Planning Fire Statement

Project
Infinite Hayes Hotel
27 Uxbridge Road
Hayes
UB4 0JN

Client details:
Applicant

Applicant Name
Infinite Partners

Date of Issue
14th September 2022

Revision 00

Filename – 2022-09-14 Infinite Hayes Hotel – Fire Statement

Contents

Amendments

Issue No.	Date	Author	Comment
Issue 00	16-Aug-22	D. Bromley	First issue
Issue 00	26-Aug-22	D. Bromley	Updated to include latest layouts.
Issue 00	31-Aug-22	D. Bromley	Updated change to fire appliance access
Issue 00	14-Sep-22	D. Bromley	Updated with adjusted boundary line

Important Information

1. Introduction

1.1.1. This Planning Fire Statement has been produced in support of the planning application for the proposed Infinite Hayes Hotel at 27 Uxbridge Road, Hayes, UB4 0JN, in the borough of Hillingdon. This Fire Statement is intended to demonstrate compliance with Section D12(A), Section D12(B) and Section D5(B) of the London Plan (1).

1.2. Development Description

1.2.1. In summary, the proposed development consists of demolition of ground floor entrance, parking structure and north-east and south-west wings of the existing building, and refurbishment and extension of existing hotel to include additional accommodation at roof level and full height extension on the north elevation, together with walkways connecting to new buildings of between 6 and 8 storeys, to create additional hotel floor space (Use Class C1) and commercial floorspace (Use Class E(g)), along with ancillary facilities, parking and landscaping.

1.2.2. The development will see:

- The creation of a new campus for local people and entrepreneurs to make and create and stay.
- The retention and upgrade of existing hotel building to bring it up to modern standards and enhance its environmental performance. This will include removal of ACM cladding from the façade of the building.
- Provide state-of-the-art incubation space for local manufacturing SMEs
- Provide additional boutique hotel accommodation on the upper levels for workers and entrepreneurs on the site, and those working in the local centres in Hayes and Southall

1.2.3. The original central core of the building was constructed in the 1960's/1970's and was used as an office building until 2013. A change in use was carried in 2013 when the office building was redeveloped into a hotel. The building is 41.55m high and has a basement with 12 storeys above ground plus a rooftop plant enclosure. There is also a 2-storey car parking facility.

1.2.4. The hotel is located on a sloping site. The main entrance to the hotel will be located off Uxbridge Road on what is known as the ground floor. The hotel can also be accessed from the car park on the East side of the building.

1.2.5. The main hotel building has an RC frame with blockwork external walls with a rainscreen cladding system that has been identified as a significant fire safety risk that will need remedial works. The parking structure has an RC frame and open sides.

2. Legislative Requirements

2.1. The Building Regulations 2010

2.1.1. The fire safety design for the building must achieve the minimum standard required by Part B of Schedule 1 to the Building Regulations 2010 (2). For fire safety, the functional requirements of the Building Regulations are set out under the following headings:

- Requirement B1 – Means of Warning and Escape.
- Requirement B2 – Internal Fire Spread (linings).
- Requirement B3 – Internal Fire Spread (structure).
- Requirement B4 – External Fire Spread.
- Requirement B5 – Access and Facilities for the Fire Service.

2.1.2. Although the measures outlined in this document may exceed contemporary fire safety guidance to Part B, this document is not intended to be considered as, or relied upon as, the fire strategy necessary to demonstrate compliance with Part B of the Building Regulations or as a specification document for design.

2.1.3. Where relevant, reference is made to measures necessary to assist in discharge of duties under the Regulatory Reform (Fire Safety) Order (FSO) (3) and the Fire Safety Act (4) information that is expected to form part of the information pack handed over to the building operators under Regulation 38 of the Building Regulations (5).

2.2. Basis of Design

2.2.1. ADB (6) provides guidance how the Building Regulations can be satisfied in common building situations, which are not always applicable to more complex, larger buildings. Due to the proposed building height and mixed-use, it is proposed that for this project the fire safety strategy will be developed on the basis of the guidance presented in BS 9999 (7).

2.2.2. Due to the design incorporating features such as open deck / balcony approach to the bedrooms, BS 8579:2020 (8) recommends BS9999 or BS9991 (9) should be used.

2.2.3. BS 9999 presents a risk-based approach which takes into account specific building features such as early warning systems or sprinkler protection. This risk-based structure also takes into account varying human factors. For example, under BS 9999, providing sprinklers reduces the risk profile which in turn allows for increased travel distances whilst ADB does not.

2.2.4. The outline fire strategy as set out in this report will generally follow the guidance in BS 9999, however, ADB was updated in 2019 and further amendments were published in May 2020. Therefore, in line with the concept of future proofing the safety standards of the development and keeping in line with the London Plan, aspects of the updated ADB will also be included (such as the recommendations for wayfinding signage for the fire service).

2.3. Relevant Expertise

2.3.1. This Planning Fire Statement has been produced on behalf of One Stop Fire Solutions by David Bromley MIFSM. Until January 2020 David was employed by the second largest Metropolitan Fire Service, reaching the rank of Station Commander.

2.3.2. David has 32 years of fire related experience including 12 years within a Fire Safety Department, ranging from auditing, enforcement, licensing, approving, events work and also as head of technical fire safety. He worked on many buildings and led on many prosecutions and events within the West Midlands ranging from small shops to major developments. This gives him the unique skill to be able to see and understand issues from both an enforcing bodies and a clients perspective

2.3.3. He has completed the Fire Safety Inspectors course, the Fire Safety Building Regulations and Guidance Course, the Fire Safety in Building Design BS9999 course, the Fire Engineering Detection Principles course and the Fire Safety Advisor Engineer Development course all held at the National Fire Service College. The BIIAB Level 1 Award in Assessment of Licensed Premises (Social Responsibility), the BIIAB Unit 2 Legislative Requirements and Assessing Licensed Premises and the BIIAB Level 2 National Certificate for Licensing Practitioners. The BTEC Advanced Award in Fire Risk Management. He also holds the Graduate of the Institute of Fire Engineers, The Royal Institute of Public Health and Hygiene, the Institute of Occupational Safety and Health. He has completed the full suite of courses run by the Association for Petroleum and Explosives Administration including Construction, Safety and Environmental Protection course and Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) plus many other fire safety and management related courses and diplomas.

2.4. Regulation 7

2.4.1. As per Regulation 7(1) of the Building Regulations 2010 (As Amended), all building work should be carried out with adequate and proper materials which are:

- appropriate for the circumstances in which they are used,
- adequately mixed or prepared, and
- applied, used or fixed so as adequately to perform the functions for which they are designed; and in a workmanlike manner.

2.4.2. Regulation 7(2) of the Building Regulations 2010, as amended by the Building (Amendment) Regulations 2018, restrict the use of combustible materials in the external walls of ‘relevant buildings’ over 18m in height.

2.4.3. A ‘relevant building’ is defined as a building with a storey at least 18m above ground and which contains one or more dwellings or contains an institution; or contains a room for residential purposes (excluding any room in a hostel, hotel or boarding house).

2.4.4. One Stop Fire recognise that Infinite Hayes House is not a relevant building, nonetheless, it is recommended that the building is constructed in accordance with Regulation 7(2) as this is the highest and hence the safest standard. It also gives greater flexibility in the use of the building, future proofing the design with additional safety.

