

Montague Quarter

Fire Safety Planning Statement

11.02.2025

B-FIRST
FIRE
SAFETY

Written Record

Revision	Description	Date	Author	Checked by	Authorised by
00	Issue for Comment	09.02.26	NR	JO	LD
01	Issue for Comment	11.02.26	NR	LD	LD
02	Issue for Comment	11.02.26	NR	LD	LD
03					
04					

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This document is confidential and for the exclusive benefit of the client. This strategy report may be used by the end user of the building in the development of any fire safety management procedures and plans considered necessary to fulfil their responsibilities under the Regulatory Reform (Fire Safety) Order 2005 (FSO) and any other applicable fire safety legislation.

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1. Introduction

- 1.1.1. B-First Fire Safety has been appointed by Accel Consulting to produce this fire safety planning statement for 9 additional flats in the proposed development at Montague Quarter Shopping Centre, Liverpool Road, Worthing BN11 1YJ
- 1.1.2. It is proposed to introduce new nine residential units at first-floor level, within an area of the building previously used for commercial purposes. This Planning Fire Safety Statement has been prepared to support the proposed change of use and to demonstrate that the development can be accommodated.
- 1.1.3. The main objectives of this report are to:
 - Provide fire safety engineering advice using the guidance given in BS 9991:2024 and other supporting documentation;
 - Highlight areas of the design that deviate from the guidance given in these documents; and
 - Propose any alternative approaches to be adopted to satisfy the requirements of the Building Regulations 2010.
- 1.1.4. The basis of design described herein sets out the package of measures that propose a high quality and practical solution to fire safety throughout the proposed development.
- 1.1.5. The finalised fire safety strategy for the overall development will be updated to comply with the Building Regulations and enable the building, in the necessary parts, to also comply with the Regulatory Reform (Fire Safety) Order 2005.

2. Project Description

2.1. Overall Development

- 2.1.1. The building consists of a five storey (Ground to Fourth Floor) mixed use development in Worthing, England. The Ground Floor is designated as commercial use and is outside the scope of this assessment.
- 2.1.2. The upper levels (first to fourth floor) comprise previously approved duplex apartments located on the left-hand side of the building and the proposed new single-storey flats located on the right-hand side. The building is served by two staircases: Stair 1 serves the first and second floors, while Stair 2 serves all floors. Stair 2 is located within a protected shaft containing a lobby and a lift, providing access to all storeys.
- 2.1.3. The height of the building to the topmost occupied floor is approximately 16.3 m. The residential portion of the building extends from the first to the fourth floor, with a total height of approximately 11.4 m.
- 2.1.4. The information provided which has formed the basis of this Planning Statement is shown in the table below

Title	Reference	Date
PROPOSED GROUND FLOOR PLAN	101	23.09.2025
PROPOSED FIRST FLOOR PLAN	NF-102	08.07.2025
PROPOSED SECOND FLOOR PLAN	103	05.09.2025
PROPOSED THIRD FLOOR PLAN	104	05.09.2025
PROPOSED FOURTH FLOOR PLAN	105	05.09.2025
PROPOSED ROOF PLAN	106	23.09.2025
PROPOSED ELEVATIONS	NF-300	03.10.2025

Table 1: Information used.

- 2.1.5. In a previous planning application, the left hand side first floor comprised nine duplex apartments and storage spaces, and the right hand side area was a commercial zone. The current proposal introduces nine additional flats within the former commercial zone. Access to these flats is provided via a lobby containing a stairway and a lift, both of which discharge at ground floor level.
- 2.1.6. A summary of each storey can be found in Table 2 below. Note that areas in Table 2 that are coloured Grey are outside of the scope of this planning submission.

Level	Areas
Ground Floor (Not included)	Commercial
First	Residential 9x Single Storey
	9x Duplex (Previously approved) Storage (Previously approved)
Second (Previously approved)	Residential 13x Single Storey 9x Duplex
Third (Previously approved)	Residential 13x Single Storey 1x Duplex
Fourth (Previously approved)	Residential 9x Single Storey 1x Duplex

Table 2: Proposed Building.

