ORIONFIRE
ENGINEERING

Fire Safety Statement (Inc. Evacuation Strategy)

PROJECT NAME: Brunswick Centre, Bloomsbury

DATE: 4th September 2023

REF: OF-000957-OFS-01-C

Quality Assurance

Rev	Date	Prepared/Updated By	Reviewed By	Comments
-	14/04/2023	Catherine Henry	Oskar Dzielak/Ben Cooper	Initial issue for design team comment
A	18/05/2023	Catherine Henry	Oskar Dzielak/Ben Cooper	Update following changes to plans and for inclusion of London Plan Statement
B	16/06/2023	Catherine Henry	Ben Cooper	Update following comments from Gerald Eve
C	04/09/2023	Catherine Henry	Ben Cooper	Update following changes to planning terminology under sections 1.4.2 and 1.4.3. Variation added with regards to reduced final exit widths at ground floor.

Contents

1 Introduction

1.1 Report Brief

1.1.1 Orion Fire Engineering have been appointed by Lazari Properties 2 Limited, to produce a RIBA Stage 2 Outline Fire Strategy report for the Brunswick Centre in Bloomsbury, London. This report outlines the key fire safety aspects within the design as a basis to support the design team for the proposed site to satisfy the functional requirements of Part B to the Building Regulations, as well as acting as a London Plan Fire Safety Statement.

1.1.2 This outline fire strategy has been developed to provide sufficient information to meet the core objectives and criteria of the RIBA Plan of Work for RIBA Stage 2. This RIBA 2 fire strategy addresses the architectural concept of the building and provides commensurate advice to the current stage of work. Cognisance has been paid to key fire safety items that could affect the architectural concept, M&E/structural engineering strategy or the land use and planning considerations of the development. Further detail will need to be provided in RIBA Stage 3 to support the formal Building Regulations application.

1.1.3 A document has been supplied detailing employer's requirements entitled "Bloomsbury, Brunswick Centre Specification for a Turnkey Development", dated 18th February 2022, Revision H. The main requirements from this document which are above and beyond minimum Part B Building Regulations compliance have been summarised in Table 2 of this report. The requirements listed have been reviewed alongside preparation of this fire strategy and any requirements above and beyond minimum Part B Building Regulations compliance have been considered as part of this report.

1.2 Legislation and Proposed Approach to Fire Safety

1.2.1 The Building Regulations 2010 contains functional requirements that are broad statements that describe how the building should perform to meet the requirements of the Building Regulations. Prescriptive codes, such as Approved Document B (referred to as ADB), BS 9991 and BS 9999 provide specific recommendations for the majority of typical buildings. The adoption of one of these prescriptive codes is one way to achieve compliance with the Building Regulations.

1.2.2 The principal guidance document that has been applied to the building to produce this RIBA 2 fire strategy is ADB Volume 2 2019 edition incorporating 2020 and 2022 amendments. In addition to the principal guidance document, multiple supporting British Standards, European Norms and industry guidance documents will be applied. The specific application of these documents will be referenced in the relevant sections of this report.

1.2.3 As the building is in the London Borough of Camden, it will be subject to the London Plan 2021. The London Plan places an expectation on developers to work to the highest standards of fire safety. The London Building Plan also provides a requirement that Major Developments are required to submit a Fire Statement to demonstrate compliance with the London Plan fire safety policies. This has been included in Appendix B –

1.3 Project Information

1.3.1 The drawing information listed in Table 1 has been reviewed whilst producing this report. Any information not listed in Table 1 has not been reviewed by Orion Fire Engineering. All recommendations made within this report are based on the drawings listed below. Any revisions to those drawings may invalidate this report.

Table 1: Drawing Information Reviewed

Produced By	Drawing Number	Drawing Title	Rev	Date Reviewed
	4742-PA1-098 A	Proposed GA Plan B2 Lower Basement	A	16/06/2023
	4742-PA1-099 A	Proposed GA Plan B1 Upper Basement	A	16/06/2023
	4742-PA1-100 A	Proposed GA Plan GF Ground Floor	A	16/06/2023
	4742-PA1-101 A	Proposed GA Plan RF Roof Plan	A	16/06/2023
	4742-PA1-301 A	Proposed GA section East - West sections	A	16/06/2023
	4742-PA1-302 A	Proposed GA section North - South sections	A	16/06/2023
	4072-F-103	Stair 1	1	14/04/2023
	4072-F-104	Stair 2	1	14/04/2023
	4072-F-105	Stair 3	1	14/04/2023
	4072-F-106	Stair 4	1	14/04/2023
	4072-F-107	Stair 5	1	14/04/2023
	4072-F-10	Stair 6	1	14/04/2023
Levitt Bernstein Associates Limited	2467/L/002	Overall Plans Levels A & B	P2	14/04/2023
	2467/L/003	Overall Plans Levels C & D	C2	18/05/2023
	2467/L/004	Overall Plans Levels E & F	C2	18/05/2023
	2467/L/005	Overall Plans Levels G &H	C2	18/05/2023

1.3.2 In addition to the drawings listed in Table 1, Orion also conducted a site visit of the existing site on 26th January 2023 and produced a site inspection report referenced "OF-000957-SIN-01", dated 8th February 2023. The contents of this report and the observations from the site visit have also been considered when preparing this report.

1.4 Site and Building Description

1.4.1 The Brunswick Centre is an existing shopping centre located in Bloomsbury, London. The centre comprises individual shopping units arranged around a central open street at ground floor level. Some units are covered by the building footprint above but are accessed directly from external either from the central street or the neighbouring Marchmont street. Located above the shopping centre, there are also several residential apartments comprising up to seven stories, (First to seventh floor), whilst the ground floor comprises shopping units. Some residential apartments face into the central street, whereas some face into the surrounding roads. There are two existing basement levels to the centre, lower and upper basement, both of which host car parking space for the shopping centre. The scheme proposes the introduction of a subterranean hotel at lower ground floor level at the Brunswick Centre, with an ancillary entrance lobby located at ground floor level. The proposed hotel will provide a total of 207 bedrooms, and an ancillary F&B restaurant. Associated plant and PV panels will be located either at roof level or lower ground floor level, with associated cabling feeding through existing risers where possible. The lower basement level will remain as existing either side of the proposed hotel, whilst the area beneath the hotel will become a 900mm void as the slab will be lowered.

1.4.2 Full Planning permission is sought for a "Change of use of existing car parking at lower ground floor to hotel use, change of use of retail unit to ancillary hotel entrance at ground floor level, alterations to the lower ground floor slab, installation of plant at roof and lower ground floor level, installation of PV panels at roof level, and associated works."

1.4.3 Listed Building Consent is sought for the "Installation of walls and fit-out relating to proposed hotel use at lower ground and ground floor level, alterations to the lower ground floor slab, strengthening of structural columns, installation of plant at roof and lower ground floor level, installation of PV panels at roof level, and associated works."

1.4.4 The height of the existing build from the sections provided is 21.12m to the topmost occupied storey from the lowest adjacent ground level, see Figure 3. The proposed development does not change the height of the existing build. In addition to the hotel bedrooms the basement level is proposed to provide a restaurant, with associated kitchen and food store, cellar, toilets, staff changing rooms and team room, several linen stores, bin store, luggage and bike room, office, comms room, linen intake and handling and several plant rooms. A central street to the hotel bedrooms is also proposed which will be provided as a lounge area for residents.

1.4.5 The basement level is served by eight protected stairs. The six central stairs are already existing, the architect has confirmed that these stairs are not shared with the residential levels above, but rather provide a dedicated corridor direct to external. Further stairs have been added within the basement level to provide access to these existing stairs. Two further protected stairs will be available for escape from the basement level, the existing stair on the right-hand side of the plan discharging directly into the ground floor central street and one discharging at the hotel entrance located off Marchmont Street.

1.4.6 Figure 1 shows a section of the existing building as described above, with the proposed hotel basement level incorporated and the proposed layout of the basement level detailing the hotel development is shown in Figure 2.

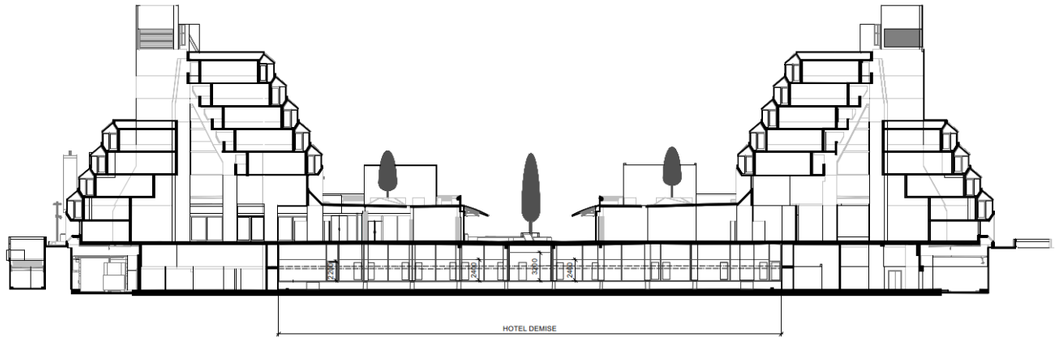


Figure 1: Section of Existing Brunswick Centre Incorporating Upper Residential Levels and Proposed Hotel Basement