2.5. The Regulatory Reform (Fire Safety) Order 2005

2.5.1. Responsibility for compliance with the Regulatory Reform [Fire Safety] Order 2005 (FSO) will rest with the "responsible person". In a workplace this will usually be the employer together with persons who may have control of other parts of the premises. In other cases, the person(s) who has control of the premises will be the "responsible person".

2.5.2. Where building work and fire protection measures comply with Part B of the current Building Regulations, additional physical measures should not normally be required under the FSO unless high-hazard materials or processes are introduced into the building.

2.5.3. The FSO places on the "responsible person" specific duties such as carrying out a fire risk assessment. More detailed guidance is available in a series of Fire Safety Risk Assessment Guides published for HM Government (10).

2.5.4. This fire strategy has been developed on the assumption that the building will be suitably managed. This includes documenting the basis on which the fire safety design was planned, the type of management organisation envisaged for running the building, and the consequential management responsibilities. Guidance on fire safety management is provided in BS 9999.

2.6. Property Protection

2.6.1. Property protection is not a requirement of the Building Regulations and therefore is not explicitly considered in this report. However, it should be noted that many of the fire safety provisions will afford some degree of property protection to the building.

2.7. Building Safety Bill – Planning Gateway One

2.7.1. The Government has implemented new requirements into the planning system (referred to as Planning Gateway One) by making amendments to The Town and Country Planning (Development Management Procedure) (England) Order (11). Planning Gateway One came into effect on 1st August 2021 and applies to "relevant buildings" which:

- contains two or more dwellings or educational accommodation, and
- meet the height condition (18m or more in height, or 7 or more storeys whichever is reached first).

2.7.2. Although Planning Gateway One will not be applicable for Infinite Hayes as it will not be a "relevant building", a planning statement is still required by the London Plan 2021 (12). It is also believed that hotels will at some stage in the future be included within the relevant building category.

2.8. The London Plan 2021

2.8.1. This outline fire safety strategy report considers the implications of The London Plan 2021 (12). Policy D12 of the London Plan provides that all development proposals must achieve the highest standards of fire safety and requires all major development proposals to be submitted with a Fire Statement, which is an independent fire strategy produced by a third party, suitably qualified assessor. Policy D5 (Part B(5)) of the London Plan requires developments that include a lift core to include at least one evacuation lift. In February 2022, the Mayor published a draft Fire Safety London Plan Guidance document which sets out how applicants should demonstrate compliance with Policy D12 and the relevant parts of Policy D5. At the time of writing, this guidance has not yet been adopted, but has been taken into account in the preparation of this planning application.

3. Fire Statement

3.1.1. The following sections and associated tables outline the measures necessary to achieve the fire safety standards expected in the London Plan. In order to ensure clarity and consistency with the London Plan, the structure of this section follows that outlined in Guidance Sheet Policy D12(B). Fire strategy drawings supporting this information are provided in Appendix A.

3.2. Building Construction Method and Products and Materials Used

3.2.1. Table 1 outlines the measures proposed to achieve fire safety related to building construction. Details and specification of individual products is provided by others.

Table 1: Measures associated with building construction

Measure	Comments / Standard
Construction	Traditional reinforced concrete construction. *BS EN 1363: Part 1 (13) or BS 476: Part 20 (14) or tested to demonstrate equivalent performance. Performance is listed in terms of R (loadbearing capacity), E (integrity), I (insulation).*
Structure	All elements of structure defined by Table 23 of BS 9999 will be protected to provide a 120-minute period of fire resistance (R) (also EI where forming compartmentation) *BS EN 1363: Part 1 or BS 476: Part 20*
External wall materials	Section 5.3.4 of the London Plan guidance document requires the following statement within this submission. *"The development will not incorporate combustible materials in its external walls."* All materials to be Class A1 or Class A2-s1,d0 (except where excluded as per Regulation 7). *Materials tested in accordance with BS EN 13501: Part 1 (15). Regulation 7 Building Regulations 2010. BS 9999 – Figure 47*

Measure	Comments / Standard
External wall construction	<u>Existing</u> Removal of ACM Cladding, which will significantly reduce risk of fire spread to the building. <u>New Build</u> Any wall within 1800mm of an escape route will achieve a minimum of 30 minutes fire resistance(REI). An initial external fire spread assessment has been undertaken in accordance with BRE guidance BR187 (2014) (16) “External fire spread: building separation and boundary distances” using the enclosing rectangle method. This has been undertaken based on a typical hotel floor and the incubator (commercial/shop) space. As all floors are compartment floors and the ground floor being the only floor of double height in one area only, the rest are less than 3m. In addition, all Tenants in the incubator space have compartment walls separating each other and again reducing the size of compartments that are exposed to the external faces of the building. Boundary distances have been halved due to sprinkler coverage in line with BRE 187. In accordance with Clause 35.2.3 of BS 9999 the South-East corner ground floor car park measurements have been taken from the edge of the canopy as it is less than 1m from the boundary. There is one bedroom on the East face and one bedroom on the South face of the building that are close to the boundary. The following points are noted. • In both these areas the boundary is at an angle to the building and so the measurement given is the worst-case scenario at the closest point. • According to Table 1 of BRE 187 and Table A.4 of PD 7974 -1:2019, the fire load density of a hotel bedroom is 310 MJ/m^2, which when compared to a dwelling at 780 MJ/m^2, is considerably lower. Due to this the lower separation numbers in brackets have been used and will be submitted for building control approval at the relevant stage. • If unprotected openings (windows) above those given in the Table below are required then the compartment size can be reduced, which in turn increased the allowable unprotected opening size. This can be achieved by providing a compartment wall between a bedroom where required. This will be assessed at the next stage of the development when the final window design is known. *BS EN 1363: Part 1 or BS 476: Part 20* *Table 22 of BS9999*

Location	Use	Panel Width (m)	Panel Height used (m)	Closest unprotected area point to boundary(m)	Minimum allowed distance for 100%	Unprotected area allowed (%)
North elevation	Hotel reception	31.5	3	19.50	4.25 (2.5)	100
West elevation	Loading bay	14	3	14	3 (2)	100
East Ground floor	Cycle store & cafe	5.34	3	2.77	2 (1.5)	100
East upper floor bedrooms	Bedrooms	34.92	3	1.84	4.25 (2.5)	30 (70)
South Bedrooms except furthest corner B015 and above	Bedrooms	17.96	3	2.02	3.25 (2)	100
South bedroom B015 and above all floors	Bedroom	5	3	1.35	2 (1.5)	40 (90)
South/ East corner	Canopy above car park	17.44	6	0	5 (3.25)	0
West elevation	Bedrooms	23.72	3	14	3.75 (2.25)	100
North upper floors	Bedrooms	29.93	3	19.50	4 (2.25)	100

Roof construction	Fire resisting construction only where supporting use as rooftop means of escape – 30 minutes, required to underside. Figures in brackets are for residential or office accommodation. *BS EN 1363: Part 1 or BS 476: Part 20* *Table 22 of BS9999*

Measure	Comments / Standard
Roof covering	Any compartment walls within the top floor will be required to extend to the underside of the roof. To reduce the risk of fire spreading over the roof from one compartment to another, a 1500mm wide zone of the roof, either side of the wall, should have a covering classified as BROOF(t4) (16), on a substrate or deck of a material rated class A2-s3, d2 (17) or better. Any areas that are not compartmented beneath the roof within 6m of the boundary will comply to BROOF(t4) or as per EC Decision 2000/553/EC of the 6th September 2000. *Table 36 of BS9999* Any green roof or wall shall be designed to comply with the specific recommendations of DCLG on designing green roofs to prevent fire penetration from external sources (18). These recommendations cover maintenance, fire breaks, irrigation, depth of growing medium and vegetation type. Where regulation 7(2) applies, that regulation prevails over all the provisions in this paragraph.