2.1.7. Figure 1 and 2 below provides an indicative layout of the existing and the proposed layout, where the addition of the 9 additional flats can be seen.



Figure 1: Previous first floor layout

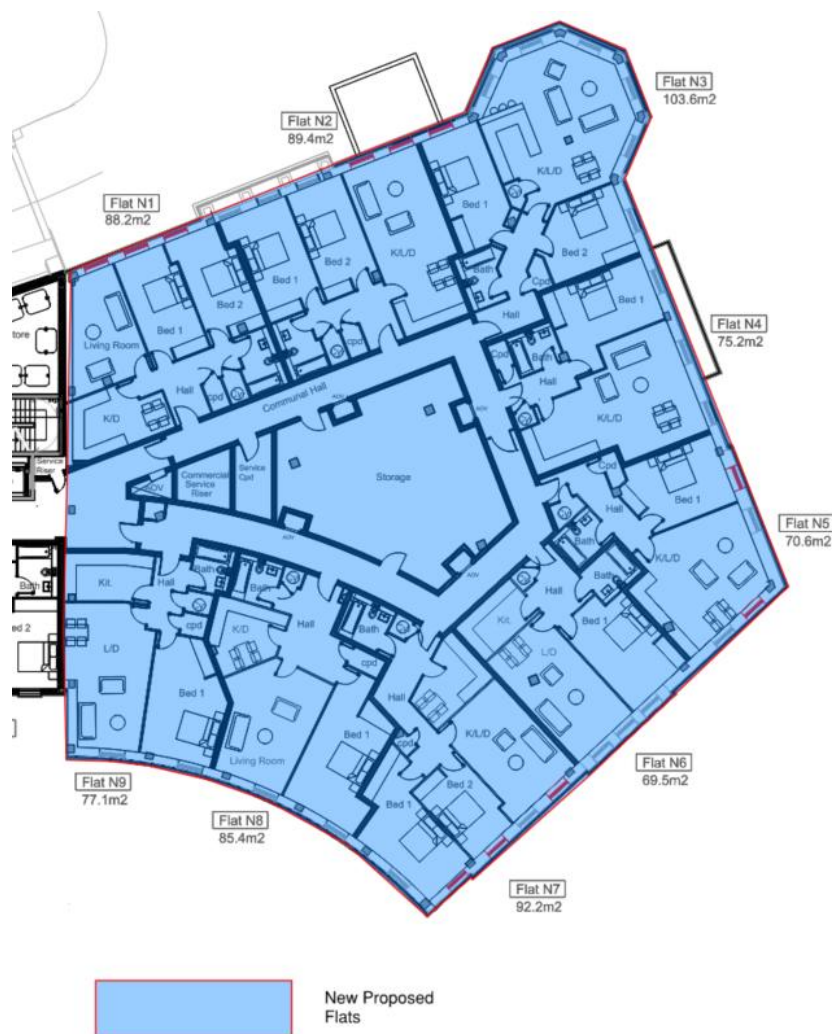


Figure 2: Proposed first floor layout

3. Fire Safety Design Approach

3.1. Design Guidance

- 3.1.1. The design is required to comply with the functional requirements relating to fire safety in Part B of the Building Regulations 2010. In order to achieve this, the fire strategy for this building has been developed using the guidance given in BS 9991:2024 and other supporting guidance.
- 3.1.2. This report has been prepared to support the planning application and associated submissions to the Local Planning Authority. It is intended to provide a planning-level fire strategy, demonstrating that the proposed development can achieve compliance with the functional requirements of Part B of the Building Regulations. While the report does not constitute a detailed design fire strategy, it has been prepared using the principles and guidance of BS 9991:2024 and other relevant supporting guidance to ensure that key fire safety considerations, such as means of escape, fire separation, and access for firefighting, are addressed.

4. Means of Escape and Warning

4.1. Evacuation Strategy

- 4.1.1. The evacuation strategy for the new residential units adopts a 'defend in place' approach. This is the same approach adopted for other residential areas in the approved scheme. Only the flat of fire origin evacuates initially. Occupants in unaffected flats remain protected within their flats unless a simultaneous evacuation is initiated by the Fire and Rescue Service, or occupants choose to evacuate independently.

