a years' experience developing fire strategies for a range of building types.
Harry McDaid	Director	BSc in Architectural Technology BSc(Hons) Fire Safety Engineering	Chartered Engineer with the Engineering Council (CEng) Member of the Chartered Institution of Building Services Engineers (MCIBSE) Member of the Institution of Fire Engineers (MIFireE) Member of Engineers Ireland (MIEI)	11 years developing fire strategies for non-residential and residential buildings, including high-rise buildings. Fire Engineering Council Member of the Fire Industry Association (FIA)
Gabriel Risco	Associate	BSc Civil Engineering MSc in Fire Safety Engineering MSc in Management	Chartered Engineer with the Engineering Council UK (CEng) Member of the Chartered Institution of Building Services Engineers (MCIBSE) Member of the Institution of Fire Engineers (MIFireE) Member of Society of Fire Protection Engineers (MSFPE)	Seven years' experience in the design of fire strategies for large residential developments and high-rise buildings.

1.4 Referenced information

1.4.1 This document is based on information provided by Cartwright Pickard to Ashton Fire, summarised below in Table 2 overleaf. Additional contradictory information or subsequent design variations to the information supplied may render the findings and recommendation of this report invalid.

Table 2 – Referenced information

Description	Reference	Revision / Date	Author
Basement Floor Plan	1016-CPA-ZZ-B1-DR-A-0299	P18/ 31.01.25	Cartwright Pickard
Ground Floor Plan	1016-CPA-ZZ-00-DR-A-0200	P21/ 31.01.25	
First Floor Plan	1016-CPA-ZZ-01-DR-A-0201	P12/ 31.01.25	
Fourth Floor Plan	1016-CPA-ZZ-04-DR-A-0204	P05/ 31.01.25	
Fifth Floor Plan	1016-CPA-ZZ-05-DR-A-0205	P08/ 31.01.25	
Sixth Floor Plan	1016-CPA-ZZ-06-DR-A-0206	P14/ 31.01.25	
Seventh Floor Plan	1016-CPA-ZZ-07-DR-A-0207	P08/ 31.01.25	
Eighth Floor Plan	1016-CPA-ZZ-08-DR-A-0208	P04/ 31.01.25	
Thirteenth Floor Plan	1016-CPA-ZZ-13-DR-A-0213	P09/ 31.01.25	
Twenty-First Floor Plan	1016-CPA-ZZ-21-DR-A-0221	P06/ 31.01.25	
Twenty-Fifth Floor Plan	1016-CPA-ZZ-25-DR-A-0225	P05/ 31.01.25	
Twenty-Sixth Floor Plan	1016-CPA-ZZ-26-DR-A-0226	P06/ 31.01.25	
North-West Elevation - Eton Avenue	1016-CPA-ZZ-ZZ-DR-A-0602	P08/ 31.01.25	
South-West Elevation – Avenue Road	1016-CPA-ZZ-ZZ-DR-A-0600	P10/ 31.01.25	
South-East Elevation – Park Walkway	1016-CPA-ZZ-ZZ-DR-A-0603	P08/ 31.01.25	
North-East Elevation – Open Space	1016-CPA-ZZ-ZZ-DR-A-0601	P07/ 31.01.25	

2 Project description

2.1 General

2.1.1 The project will comprise the development of two residential-led blocks, where the basement is existing and will be retained from the previous building. The tower block will be primarily residential in use with the exception of a retail unit at ground, whereas the lower block will be residential-led, with an element if community space spanning across multiple floors, and commercial/ retail accommodation at ground floor. A further external amenity space will be located on the seventh floor of the lower block. The tower block will consist of 27 storeys (B, G+25) and will house two cores, while the lower block will have 9 storeys (B, G+7) and will make use of three cores.

2.1.2 The tower block will have an approximate footprint of 586m^2 and a top storey height of more than 50m, while the lower block will have an approximate footprint of 1,559m^2 and a top storey height of more than 18m. There will be no increase in the building envelope in the section 73 application from that of the extant permission.

2.1.3 Further information on the proposed uses of each level is given in the table below:

Table 3 – Summary of the development

Block	Storeys	Top floor height (m)	Use
Tower	27 (B, G+25)	>50m	1 to 3 single-storey flats on levels 01 to 25. Amenity spaces at level 25. Retail unit and reception at ground level. Resident amenity, amenity plant, car park, cycle stores, market sale BoH and refuse at basement.
Lower	9 (B, G+7)	>18m	1 to 3 single-storey flats on levels 01 to 07. Community Space at basement and level 05-07. External community and residential terrace at level 06. Reception/ entrance halls, refuse, retail at ground floor. Plantrooms, car park, cycle stores at basement.

2.1.4 100 Avenue Road was granted implemented permission via appeal on 18th February 2016. It has been subjected to further scheme amendments facilitated under Section 96a of the Town & Country Planning Act (1990) (As Amended). A summary of the amendments to the implemented permission as per the crib sheet are:

- Introduction of a second staircase and updated floor plans which meet the latest Building Regulations;
- Residential units provided for sale, rather than as a build to rent product;
- An increased number of homes, of both 'Market for Sale' and 'Affordable' tenures, within the approved massing envelope;
- Provision of 35% affordable homes, on a GIA sqm and habitable room basis, to meet Camden's needs;
- High quality residential accommodation delivered to meet the latest standards, including 90% M4(2) and 10% M4(3) units, across a mix of tenures and unit sizes;

- Provision of Community Space, to meet the needs of a variety of potential operations.
- Improved building frontages with a dedicated community entrance and contextual public realm to address areas adjacent to the Site;
- Rationalisation and retention of Class E uses, with active frontages where possible;
- An MEP strategy which meets adopted London Plan policy requirements;
- An updated facade design to meet the latest Approved Document O Overheating requirements;
- A more contextual facade strategy which illustrates high quality and buildability; and
- Improved public realm proposals and maximising greening opportunities.

3 Fire safety systems – All Areas

3.1 Introduction

3.1.1 The fire strategy for the development will be supported by fire safety systems in line with ADB and BS 9999 guidance and where required, specific fire safety systems to support a tailored fire engineered solution.

3.1.2 The systems are categorised into active and passive fire safety system. A description of the minimum requirements across the building is detailed in the following sections.

3.2 Active fire safety systems

3.2.1 The main active fire safety systems are summarised in Table 4 below. These items are not exhaustive and additional fire safety provisions may be required as the design progresses in support of the architectural proposals.

Table 4 – Minimum active fire safety systems summary

Fire safety system	Description
Fire detection and alarm system	A grade D category LD1 system conforming to BS 5839-6 within flats.
	L5 system conforming to BS 5839-1 within communal corridors/lobbies.
	Category L2(M) system conforming to BS 5839-1 within the areas ancillary to the residential use (e.g. amenity spaces, store rooms, plantrooms), the car park, the retail unit, café, client lounge, business suite, amenity spaces and community space.
Evacuation alert system	An evacuation alert system in accordance with BS 8629 will be provided, to support the fire service during firefighting and rescue operations and facilitate early evacuation of the building should it be deemed necessary.
Sprinkler system (1)	Category 4 sprinkler system conforming to BS 9251:2021 for residential areas.
	Category OH1 within the café, client lounge, business suite, amenity spaces greater than 100m^2 in area, retail and community space. Category OH2 for the car park, plantrooms and other similar higher risk spaces / ancillary areas. The amenity spaces on the upper floors will need to be limited to 100m^2 in floor area to omit the need of an OH3 system as recommended in Annex E of BS EN 12845.
Smoke ventilation / control system (2)	1.0m^2 AOVs at the head of each staircase.
	Lobbies serving the residential stairs and associated evacuation lifts should be provided with an inlet air shaft achieving a clear area of 1.0-1.2m^2.
	Corridors serving flats or protected lobbies connecting cores to ancillary areas should be provided with a mechanical smoke ventilation system, typically with a cross-sectional area of 1.0-1.2m^2. The exact dimensions should be confirmed by CFD modelling. Further design amendments and coordination are required to provide mechanical ventilation to residential corridors and lobbies adjoining the residential aspects and community space.