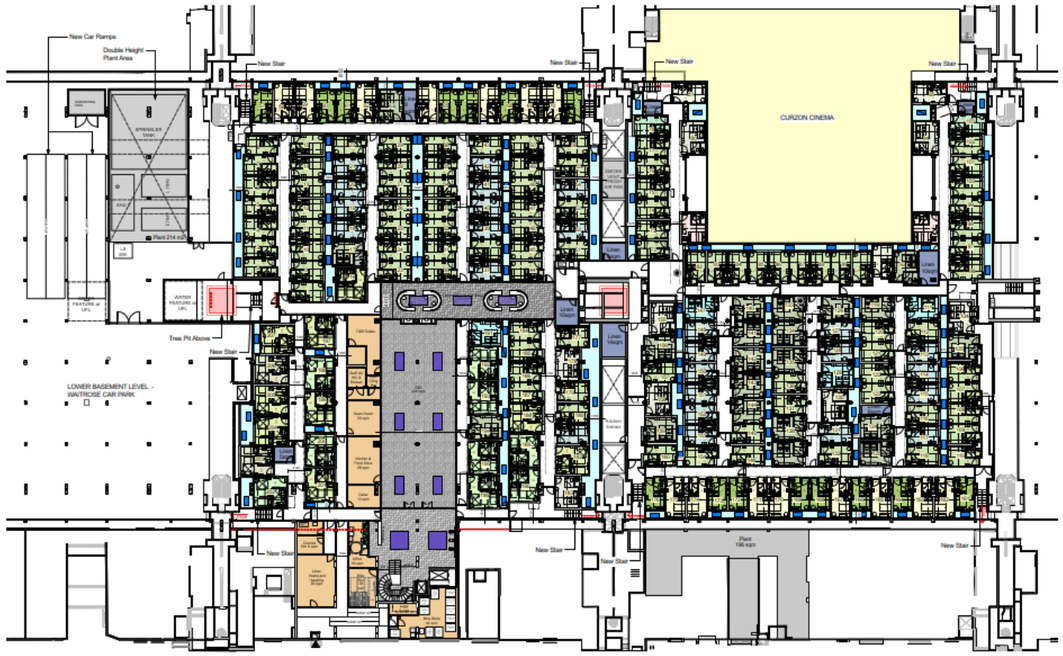


Figure 2: Proposed Basement Level Hotel Layout

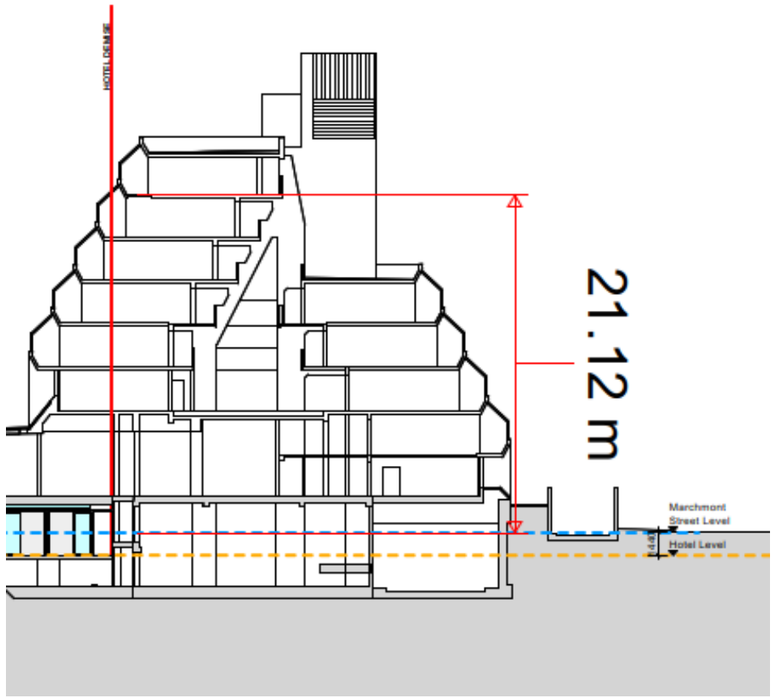


Figure 3: Building Height to the topmost Occupied Storey

1.5 Employers Requirements

1.5.1 A summary of the relevant Fire Obligations listed in the Employer Requirements has been listed in Table 3. This is not an extensive list but covers the main requirements to be incorporated into the overall fire strategy design. Some of these will inherently be achieved in order demonstrate the functional requirements of the Building Regulations will be met in addition to meeting The Building (Amendment) Regulations 2018. Reference should be made to the full Employer Requirements for the detailed design elements that will form part of the works as the scheme develops further.

1.5.2 It should be noted that this fire strategy contains some derogations from the Employer Requirements. This have been summarised in blue under the relevant employers requirement in Table 2 below and should be reviewed by the operator to confirm their acceptance.

1.5.3 In other Turnkey specifications, there has been a requirement that each guest bedroom is enclosed in 30 minutes fire-resisting construction. This requirement was not identified in the Turnkey specification received by Orion Fire. This should be confirmed by Whitbread at the earliest opportunity as it will have a significant impact on the proposed “skylight” areas that face into the bedrooms.

Table 2: Summary of Employer Requirements Fire Obligations

Item	Employer Requirement	ER Section
External Walls	For buildings with the top floor of accommodation above 12.5m, the restriction of Euroclass A2 or better rating will be extended to all elements of the external wall. (Breather membranes can be Euroclass B-s1,d0 as this is the least combustible class of this material that is currently available). Whitbread to confirm that this requirement can be relaxed due to the building being existing and the proposed hotel accommodation being located within the basement.	1.10
Lifts	Fire/smoke curtains must be fitted as required in cases of a lift prejudicing escape routes, such as where the lift serves a protected bedroom corridor and a back of house room such as a linen room.	2.10.1
	Where dual-entry fire-fighting lifts are installed, fire curtains should be located within linen rooms and should be both smoke and fire curtains. They should be activated by any confirmed alarm in the hotel, as opposed to local detection (local detection shall only be utilised when required by the fire strategy and by agreement with Premier Inn).	2.10.7
Automatic Fire Suppression Systems	Ansul Fire Suppression system required to the kitchen.	2.15
	Where sprinklers are required to be installed then the developer shall carry out a detailed building study and ascertain all design limitations and installation restrictions. Allow to develop a sprinkler design solution in full compliance with BS EN 12845 Incorporating LPC Technical Bulletins to achieve the required risk mitigation, to a minimum hazard rating of OH1 (Ordinary Hazard 1). A BS 8489 high pressure water mist system is proposed in lieu of a BS EN 12845 system. Marioff will develop the design to provide an equivalent level of protection to a BS EN 12845 system. This variation should be agreed with Whitbread.	4.3.4.6
Fire Alarm Interfaces	On the gas supply to the plant room gas fired water heaters, the developer shall supply and install a suitably sized solenoid valve linked to the fire alarm system (Shut On Alarm) along with thermal links (1 No. per heater) and emergency shut off button located by the exit door, activation shutting the gas valve, the gas valve will automatically reset. The system shall comply with BS 799.	4.2.3
	Provide all necessary interfaces and data cabling to link the pager system to the key hotel systems. This includes as a minimum, the Disabled Refuge system and Fire alarm panel.	4.4.13

Item	Employer Requirement	ER Section
Fire Engineered Solutions for Means of Escape	Travel distances are to be in accordance with Building Regulations and that where this is not achievable and a fire engineered solution is required, the principles of the scheme are to be agreed with Whitbread prior to exchange. Use of a fire engineered solution should only be considered where it is impractical or not viable to include an additional staircase(s) to reduce travel distances to within code compliant limits. The specification details that sprinklers are the preferred option to compensate for extend travel distances and that any form of smoke control system to compensate for extended travel distances would need special consideration. Isolated cases of extended travel distances may not justify such measures and alternative layouts may be necessary to overcome the impact on travel distance.	4.3.4.5
Fire alarms	Combined smoke/heat detectors with integral sounder units shall be provided throughout the public areas including guest bedrooms, with suitable detectors located in areas such as plant rooms in accordance with the requirements of BS 5839. Considerations should be given to ensure that all voids over 800mm are provided with automatic fire detection. The 3-minute delay is the hub by Premier inn preferred standard operation for the fire alarm panel	4.4.3
Emergency Lighting	Emergency lighting will be designed and installed in accordance with BS5266: Part 1, BSEN 1838 and draft European requirements. The associated charger units able to suitably recharge within 24 hours. Testing facilities shall be key switches located adjacent to local distribution boards for tests to large areas such as Main Reception, bedroom corridors and staircases. For tests to isolated areas such as offices, linen rooms and WCs test facilities shall be installed within the local lighting switch plate.	4.4.5

1.6 Variations from Prescriptive Guidance

1.6.1 The layout of the development is generally in accordance with the prescriptive recommendations given within ADB. All alternative approaches from the recommendations of ADB have been summarised in Table 3 for ease of reference. Unless listed below, no other aspect of the design should deviate from the relevant recommendations of ADB.