4.2. Fire Detection and Alarm System

- 4.2.1. The proposed additional 9 flats will be provided with a category Grade LD1 Grade D1 fire alarm and detection system as per BS 5839-6, as per the specification for the previously approved flats.

4.3. Sprinklers

- 4.3.1. As the building exceeds 11m in height, an appropriate sprinkler system will be provided to the new apartments which will conform to the requirements of BS 9251:2021.

4.4. Internal Layout

- 4.4.1. It is noted that all the apartments are located above 4.5m, therefore all the flats should be in accordance with the recommendations given in section 8.4.2 for single storey flats.
- 4.4.2. The new flats are provided with a protected entrance hallway providing an exit from all habitable rooms and having a travel distance not exceeding 9m from the entrance door to any habitable room.

4.5. Common Corridors

First floor corridor

- 4.5.1. First floor corridor to these new flats will be served by one escape stair, considering the building height the design should be in accordance with section 7.2.3 of BS 9991:2024, meeting the following recommendations:
- Each part of the storey with a common access route serving dwellings should have access to either an escape stairway or a final exit.
 - Common access should be ventilated in accordance with section 20.2.2 of BS 9991:2024
 - As the travel distances from the furthest dwelling exceeds 15m, the corridor should be provided with a smoke control system in accordance with section 20.2.6 of BS 9991:2024.
 - The stairway should terminate at ground level.
 - There should be an AOV at the head of the stair with a free area of not less than 0.7 m².
- 4.5.2. The proposal for this common corridor will be consistent with the recommendations and design for the approved scheme.
- 4.5.3. Corridors will be provided with a means of mechanical smoke extract, the outline performance specification of which is included in Appendix A of this document. Note that this smoke control strategy will be implemented in the scheme and documented in the fire strategy at a later stage.

4.6. Means of Escape - Vertical

Number of Escape Stairs

- 4.6.1. This building is provided with two means of escape stairs. Stair 1 serves first and second floor, meanwhile stair 2 serves all floors. The new flats are to be served by stair 2 on level one. Figure 3 below shows the stair location.

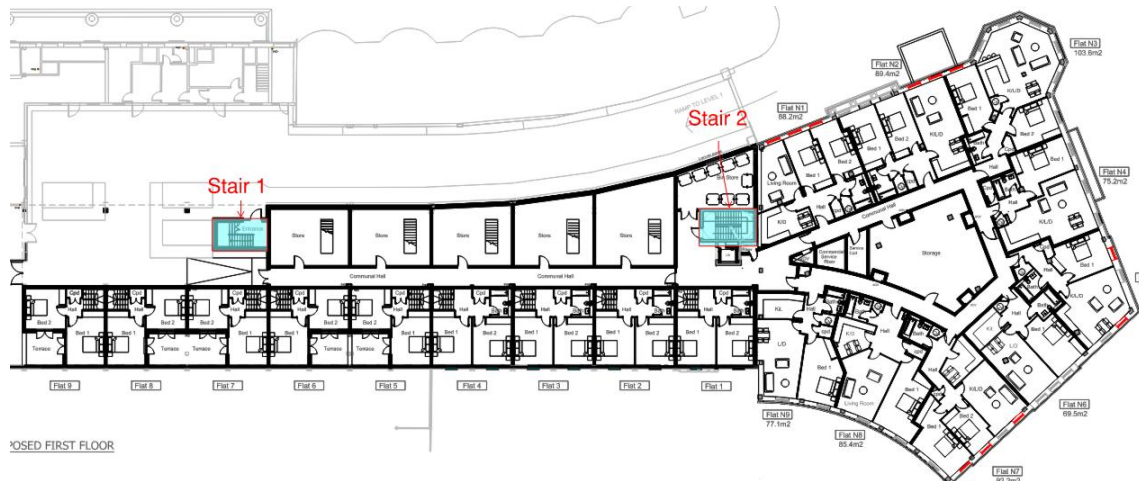


Figure 3: Stair location.

Width of Escape Stairs

- 4.6.2. Stair 1 serving second and third floor has a width of approximately 1100mm and the stair 2 serving all floors has a width of 1200mm. Therefore, the stair widths exceed the minimum recommendations of 1000mm as stated in BS 9991:2024.