3.3. Means of Escape for All Building Users and Evacuation Strategy

3.3.1. Table 2 provides a summary of the means of escape arrangement within the building in general compliance with prescriptive guidance. Reference should be made other sections for detail on associated fire safety measures.

Table 2: Means of escape from the building

Measure	Comments / Standard
Evacuation policy	Simultaneous evacuation of all areas of the building upon alarm. Escape routes to be adequately sized and protected sufficiently to allow escape for all occupants throughout the building.
Risk Profile	BS 9999 requires an appropriate risk profile to be adopted for each area, therefore the following risk profiles are considered appropriate: • Hotel upper floors (bedrooms) - Ciii1 risk profile: “Occupants who are likely to be asleep with a short-term occupancy and a slow fire growth rate due to sprinkler provision.”. • Hotel public areas (ground, first and second floor) - B1 risk profile: “Occupants who are awake and unfamiliar of the surroundings with a slow fire growth rate due to sprinkler provision.”. • Hotel back of house areas such as offices - A1 risk profile: “Occupants who are awake and aware of the surroundings with a slow fire growth rate due to sprinkler provision.”. • Plant spaces – A2 Risk Profile: “Occupants who are awake and familiar with the surroundings with an inherent medium fire growth rate due to the provision of sprinklers. • Incubator spaces – B2 Risk Profile: “Occupants who are awake and unfamiliar of the surroundings with an inherent medium fire growth rate due to the provision of sprinklers.

Measure	Comments / Standard
Means of escape arrangement Bedrooms	In response to international influences there has been an increase in open plan design layouts. It has also seen an increase in hotel bedrooms offering facilities for guests to use the room as an apartment. Open plan bedrooms will incorporate an on-suite and a small cooking facility including a small induction hob and microwave. In line with guidance issues by NHBC Open Plan Flat Layouts foundation study (19), commissioned to assess life safety in the event of a fire in open plan flat layouts, the bedrooms should meet the following specific recommendations: • The size of the bedroom should not exceed 16m x 12m • Should be single level only • The ceiling should have a minimum height of 2.25m • The cooking facilities should not be adjacent to the bedroom door exit. *BS 9999, BS9991*
Means of escape arrangements open deck/ balcony approach	New build bedrooms will be accessed via open sided external deck access corridors, wrapping the inner courtyard facing elevations. It is recognised in section 7 of BS9991 that "*there is little risk of a balcony or deck becoming smoke-logged and there is thus no need to impose a limitation on the travel distance from the dwelling entrance to the stairway".* This statement shows that open deck approach is believed to be very safe. As soon as a person leaves their bedroom from a fire they will be in open air and not inside an enclosed bedroom corridor. Deck approach/ balconies are considered that safe that guidance allows them to be used as a refuge Balconies will be limited to 2m wide to avoid any smoke-logging both laterally along the balcony and upon levels above. Some balconies will be provided with planters that will match the galvanised steel sections. There will be a minimum of 1440mm clear available width. The balconies will be constructed of class A2-s1, d0 or better and walking surface will be imperforate. Soffits will be flat with no edge downstand or feature that would obstruct the outwards plume flow. If the balcony has a width of more than 2 m, down stands at 90° to the face of the building should be placed on the line of separation between individual bedrooms. These should project 0.3 m to 0.6 m below the soffit or any other downstand. The open deck/ balcony areas will conform to the guidance given in BS9991. In addition, two-way travel has been provided in nearly all bedrooms apart from just a few in corners where additional safeguarding provisions such as fire resisting construction will be in place. *BS 9999, BS9991*

Measure	Comments / Standard
Exit widths	Horizontal exit width calculations have been caried out for each level in accordance with Table 12 of BS9999 including discounting the largest exit on each floor. Any areas where the door is hung to swing against the direction of escape shall be limited to 60 persons using the escape route. It is believed that the maximum figures used in the design are on the onerous side and likely never to be met. A significant number of persons are accounted for to allow an open-air event on the first and second-floor external courtyards where a figure of 210 for the first floor and 1144 persons for the second-floor area has been given. It is expected that these people will be from other areas of the building. Exit widths have been calculated in accordance with BS9999, Table 12. Risk Profile C1 has been used due to Sprinkler coverage, which gives a door width of 3.6mm per person or 800mm, whichever is greater. 850mm is the minimum required for wheelchair access. Door widths of less than 1050mm can only be considered to safely accommodate up to 138 people. For the 1st floor East and 2nd floor West open air courtyard spaces, Table 16 of BS9999 has been used to give the maximum acceptable variation of 2.4mm door width per person. It is recognised within the CLG guide to open air events, that longer escape times are allowable in sections where they are within open air to a relative place of safety. The number of people within these areas would only be high if there was an event taking place. In any case where numbers of people from members of the public are high it is usual to have safety stewards in attendance, which should have radios to assist effective safe evacuation of the premises in a controlled manor ensuring people are directed to the most suitable fire exit route. In addition to the calculations a central accommodation staircase of 1800mm is proposed which will terminate at ground floor level within the lobby area. People tend to escape the way they came into a building, and it is believed a significant amount of people will use this route to escape in the incipient stages of a fire. If a fire was to be located in an area adjacent to another storey exit, there would be no reason why persons could not be allowed to use this route, which would give extra 500 persons exit width.

Open spatial (vertical) planning	In open spatial planning (or open void), where two or more storeys are connected in one compartmented volume such that smoke and heat will travel readily throughout all levels. An accomidation staircase is proposed between the ground, first and open air external courtyard of the second floor. As such, storey exits should be sited away from the open connection so that escape routes do not approach the opening and be within acceptable travel distances.

<table>
<tr>
<td>Travel distances</td>
<td>
Travel distances should be in accordance with the guidance recommended in Table 11 of BS 9999 (see table below).
<table>
<tr><th rowspan="2">Area</th><th colspan="2">Maximum travel distance (meters)</th></tr>
<tr><th>Single Direction</th><th>Alternative Means of Escape</th></tr>
<tr><td>Hotel bedroom accommodation (C1)</td><td>13m</td><td>27m measured from bedroom door</td></tr>
<tr><td>Back of house office areas (A1)</td><td>26m</td><td>65m</td></tr>
<tr><td>Offices, lounges, seating areas, bars, galleries, gym (B1)</td><td>24m</td><td>60m</td></tr>
<tr><td>Shops sales areas, workshops, factories (B2)</td><td>20m</td><td>50m</td></tr>
<tr><td>Open plan balcony</td><td colspan="2">No limit but 60m with sprinklers, set by fire service hose lengths</td></tr>
<tr><td>Place of special fire hazard / Plant rooms (A2)</td><td>22</td><td>55</td></tr>
<tr><td>Rooftop plant areas (escape in open air) (ADB vol2)</td><td>60</td><td>100</td></tr>
</table>
In areas provided for the consumption of alcohol, it may be advisable to reduce travel distances by 25%.

Where the internal partition layout is unknown, direct distances should be adopted; direct distances are two thirds of the distance nominated in the above table.