Table 3: Variations to the prescriptive guidance

Variation	Report Section
As the basement is over 200m^2 in area, it should be provided with a means of smoke ventilation, this is proposed by a mechanical ventilation system. A mechanical ventilation system is permitted as an alternative to natural ventilation, on the basis that a commercial sprinkler system in accordance with BS EN 12845 is also provided. However, it is proposed to provide a BS 8489 Commercial Watermist system as an alternative to a BS EN 12845 commercial sprinkler system to protect the basement. This is a variation to the guidance and to the Whitbread requirement and so will need to be agreed as a variation with Whitbread. The Watermist system will be required to achieve an equivalent level of performance to a BS EN 12845 commercial sprinkler system. The detailed design should be developed by Marioff or other appointed watermist system specialist at later RIBA stages as applicable.	2.3.1
The stair which discharges at the hotel entrance located off Marchmont Street, has a reception space at the hotel level exceeding 10m^2 in area. This will be addressed by limiting the combustible material in this area, by controlling the fire load to a total of 10m^2. The limiting of fire load in this area should be stipulated as a condition in the operators' terms and regular assessments carried out to determine that this is being adhered to and there is no build-up of combustible materials etc. In addition to the above, the presence of a Watermist system means that in the event of a fire, it should be controlled in the early stages, limiting the fire growth, and spread.	4.4.9
It is proposed provide a lounge area in the central street comprising of fixed furniture. Although the central street won't be a protected escape route, it won't be the sole means of escape from any bedroom and would act as a secondary escape route with occupants of each bedroom having more than direction of escape available. In addition, a clear width of escape routes will be maintained, and the fire load controlled by limiting the combustible content in the area. This justification will be further developed at RIBA Stage 3.	4.3.6
There is reduction in width along the escape route leading to the stair located on the right-hand side of the plan (which discharges to the shopping centre central street at ground floor level) due to the presence of existing columns, which reduces the escape width from 1.16m in the corridor to 0.9m between the columns. For compliance with Building Regulations the escape route should not narrow at any point to the storey exit, however, it is considered the due to the number and width of exits available exceeding those required for the number of occupants proposed (210 persons) the situation can be considered acceptable. In addition, in line with Table 7, a 900mm width is able to support 110 persons and therefore it is not considered that this reduction in width will have a negative impact on the overall exit capacity. The hotel will be provided with a Category L1 system throughout (BS 5839-1), which will provide early warning to occupants. This coupled with an AWFSS to limit the fire spread in the early stages will provide occupants with a greater time to make their escape.	4.2.6

Variation	Report Section
For minimum compliance with Building Regulations, the minimum recommended width of a stair where there is upward travel should be 1200mm. The six existing central stairs do not meet this recommendation, but rather each stair had a measurement of 970mm as measured on the day of the site visit, with the two reaming stairs measuring 1800mm and 1500mm. Discounting the largest 1800mm stair, the 1500mm stair serving one floor would have sufficient capacity to support simultaneous evacuation of 300 persons. As per Table 3.1 of ADB, a stair with a minimum width of 800mm is able to serve a maximum of 50 persons. The six central stairs combined would therefore be able to support evacuation of 300 persons, taking the total exit capacity after discounting the largest stair (1800mm) to 600 persons (capacity of 1500mm stair plus six central stairs). This would be sufficient to evacuate the 442 persons proposed to the hotel. Based on the above, the vertical capacity of the hotel can be considered sufficient and the reduction in stair width of the central stairs is not considered to have a detrimental effect on the escape capacity.	4.4.3
The final exit doors from the stairs should be at least of wide as the stair they serve. This is not achieved for the six existing stairs shared with the shopping centre, which as per the architects' drawings supplied range from 978mm to 997mm. In addition, the final exit from the stair discharging at the hotel entrance located off Marchmont Street is also not as wide as the stair it serves. In line with Table 3.1 of ADB, the six central stairs are limited to a capacity of 50 persons each due a stair reduced width below 1000mm, but in excess of 800mm. Therefore, it is considered that as the ground floor final exits for the existing stairs are in excess of 800mm, the exit capacity from the six central stairs will remain unaffected, with each stair/final exit able to support the evacuation of 50 persons. With regards to the remaining two stairs, in line with ADB a 1000mm stair can support evacuation of 150 persons, therefore, if the final exit doors from the stairs measuring 1800mm and 1500mm were a minimum of 1000mm each, the final exit from each stair could support evacuation of 150 persons. Based on the above, after discounting the largest stair, the final exits could support an evacuation of 450 persons, which would be sufficient to support the 442 persons proposed to the hotel level. Note that any change in occupancy levels would require a reassessment of the exit capacities.	4.4.8
The locations of the dry riser outlets are yet to be confirmed, however based on the indicative locations, the hose laying distances to some parts of the floor plate exceed the 45m requirement, with distances up to 49.4m. This extension would need to be reviewed with the London Fire Brigade and will remain a design risk until approved.	6.1.5

1.7 Further Works

1.7.1 This fire strategy has been produced to provide a performance specification suitable for RIBA Stage 2. There are multiple areas of the current design that will require further development as they currently provide a risk, the Architect's GA Floor Plans will need to be developed alongside this pre-planning fire strategy. These areas have been summarised in Table 4 below.

Table 4: Further Works to be developed at RIBA Stage 3

Further works	Report Section
Discuss the variations to prescriptive guidance within this report with the approval authorities and the fire service as appropriate.	N/A
Confirm no requirement in the Turnkey specification for each guest bedroom to be enclosed in 30 minutes fire-resisting construction	1.5.3
Confirm the locations of existing dry risers.	6.1.5
Provide details on water supplies and achieved flow rates for existing hydrants if available.	6.1.4
To be confirmed that the Employer's requirement to have Euro class A2 or better rating extended to all elements of the external wall does not apply to this scheme as the proposal is for a basement level hotel.	3.3.2
Updated plans showing the location of the disabled refuges should be supplied once available for inclusion in the RIBA Stage 3 report.	4.5.2
Composition of the primary frame for the existing build should be confirmed.	B1.3
Assembly points for the building to be confirmed by design team.	B1.4.4

2 Fire Safety Systems

2.1 Fire Detection and Alarm System

2.1.1 The hotel is to be provided with an addressable Category L1 fire detection and alarm system throughout designed and installed in accordance with BS 5839-1.

2.1.2 As per section 4.4.3 of the Whitbread Specification, combined smoke/heat detectors with integral sounder units shall be provided throughout the public areas including guest bedrooms, with suitable detectors located in areas such as plant rooms in accordance with the requirements of BS 5839. In addition, section 4.4.3 also details that considerations should be given to ensure that all voids over 800mm are provided with automatic fire detection.

2.1.3 Also provided under section 4.4.3 of the Whitbread Specification is a cause-and-effect matrix, which details that a double knock or two stage alarm is to be provided, with a 3 minute delay or investigation period. The requirements of the brand standard will be incorporated into the cause and effect to be produced by Orion at RIBA Stage 4. This will be intended as a starting point for Part B Regulations compliance and can be modified by the specialist designer to suit operational needs.

2.1.4 Section 4.4.13 of the Whitbread specification details that the paging system should be interfaced with the fire alarm. This will be incorporated into the cause and effect to be produced by Orion at RIBA Stage 4 and should be retained by the specialist designer.

2.2 Emergency Lighting

2.2.1 Emergency lighting should be provided in all common escape routes and ancillary accommodation in accordance with the recommendations of BS 5266.

2.2.2 As per section 4.4.5 of the brand standard, emergency lighting will be designed and installed in accordance with BS5266: Part 1, BS EN 1838 and draft European requirements.

2.2.3 All emergency luminaires shall have a standby operation of 3 hours, with their associated charger units able to suitably recharge within 24 hours to satisfy the brand standard.

2.2.4 Provision shall be made to provide all final exits, corridor fire doors & direction changes to fire exit routes with illuminated directional exit signage.

2.3 Automatic Suppression Systems

2.3.1 As the basement is over 200m^2 in area, it should be provided with a means of smoke ventilation, this is proposed by a mechanical ventilation system. A mechanical ventilation system is permitted as an alternative to natural ventilation, on the basis that a commercial sprinkler system in accordance with BS EN 12845 is also provided.

2.3.2 It is proposed however, to provide a BS 8489 Commercial Watermist system as an alternative to a BS EN 12845 commercial sprinkler system to protect the basement. This is a variation from Building Regulations and is therefore an approvals risk.

2.3.3 The compatibility of the preferred mist system with the proposed basement ventilation system will need to be considered. Marioff have confirmed that a mist system and smoke extract can operate in the same space, although it will require design co-operation between PSH and the sprinkler consultant. The detailed design should be developed by Marioff or other appointed watermist system specialist at RIBA Stage 4.

2.4 Basement Ventilation Systems

2.4.1 A mechanical ventilation system will be provided. This shall be sized for 10ACH on the largest compartment and then ducted to serve all compartments. A row of bedrooms will be considered as a compartment, separated by the bedroom corridors, in the event that fire resistance between bedrooms is not provided (see section 1.2.1). Bedrooms will be ventilated by opening doors into the main corridors as the vent is for post-fire smoke clearance rather than smoke control. It is also considered that the Watermist system provided will limit the fire spread, limiting the growth of the fire and therefore the compartment size. The ventilation system and strategy will be developed at the later RIBA stages as appropriate.

2.5 Evacuation Lifts

2.5.1 For compliance with policy D5 of the London Building Plan, where a lift shaft is provided, at least one lift within the shaft needs to be provided as an evacuation lift. To satisfy this requirement one of the lifts in the lobby adjoining the hotel entrance will be designed as an evacuation lift. This should be designed and installed in accordance with BS EN 81-76.

2.6 Fire Mains

2.6.1 Due to the extensive floor plan it is not possible for the fire service to achieve the required 45m hose laying distances and therefore the perimeter access provision would not be sufficient (see Figure 7 of section 6 of this report). For this reason, the provision of fire mains would be proposed. It is considered that as part of the existing shopping complex, fire mains may already be supplied to a number of the shared stairs between the shopping complex and the hotel. The existing provisions should be confirmed such that the applicability of these to the proposed hotel can be assessed. Each of the eight protected stairs should be provided with a dry rising main in accordance with BS 9990.