Exits from Protected Stairways

- 4.6.3. The guidance of BS 9991:2024 states that every protected stairway should discharge:
- directly to a final exit; or
 - by way of a protected exit passageway to a final exit.
- 4.6.4. This is achieved throughout this building as every stair discharges to the outside, in the case of stair 1 directly to the outside, in the case of stair 2 into a protected passageway leading to a final exit.
- 4.6.5. The protected exit passageway should have the same level of fire resistance and lobby protection as the stair it serves.

Evacuation Lift

- 4.6.6. There is a proposed evacuation lift which provides assistance for occupants with reduced mobility who wish or need to evacuate the building.
- 4.6.7. Further details on evacuation lift provision and operation will be included in the fire strategy for the scheme which will be developed at a later stage.
- 4.6.8. The evacuation lift lobby should incorporate a refuge area for those awaiting the lift, provide direct access to a protected stair, and not be directly accessible from any flat, storage room, or electrical equipment room.
- 4.6.9. Temporary waiting spaces should be provided adjacent to each evacuation lift, located either within an escape stair enclosure or in a protected stair lobby, consistent with Figure 14 of BS 9991:2024.
- 4.6.10. Evacuation lifts must:
- Be housed in a protected shaft achieving a minimum of 60 minutes fire resistance,

- Have both primary and secondary power supplies. For buildings under 18m, the secondary supply may be a separately fused circuit or an independent generator housed in a fire-protected enclosure.

4.6.11. Automatic evacuation operation must be supported, including:

- Lift recall to a safe location,
- Activation via an automatic evacuation signal,
- Controlled landing calls (permitted only from designated priority floors) managed via the lift controller.

4.6.12. A fire detection and alarm system (as per BS 5839-1:2019) must be installed in:

- Lift motor rooms,
- Machine rooms and lift lobbies,
- Any supporting areas that could impact lift operation. This system must also send a suspend service signal when needed.
- Where UPS systems are used, they must also send a suspend service signal before full discharge to ensure evacuation lifts are not affected by power loss.
- In buildings without 24/7 staffing, driver-assisted evacuation should be provided. This can also supplement evacuation in staffed buildings.