Travel distances within the building appear to achieve the values given in the above table.
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<tr>
<td>Means of escape protection</td>
<td>
Bedrooms and corridors, stairs and lobbies are enclosed in fire resisting construction or have balcony approach in fresh air.

Corridors, lobbies, balconies and stairs are to be fire sterile, including separation of any corridor-based service routes.

Within the existing building the two protected shafts are provided with automatic openable vents at the head of stairs. There are also automatic openable vents in all corridors.

Stairs within the new build area will be open to fresh air and so ventilation will not be required.

Any final exits that are adjacent to the building will be protected up to 1800mm of the escape route via construction and/or fire-resistant glazing up to 1100mm high.
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Measure	Comments / Standard
Vertical means of escape arrangements	The building is served by 5 stairs (see Figure 2 below), two of which are from the original hotel building. The new stairs will form part of the open plan structure and themselves be open deck / design with open sides where possible. This is believed to be safer as any smoke, heat and products of combustion would simply leave through the open walls and so not produce smoke logging. Where possible access to the stairs will be via two-way travel and as such persons can simply turn their back from a fire and use another staircase. The two original staircases will still be located within the building and be able to be used by any person who does not wish to use the open plan stairs. The original Core 1, the new Core 3 in the North-West side of the building and the new Core 5 stair in the South-East side of the building will be designed as fire fighting cores serving all floors. The two new cores are felt to offer greater safety to the firefighters who will be able to walk upstairs in fresh air. If smoke is drifting across a staircase, then firefighters can simply use another staircase or revert back as if they were approaching a high-rise incident within a building. London Fire Brigade has been contacted for their thoughts on this approach but informed us that they did not have a Planning Officer who could assist. In accordance with paragraph 17.3.2 of BS 9999, there is no requirement to discount a stair as the building has a sprinkler system. The original Core 1 and 2 staircases had single 60-minute fire door protection on some floors including the first-floor kitchen. Where possible these will be upgraded to include a protected lobby or protected corridor approach in accordance with clause 17.2.4 of BS9999. Each staircase discharges to the outside of the building, either directly or via a protected route. *BS 9999, BS9991,*  Stair Layout

Measure	Comments / Standard
Mobility impaired persons	Existing disabled refuges are located in the protected lobbies of core 1 and 2 stairs at all levels. The original fire strategy states the following • *Each refuge is provided with two-way emergency voice communication points linked to the reception area.* • *Refuges should be 1400mm by 900mm and clear of the escape path should be clearly identified by appropriate signage. They are not required at ground floor level.* • *The firefighting lift can be utilised for vertical transport of disabled people to exit level as an added benefit. This could minimise guest and staff injuries carrying people downstairs. In order that the lift is not used to evacuate to ground floor in the event of a fire at this level, it is recommended that the automatic fire detection and alarm system is linked to the lift controls to prevent it serving ground floor in this scenario and stopping at first floor level.* New elements of the building greatly increase safety and facilities for people with mobility issues. • Access to bedrooms is via an open sided balcony where people will be in fresh air as soon as they leave their bedrooms. • The design includes two further firefighting cores complete with firefighting lifts that could be available for escape for those with limited mobility. • With 3 available firefighting lifts it gives greater flexibility to those organising the safe evacuation of people with mobility issues. • Any person within the original one or two stair core could simply exit at the same level through the new door adjacent to the staircase onto the open plan balcony and into fresh air where they could continue their escape along the balconies in safety. • Having 3 firefighting/ evacuation lifts gives the premises greater flexibility for maintenance as 2 others should always be available. A personal emergency evacuation plan (PEEP) will be required to be established by the management for any disabled employees or visitors. This will include training for sufficient staff in procedures and carrying operations when necessary. The Fire Safety Management Plan to be developed by the hotel operator will document the disabled evacuation procedures in more detail and does not form part of this planning fire statement, which deals with the design criteria only. For example, in line with clause 45.9 of BS9999 and subject to a risk assessment there are 2 other lifts that could be used for evacuation in some circumstances. The risk assessment should include that. a) the interface between the lift control system and the fire detection and fire alarm system will support the evacuation management strategy; b) controlled operation of the lift will be possible during an evacuation; c) the power supply to the lift is likely to remain usable throughout the time required for evacuation; d) the lift enclosure and associated escape routes will remain free from the effects of fire, heat and smoke during the evacuation; e) there is a suitable communications system available to ensure that staff can use the lifts safely to evacuate mobility-impaired people; f) there is an alternative escape route available for situations when the use of the lift is not viable. *London Plan Policy D5(B5)*

Measure	Comments / Standard
Evacuation lifts	Evacuation lifts, provided for compliance with London Building Plan, Policy D12, should comply with Annex G of BS 9999, BS EN 81-20 and BS EN 81-70. As the development will have 3 firefighting lifts, these can be used as an evacuation lift. The firefighter/ evacuation lifts should be provided with alternative power supply. This allows for continuous operation of the lift in the event of a primary power supply failure in the building. As the firefighting/ evacuation lifts remains powered in the event of a fire within the building, they allow wheelchair users and other non-ambulant residents to make a dignified escape from the building. It is recommended that the fire alarm Cause and Effect matrix for the building does not result in the passenger lift descending to ground floor level and being taken out of service in the event of smoke detection within the common escape routes. *London Plan Policy D5(B5), BS EN 81-76 (26), BS9999 – Annex G*
Other disabilities / barriers	The management of the hotel will consider and where reasonable provide devices, systems, literature or PEEPS for persons with disabilities other than mobility or any other reason that may mean they are slow to evacuate which may include those who require level access or use braille or a hearing loop and people who do not have a good understanding of English.
Final Exits	Stair core 1 discharges through a protected corridor to a final exit. Stair cores 2, 3, 4, and 5 all discharge directly to a final exit.
Muster point	The existing primary evacuation assembly point is the Hyatt Place Billboard with an Assembly point sign. Wickes car park across the road is also used. *London Plan Policy D12(B)*

Measure	Comments / Standard
Evacuation Management	A fire safety and evacuation management plan will be adopted in accordance with prescriptive guidance and operator requirements. The evacuation management plan will ensure the following as a minimum: • Responsibility for the management of fire safety may be divided over several different individuals. • Staffing level specific to the building considering the use of the building and nature of the occupants. Includes sufficient trained personnel to ensure all less able-bodied occupants are assisted out of the building effectively in an emergency. Contingency for sickness or holiday. • Fire safety measures are functional at all times when the building is in use. Alternative procedures for times when equipment is unavailable are determined. • Contingency planning takes account of a narrow range of possible emergency incidents. • Maintenance and testing – appropriate regime for testing, maintenance, cleaning of service routes and plant. Regular testing and maintenance logs to be provided for active fire protection systems. • Adequate control of occupant load per floor and in sensitive areas such as front of house areas. • Policy for receipt of alert signals, alarm and communication of alarm to staff and fire wardens located throughout the building. Particularly in regard to mobility impaired persons.

3.4. Passive and Active Fire Safety Measures

3.4.1. Table 3 summarises the passive fire safety measures to be included within the building. Specific detail and location is not addressed beyond general compliance and is to be considered during design development.

Table 3: Passive fire safety measures

<table>
<tr><th>Measure</th><th>Comments / Standard</th></tr>
<tr><td>Internal wall linings</td><td>Wall and ceiling linings should meet with the recommendations of Table 33of BS 9999.