2.7 Fire Hydrants

2.7.1 A utilities survey has not been received; however, based on a site inspection and walk around the direct perimeter of the building 6 existing fire hydrants were identified, refer to section 6.1.4 and Figure 6. Details on water supplies and achieved flow rates for existing hydrants should be supplied if available..

2.8 Secondary Power Supplies

2.8.1 The majority of the fire safety systems within the building will be provided with secondary power supplies via integral back-up batteries. However, the following life safety systems will require a dedicated secondary power supply:

- Water Mist System
- Mechanical Smoke Ventilation
- Evacuation Lifts

2.8.2 As per section 4.4.1.5 of the Whitbread specification, a generator with a minimum 7-hour duration integral fuel tank should be provided on site as the secondary power supply for the above high power systems.

3 Building Fabric and Components

3.1 Structural Fire Protection

3.1.1 All elements of structure should achieve 90 minutes fire resistance for loadbearing capacity (R90).

3.2 Compartmentation

3.2.1 The compartmentation requirements for the building have been tabulated below in Table 5. Note that where one wall falls into more than one of the below categories, the higher rating should be applied. Orion Fire recommend that European classification for fire-resistance is used instead of National classifications. It has been confirmed that the existing wall system comprises a mixture of concrete and blockwork.

3.2.2 As the proposed development is for a hotel and there is therefore a sleeping risk within the building, the floors between basement and ground level and between upper and lower basement are required to be designed as compartment floors. The architect has confirmed that the existing floors comprise concrete construction.

Table 5: Compartment Wall and Floor Requirements

Location	European Classification[1]
Compartment Floors	EI 90
Protected Stairs	EI 90
Lightwells Into Stairs	EI 90
Lightwells in corridors adjoining back of bedrooms	EI 90
Lift	EI 90
Bedroom Corridors	EI 30
Protected Lobby	EI 30
Plant/Services	EI 60
F&B Space/Ancillary Rooms	EI 60
Risers	EI 30
Linen Rooms	EI 60
Refuse Stores	EI 60
Kitchen	EI 60
Rooms containing life safety plant	EI 120
Substations	EI 240

[1] Add R to the fire-resisting rating for any loadbearing walls

3.2.3 Fire doors are generally half the rating of the wall they are fitted in, rounded to the nearest 30 minutes. The exception to this is plant rooms and the F & B space which should be the same rating as the wall they are fitted in.

3.3 External Walls

3.3.1 The proposed development is for a basement level hotel under an existing building. The provision of a hotel in such a location will not have an impact on the existing external fire spread for the existing building and as such there is no requirement to assess this.

3.3.2 As detailed in Table 2 above, it is a requirement of the Whitbread specification that for buildings with the top floor of accommodation above 12.5m, the restriction of Euro class A2 or better rating will be extended to all elements of the external wall. As the proposed development is for a basement level hotel the operator should confirm that this requirement does not apply and will not be extended to any existing external walls.

3.3.3 If it is not possible to provide entirely independent escape routes/access routes to the hotel from the residential accommodation above the Brunswick Centre, the applicability of Regulation 7 under a Material Change of Use for the full building will need to be discussed with the Building Control Body at the earliest opportunity. As the number of rooms for residential purposes within the building is changing, the building is technically undergoing a Material Change of Use as per Regulation 5 of the Building Regulations. The current proposal is classify the hotel as a separated part of the building such that Regulation 7 is not legally applicable to the residential tower above. However, this approach is reliant on the two areas being entirely separated.

3.4 Material Specifications

3.4.1 The flights and landings of stairs should be constructed of A2-s3,d2 rated materials (as classified in BS EN 13501), such as concrete or steel.

3.4.2 A1 rated materials should be used in the construction of flues.

3.4.3 The following rooms should be enclosed in robust, solid, non-combustible construction, such as blockwork:

- Refuse stores
- Boiler rooms
- Fuel storage spaces
- Transformer and switchgear rooms, except for rooms that contain only low voltage equipment.

3.5 Distribution of Services

3.5.1 No services should be run through or within the common escape stairs unless they are required to serve the stair (e.g. lighting). For the purposes of this Stage 2 fire strategy, the “Protected Escape Routes” as referred to in BS 7671 are considered to be the vertical escape routes only.

3.6 HVAC Systems

3.6.1 Ventilation ducts should not pass-through compartment boundaries such the bedroom corridors or through the stair enclosure. Wherever ductwork passes through a fire-separating element it should be provided with a fire damper or a leakage-rated fire damper in accordance with BS 9999 and ASFP Grey Book: Fire and smoke resisting dampers or alternatively the duct should be fire-rated or enclosed in fire-resisting construction (integrity and insulation) to the highest period of fire-rated construction through which it passes.

3.6.2 The temperature control systems provided within common residential corridors should not rely on any inlet air from the stair.

4 Means of Escape

4.1 Evacuation Strategy

4.1.1 The evacuation procedure within all areas of the basement hotel demise will follow a simultaneous evacuation philosophy. If a fire alarm is raised within any area of the basement the alarm will sound throughout the basement hotel and all occupants would evacuate immediately.

4.1.2 Upon activation of an alarm in the basement hotel, a notification should be sent to the ground floor shop premises and the management of the residential aspect such that evacuation of these areas could be facilitated if deemed necessary.

4.1.3 As per section 4.4.3 of the Whitbread Specification a double knock or two stage alarm is to be provided, with a 3 minute delay or investigation period.

4.2 Building Population

4.2.1 The occupancy for the hotel has been estimated based on the floor space factors given in Table D1 of ADB Volume 2. With regards to the bedrooms, the occupancy is based upon 2 persons per bedroom.

4.2.2 There are a number of areas within the building where the occupancy would be deemed as transient. These include, but are not limited to, storage areas, plant rooms, linen rooms, bin stores, bike room, luggage rooms, toilets, other sanitary accommodation and common access/egress routes. The occupancy within these areas is not permanent and has been already accounted for elsewhere in the building.

4.2.3 A summary of the building population is given in Table below. It should be noted that the populations of the central street, the F & B and reception spaces have not been included in the overall occupancy as it is expected that the occupants of these rooms will have already been accounted for in the bedrooms or staff areas.

Floor	Use	Floor Space Factor	Occupancy (persons)
Basement	Bedrooms	1 person per bedroom	414
	Office	6m^2/person	2
	Reception Desk	Assumed 2 staff	2
	Team Room	1m^2/person	20
	Kitchen	7m^2/person	4
	Central Street/Lounge Area	10 persons per seating	40*
	F & B	1m^2/person	248*
		Total	442

* Not included in overall occupancy as occupants accounted for elsewhere in the building.

4.3 Horizontal Means of Escape

4.3.1 Travel distances throughout the building should be in line with Table 6 below. Where these travel distances have not been achieved, they have been highlighted on the drawings indicated in Appendix A.

4.3.2 Section 4.3.4.5 of the Whitbread specification details requirements for fire-engineered solutions for means of escape. The section details that travel distances are to be in accordance with Building Regulations and that where this is not achievable and a fire engineered solution is required, the principles of the scheme are to be agreed with Whitbread prior to exchange. Section 4.3.4.5 carries on to detail that use of a fire engineered solution should only be considered where it is impractical or not viable to include an additional staircase(s) to reduce travel distances to within code compliant limits. The specification details that sprinklers are the preferred option to compensate for extend travel distances and that any form of smoke control system to compensate for extended travel distances would need special consideration. The specification further details that Isolated cases of extended travel distances may not justify such measures and alternative layouts may be necessary to overcome the impact on travel distance.

4.3.3 As a watermist system is proposed to the basement rather than a code-complaint commercial sprinkler system in accordance with BS EN 12845, it is not possible to use this a justification for extended travel distances as the substitution is already a variation from guidance. Rather it is considered where extended travel distances are present, that the layout is altered to provide a code-complaint travel distance.

Table 6: Travel Distance Limitations

Area	Single Direction (m)	More than one Direction (m)
Hotel bedroom	9	18
Hotel bedroom corridor	9	35
Hotel areas elsewhere	18	35
Ancillary Accommodation (unless otherwise listed)	18	45
Refuse Store (within room)	9	18
Plant Rooms (within room)	9	18
Plant escape route not in open air (overall distance)	18	45

4.3.4 All doors within the building should be not less than 750mm or the relevant requirement of Approved Document M, whichever is greater.

4.3.5 Doors serving ancillary accommodation should be sized depending on the maximum occupancy of the space. The minimum door widths for a specified number of occupants have been included below in Table 7.

Table 7: Minimum Door Widths

Number of people	Door width (mm)
60	750
110	850
220	1 050
More than 220	5 per person

4.3.6 It has been advised by the Architect that there is reduction in width along the escape route leading to the stair located on the right-hand side of the plan (which discharges to the shopping centre central street at ground floor level) due to the presence of existing columns (see Figure 4). The columns reduce the escape width to 900mm, a reduction of approximately 216mm from the bedroom corridors, before returning to 1800mm once in the stair at leading to ground floor. Although for compliance with Building Regulations the escape route should not narrow at any point to the storey exit, it is considered the due to the number and width of exits available exceeding those required for the number of occupants proposed (442 persons) the situation can be considered acceptable. In addition, in line with Table 7 above, a 900mm width is able to support 110 persons and therefore it is not considered that this reduction in width will have a negative impact on the exit capacity. The hotel will be provided with a Category L1 system throughout (BS 5839-1), which will provide early warning to occupants. This coupled with an AWFSS to limit the fire spread in the early stages will provide occupants with a greater time to make their escape. This is variation from guidance and is subject to acceptance and agreement with Building Control.