Fire safety system	Description
	The car park should be provided with a mechanical smoke ventilation system. This system is to be designed in accordance with BS 7346-7. Where EVs are provided, further consideration of the smoke ventilation (and sprinkler system) may be required at subsequent design stages.
	Rooms located in the basement and lower ground level should too be provided with a mechanical extract system. This system is to be designed to achieve a minimum of 10 ACH. The mechanical smoke extract system should be supported by a sprinkler system conforming to BS EN 12845.
	Refuse store lobbies will be provided with a minimum of 0.2m^2 of permanent ventilation where they connect internally to other areas of the building. The ventilation provision will need to be increased as indicated above, if the refuse store lobbies connect to firefighting shafts, escape stairs or evacuation lift lobbies.
Emergency voice communication systems	Type A and B emergency voice communication systems in accordance with BS 5839-9 should be provided in the tower block due to the building height. While only a Type B emergency voice communication will be provided in the lower block. Type A systems should be provided to support communication for firefighters in the event that the fire service communications system is disrupted due to the distance between storeys. The Type B system allows occupants of the protected refuge to communicate with the fire service at ground level. These should be located in each evacuation lift lobby (residential areas) and within the protected stairs or their associated lobbies (non-residential areas).
Evacuation lifts Firefighting lifts	The tower block should be provided with at least two hybrid lifts (designed for both firefighting and evacuation). The lower block will be provided with four lifts, with at least the one serving the community sspace acting as a hybrid lift, and at least two of the remaining three serving as a firefighting and evacuation lift, and the other as an evacuation lift. Evacuation lifts should be designed and installed in accordance with the relevant provisions of BS EN 81-20 and BS EN 81-70 and should be provided with a secondary power supply. A type 2 evacuation lift car is recommended, as outlined in Table 3 of BS EN 81-70. Consideration should be given to undertaking an escape capacity assessment by the vertical transport consultant in subsequent design stages. Firefighting lifts should be designed and installed in accordance with BS EN 81-20 and BSN EN 81-72.
Secondary power supply	All life safety systems should be provided with a secondary power supply via a generator or from a secondary substation which is on a separate HV main.

Fire safety system	Description
Isolating switches and EV risks	If EV parking is offered isolating switches should be provided for the fire service to disconnect the charging points located in the basement and lower ground car park from the main supply. Consideration should be given to an automatic cut-off switch linked to the automatic detection system. In subsequent design stages consideration should be given to further precautions that might need to be taken to mitigate the effects of fire or smoke as a result of thermal runaway or cell rupture, which can release toxic gases, heat, and smoke, leading to potential re-ignition even after flames appear extinguished.
Emergency lighting	Emergency lighting will be installed in accordance with the recommendations of BS 5266-1, BS EN 1838 and BS EN 60598-2-22. It will also illuminate a safe exit route including fire exits, fire alarm call points, changes in level or direction and firefighting equipment.
Fire safety signage	Fire safety signs will be installed where necessary (common areas and ancillary spaces) to provide clear identification of fire precautions, fire equipment and means of escape in the event of 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, BS 5499-4 and BS 5499-10.
Note 1: The design of the sprinkler system should be undertaken by a sprinkler specialist. Note 2: Mechanical smoke ventilation systems will be supported by CFD modelling, which will be carried out in subsequent design stages.	

3.3 Passive fire safety systems

3.3.1 The main passive fire safety systems are summarised in Table 5. The items listed in table below are not exhaustive and additional fire safety provisions might be required as the design progresses in support of the architectural proposals.

Table 5 - Minimum passive fire safety systems summary

Fire safety system	Description
Structural fire resistance	All loadbearing elements of structure are to achieve a minimum of 90 minutes and 120 minutes structural fire-resistance for the lower block and tower block respectively. Further analysis should be undertaken in subsequent stages to confirm the suitability of this minimum fire-resistance.
Compartmentation and fire-resisting construction	All floors (including roofs designed as amenity spaces or supporting heavy plant equipment) are to be constructed as compartment floors achieving the same level fire resistance as the structure (90/120 minutes REI). Further analysis should be undertaken in subsequent stages to confirm the suitability of this minimum fire-resistance.
	All shafts (including stairs, lifts and service risers) passing through compartment floors should maintain compartmentation between levels, and thus be designed as protected shafts enclosed in 90-minutes and 120-minute fire resisting construction for the lower block and tower block respectively.

Fire safety system	Description
	The car park, retail unit, client lounge and business suite should be separated from the remainder of the tower block via 120-minute fire-resisting construction. The retail area and community space should be separated from the remainder of the lower block via 90-minute fire-resisting construction. Flats will be separated from each other and from the common corridors or amenity spaces by 60-minute compartment walls.
	Refuse stores will be enclosed in 90-minutes and 120-minutes fire-resisting construction in the tower block and lower block respectively.
	Any rooms containing life safety equipment should be enclosed in 120-minute fire-resisting construction.
	Plant rooms and store enclosures will be enclosed in a minimum of 60 minutes (REI) or 30 minutes fire resisting construction, depending on their use and associated risk, unless adjoining a wall needing to achieve a higher fire resistance.
	Fire and smoke curtains in the lower block will be 120-minute fire rated.
Roofs & terraces	Roof coverings should be specified to achieve a B_{ROOF}(t4) classification.
External walls and balconies	All external walls should be constructed of materials achieving a European classification A2-s1, d0 or class A1 in accordance with BS EN 13501-1 to meet the requirements of Regulation 7(2), unless exempt under Regulation 7(3).
Cavity barrier	Cavity barriers should be provided to enclose the edges of cavities, including around openings (e.g. windows/doors, service penetrations and ventilation ducts opening within an external cavity wall). Cavity barriers will also be provided at the junction of an external or internal cavity wall and every compartment wall and compartment floor and in line with Section 8 of ADB Vol.1. Furthermore, cavity barriers should be provided to sub-divide extensive cavities, such that they do not exceed 20 m in any direction.
Fire stopping	Openings in fire resisting walls and floors are expected to be fire-stopped to the same rating as the wall/floor through which they pass, including all relevant openings for pipes, ducts and conduits for cables. Fire stopping should be by means of proprietary fire stopping shown by test to achieve the required performance for the intended use and in line with Section 9 of ADB Vol.1 and Section 10 of ADB Vol.2.

4 Means of escape

4.1 Evacuation strategy

4.1.1 A 'stay-put' strategy will be implemented in all residential units, whereby, in the event of a flat fire, only the unit of fire origin will receive a signal to evacuate. No other flats will receive an alert notification, though should residents become aware of a fire they may leave the building if they wish to do so. The fire service may initiate a further evacuation of specific 'zones' if deemed necessary by means of the evacuation alert system.

4.1.2 The non-residential areas are to operate a simultaneous evacuation strategy, whereby only the affected area of the building will evacuate upon activation of the fire alarm system, sprinkler flow valve or actuation of a manual call point.

4.1.3 For the commercial space, it is understood that this shall be principally used as a youth centre for 5–7-year-olds. Staffing levels shall be 1:8 and regular training drills will be carried out to ensure all occupants, including children and any parents are familiar with the evacuation requirements. A robust fire safety management plan shall be in place for the community centre which shall set out the minimum staffing levels and fire drill requirements.

4.1.4 Where children under the age of 5 are within the community centre, it is required that they are always accompanied by a parent.

4.1.5 The cause and effect of the detection and alarm system will be further developed in subsequent design stages.

5 Means of Escape – Residential & Basement Areas

5.1 Horizontal means of escape – Apartments

5.1.1 The blocks will comprise single-storey flats provided with a protected entrance hall enclosed in 30-minute fire resisting construction, and the maximum travel distance within the entrance hall will not exceed 9m (Diagram 3.2 of ADB Vol.1).

5.1.2 The blocks will also comprise open plan flats which are not consistent with guidance contained within ADB Vol.1. However, the open plan flats are considered acceptable on the basis that:

- The maximum dimensions of an open plan flat will not exceed 16m x 12m, or 192m^2 in floor area;
- All flats will be provided with an automatic fire detection and alarm system to a category LD1 standard in accordance with BS 5839-6;
- Cooking facilities will be sited remote from the escape route (minimum 1.8m away from a 0.9m wide route); and
- All flats will be provided with a sprinkler system designed in accordance with BS 9251.

5.1.3 The design is also substantiated by further research carried out by the BRE and commissioned by the NHBC Foundation on open plan flat design – NF19 (NHBC, 2009) and Hopkin et al.

5.2 Private balconies and terraces

5.2.1 Private balconies and terraces will be designed in accordance with the supplementary guidance in Annex D of BS 9991. Balconies more than 4.5m above ground will meet the following recommendations:

- The escape route from the balcony will not pass through more than one access room.
- The interior of the access room will be visible from all parts on the balcony unless provided by an automatic fire detection and alarm system.
- Any cooking risks within the access room will be enclosed in fire resisting construction unless:
    - the open cooking risk is remote from the balcony escape route (i.e. 1.8m away); and
    - An automatic fire detection and alarm system in accordance with BS 5939-6 is provided to the access room with sounders or visual beacons provided on the balcony/ podium.
- Where the maximum travel distance from the balcony access door to the furthest point on the balcony exceeds 7.5m either a separate exit into a different room will be provided or automatic smoke detection will be provided within the access room.