4.6.13. Refer to Figure 14 of BS 9991:2024, extracted below, for evacuation lift and lobby dimensions (mm).

Figure 14 — Lift and lobby minimum dimensions

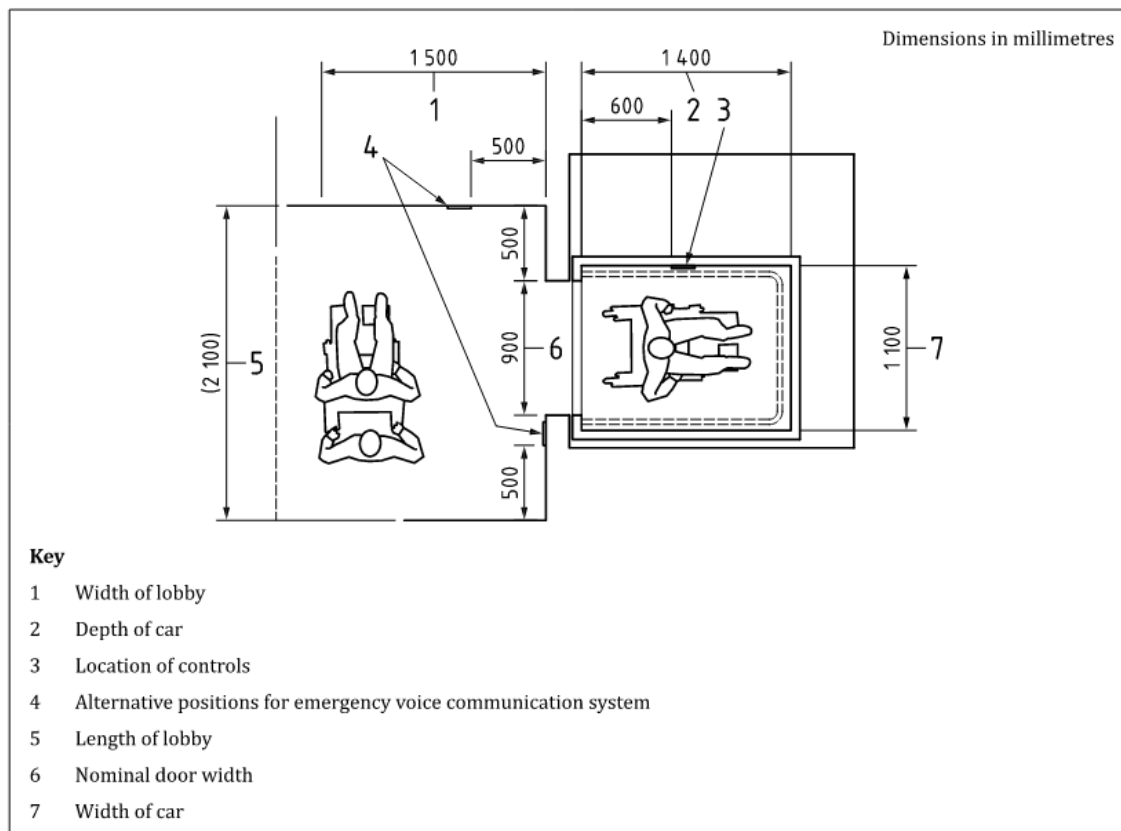


Figure 4: Temporary Waiting Space and Evacuation Lift Dimensions.

4.7. Refuse Store

- 4.7.1. The proposed refuse store on the first floor should be enclosed in 60 minutes fire resisting construction. The refuse store opens directly into the lift/stair lobby, as shown in the drawings. To ensure adequate separation, an additional protected lobby should be provided. This protected lobby should achieve at least 30 minutes fire resistance.
- 4.7.2. The protected lobby separating the refuse store from the common areas of the building shall be provided with 1m² permanent ventilation.

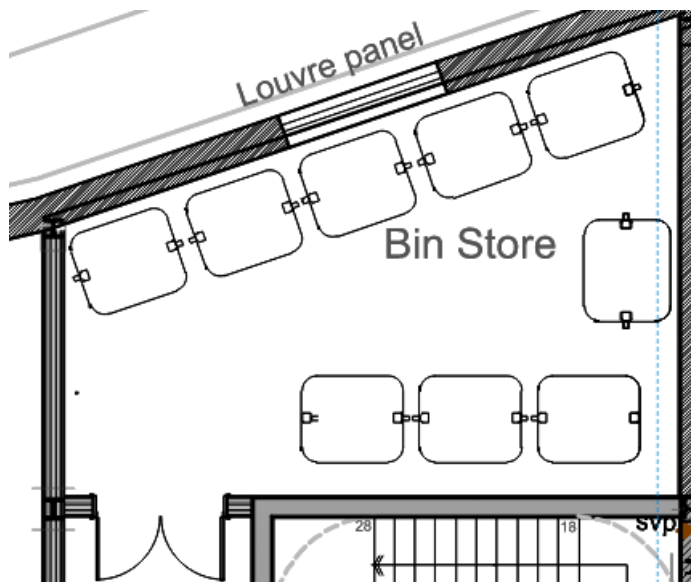


Figure 5: Refuse store

5. Internal Fire Spread (Linings)

- 5.1.1. All wall and ceiling linings should meet the relevant classifications given in Table 3, as per Section 26.1 of BS 9991:2024.

Location	European Class
Circulation spaces within dwellings	C-s3, d2
Other circulation spaces	B-s3, d2
Small rooms of area not more than 4m2	D-s3, d2

Table 3: Minimum Surface Spread of Flame Classifications

6. Internal Fire Spread (Structure)

6.1. Structural Fire Resistance

- 6.1.1. Any new elements of structure introduced to the building as a result of installing the nine apartments should achieve the same period of fire resistance as the remainder of the building i.e. 60 minutes fire resistance.

6.2. Fire Resisting Construction

- 6.2.1. The building should be provided with periods of fire resistance shown in Table 4.