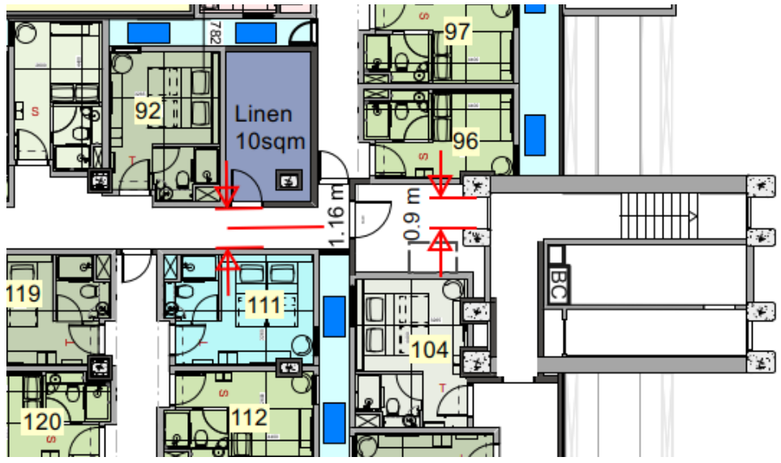


Figure 4: Reduced Escape Width - Existing Columns

4.3.7 It is proposed by the Architect as a client aspiration to provide a lounge area in the central street comprising of fixed furniture. A justification for furniture in this location will be further developed as part of the RIBA Stage 3 report but will detail that although the central street won't be a protected escape route, it won't be the sole means of escape from any bedroom and would act as a secondary escape route with occupants of each bedroom having more than direction of escape available through the bedroom corridors. Some bedrooms do have a single direction of escape in the bedroom corridors until there is a choice of exits, in the case of a fire blocking this escape route, occupants could escape via the central street, this is acceptable on the basis of fire engineering first principles where a single fire location (accidental fire) is assumed for the design of the fire strategy. In addition to the above, a clear width of escape routes will be maintained throughout the central street, and the fire load controlled by limiting the combustible content in the area. This is a variation from guidance and so will be an approvals risk. At this stage, the furniture provision within the street should be assumed to be restricted to the below requirements:

- Furniture should be contained within a 10m^2 zone within the street and not impinge on escape routes through the street; and
- 15m^2 furniture zones should be separated from adjacent furniture zones by a distance of 4m

Cross-corridor doors

4.3.8 In accordance with section ADB Volume 2 where corridors exceed 12m in length and connect two or more storey exits, they should be provided with be sub-divided by self-closing FD30S fire doors (and any necessary associated screens). The fire door(s) and any associated screen(s) should be positioned approximately mid-way between the two storey exits to effectively safeguard the route from smoke (having regard to the layout of the corridor and to any adjacent fire risks).

4.4 Vertical Means of Escape

4.4.1 The building is served by 8 protected stairs, six central stairs shared with the shopping centre, the existing stair on the right-hand side of the plan discharging directly into the ground floor central street and the stair discharging at the hotel entrance located off Marchmont Street.

4.4.2 The architect has confirmed that the six central stairs are not shared with the residential levels above, but rather provided with a dedicated corridor direct to external.

4.4.3 For minimum compliance with Building Regulations, the minimum width of a stair where there is upward travel should be 1200mm. As the building and therefore a number of the stairs are existing, the six central stairs do not meet this requirement, but rather each stair had a measurement of 970mm as measured on the day of the site visit. The existing stair on the right-hand side of the plan discharging directly into the ground floor central street had a measurement on the day of the site visit of 1800mm, whilst the proposed new stair discharging at the hotel entrance located off Marchmont Street, has a measurement on plan of 1500mm.

4.4.4 As the stairs are not lobbied at basement and ground floor level, it is necessary to discount one stair due to it being rendered unavailable due to the effects of fire and/or smoke. Discounting the largest 1800mm stair, as per Table 3.2 of ADB Volume 2, the 1500mm stair would have sufficient capacity to support simultaneous evacuation of 300 persons where the stair serves one floor. As per Table 3.1 of ADB, a stair with a minimum width of 800mm is able to serve a maximum of 50 persons. The six central stairs combined would therefore be able to support evacuation of 300 persons, taking the total exit capacity after discounting the largest stair (1800mm) to 600 persons (capacity of 1500mm stair plus six central stairs). This would be sufficient to evacuate the 442 persons proposed to the hotel. Based on the above, the vertical capacity of the hotel can be considered sufficient and the reduction in stair width of the central stairs is not considered to have a detrimental effect on the escape capacity. This is a variation from guidance and is therefore subject to Building Control agreement and acceptance.

4.4.5 As per section 3.2 of ADB Volume 2, if a building contains storeys in different purpose groups, then it is necessary to provide different escape routes from the different areas of use or provide other effective means to protect the common escape routes. For this reason it is considered that protected lobbies should be provided to separate the escape routes from the different demises.

4.4.6 Escape stairs should discharge either:

- Directly to a final exit; or
- Into a protected corridor leading to a final exit which is itself lobbied from any accommodation.

4.4.7 This is achieved for all stairs on the plans.

4.4.8 The final exit doors from the stairs should be at least of wide as the stair they serve. This is not achieved for the six existing stairs shared with the shopping centre, which as per the architects' drawings supplied range from 978mm to 997mm. In addition, the final exit from the stair discharging at the hotel entrance located off Marchmont Street is also not as wide as the stair it serves. As per section 4.4.4 above, the six central stairs are limited to a capacity of 50 persons each due a stair reduced width below 1000mm, but in excess of 800mm as per Table 3.1 of ADB. Therefore, it is considered that as the ground floor final exits for the existing stairs are in excess of 800mm, the exit capacity from the six central stairs will remain unaffected, with each stair/final exit able to support the evacuation of 50 persons in line with section 4.4.4 above. With regards to the remaining two stairs, in line with ADB a 1000mm stair can support evacuation of 150 persons, therefore, if the final exit doors from the stairs measuring 1800mm and 1500mm were a minimum of 1000mm each, the final exit from each stair could support evacuation of 150 persons. Based on the above, after discounting the largest stair, the final exits could support an evacuation of 450 persons, which would be sufficient to support the 442 persons proposed to the hotel level. This is a variation from guidance and therefore will require review and agreement with Building Control. Note that any change in occupancy levels would require a reassessment of the exit capacities.

4.4.9 The stair which discharges at the hotel entrance located off Marchmont Street, has a reception space at the hotel level. In accordance with ADB, this is permissible as there are multiple stairs in the building,

however, the reception space should be limited to 10m^2. This will be addressed by limiting the combustible material in this area, by controlling the fire load to a total of 10m^2. The limiting of fire load in this area should be stipulated as a condition in the operators' terms and regular assessments carried out to determine that this is being adhered to and there is no build-up of combustible materials etc. In addition to the above, the presence of a Watermist system means that in the event of a fire, it should be controlled in the early stages, limiting the fire growth, and spread. This is a variation from guidance and therefore an approvals risk.

4.5 Evacuation of Non-Ambulant Occupants

4.5.1 The responsibility for safe evacuation of any persons needing assistance (reduced mobility, disabled, etc.) falls on the tenant or management of the building. As part of RR(FS)O, specific fire evacuation policies and procedures should be developed (such as Personal Emergency Evacuation Plans (PEEPs)), accounting for a wide spectrum of persons who may be present on the premises. No reliance should be made upon the Fire Service to assist during evacuation of the building.

4.5.2 Section 4.4.4 of the Whitbread specification details the requirement for refuge points to the hotel.. Provision should be made for a disabled refuge within the stair or stair lobby enclosure within each protected escape stair. The disabled refuges should measure 900mm x 1,400mm and not impinge on width of the escape routes for the building. The architect has advised the locations of disabled refuges to be provided to each stair, the updated plans should be supplied once available for inclusion in the RIBA Stage 3 report.

4.5.3 Each refuge point will need to be provided with a two-way communication system so that the management is aware of anyone awaiting assistance in the refuge space. This should be linked to either a reception desk or another appropriate location (such as next to the fire alarm panel or adjacent to the fire service access point) such that there is a member of staff or other to answer the EVC device. Section 4.4.13 of the Whitbread specification states that the pager system should also be linked to the disabled refuge communication system. The EVC communication system should be designed and installed in accordance with BS 5839-8 and consist of Type B outstations.

4.5.4 In addition to the above, section 4.4.13 of the Whitbread specification details that the EVC communication system will be active at all times and not just under a fire situation.

4.5.5 As part of London Building Plan, Policy D5, means for dignified escape need to be provided for all occupants of the building. As such allowance should be made for one lift per core to be designed as an evacuation lift. Evacuation lifts should be designed and installed in accordance with BS EN 81-76.

5 Space Separation

5.1.1 The proposed development is for a hotel at basement level underneath the existing hotel. The provision of a hotel in such a location will not have an impact on the existing external fire spread for the existing building and as such there is no requirement to assess this.

6 Fire Service Access

6.1 Site Access

6.1.1 As previously discussed, the proposed development is for a basement level hotel under the existing building. For that reason, external fire service access will remain unchanged. No site plan has been provided for the development; however the existing building can be seen in Figure 5 below.