5.2.2 Balconies less than 4.5m above ground will either be provided with escape doors or windows or meet the recommendations in para. 5.2.1 above.

5.2.3 All balconies will be guarded by a protective guarding conforming to BS 6180 (BSI, 2011).

5.2.4 Terraces provided with a single directional escape route which are open to external air will have a travel distance limited to 45m. The maximum occupancy will not exceed 60 persons, and a simultaneous evacuation regime will be implemented from the terrace space.

5.2.5 Terraces provided with multiple directions of escape which are open to external air are not limited in terms of travel distances, but all areas will be within 60m from a fire main outlet measured on a hose laying route.

5.3 Horizontal means of escape – Common residential areas

5.3.1 Escape from each residential flat will be via ventilated communal corridors connecting to ventilated lobbies serving the evacuation lift and escape stairs. Disabled occupants making their escape will be expected to seek refuge within the lift lobby whilst waiting for the lift car to arrive. Therefore, the lift lobbies will be provided with the same level of protection as the escape stairs and each adjoining residential corridor is provided with a smoke ventilation system.

5.3.2 Travel distances within the residential communal areas are limited to 7.5m in a single direction and 30m where escape is available in more than one direction. Where these distances are exceeded, additional smoke shafts have been provided.

5.3.3 Extended travel distances will be supported with an engineered design solution, following the recommendation set out in the Smoke Control Association (SCA) guide. CFD modelling will be required to support this arrangement. This will be carried out at the next stage.

5.4 Horizontal means of escape – Basement & Ancillary Areas

5.4.1 The ancillary and non-residential spaces at basement level will be provided with access to two protected stairs and three evacuation lifts, all discharging directly to outside at ground level.

5.4.2 The ground floor spaces will generally have access directly to outside. The client lounge and business suite at Level 01 and the amenity space at level 25 will be provided with two protected stairs and evacuation lifts discharging directly to outside.

5.4.3 Areas served by a single exit will not accommodate more than 60 persons. Where multiple exits are available, the largest exit will be discounted when estimating the total available exit capacity, assuming that it is blocked by a fire.

5.4.4 Based on the maximum occupancy estimated of less than 60 people per room in the basement and ancillary areas, a single exit of 850mm will suffice.

5.4.5 Accessibility requirements are outside of the scope of this report, and it should be noted that wider corridor or doorways may be required to satisfy the requirements of Part M of the Building Regulations. Further guidance is given in Approved Document M (ADM).

5.4.6 Travel distances when measured to a storey exit or final exit should be within the acceptance limits listed in Table 6 overleaf, reproduced from ADB Vol.2.

5.4.7 The travel distances below apply where the internal layouts are known (e.g. partitions, fitting, etc.). Where the layouts are unknown (e.g. shell-and-core design), the direct travel distances should be taken as two thirds of these limits.

Table 6 – Travel distance limitations – Basement Area

Purpose group/area	Recommended maximum travel distance	
	Single direction	Multi-directional
Group 3 – 'Office'	18	45
Group 5 – 'Assembly and recreation' (i.e. amenity space in the residential areas)	18	45
Group 7(b) – 'Storage and non-residential' (normal hazard – i.e. car park & cycle store)	25	45
Place of special fire hazard and refuse stores	12	25
Plant room or rooftop plant: - distance within room - escape route not in open air - escape route in open air	 9 18 60	 35 45 100

5.5 Vertical means of escape

5.5.1 Escape from single storey flats on the upper levels will be facilitated by protected stairs, which connect to the ventilated lift lobbies on each level and discharge directly to outside through fire sterile corridors or lobbies at ground.

5.5.2 Firefighting stairs, stairs serving storeys more than 18m above ground level and stairs serving assembly and recreation areas (e.g. community centre) should achieve a clear width of 1,100mm as a minimum.

5.5.3 Given an evacuation alert system will be provided, there is a potential for a full building evacuation. Considering the limited number of occupants per floor and the number of stairs provided, the proposed arrangements are considered acceptable from a vertical escape capacity perspective if a simultaneous evacuation where to occur.

5.6 Evacuation of mobility impaired persons

5.6.1 The evacuation of mobility impaired persons (MIP) should be facilitated through use of lifts suitable for evacuation. Each residential stair will be provided with an associated evacuation lift.

5.6.2 Refuge areas are to be provided within the protected stair lobbies on all floors to support MIP evacuation. Refuge areas will have a minimum dimension of 900 x 1400mm and will be provided

with Type B outstations in accordance with BS 5839-9: 2021, allowing occupants to communicate with the building management team. In case of non-residential areas, the refuge space should not encroach onto the clear escape route of the lobby or stair.

5.6.3 Evacuation shafts will be designed to adequately protect the evacuation lift and associated lobby in accordance with the recommendations of the ADB Vol.1 2024 amendments:

- Provide a protected refuge space within a protected lobby in front of the lift and the escape stairs;
- Provide a smoke control system in the adjoining internal corridors to the lift lobby. This system is designed to protect the lobby from the ingress of smoke and ultimately ensure adequate tenability within the lobby is maintained;
- Provide a smoke shaft within the lobby to be used as fresh air inlet for the extract system within the corridor. This will also facilitate the removal of any small quantities of smoke entering the lobby during the initial means of escape phase; and
- By adequately protecting the refuge lobby / lift lobby, the stair and lift shafts will also be appropriately protected from the ingress of smoke.

5.7 Final exits and onward escape

5.7.1 Travel beyond the building final exits must be away from the building, towards a place of safety, and not be jeopardised by unprotected openings of the building.

5.7.2 In general, the building will be provided with escape routes, upon exiting the building that are either directly away from the building, have alternate path along the building façade or have alternative exits via a second stair or alternative exits at different levels.

5.7.3 Where the external escape route continues in a single direction along the façade, the external wall adjoining the escape routes will have a minimum of 30 minutes fire resistance (integrity and insulation).

5.7.4 Final exits will avoid outlets from basement smoke vents and openings to transformer chambers, refuse chambers, boiler rooms and similar risks.

5.7.5 Final exits will not present a barrier for disabled people. Where the route to a final exit does not include a stair, a level threshold and, where necessary a ramp will be provided.

6 Means of Escape – Community Space

6.1 Design occupancy

6.1.1 For the Community Space, it is understood that this shall be principally used as a youth and community centre, with the majority of children and young people aged 5-16 years old. Staffing levels will align with the requirements set by Ofsted Early Years where Ofsted regulated services are provided. In general, for children under eleven, the staffing ratio will be 1:8, and for children over eleven, it will be 1:10, depending on staff qualifications. For children under five, the staffing ratio will be 1:5. Regular training drills will be carried out to ensure the safety of all occupants, given the young age group and varying staffing ratios.

6.1.2 Where children under the age of five are within the community centre, it is required that they are always accompanied by a parent or carer.

6.1.3 The below table sets out the maximum occupancy that can be accommodated based on the current design arrangements. Note: The community centre shall need to ensure that these occupancies are not exceeded at any time.

Table 7 - Estimated design occupancy – Community Space

Floor	Number of exits	Exit Widths	Sizing Factor	Occupancy (1) (2) (persons)
Level 7	2	<1050mm each	4.1mm/person	121
Level 6	2	<1050mm each	4.1mm/person	121
Level 5	2	<1050mm each	4.1mm/person	121
Ground	2	<1050mm each	4.1mm/person	121
Basement	1	<1050mm	4.1mm/person	60

Note:

1) Any rooms / terraces on a floor plate with a single door access/egress arrangement shall be limited to 60 people at any one time.
2) The total maximum occupancy of all upper floor levels at any one time is summarised in section 6.4.2.

6.2 Design Parameters

Risk Profile

6.2.1 The community space shall be designed in accordance with the guidance set out in BS 9999. In accordance with BS 9999, risk profiles are required to establish the fire safety provisions required for the space.

6.2.2 Risk profiles are a function of the occupancy characteristics and the fire growth rate. The risk profiles for the relevant areas are given below. It should be noted that the risk profiles have been reduced by 1 given the provision of sprinklers throughout the building.

- Public Access Areas / Community Centre – B2
- Back of house, storage and plant areas – A2

Travel Distance

6.2.3 The maximum travel distances based on the risk-profiles identified above are given in the table below:

Table 8 – Travel distances – Amenity and BOH areas

Risk Profile	Single Direction		Multiple Direction	
	Direct	Actual	Direct	Actual
A2	15m	22m	37m	55m
B2	13m	20m	33m	50m
Note: 1) Where the layout is unknown, the actual distances should be used.				