Element of Construction	Fire Resistance Period (minutes)			Fire Door
	Integrity	Insulation	Loadbearing capacity	
Loadbearing Elements of Structure	-	-	60	-
Compartment floor	60	60	60	-
Protected stair	60	60	60	FD 30S
Lift	60	60	60	FD 30
Riser shafts	60	60	60	FD 30
Ground floor protected exit passageway	60	60	60	FD 30S
Separation between residential and commercial units	60	60	60	-
Separation between flats/duplex	60	60	60	FD 30S
Separation between flats/duplex and ancillary parts of the building	60	60	60	FD 30S
Atrium	60	60	60	FD 30S
Protected entrance halls	30	30	30	FD30
Refuse store	60	60	60	FD 60S
Lobby to Refuse Store	30	30	30	FD30S

Table 4: Fire Resistance Period

7. External Fire Spread

External Wall Construction

- 7.1.1. As this building is taller than 11m with a residential use, the performance recommendation is that all construction materials have a minimum of Class A2-s1 d0.

Space separation and unprotected façade areas

- 7.1.2. In accordance with the methodology set out in BR 187, using the enclosing rectangles approach, calculations have been undertaken for the unprotected areas of Flats N1 and N2 based on their distance to the notional boundary. As shown in the Figure 6 below, the notional boundary is located at 3.7 m.

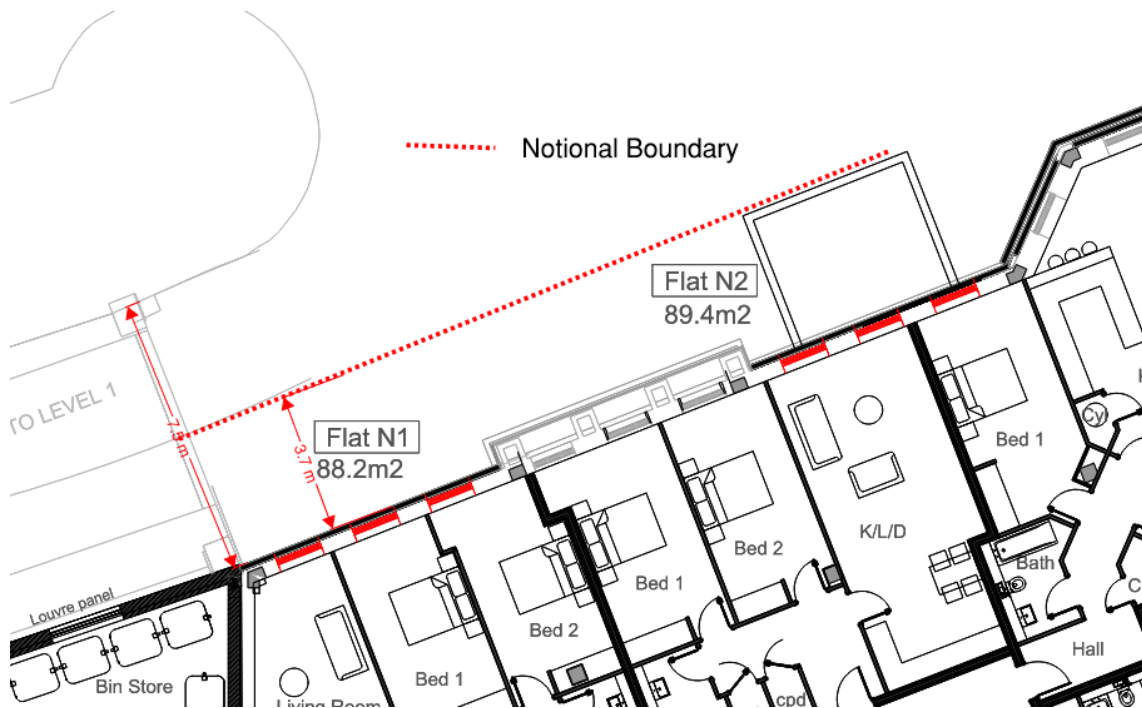


Figure 6: Notional Boundary Distance

- 7.1.3. The Figure 7 below shows the enclosing rectangles used in the calculation, as the apartments will be provided with sprinklers, BR 187 allows to halve the distance once the calculations are done. Note that Flat N1 is highlighted in green while flat N2 is highlighted in blue.