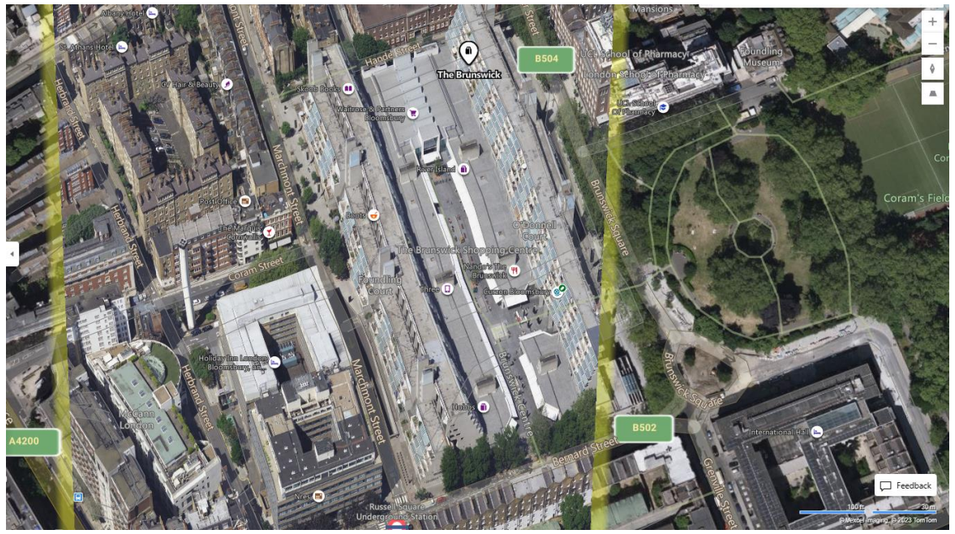


Figure 5: The Existing Brunswick Centre

6.1.2 Perimeter access for a pump appliance is available to the site via each of the adjoining roads, namely, Marchmont Street, Bernard Street, Handel Street, Hunter Street and Brunswick Square.

6.1.3 The location of any existing fire main inlet points to the building is unknown. This should be confirmed by the design team.

6.1.4 Hydrants should be positioned within 90m of an entry point to the building and not more than 90m apart. A utilities survey has not been received; however, based on a site inspection and walk around the direct perimeter of the building 6 existing fire hydrants were identified in the locations shown in Figure 6 below

6.1.5 The internal firefighting provisions for the building have been illustrated in Figure 7 below. The location of the existing dry riser outlet points is not yet known and is to be confirmed. As such the dry riser outlet locations shown are indicative only and will be updated once the existing locations are confirmed. It is required that every point on the floor plate is reached within 45m of the dry riser outlet point, on a route suitable for laying a hose. This is achieved for most areas of the floor plate, however there are some areas where this distance is slightly exceeded, up to 49.4m. The slight extension would need to be reviewed with the fire service. These diagrams should be developed into fire service access plans at RIBA Stage 4 for the fire service consultation.