Sizing Factors

6.2.4 The required width of exits and stairs will also be calculated using sizing factors given within BS 9999. The sizing factors are based on the risk profile for the relevant areas. The necessary sizing factors are summarised in the table below. The most conservative factors have been used for the purpose of this report.

Table 9 – Sizing Factors – Amenity and BOH areas

Risk Profile	Doors, corridors & escape routes (mm/person)	Stairs (mm/person)
		Serving 3 floors
A2	3.6	N/A
B2	4.1	3.4 (1)
Note: 1) The community center is located on levels 5, 6 and 7. The stair serving the community space serves all levels below. However, for conservative purposes, the stair sizing factor is assumed to serve 3 storeys only.		

6.3 Horizontal Means of Escape

6.3.1 The maximum number of people permitted on a storey at any one time has been calculated using the exit width provided. This is shown in Table 7 above.

6.4 Vertical Means of Escape

6.4.1 The maximum occupancy on each upper floor levels (Levels 5, 6 and 7) is given in Table 7 above. However, the maximum occupancy that can be simultaneously located on the upper floor levels at anyone time is restricted based on the available stair width.

6.4.2 The stair widths provided are 1200mm, and utilising a sizing factor of 3.4mm per person results in a maximum upper floor capacity of 352 people. Management arrangements shall need to be in place to ensure the overall maximum capacity of the upper floor levels does not exceed 352.

6.4.3 The final exit from the stair needs to be at least as wide as the stair it serves.

Connection with Residential Areas

6.4.4 To provide an alternative means of escape from the community space on levels 5, 6 and 7, access will be provided to the adjoining residential core (see mark-ups in Appendix A for information).

6.4.5 It is acknowledged that this arrangement does not align with generic guidance recommendation. As such, an engineered solution is proposed to justify this connection. The principal points which summarise the justification are given below:

- The building is sprinkler protected throughout.
- It is impractical to provide additional stairs for the community space.
- The occupancy levels of the community space are very low given the limited floor areas.
- Residential cores (including the lobby areas) will be protected from smoke ingress by a mechanical smoke control system.
- CFD modelling will be carried out to demonstrate that a fire within the community space does not impact on the residential core areas. The modelling will be required at RIBA Stage 3.

6.4.6 The above proposals will require additional design development during RIBA Stage 3, as is standard, to refine and finalise the proposed fire-engineered solution.

Escape from Basement

6.4.7 At basement level, it is not possible for the community space to connect to the residential stair cores for an alternative means of an escape. The areas will be separated by compartment walls / floors with no internal communication at this level.

6.4.8 It is acknowledged that the single stair arrangement for basement does not align with generic guidance recommendations for the community space in so far as the stair serving the upper portions of the building continues down to serve the basement. As such, an engineered solution is proposed to justify a connection. The principal points which summarise the justification are given below:

- The building is sprinkler protected throughout.
- The occupancy levels of the community space are very low given the limited floor areas.
- The lobby serving the stair and lifts will be provided with a mechanical extract system on all levels. The purpose of this system is to prevent smoke ingress into the stairs.
- CFD modelling will be required to demonstrate that the stairs remain smoke free if a fire were to occur within the community space.

6.4.9 The above proposals will require additional design development during RIBA Stage 3, as is standard, to refine and finalize the proposed fire-engineered solution

Escape from Ground

6.4.10 The stairs and lift will discharge directly into a corridor which leads directly to the outside. The final exit widths will need to be at least the same width as the stair (1200mm).

6.4.11 Where connections to the ground floor reception area are proposed, fire and smoke curtains are being provided in lieu of ventilated lobbies. See Appendix A for information.

Evacuation Lifts

6.4.12 Evacuation lifts will be provided to the community space.

6.4.13 For the community space, the evacuation lift requirements are to be designed in accordance with Annex G of BS 9999.

6.5 Atria Requirements

6.5.1 A void connecting levels 6 and 7 of the community space is proposed. Given the floors are compartment floors, the void is considered as an 'Atrium'.

6.5.2 The following provisions are required as part of the atria design:

- A smoke reservoir equal to one storey height is to be provided at the head of the atria (note: this will be provided by active smoke curtains and glazing).
- Ventilation equivalent to 10% of the void area of the atrium base is required at the head of the atrium.
- Simultaneous evacuation of all areas within the community space is required.
- A minimum of an L2 detection and alarm system is required throughout the community space.

6.5.3 Given the atrium connects levels 6 and 7 only, the above provisions are considered acceptable for this arrangement.

7 Means of Escape – Retail Area

7.1 Design occupancy

Table 10 - Estimated design occupancy

Block/ Floor	Area	Floor area (m^2)	Floor space factor (m^2/person)	Occupancy (persons)
Lower Block/ Ground	Retail	930	2	465
Tower Block/ Ground	Retail	228	2	114

7.2 Design Parameters

Risk Profile

7.2.1 The retail areas shall be designed in accordance with the guidance set out in BS 9999. In accordance with BS 9999, risk profiles are required to establish the fire safety provisions required for the space.

7.2.2 Risk profiles are a function of the occupancy characteristics and the fire growth rate. The risk profiles for the relevant areas are given below. It should be noted that the risk profiles have been reduced by 1 given the provision of sprinklers throughout the building.

- Public Access Areas (retail) – B2

Travel Distance

7.2.3 The maximum travel distances based on the risk-profiles identified above are given in the table below:

Table 11 – Travel distances – Amenity and BOH areas

Risk Profile	Single Direction		Multiple Direction	
	Direct	Actual	Direct	Actual
B2	13m	20m	33m	50m
Note: Where the layout is unknown, the actual distances should be used.				

Sizing Factors

7.2.4 The required width of exits and stairs will also be calculated using sizing factors given within BS 9999. The sizing factors are based on the risk profile for the relevant areas. The necessary sizing factors are summarised in the table below. The most conservative factors have been used for the purpose of this report.

Table 12 – Sizing Factors – Amenity and BOH areas

Risk Profile	Doors, corridors & escape routes (mm/person)	Stairs (mm/person)
		Serving 1 floors
B2	4.1	N/A
Note: Where the layout is unknown, the actual distances should be used.		

7.3 Horizontal Means of Escape

7.3.1 The number of exits and the associated exit widths from each of the areas noted above is based on the numbers of occupants numbers given in Table 10 and the risk profiles / sizing factors in Table 12. The width requirement is summarised in the table below:

Table 13 – Horizontal Exit width requirements

Block/ Level	Risk Profile	Number of occupants	Sizing Factor	Number of storey exits provided	Width of storey exits
Lower Block/ Ground	B2	465	4.1	3	1050 mm each
Tower Block/ Ground	B2	114	4.1	2	850 mm each

7.3.2 All exits should be direct to the outside, where level changes occur, a ramp should be provided. Where it is not feasible to install ramps, refuge areas are required.

8 External fire spread

8.1 External wall construction – 'Relevant buildings'

8.1.1 To prevent the spread of flame across the external surfaces of the building, materials forming part of the external wall of the building should be specified in accordance with Section 10 of ADB Vol.1.

8.1.2 As the building will contain one or more dwellings, an institution or a room for residential purposes and will have a floor at a height greater than 18m above ground level, it will be classified as a 'relevant building' under Regulation 7(4) of the Building Regulations.

8.1.3 Regulation 7(2) requires that all materials which become part of an external wall or specified attachment achieve class A2-s1, d0 or class A1.

8.1.4 The building will comply with the requirements of Regulations 7(1) and 7(2), which state that:

- […] "(1A) building work shall be carried out so that relevant metal composite material does not become part of an external wall, or specified attachment, of any building."
- "(2) 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 the reaction to fire classification)."

8.1.5 In accordance with Regulation 7(3) the following items are exempt from Regulation 7(2):

- Cavity trays when used between two leaves of masonry.
- 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.
- Electrical installations.
- Fibre optic cables.
- Insulation and water proofing materials used below ground level or up to 300mm above that level.
- Intumescent and fire stopping materials where the inclusion of the materials is necessary to meet the requirements of Part B of Schedule 1.
- Membranes.
- Seals, gaskets, fixings, sealants and backer rods.
- Components associated with a solar shading device, excluding components whose primary function is to provide shade or deflect sunlight, such as the awning, curtain or slats.
- Thermal break materials where the inclusion of the materials is necessary to meet the thermal bridging requirements of Part L of Schedule 1.
- Window frames and glass.
- Materials which form the top horizontal floor layer of a balcony which are of European classification A1fl or A2fl-s1 (classified in accordance with the reaction to fire classification) provided that the entire layer has an imperforate substrate under it.