Figure 7: Enclosing rectangles.

7.1.4. Table 5 summarises the external fire spread calculations for each flat.

Elevation Characteristics	Flat N1	Flat N2
Elevation Width (m)	7.7	9.9
Elevation Height (m)	4.1	4.1
Elevation Area (m ²)	31.6	40.6
Boundary Distance (m)	3.7	3.7
BRE Width (m)	9.0	12.0
BRE Height (m)	6.0	6.0
BRE Area (m ²)	54.0	72.0
BRE Unprotected Area (%) - No Sprinklers	64	54
BRE Unprotected Area (%) - Sprinklers	100	100
Protection Required (m ²)	0	0

Table 5: BRE 187 Enclosing rectangles for flats N1 and N2.

8. Fire-fighting Provisions

8.1. Fire-Fighting Provisions

- 8.1.1. Construction of the apartments as part of this application will not impact the fire service access provisions to the scheme. The same principles of fire fighting will be applied to these apartment units as per other areas of the approved scheme.

8.2. Fire-Fighting Access

- 8.2.1. Access for fire service vehicles is available via Liverpool Road. This access road is existing and is therefore assumed to meet the minimum hardstanding requirements for fire service appliances. It is noted that fire appliance dimensions are not standardised; accordingly, consultation with the local fire brigade is required to confirm vehicle size requirements.
- 8.2.2. The building should be fitted with rising dry fire mains located in Stair 2. Access for a fire appliance would be provided within 18 m of each fire main inlet connection point, which is typically located on the building façade adjacent to the entrance and visible from the fire appliance.

8.3. Water supplies

- 8.3.1. Hydrants should be located close to building access points and fire appliance parking areas. Where dry fire mains are provided, hydrants are positioned within 90 m of the dry riser inlet.
- 8.3.2. Water mains and hydrants must deliver a sufficient flow rate to support effective firefighting. The provision of both should be in accordance with BS 9990.
- 8.3.3. An existing fire hydrant appears to be located directly opposite the main entrance to the building, as indicated in the Figure 8 below. The operational status and adequacy of this hydrant have not been confirmed as part of this application and should be verified to confirm its suitability.

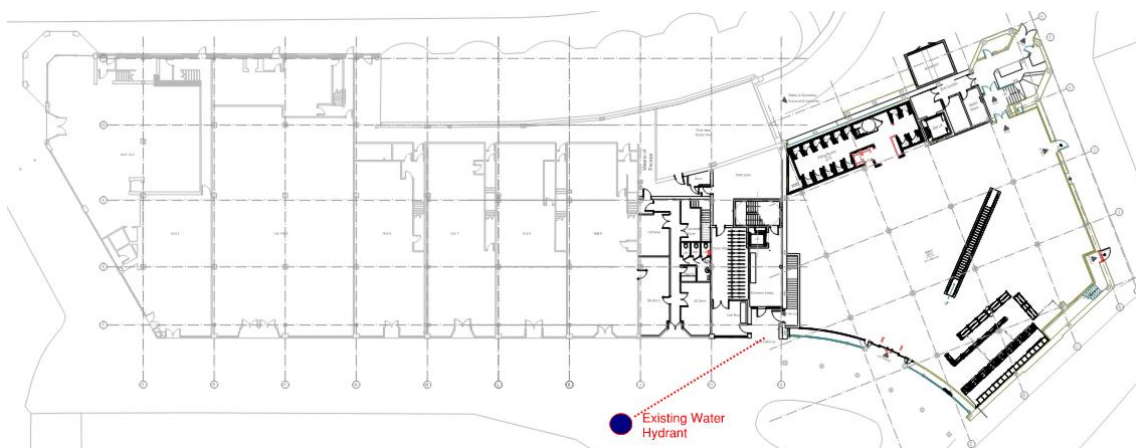


Figure 8: Hydrant Location.