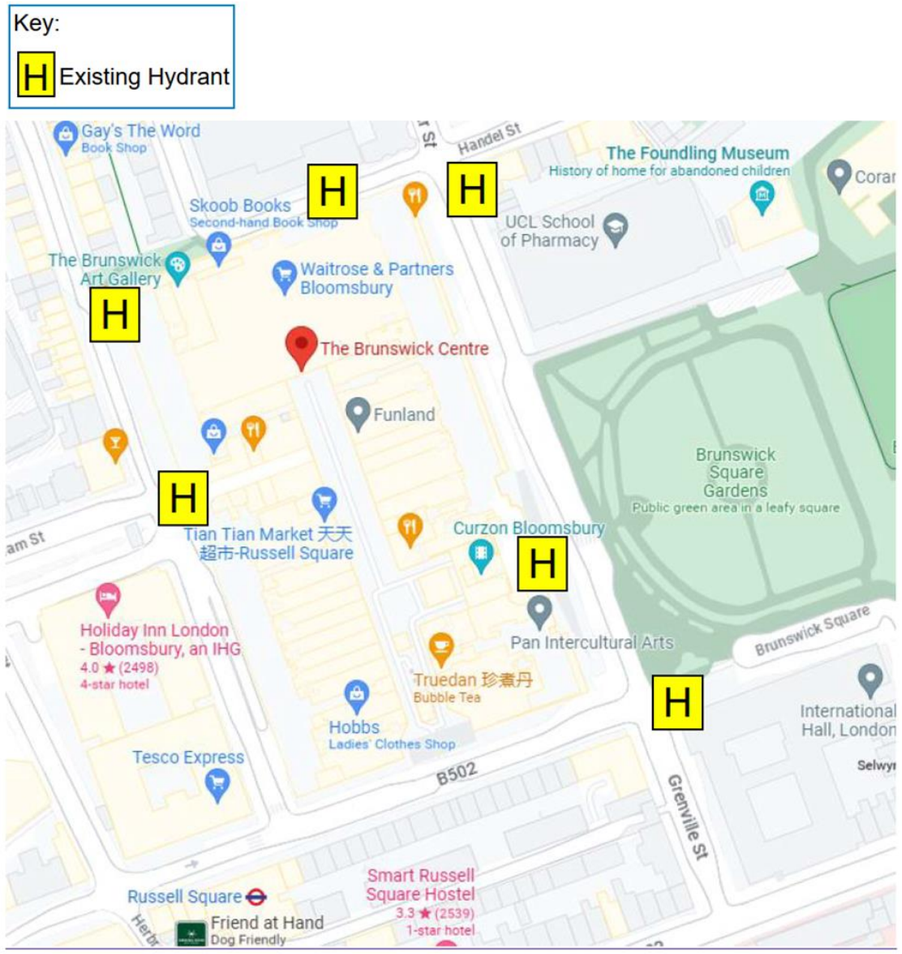


Figure 6: Existing Hydrants Identified Around the Brunswick Centre

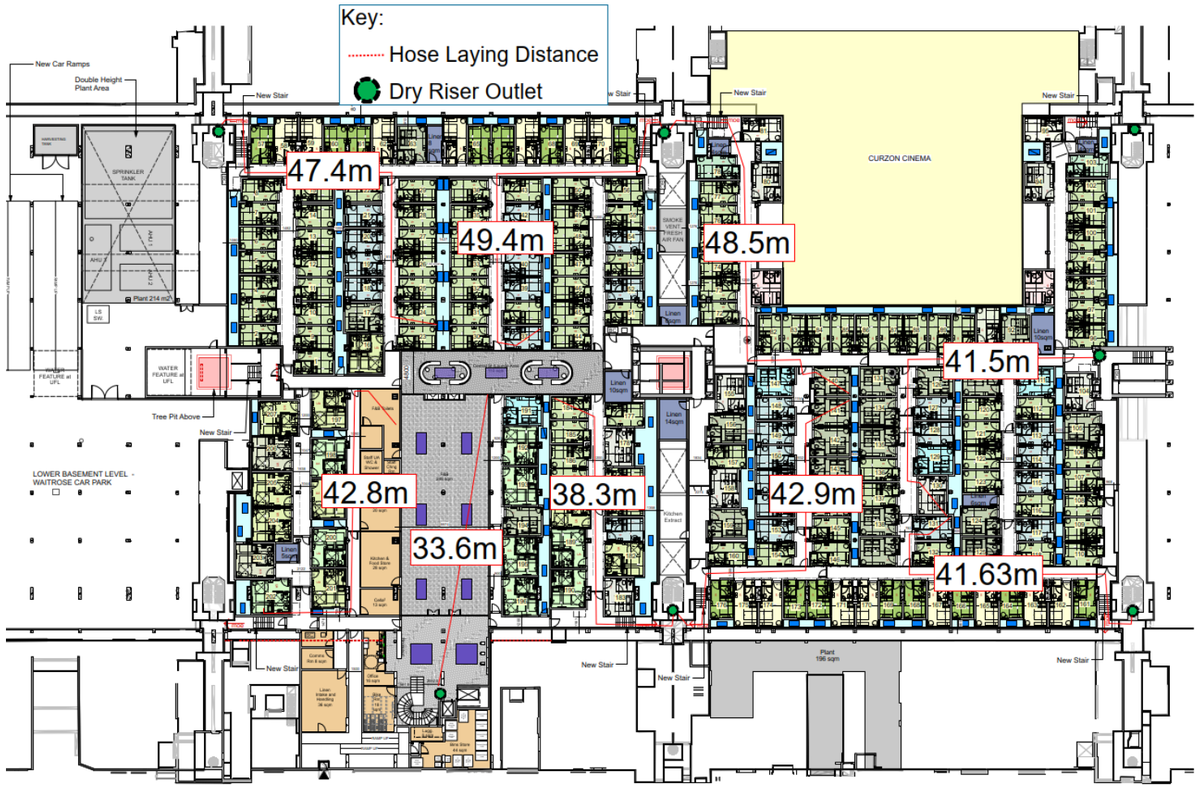
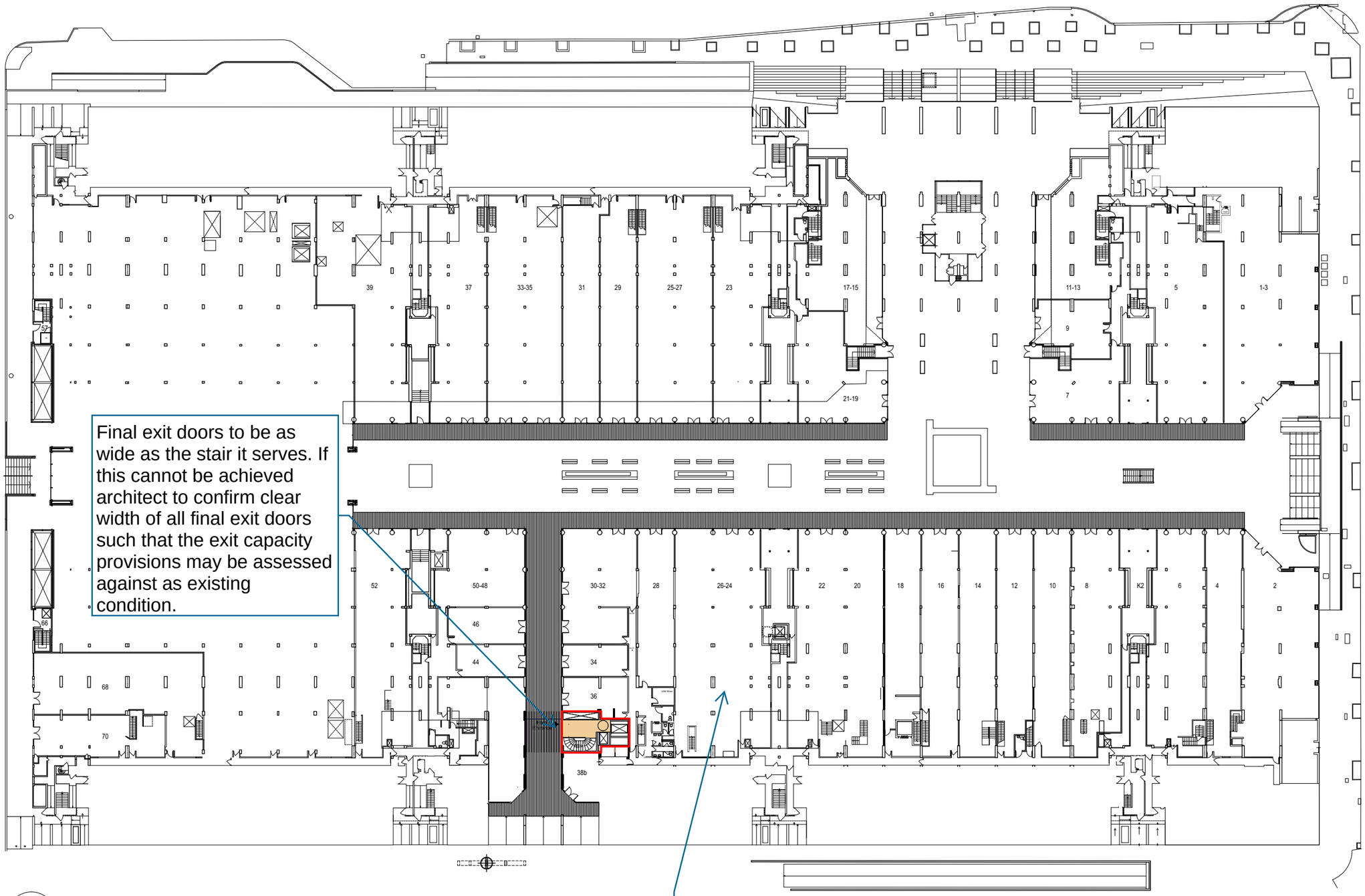


Figure 7: Internal Fire Service Provisions

Appendix A – Drawing Comments

0m 10m 20m
APPROXIMATE SCALE BAR



3 Proposed Ground floor
Scale: 1:300

Orion Fire Drawing Review - RIBA 2
Prepared by : Catherine Henry
Reviewed by : Ben Cooper
Date : 16/06/2023
Reference : OF-000957-DRC-05

ORIONFIRE ENGINEERING

Rev	Date	Description	By	Chk
A	06/06/2023	Stage two issue	FP	

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Drawing
PROPOSED GA PLAN GF
Ground floor

Scale	Date	Drawn	Checked
1:300	15/11/2022	FP	JM

Drawing No. **Revision**
4742-PA1-100 A

Status
FOR INFORMATION

Occupants of the bedrooms are required to make escape through the central street which will contain furniture and is proposed to be a lounge area. For this reason the central street is not a protected escape route, however, a justification for this based on clear width of escape routes and limited fire load etc.will be provided as part of the RIBA Stage 3 report. This is however a variation from guidance and so will be an approvals risk.

Noted that there is reduction in the escape width here from 1160mm in the corridor to 900mm between columns. A justification has detailed in the report, however, this is a variation from guidance and therefore an approvals risk. This is also an operator risk, to be agreed alongside Building Regulations.

It is acceptable for the F & B space to have access to the stair, however fire door and lobby separation will be required.

It is to be confirmed by Whitbread if there is a need to provide fire separation between bedrooms. if Whitbread confirm a requirement for 30minutes fire-separation between bedrooms, the skylight areas with opening windows to bedrooms will be a breach of that requirement. In addition, FR glazing will be required and all windows to be fixed shut.

Reception area exceeds 10m². A justification has detailed in the report, however, this is a variation from guidance and therefore an approvals risk.

1 Proposed Lower Basement B2
Scale: 1:200

Rev	Date	Description	By	Chk
A	06/06/2023	Stage two issue	FP	

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Drawing
PROPOSED GA PLAN B2
Lower basement

Scale	Date	Drawn	Checked
1:200	15/11/2022	FP	JM

Drawing No. **4742-PA1-098** Revision **A**

Status
FOR INFORMATION

Appendix B – London Plan D12

B1.1 London Plan D12 Requirements

B1.1.1 In the following sections, the requirements of The London Plan Policy D12, section B(1) – B(6) inclusive as well as section D5 B(5) are detailed to assist the reader with the information provided in sections B1.2 to B1.9 of this London Plan Statement.

Policy D12 Fire Safety – B

B1.1.2 All major development proposals should be submitted with a Fire Statement, which is an independent fire strategy, produced by a third party, suitably qualified assessor. The statement should detail how the development proposal will function in terms of:

1) the building's construction: methods, products and materials used, including manufacturers' details

2) 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

3) features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans

4) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these

5) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building

6) ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

Policy D5 Inclusive Design – B(5)

B1.1.3 Development proposal should achieve the highest standards of accessible and inclusive design. They should:

(5) 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.

B1.2 Statement of Compliance

B1.2.1 Based on the below provisions and the guidance Orion Fire has given to the design team to meet the London Plan, this fire statement is considered in accordance with the London Plan (Policy D12). Orion Fire has been appointed by the client as a fire engineer for the project and is to remain involved throughout the design and construction stages to monitor the progression of these elements and review the proposed materials, compatibility and workmanship are fit for purpose and meet the recommendations of this performance specification and the London Plan.

B1.3 Policy D12B(1)

B1.3.1 The proposed development is for a basement level hotel in an existing building. The provision of a hotel in such a location will not have an impact on the existing wall construction of the building and as such there is no requirement to consider the existing materials used. It has been confirmed however that the existing wall system comprises a mixture of concrete and blockwork. The composition of the primary frame for the existing build is not known, all elements of structure are to achieve 90 minutes fire resistance.

B1.4 Policy D12B(2)

B1.4.1 The basement level hotel will be served by eight protected stairs. The six central stairs are existing, the architect has confirmed that these stairs are not shared with the residential levels above, but rather provide a dedicated corridor direct to external. Further stairs have been added within the basement level to accommodate the level change and provide access to the existing stairs. Two further protected stairs will be available for escape from the basement level, with the existing stair on the right-hand side of the plan discharging directly into the ground floor central street and one discharging at the hotel entrance located off Marchmont Street.

B1.4.2 The vertical capacity of the stair cores to the basement level has been assessed (Section 4.4.3) and it has been demonstrated that the stairs provide sufficient capacity for evacuation of all occupants. Although the six existing central stairs have a reduced stair width to that required for minimum compliance with Building Regulations, the assessment shows that the capacity of the 1500mm stair alone after discounting the largest stair is sufficient to support the proposed occupancy. The six central stairs would also be available for evacuation, further aiding the vertical exit capacity.

B1.4.3 Consideration has also been given to the disabled evacuation provisions (Section 4.5) within the building as part of The London Plan Policy B5(D5). An evacuation lift in accordance with BS EN 81-76 will be provided to the reception area and disabled refuges will be provided to each stair core. The architect is to mark up the refuge points on the next iteration of the plans. The means of escape provisions provided within the development are in accordance with Part B of the Building Regulations, through either a linear route of compliance with a prescriptive guidance or through a functional route demonstrating compliance through a fire engineered solution. Therefore, meets the recommendations of the London Plan.

B1.4.4 The assembly points for the occupants of the hotel level have not yet been specified, however there is sufficient space for all building users in the publicly accessed Brunswick Square Gardens, directly adjacent to the site, see Figure 8 below. The assembly points should be a place of ultimate safety away from the buildings and should not hamper fire-fighting operations. Assembly points should already be in place for the building, these should be confirmed by the design team.