8.1.6 In addition to the recommendations set out by Regulations 7(1) and 7(2) above, the building will also comply with requirement B4 of the Building Regulations and the external walls of the building will meet the following recommendations:

8.1.7 Particular attention is drawn to the following points:

- Membranes used as part of the external wall construction above ground level will achieve a minimum of class B-s3, d0. Roofing membranes do not need to achieve a minimum of class A2-s1, d0 when used as part of a roof connecting to an external wall.
- As per Regulation 7(3), window frames and glass (including laminated glass) are exempted from Regulation 7(2). Window spandrel panels and infill panels 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. However, they will not span two compartments and will be limited in size to the minimum required to restrict the thermal bridging (the principal insulation layer is not to be regarded as a thermal break).
- Regulation 7(2) only applies to specified attachments. Shop front signs and similar attachments are not covered by the requirements of Regulation 7(2), although attention is drawn to the point below.
- While Regulation 7(2) applies to materials which become part of an external wall or specified attachment, consideration should be given to other attachments to the wall which could impact on the risk of fire spread over the wall.
- Any material achieving class A1fl or A2fl-s1 in accordance with BS EN 13501-1 is exempted when it meets both of the following conditions:
  - It forms the top horizontal floor layer of a balcony.
  - It is provided with an imperforate substrate under it which extends to the full size of the class A1fl or A2fl-s1 material.

8.2 Roof coverings

8.2.1 Roof coverings are recommended to be resistant to the spread of fire where either close enough to a boundary to be at risk of ignition from a fire in other buildings or where needed to avoid fire spread between compartments via the roof covering.

8.2.2 The relevant test and classification standard for the external fire performance of roof systems is BS EN 13501-5 (European class). If required, Table B2 of ADB Vol. 1 provides further information on the transposition to the BS 476-3 classification.

8.2.3 Roof coverings refer to a construction that can consist of one or more layers of material but does not refer to the roof structure as a whole.

8.2.4 All roof covering will be specified as achieving a class $B_{ROOF}(t4)$.

8.3 Space separation and unprotected areas of the façade

8.3.1 Should a fire occur in a building, heat will radiate through non-fire resisting openings in the external walls. This heat can be sufficient to set fire to nearby buildings and in order to mitigate the risk of external fire spread, ADB places limits on the area of the external elevation with no fire resistance, known as the unprotected area.

8.3.2 A full unprotected area calculation will be carried at the next design stage (RIBA Stage 3) to determine the amount of fire rated glazing / fire rating of external walls.

9 Fire service access and facilities

9.1 Vehicle access to and around the site

9.1.1 Fire service vehicle access must be provided as follows:

- Within 18 meters of each access point to the firefighting shafts.
- To cover 15% of the retail area on the ground floor.
- Within 18 meters of any inlet points (e.g., dry risers or wet riser tank replenishment inlet).
- Reversing distances for fire service vehicles must not exceed 20 meters. Turning facilities should be incorporated to ensure compliance with this distance requirement.

9.2 Access into and through the building

9.2.1 Firefighting shafts consisting of firefighting stairs, lifts and lobbies will be provided in both blocks.

9.2.2 Firefighting shafts should provide access to all floors they pass through. However, due to the unique design of the community space, where the stairs serve only the Basement, Ground, and Levels 5-7, it is proposed that the firefighting shafts be accessible only to these areas. This approach is deemed acceptable as the firefighting shafts within the residential areas will serve all levels. The unique stair arrangement in the community space justifies this provision.

9.2.3 Where buildings have a floorplate greater than 900m^2 in area or a top storey height greater than 18m, two separate firefighting shafts are required.

9.2.4 Maximum hose laying distances, measured from the fire main outlet to the most remote point should not exceed 45m.

9.2.5 Areas at ground floor accessible exclusively via perimeter doors located around the building elevation, should be covered by a maximum of a 45m hose laying route measured from a fire and rescue service vehicle to the most remote points in each room.

9.3 Fire Mains

9.3.1 All cores will be provided with a fire main in accordance with BS 9990, with outlets located at each level. Where the firefighting core is in a building with a top floor height exceeding 50m, wet rising mains will be required.

9.3.2 For buildings where the top floor height does not exceed 50m, dry rising mains will be required.

9.4 Water supplies

9.4.1 Hydrants, which should be specified in accordance with Section 14 of ADB Vol.1, will be required in the vicinity of the building to support firefighting operations. The location of any existing fire hydrants near the building should be investigated on-site and confirmed with the fire and rescue service. Additional hydrants will be required if both of the following apply to the building:

- It has a compartment with an area of more than 280m^2 and
- It is being erected more than 100m from an existing hydrant.

9.4.2 Any new hydrants will be located not more than 90m of the dry riser inlet.

9.4.3 Private hydrants will be designed and installed in accordance with BS 9990. All hydrants will have signage in accordance with BS 3251.

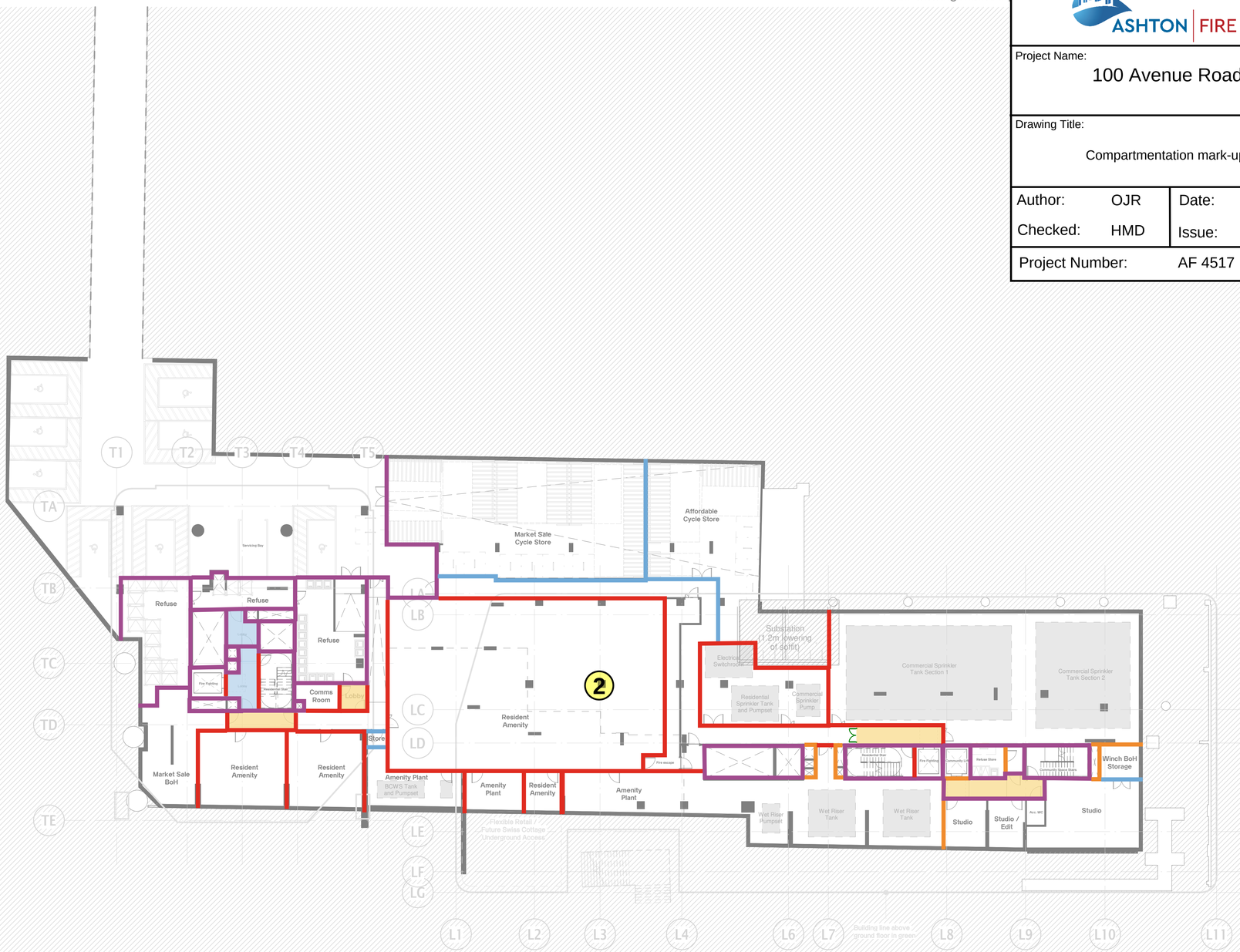
9.4.4 If new fire hydrants are to be installed, they will be included as part of a fire ring main system. They should preferably be sited immediately adjacent to roadways or hard-standing facilities suitable for

fire and rescue service appliances. To ensure that they remain usable during a fire, they should be sited with consideration of the effect that falling debris and other possible occurrences during a fire might have on the continuing viability of the location and as such will be sited not less than 6m from the building.