• Corridors, circulation routes and escape routes: Class B-s3,d2

• Rooms more than 30m^2: Class C-s3,d2.

• Rooms not more than 30m^2: Class D-s3,d2.

Materials tested in accordance with BS EN13501: Part 1.</td></tr>
<tr><td>Internal walls</td><td>All new compartmenting elements and/or fire stopping should be provided to meet the recommended minimum fire resistance performance in accordance with Table 22 of BS9999 as summarised below.
<table>
<tr><th>Part of building</th><th>Minimum fire resistance standard</th></tr>
<tr><td>Protected escape corridors</td><td>30 minutes</td></tr>
<tr><td>Subdivision wall of a protected corridor</td><td>30 minutes</td></tr>
<tr><td>Cavity barriers</td><td>30 minutes integrity and 15 minutes insulation</td></tr>
<tr><td>Enclosing escape stairs</td><td>60 minutes</td></tr>
<tr><td>Enclosing service risers and lift shafts that breach compartment floors</td><td>60 minutes</td></tr>
<tr><td>Walls separating occupancies</td><td>60 minutes</td></tr>
<tr><td>Compartment floors</td><td>120 minutes</td></tr>
<tr><td>Compartment walls</td><td>120 minutes</td></tr>
<tr><td>Enclosing Fire Fighting shafts</td><td>120 minutes</td></tr>
<tr><td>Rooms containing life safety equipment</td><td>120 minutes</td></tr>
</table>
BS EN 1363: Part 1 or BS 476: Part 20

Required to each side separately.</td></tr>
</table>

<table>
<tr><th>Measure</th><th>Comments / Standard</th></tr>
<tr><td>Minimum Fire Resistance Performance</td><td>Ancillary accommodation should be separated from other parts of the building in accordance with Table 29 of BS9999 as summarized below
<table>
<tr><th>Area of ancillary accommodation</th><th>Type of construction needed to separate ancillary accommodation from other parts of the building</th></tr>
<tr><td>Storage areas greater than 1m² in area but not greater than 450m² (other than refuse storage areas)</td><td rowspan="3">Robust construction having a minimum standard of fire resistance of 30 minutes including doors.</td></tr>
<tr><td>Repair and maintenance workshops where flammable or highly flammable liquids are not used or stored</td></tr>
<tr><td>Kitchens (separately or in conjunction with an associated staff restaurant or canteen)</td></tr>
<tr><td>Storage areas greater than 450 m2 (other than refuse storage areas)</td><td rowspan="3">Robust solid non-combustible construction having a minimum standard of fire resistance of 60 minutes including doors.</td></tr>
<tr><td>Places classified as high fire risk areas</td></tr>
<tr><td>Repair and maintenance workshops where flammable or highly flammable liquids are used or stored</td></tr>
<tr><td>Covered loading bays</td><td rowspan="6">Robust solid non-combustible construction having a minimum standard of fire resistance equivalent to that required for the elements of construction of the building and in no case less than 60 minutes including doors.</td></tr>
<tr><td>Car parks within or adjoining the building and greater than 450 m2 in area</td></tr>
<tr><td>Refuse storage areas</td></tr>
<tr><td>Boiler rooms</td></tr>
<tr><td>Transformer and switchgear rooms for equipment above low voltage</td></tr>
<tr><td>Rooms housing fixed internal combustion engine(s)</td></tr>
<tr><td>Any electrical substation or enclosure containing any distribution board, generator, powered smoke control plant, pressurization plant, communication equipment, and any other equipment associated with life safety and fire protection systems</td><td>Robust solid non-combustible construction having a minimum standard of fire resistance of not less than 120 min. Any openings in the required construction should be protected by doors having a fire resistance not less than 60 minutes.</td></tr>
</table></td></tr>
<tr><td>Floors</td><td>All floors – 120 minutes (REI), required to underside

BS EN 1363: Part 1 or BS 476: Part 20</td></tr>
<tr><td>Fire Doors</td><td>Fire doors in the building will be FD30S fire doors where located within a 30minute or 60minute wall.

Fire doors in the building will be FD60S doors where located in a 120minute wall.</td></tr>
</table>

Measure	Comments / Standard
Cavity barriers	Concealed cavities are to be provided with cavity barriers in accordance with the recommendations given in BS9999. All voids will be provided with cavity barriers every 20 m where the class of exposed surface in the cavity is Class 0 or Class 1. If the exposed surfaces within the cavity do not achieve Class 0 or Class 1, then cavity barriers should be provided every 10 m. Where any single room is not more than 40m in either direction, cavity barriers only need to be located at the line of the enclosing walls of the room, provided the exposed surfaces in the cavity have ratings of either Class 0 or Class 1. Cavity barriers should be provided at all of the following locations. a. At the edges of cavities, including around openings (such as windows, doors and exit/entry points for services). b. At the junction between an external cavity wall and every compartment floor and compartment wall. c. At the junction between an internal cavity wall and every compartment floor, compartment wall or other wall or door assembly forming a fire resisting barrier. Cavity barriers are not to be used to complete a line of compartment walls by fitting them above. All compartment walls should extend to the underside of the floor or roof above. This will also ensure extensive cavities are avoided. All cavity barriers should be mechanically fixed to the structure of the building and in all cases be installed in accordance with the recommendations of the manufacturer. **Cavity Barriers (external walls)** Where the new cavity walls are constructed, then cavity barriers shall be provided at every junction between a cavity wall and every fire resisting element and around openings. Cavity barriers should achieve a minimum fire resistance of 30 minutes (E) and 15 minutes (I). In line with Clause 12.1 of BS 8579:2020, any wall cavity at the line of connection of an open balcony to the building should be closed by a cavity barrier and should have performance as such. *BS EN 1363: Part 1 or BS 476: Part 20*
Fire stopping	All pipes, ducts, cables or other openings in compartmentation will be fire-stopped with proprietary products as required. *BSEN 1366: Part 3 (20), or BS 476: Part 22 (21), or BS EN 13501: Part 2 (22)*

Notes

* All fire performance to be (EI) and including (R) where also forming element of structure. Fire protection is required to both sides separately.

3.5. Active Fire Safety Measures

3.5.1. Table 4 summarises the active fire safety measures to be included within the building. Specific detail and location is not addressed beyond general compliance.

Table 4: Active fire safety measures

Measure	Comments / Standard
Detection & Alarm	A BS5839 (23) delayed simultaneous, double knock (two-stage) system is currently provided that according to the latest fire risk assessment gives a 2-minute investigation period, that could be extended by a further 90 seconds, if required. The delay was included within the original fire strategy stated a typical investigation period is 3 minutes and to be set after discussions with the hotel operator. The two-stage evacuation process ensures those at immediate risk will evacuate immediately and other occupants remote from the fire will evacuate once a fire is confirmed or the investigation period expires. Moving forward, a further measure of protection will be established that incorporates a 1-minute acknowledgement time for staff to respond to a pre alarm and then moves to an investigation time, which will be set once it is known how long it would take to reach the furthest point to investigate. The fire alarm panel should be located at the main entrance. Manual call points will be installed along escape routes, at all storey exits and final exits from the building. Visual alarm devices will be provided to supplement audible alarm signals in areas in which the latter are likely be ineffective. These include roof terraces and plant areas with high ambient sound levels or where occupants with hearing impairment may be alone in the building. Consideration should also be given to the use of other tactile alarm devices which may be given to guests where it is identified that they may have a hearing and/ or visual impairment. Where electronic locking devices and / or door holders are provided along escape routes these will be interfaced with the fire alarm system to ensure they fail safe and release on activation of the alarm.
Automatic Sprinklers	The building will be fitted with an automatic sprinkler installation that has been designed and installed in accordance with BS EN 12845 (24). The hazard classification will be Ordinary Hazard 1 for the hotel section and Ordinary Hazard 3 for the incubator space. A central water supply consisting of a 185m3 full capacity water storage tank, dual booster pumps, pressure maintenance pump and alarm valve assemblies will be provided in the Basement West Wing to serve the sprinklers located throughout the building. The basement sprinkler tank will be located in a 120-minute dedicated compartment within the basement. This can be accessed from two staircase cores via a protected corridor. Hood suppression will be provided in the main hotel kitchen.