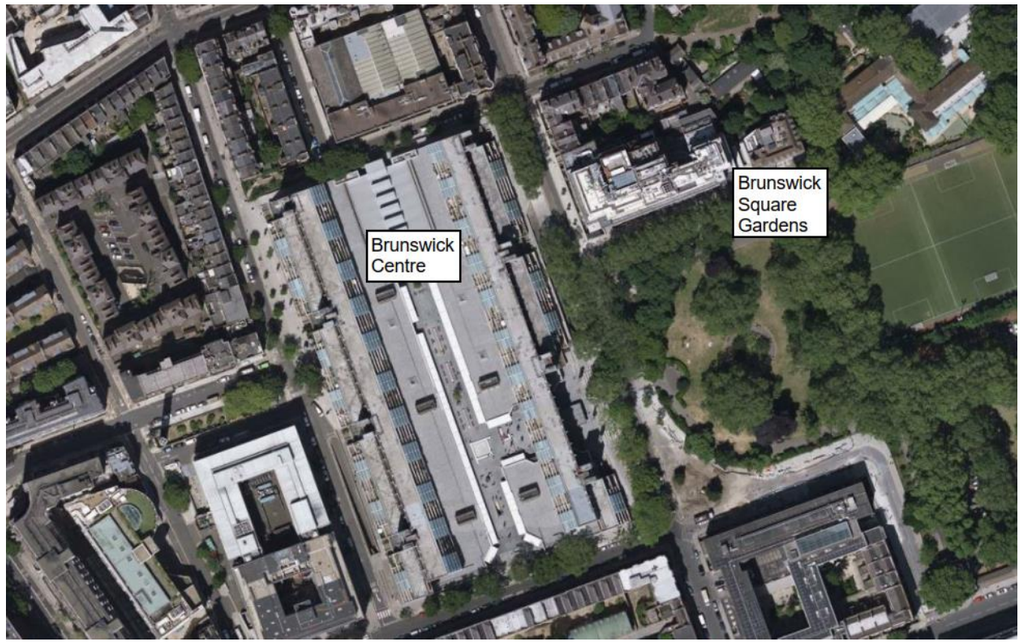

Figure 8: The Brunswick Centre and the Adjacent Brunswick Gardens

B1.5 Policy D12B(3)

B1.5.1 The development has been provided with a number of life safety systems such as a Category L1 alarm system throughout the development to BS 5839-1; which is the highest coverage specified for automatic detection systems, an evacuation lift as per BS EN 81-76, BS 9999 and other supporting documentation and a BS 8489 Commercial Watermist system. The performance specification of these systems stated either meets or exceeds the recommendations of the guidance.

B1.5.2 The detailed design of these systems is to be developed further by the design team within the later stages of the project. Orion will be involved in the review process and will advise on any enhancements necessary to improve the fire safety aspects, with due consideration to the height of the building. This, however, is unlikely to have a material impact on planning and will seek to improve on the level of safety. Where life safety systems are provided in the building (both passive and active), they should be adequately maintained by the responsible person and in accordance with the specific manufacturer recommendations and a good practice approach. The client requirements for the scheme also exceed the minimum requirements of the Building Regulations which aligns well with the London Plan policy requirements to achieve the highest levels of fire safety.

B1.6 Policy D12B(4)

B1.6.1 As previously discussed, the proposed development is for a basement level hotel under the existing building. For that reason, external fire service access will remain unchanged. Perimeter access for a pump appliance is available to the site via each of the adjoining roads, namely, Marchmont Street, Bernard Street, Handel Street, Hunter Street and Brunswick Square and therefore perimeter access is considered in line with the requirements of the Building Regulations. The location of the existing dry riser inlet points to the façade of the building, as well as the location of the dry riser outlet points in the stair cores is currently unknown and is to be confirmed by the architect/other members of the design team as appropriate. An initial assessment of the hose laying distances based on indicative dry riser outlet positions (see Figure 7) shows that the hose laying distance to some areas of the floorplate slightly exceeded the 45m requirement (up to c. 49.4m). Assessment of the hose-laying distances will need to be readdressed at RIBA Stage 3 once the location of the dry rising outlet points is known. If on reassessment the hose laying distances are still exceeded, the areas of slight extension will need to be reviewed with the fire service. However, typically an extension of up to 60m is permitted where the building is provided with automatic suppression systems which is the case for the hotel.

B1.6.2 A utilities survey has not been received; however, based on a site inspection and walk around the direct perimeter of the building 6 existing fire hydrants were identified in the locations below.

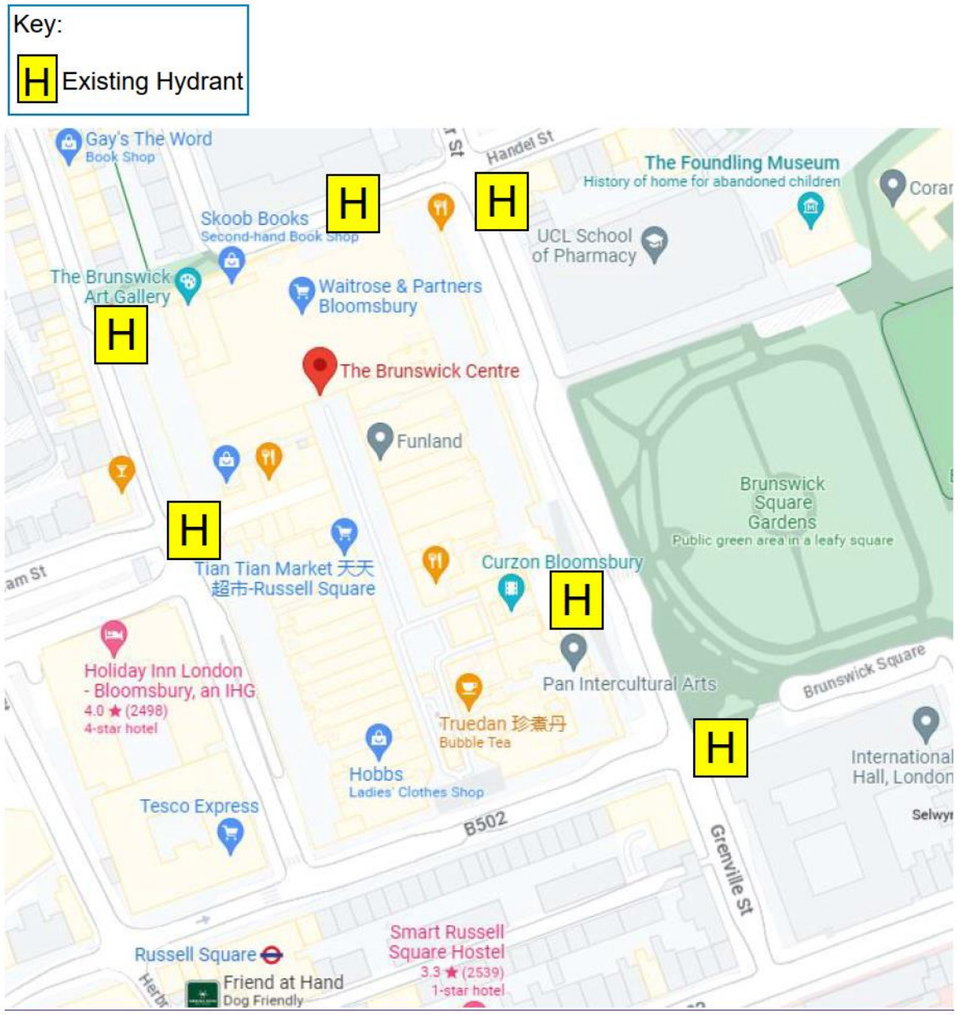

Figure 9: Existing Hydrants Identified Around the Brunswick Centre

B1.7 Policy D12B(5)

B1.7.1 As the building is existing and the proposal changes the basement level layout only the access for a fire appliance to the curtilage of the development remains unchanged. There are a number of parking areas on the roadside adjacent to the curtilage of the development, however as there is access to a large percentage of the perimeter, it is considered that this would not prevent a fire appliance from parking on the road and fire-fighter's then accessing the building on foot. Once the location of the dry riser inlet points has been specified, the distance to the inlet points from the parking for a pump appliance will be assessed as part of the RIBA Stage 3 fires strategy.

B1.8 Policy D12B(6)

B1.8.1 Any future changes or modifications to the building are to take account of the fire strategy for the building and this should be monitored and developed as the scheme continues to progress to maintain full adherence to the guidance available and legislative requirements of the Building Regulations and the London Plan. Orion Fire will be involved throughout this process and will provide advice/direction on any actions that need to be undertaken.

B1.8.2 This fire strategy document will form a baseline fire safety performance specification on which the detailed report will be developed. The part of the building that this fire strategy is relevant to is the hotel. Any changes to the hotel in the future would likely constitute a material change of use under the Building Regulations (as a change in the number of rooms for residential purposes within a building constitutes a full material change of use) therefore, any changes are likely to be subject to the full fire safety requirements of future guidance.

B1.9 Policy D5B(5)

B1.9.1 One lift core has been provided to the development in the entrance lobby. One lift in this core will be designed as an evacuation lift, to allow for dignified escape for all occupants of the building. This is further supported by the provision of a refuge point/EVC communication system in each stair, linked to either a reception desk or another appropriate location (such as next to the fire alarm panel or adjacent to the fire service access point) allowing for a member of staff or other to answer the EVC device. The architect is to update the plans to specify the location of each refuge. It is also a requirement of the Whitbread specification that the pager system also be linked to the disabled refuge communication system and that the EVC communication system is active at all times, not just in a fire situation. Further information on dignified means of escape has been included in the fire strategy, (section 4.5).