10 Conclusion

10.1.1 The provisions outlined in the sections of the report, once further developed by the design team, are expected to achieve an adequate level of safety and ultimately satisfy Building Regulations. The inclusion of evacuation lifts for MIPs aligns with Approved Document D5, and contemporary industry guidance has been adopted to ensure the highest possible standard of fire safety in accordance with D12.

APPENDIX A FIRE SAFETY MARK-UPS



ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Basement Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P18

Drawing No.
1016-CPA-ZZ-B1-DR-A-0299

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1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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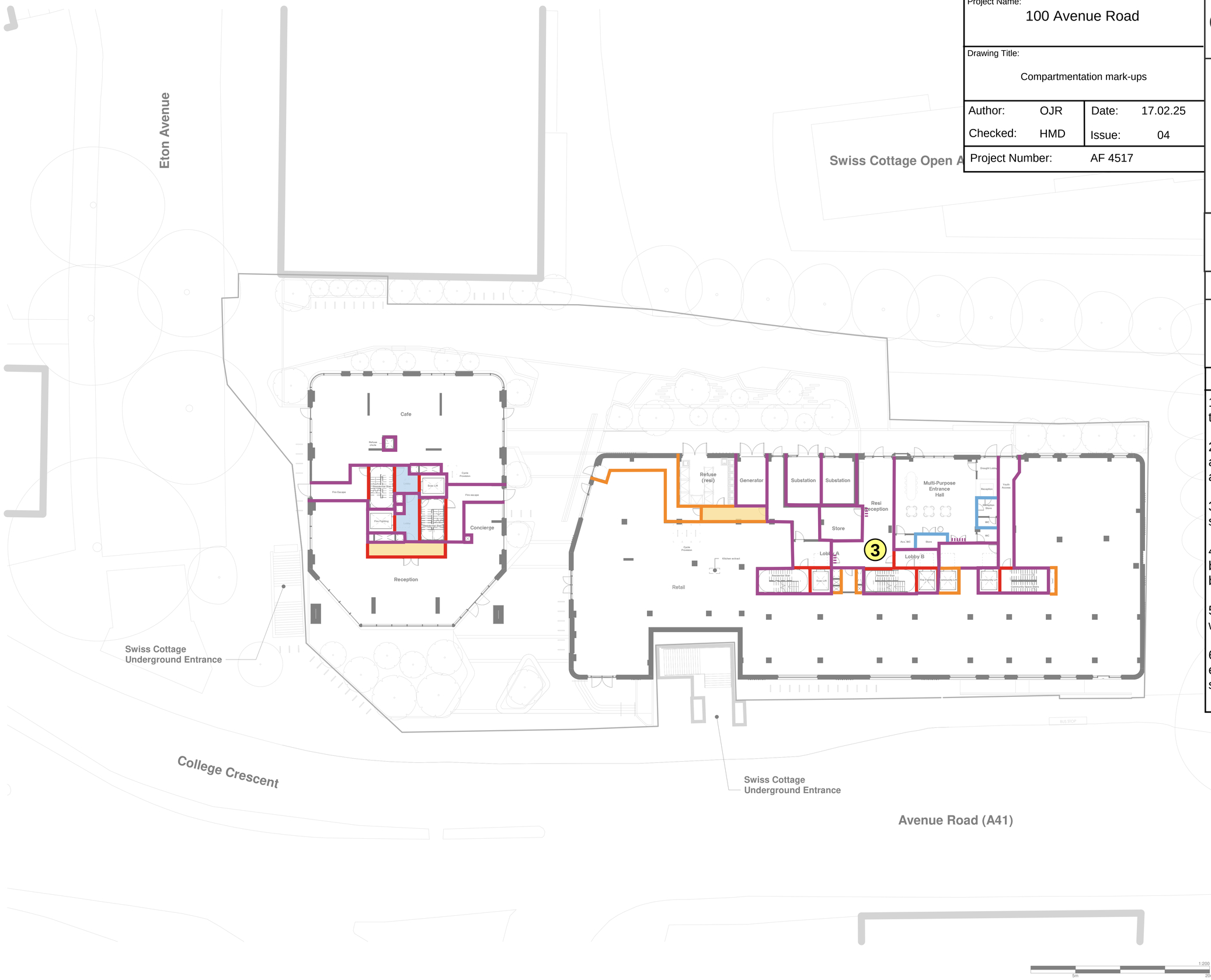

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

Mechanically ventilated area

Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Ground Floor Plan

Scale
1: 200 @ A1

Drawing Created
August 2024

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P01

Drawing No.
1016-CPA-ZZ-ZZ-DR-A-0200

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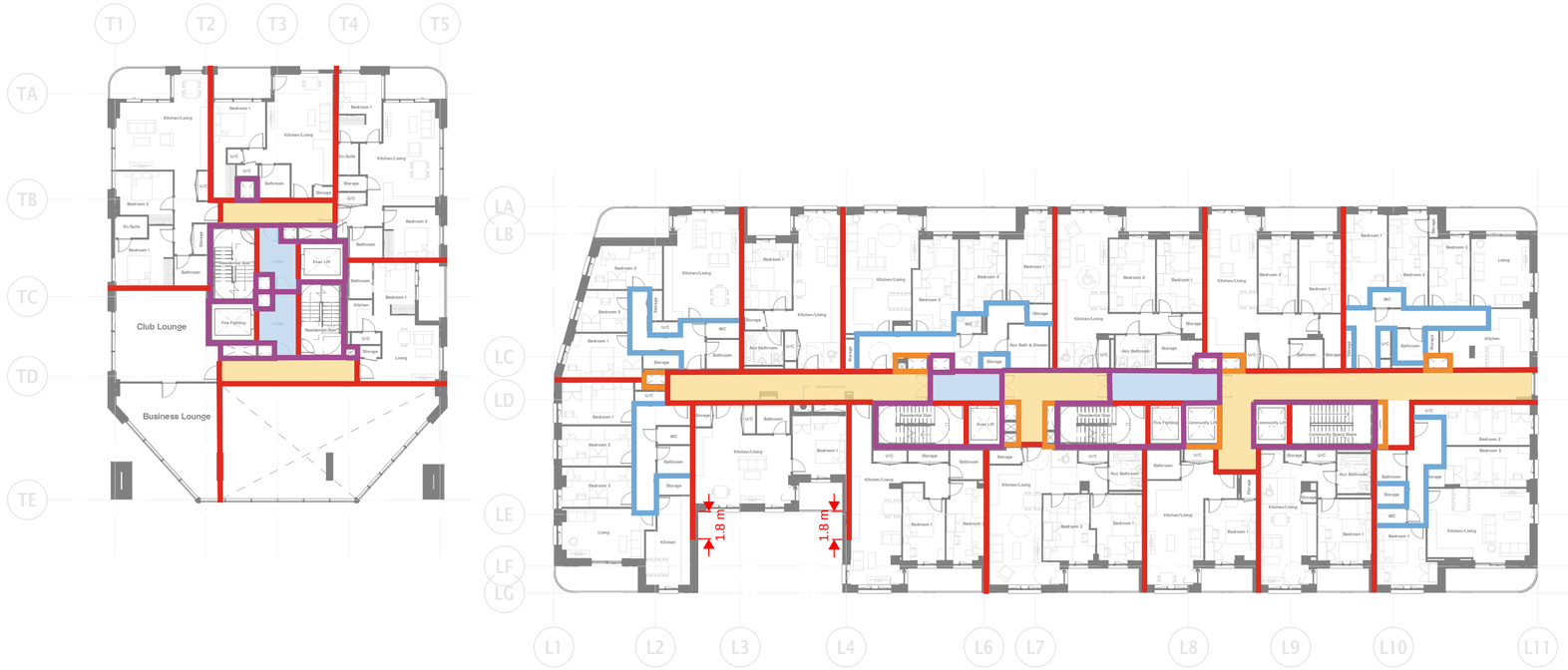

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors	
		With Smoke Seals	Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

Mechanically ventilated area

Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
First Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P12

Drawing No.
1016-CPA-ZZ-01-DR-A-0201

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ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Fourth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P05