Measure	Comments / Standard
Stair & corridor ventilation	**Original building core** The original fire strategy states that the lobby to the fire fighting stair in Core 1 in the original building has a mechanical smoke extract shaft each floor level, which should be in the order of 60 air changes per hour. It should be operated by the fire service on the fire floor and designed to prevent smoke entering the stair and to improve conditions in the lobby. Fans should be duty and back up and rated at 300^0C for 60 minutes. The smoke shaft; circa 0.6m² geometric with a 0.8m² damper opening into it at each level from the ground. The damper opening must have some part higher than each door to the stair and accommodation. Only the damper on the fire floor (and any to the extract fan location) will open with others remaining closed. Inlet air will come from the fire fighting stair. All vents should be provided with override switches for FRS use which can be by indivual local switches on each floor or a central control panel at Ground Floor level. Both escape stairs have a 1.0m² manually openable vent to the top floor with remote switching at fire service access level. **New Build Areas** Stair cores within the new build area are open sided with open deck/ balcony approach and so there is no enclosed area to ventilate. *BSEN 12101: Part 2 (25)*
Ancillary ventilation	The existing car park is partially covered with open sides and therefore should incorporate permanent ventilation equal to at least 5% of the floor area (with 2.5% located on opposing sides). Kitchen extract will be via ductwork direct to outside.
Emergency lighting	Emergency lighting will be provided throughout all areas, including car park and ancillary rooms and will activate upon power failure. Lighting will be sufficient to illuminate signage and escape routes, including external escape routes. *BS 5266: Part 1 (27)*
Emergency power	Emergency power or provision of suitably isolated supply routes from an external substation will be provided for any life safety systems. BS 8519 (28)

3.6. Access and Facilities for the Fire and Rescue Service

3.6.1. Table 5 summarises the measures supporting internal access to the building for the Fire & Rescue Service. These measures are not exhaustive and require coordination and review with London Fire Brigade.

Table 5: Fire & Rescue Service access & facilities

Measure	Comments / Standard
Fire plans box	To facilitate fire-fighting operations and reduce risks to fire-fighters, it is recommended that a premises information box be retained at an appropriate location on the building perimeter. The information box should contain information such as site profile, access and security arrangements, hydrant/water supply, evacuation strategy, communications, hazards and risks, building layouts etc. *ADB 2019 (5) enhancement.*
Hydrants	It has been confirmed by LFB that an existing fire hydrant is located on Uxbridge Road within a short distance from the building. *Clause 22 of BS 9999, BS 9990 (29)*
Wayfinding signage	Floor identification signage will be located on every landing of the protected stair. Bedroom indicator signage noting rooms accessed on each storey will also be located on the stair landing. Bedroom indicator signage will also be located adjacent the access door to each leg of corridor. *ADB Vol 1 2019 (30)*
Building access	The building will be provided with two new fire fighting shafts making a total of three. The new fire fighting shafts will be located in Core 3 at the North-West wing of the building and Core 5 at the South-East wing of the building. The original 120-minute fire fighting, Core 1 stair is located in the North end of the original building. Fire Appliance access will be within 18m of all three. All firefighting shafts are in excess of the required 1100mm in width. The protected corridor to Core 1 should be 500mm wider than the 1200mm staircase to allow room for fire and rescue service personnel to move towards the fire-fighting shaft in accordance with clause 20.2.2 of BS9999. An additional protected escape stair will be provided to the basement at the opposite end of the original staircase, joined by a protected corridor, making firefighting conditions much safer and easier to extinguish and ventilate within smaller compartments. All fire-fighting shafts will be provided with fire fighting lift installations, dry rising mains, ventilation where required and wayfinding signage to assist the fire and rescue service to identify each floor. Due to the open plan construction, there will be two types of fire fighting shafts. *Clause 20.1 of BS 9999, BS9991 open deck approach.*

Measure	Comments / Standard
Internal mains	An existing dry main is provided at core 1 within the original building. 2 new dry rising mains are to be provided within the open deck areas to ensure hose lengths are within the guidance of BS 9999. 1 at Core 3 firefighting staircase at the North-West corner wing and one at Core 5 firefighting staircase in the South-East corner. The inlets are to be provided to the exterior of the building adjacent to the staircases or have signage indicating their location if this is not possible. All will be within 18m of fire service set down points. Outlets will be located within the firefighting lobby at each level. BS 9990 (29), BS 9999.

3.7. Site Access for the Fire and Rescue Service

3.7.1. Table 6 summarises the sitewide access to the building plot for the Fire Service. It is noted that obstructions to public roads are outside of the remit of this document.

Table6: Site access for the Fire and Rescue Service

Measure	Comments / Standard
Site access	The site is existing and currently fire appliances park on Uxbridge Road and access the site from the main entrance. This development will offer a further access point off Springfield Road to Core 3 and an on-site access to Core 5 via the existing driveway to the South of the building off Springfield Road. Both are to be within 18m of the inlet. If the length of the access route is more than 20m long, then turning facilities should be provided. This can be in the form of a hammerhead or turning circle. The access route will have the following specifications as shown below for an appliance as a minimum. • Minimum width of road between kerbs: 3.7m • Minimum width of gateways: 3.1m • Minimum width considering equipment trays 4.18m • Minimum turning circle between kerbs: 16.8m • Minimum turning circle between walls: 19.2m • Minimum clearance height: 3.7m • Minimum carrying capacity: 14 tonnes, as per recommendations from the LFB guidance note 29. (31). This is higher than the standard guidance of 12.5 tonnes *BS 9999, London Fire Brigade guidance note 29. (31).*

3.8. Future Development of the Asset and 'Golden Thread' of Information

3.8.1. The following measures and general approach will be adopted in order to maintain the principles of the golden thread concept (32):

3.8.2. It is recommended that One Stop Fire Solutions are appointed throughout RIBA Stage 2 to RIBA Stage 6 and therefore remain a custodian of the fire strategy and fire safety design of the building throughout the design and construction programme.

3.8.3. Where building works are provided in the areas under control of the building owner, the fire strategy will require review and update as necessary in accordance with the Building Regulations.

3.8.4. The fire strategy will identify the requirements of 'responsible persons' and 'competent persons' in discharging their responsibilities under the Regulatory Reform (Fire Safety) Order and the Fire Safety Act and communicate this to the client.

3.8.5. Where One Stop Fire Solutions are not appointed for the future stages of the scheme, it has been communicated to the client that a comprehensive handover is undertaken prior to agreed ending of the current appointment.