8.4. Hose laying distance

- 8.4.1. In general, hose coverage to all apartments on the floor is achieved within 45 m of the dry rising main outlet serving Stair 2. In a limited number of rooms within selected apartments, the maximum hose coverage distance to the furthest point within the room is approximately 48 m.
- 8.4.2. In these instances, the distance from the dry rising main outlet to the entrance door of each room remains within 45 m, with the additional distance occurring within the room itself. On this basis, and allowing for hose spray reach from the nozzle, effective firefighting coverage to

all areas within the apartments is considered to be achievable. The relevant distances are shown in the Figure 9 below.

- 8.4.3. In terms of hose coverage to the apartments associated with this application, it is an issue in apartments N3, N4 and N5.



Figure 9: Hose laying distance.

9. Appendix A - Mechanical Smoke Extract

9.1. General Principles

- 9.1.1. This appendix sets out the outline performance principles for the proposed smoke ventilation strategy serving the common corridors, as required to support the planning submission. The proposals described below are indicative in nature and will be subject to further development and detailed analysis as part of the detailed fire strategy and Building Regulations submission.
- 9.1.2. The development incorporates a central courtyard arrangement serving residential accommodation at Levels 1 to 4. Common access corridors at these levels will be provided with a mechanical smoke ventilation system designed to limit smoke spread, support means of escape, and protect firefighting access routes.
- 9.1.3. The smoke ventilation strategy has been developed to align with the principles of BS 9991:2024 and relevant supporting guidance, recognising that detailed design and validation will be undertaken at a later stage.

9.2. Corridor Sub-Division

- 9.2.1. At each level surrounding the courtyard, the common corridor will be subdivided into two independent smoke control zones, each operating as a standalone system. This arrangement limits the extent of smoke spread within the corridor and supports tenability along escape routes.
- 9.2.2. Each smoke zone will be served by two smoke shafts, arranged to operate in a push-pull configuration. The direction of airflow will be dependent on the location of the detected fire, such that smoke is drawn away from the affected area and exhausted via the appropriate shaft.

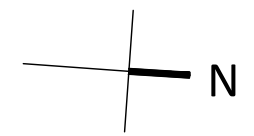
9.3. Mechanical Smoke Ventilation System

- 9.3.1. Each smoke shaft will be provided with mechanical extract, incorporating duty and standby fans located at roof level to provide system resilience. The system will be arranged to automatically activate on fire detection within the relevant smoke zone.
- 9.3.2. The system will be designed to:
 - Control the spread of smoke within the common corridor;
 - Maintain tenable conditions along escape routes;
 - Prevent smoke ingress into the evacuation lift lobby and protected stair enclosures.

9.4. Performance Assumptions and Further Assessment

- 9.4.1. At planning stage, the smoke ventilation system is proposed to support extended travel distances to Stair 2, where distances exceed 15 m, and to maintain the evacuation lift lobby as a smoke-free space during evacuation and firefighting operations.

- 9.4.2. These assumptions will be subject to detailed analysis, including Computational Fluid Dynamics (CFD) modelling, at the detailed design stage. The CFD analysis will be used to demonstrate that:
- Tenable conditions can be returned along the corridor for the required evacuation duration;
 - Smoke spread towards Stair 2 and the evacuation lift lobby is adequately controlled;
 - The proposed extended travel distances remain acceptable.
- 9.4.3. A full fire strategy, including detailed smoke ventilation calculations, system specifications, and CFD modelling where required, will be prepared as part of the subsequent Building Regulations submission.



Additional Proposed Windows

PROPOSED FIRST FLOOR - NORTH

A	08.07.25	Kitchen separated in Snc. flats
-	15.05.25	First issue
Rev	Date	Description
ACCEL CONSULTING LTD		
23 Southwick Street, Southwick, B84 4TB, Tel: 01273 894921, www.accelconsulting.co.uk		
Client: CAYUGA 013 LLP		
Project:	MONTAGUE QUARTER, WORTHING	No. 1983
Drawing Title: PROPOSED FIRST FLOOR PLAN - NORTH		
Drawing No:	Rev	Rev Date
NF-203	A	08 JUL 2025
Scale:	1:100@A1	

PLANNING ISSUE

ACCEL Consulting Ltd