Drawing No.
1016-CPA-ZZ-04-DR-A-0204

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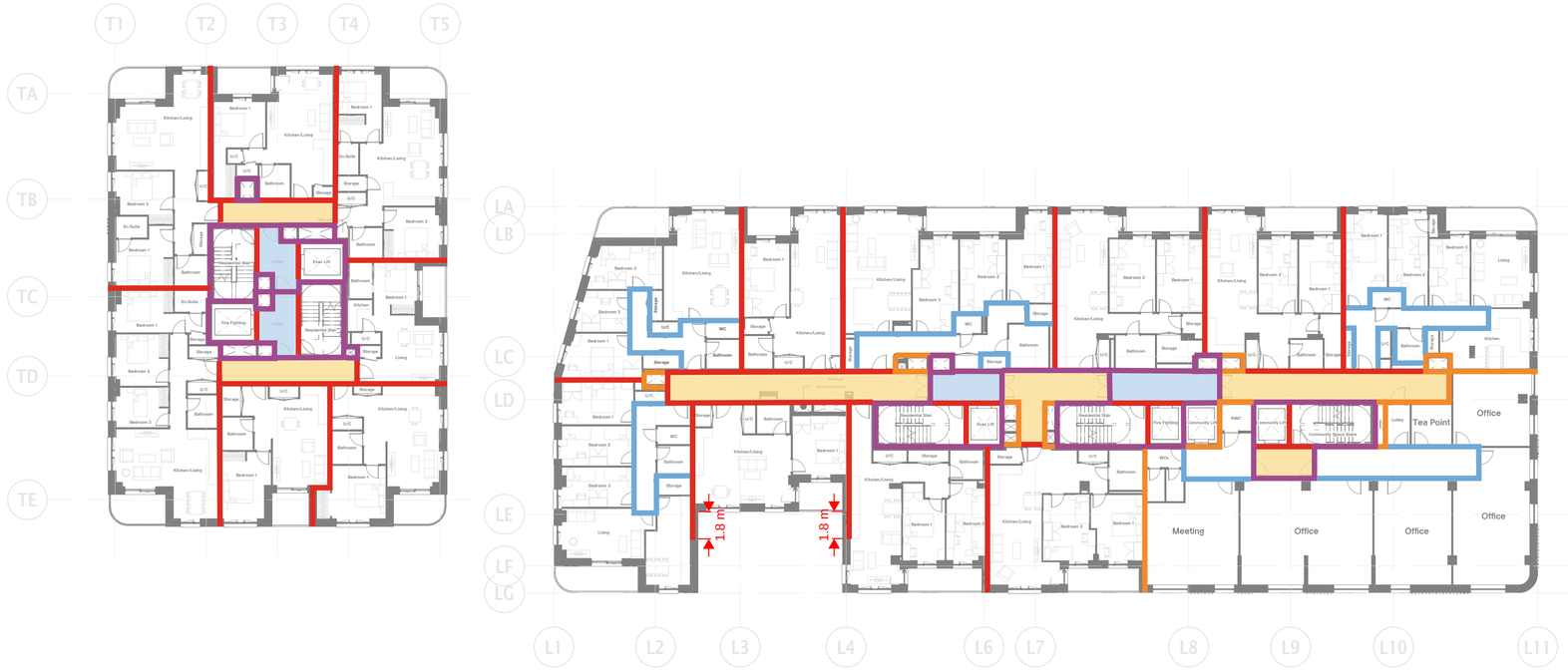

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

ASHTON | FIRE **Fire Resistance**

Rating (Minutes)	Walls	Doors	
		With Smoke Seals	Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

Mechanically ventilated area

Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Fifth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P08

Drawing No.
1016-CPA-ZZ-05-DR-A-0205

London Office
1 Canal Side Studios
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London NW1 0QG
Tel 020 7554 3830

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ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Sixth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P14

Drawing No.
1016-CPA-ZZ-06-DR-A-0206

London Office
1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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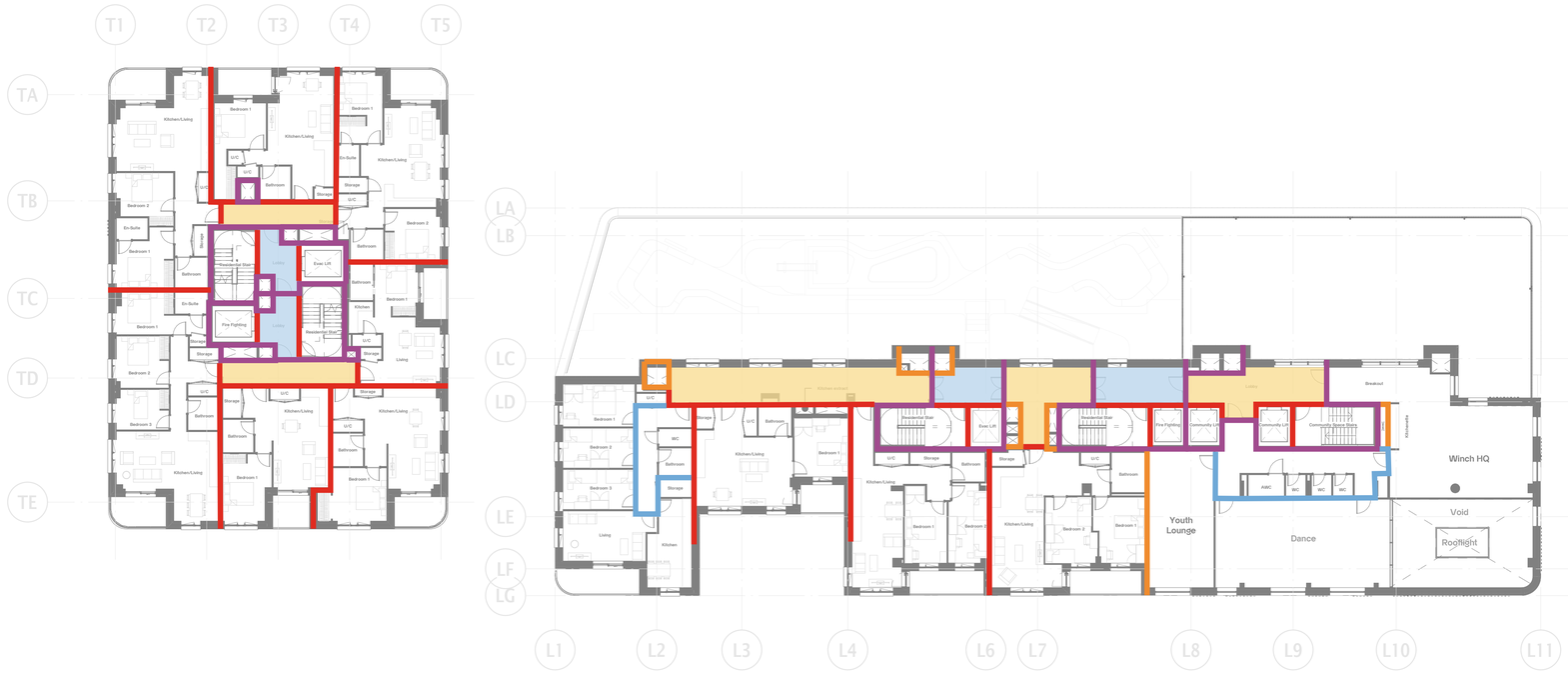

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Seventh Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P08