3.9. Construction Phase

3.9.1. Suitable arrangement will be in place at all times during the construction phase that consider the safety of construction workers by ensuring there is a system in place to warn all within the building of a fire and allow those person to evacuate safety.

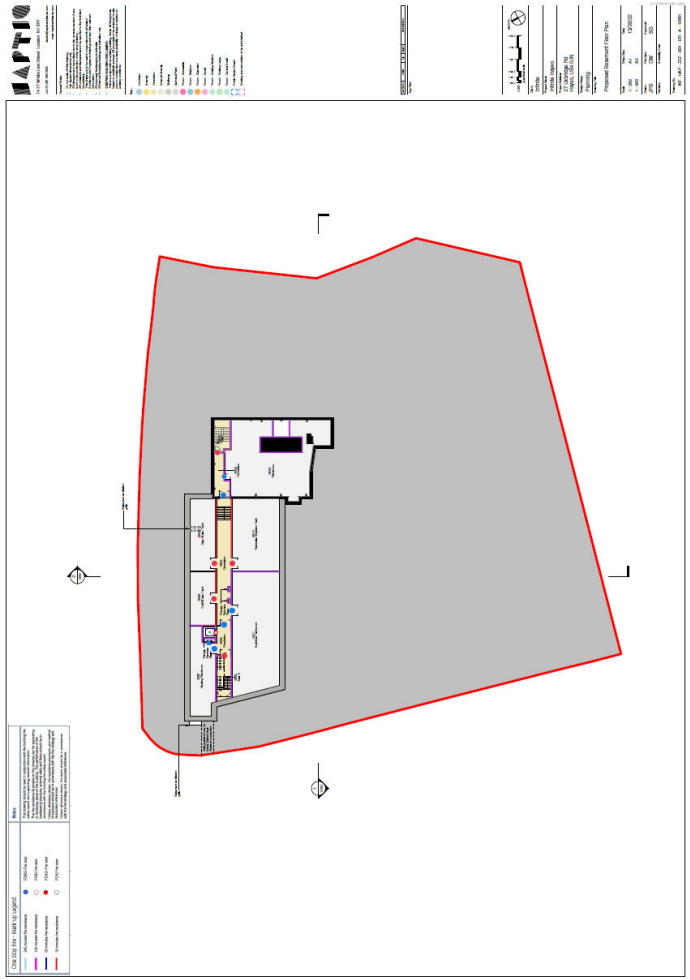
3.9.2. An adequate number of fire points should be located throughout the building that include suitable extinguishers and a way to alert others of a fire, which could for example include radio linked manual fire alarm call points.

3.9.3. Emergency exit signage should be in place showing the latest and safety way to safety as the routes can change as construction develops.

3.9.4. Where possible focus on providing protected routes from the premises as early as possible within the construction should be given.

4 Appendix A – Fire Strategy Drawings

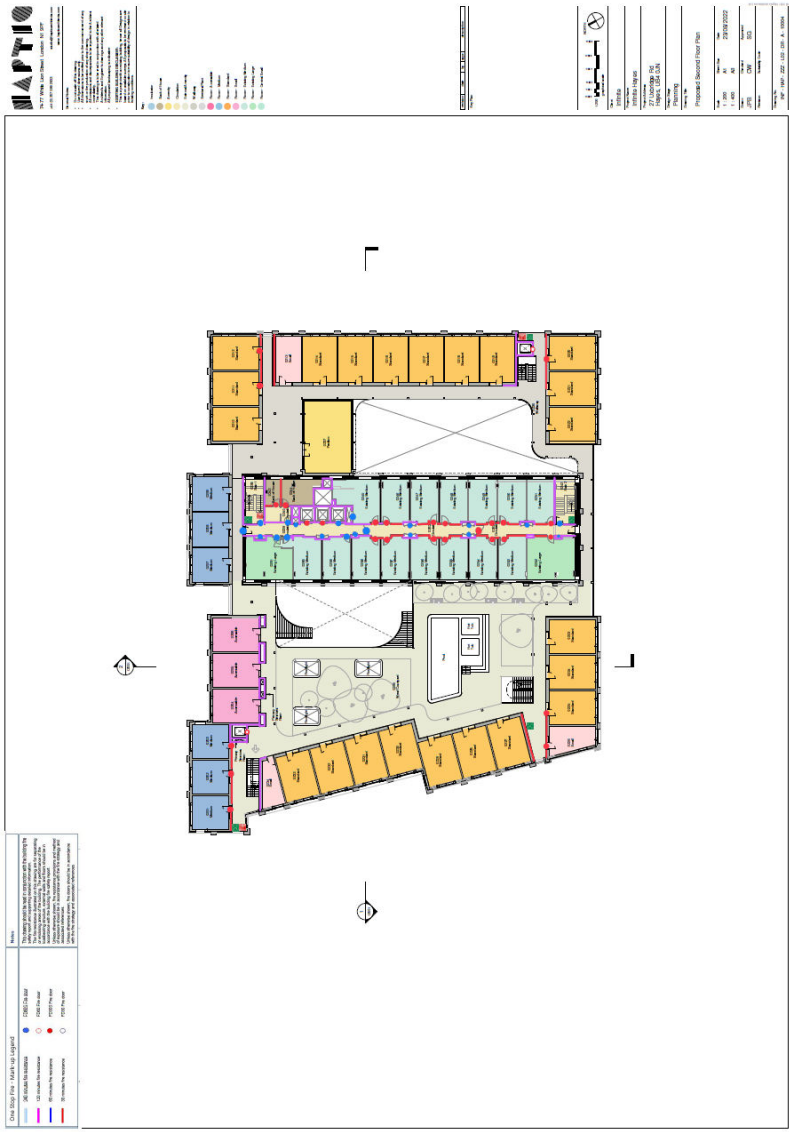
The following drawings provide indicative fire strategy information commensurate with the design at the time of writing. These drawings are subject to amended further to design coordination.