Drawing No.
1016-CPA-ZZ-07-DR-A-0207

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1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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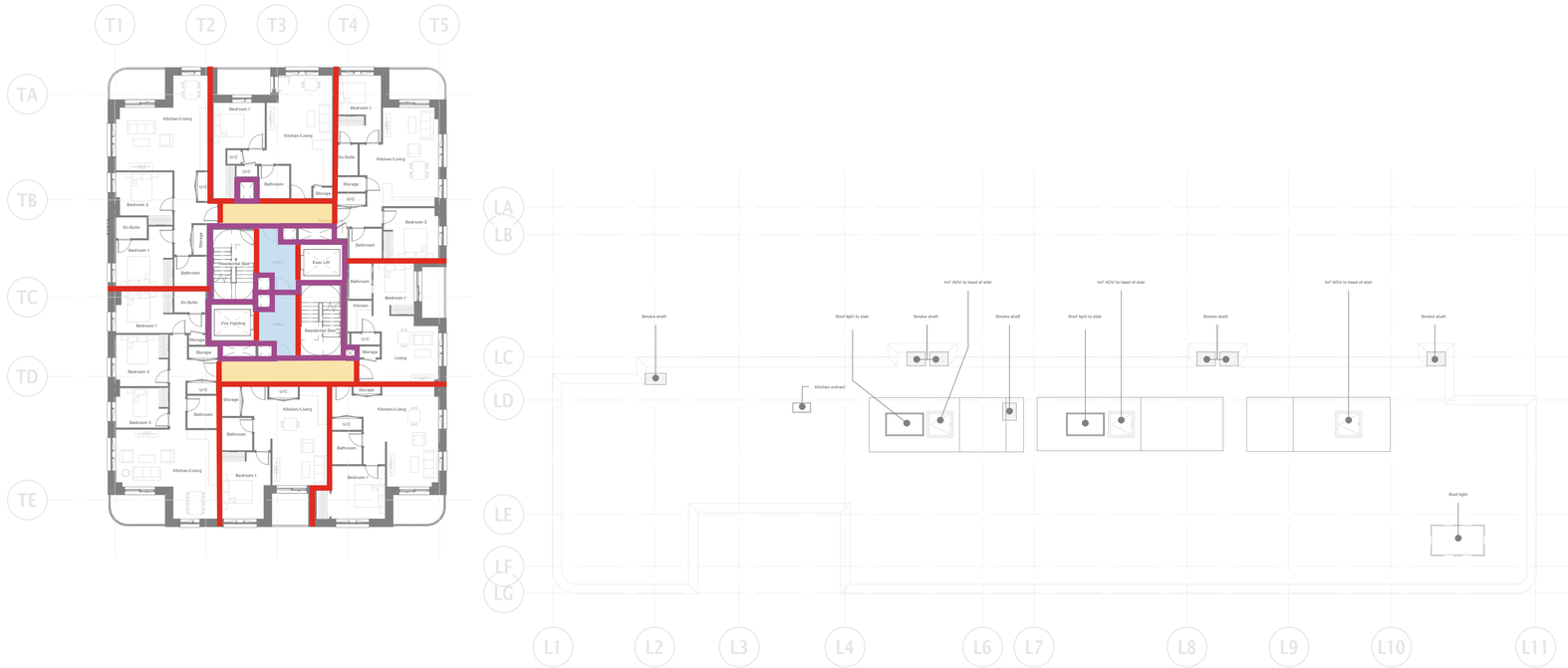

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

Mechanically ventilated area

Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Eighth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P04

Drawing No.
1016-CPA-ZZ-08-DR-A-0208

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1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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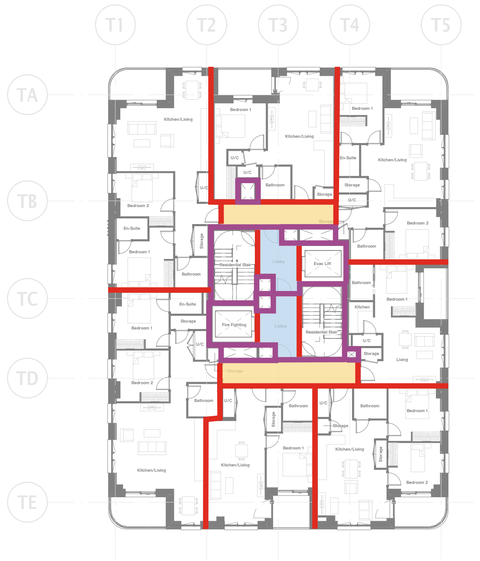

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Thirteenth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P09

Drawing No.
1016-CPA-ZZ-13-DR-A-0213

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1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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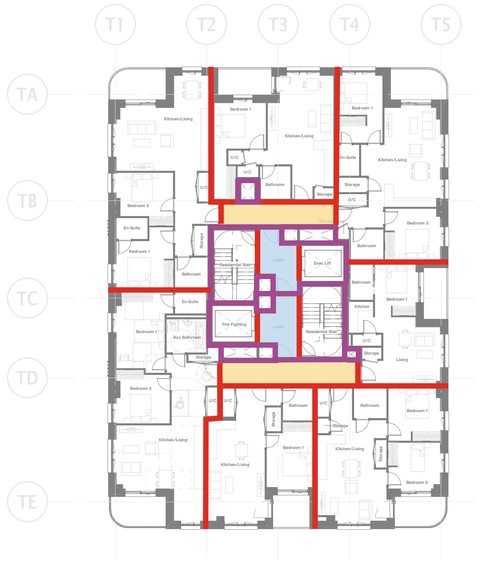

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

- Mechanically ventilated area
- Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Twenty-First Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P06

Drawing No.
1016-CPA-ZZ-21-DR-A-0221

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1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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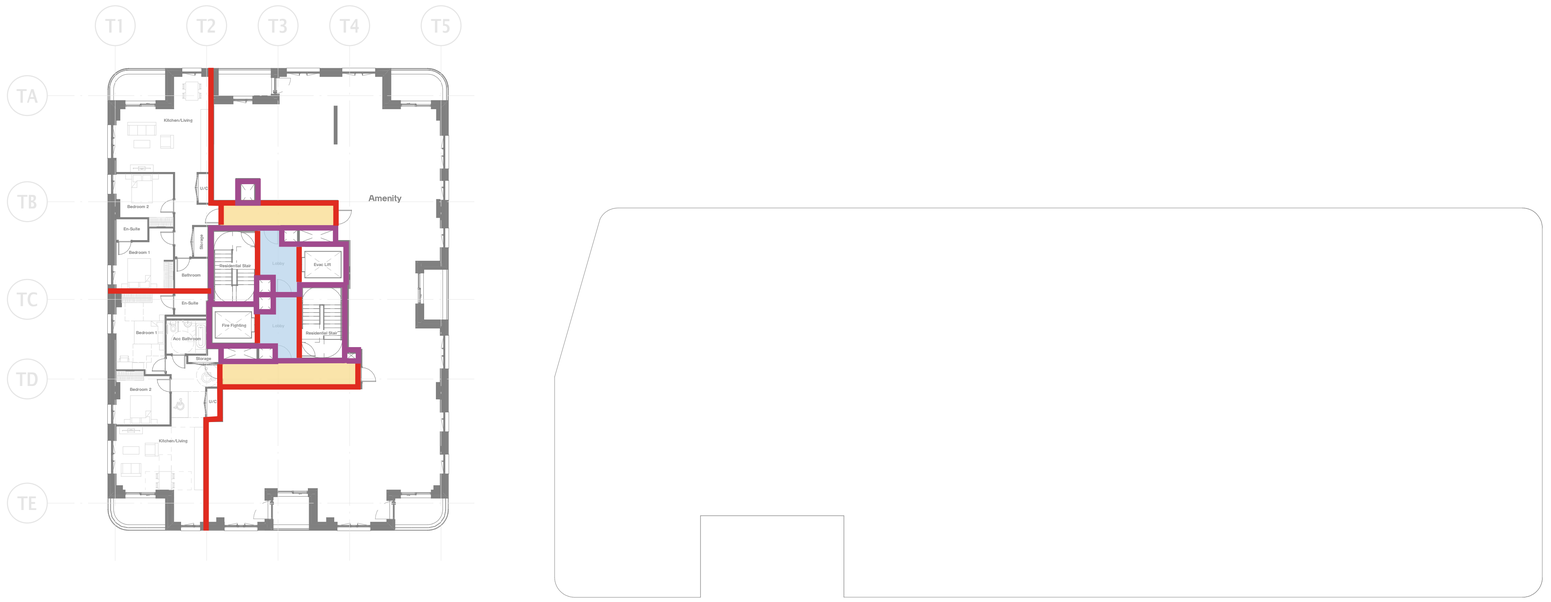

ASHTON | FIRE

Project Name:
100 Avenue Road

Drawing Title:
Compartmentation mark-ups

Author:	OJR	Date:	17.02.25
Checked:	HMD	Issue:	04

Project Number: AF 4517

ASHTON | FIRE

Fire Resistance

Rating (Minutes)	Walls	Doors: With Smoke Seals	Doors: Without Smoke Seals
30			
60			
90			
120			
240			

Rating (Minutes)	Fire Curtain/ Shutter
120	

Legend

Mechanically ventilated area

Naturally ventilated area

Notes

1. Atria requirements are to be applied to the community space atrium.

2. Basement ventilation required to achieve 10 ACH mechanically to all areas.

3. Escape route from stair must be kept sterile with no combustible content.

4. Structural fire resistance is 120min for buildings above 30m and 90 minutes for buildings between 18m and 30m.

5. Mark-ups are to be read in conjunction with RIBA 2 report.

6. Maximum travel distance on the external terraces is limited to 18m in a single direction.

N

1:200
5m 20m

Project
1016 | 100 Avenue Road

Building Name
Tower & Lower Building

Drawing Title
Twenty-Fifth Floor Plan

Scale
1: 200 @ A1

Drawing Created
July 2024

Revision
P05

Drawing No.
1016-CPA-ZZ-25-DR-A-0225

London Office
1 Canal Side Studios
8-14 St Pancras Way
London NW1 0QG
Tel 020 7554 3830

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