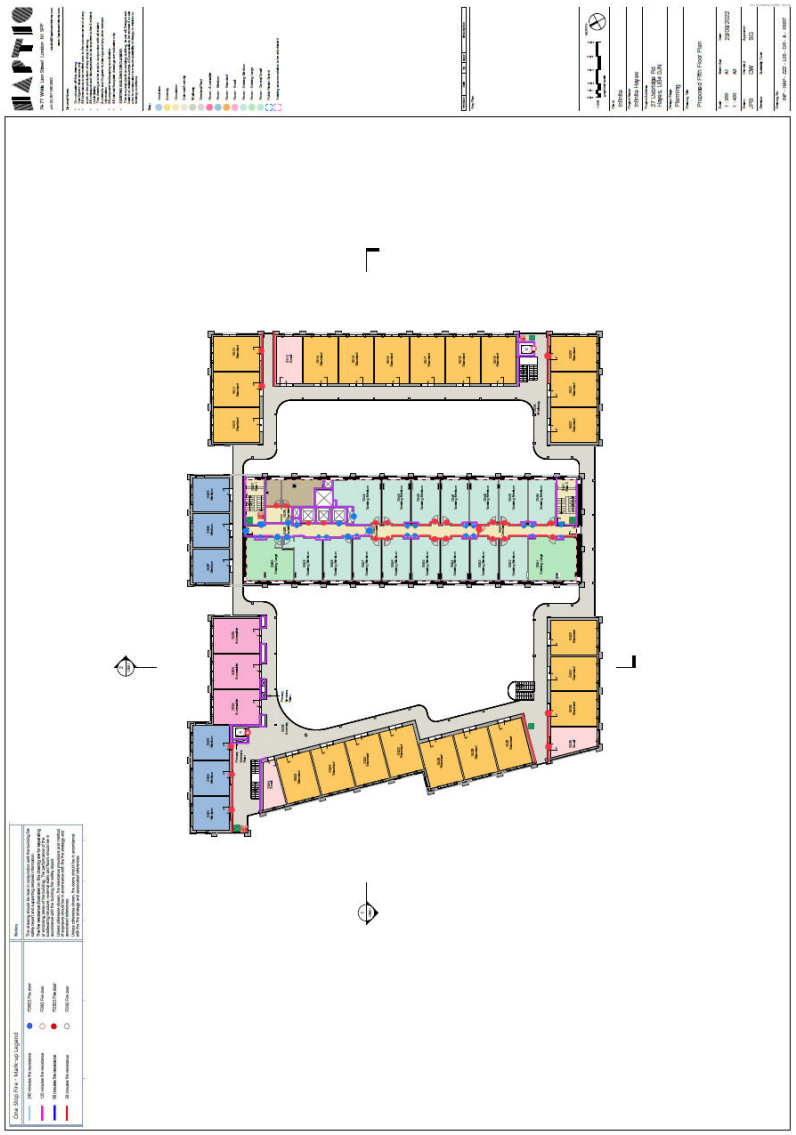
Basement

Ground Floor

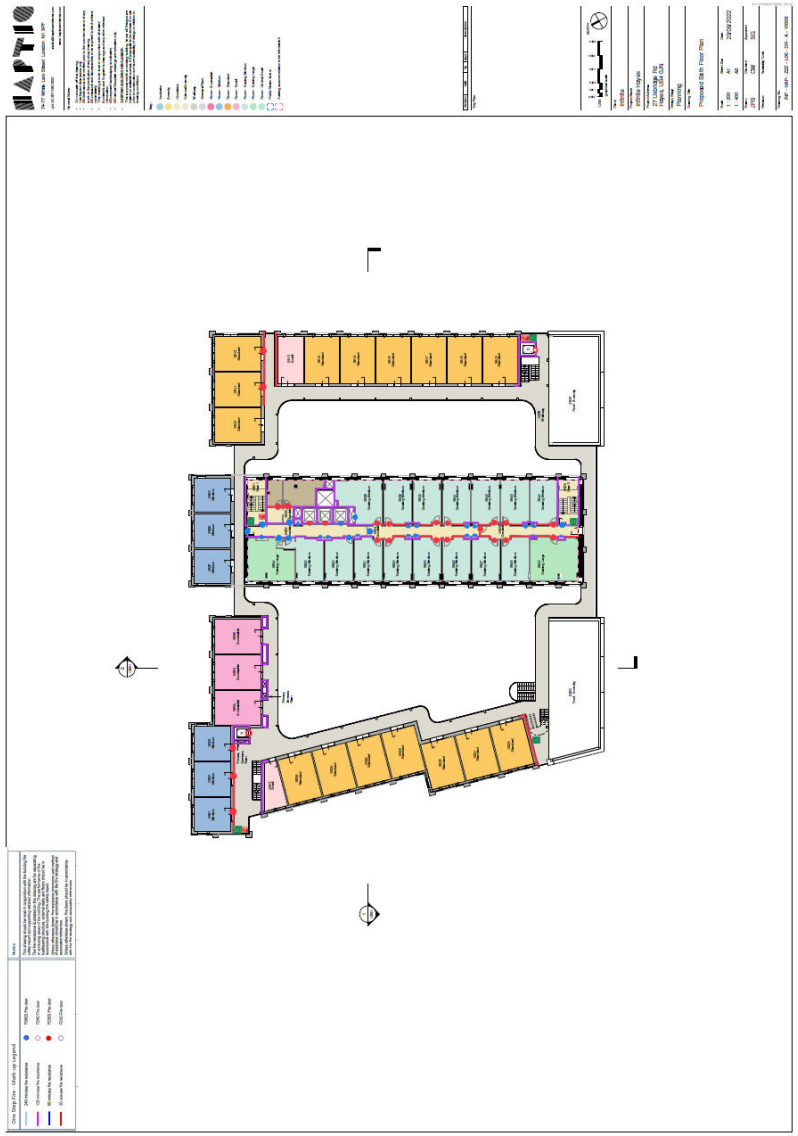
Floor 1



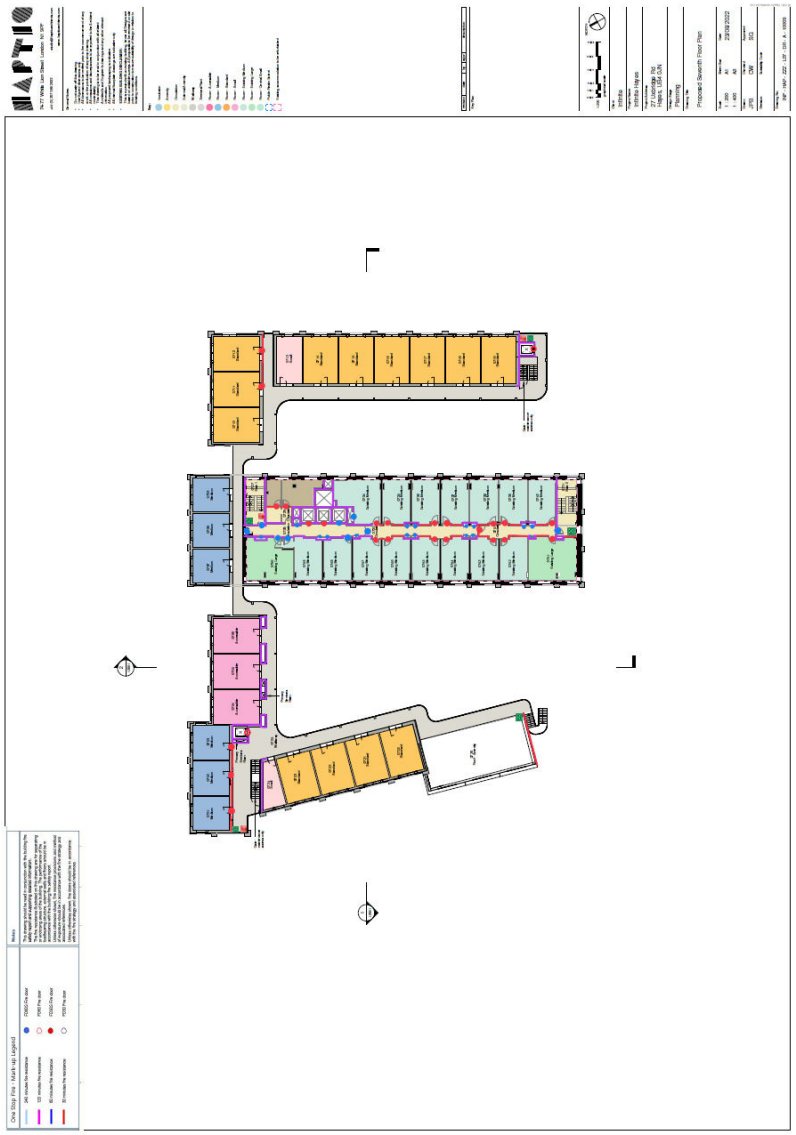
Floor 2



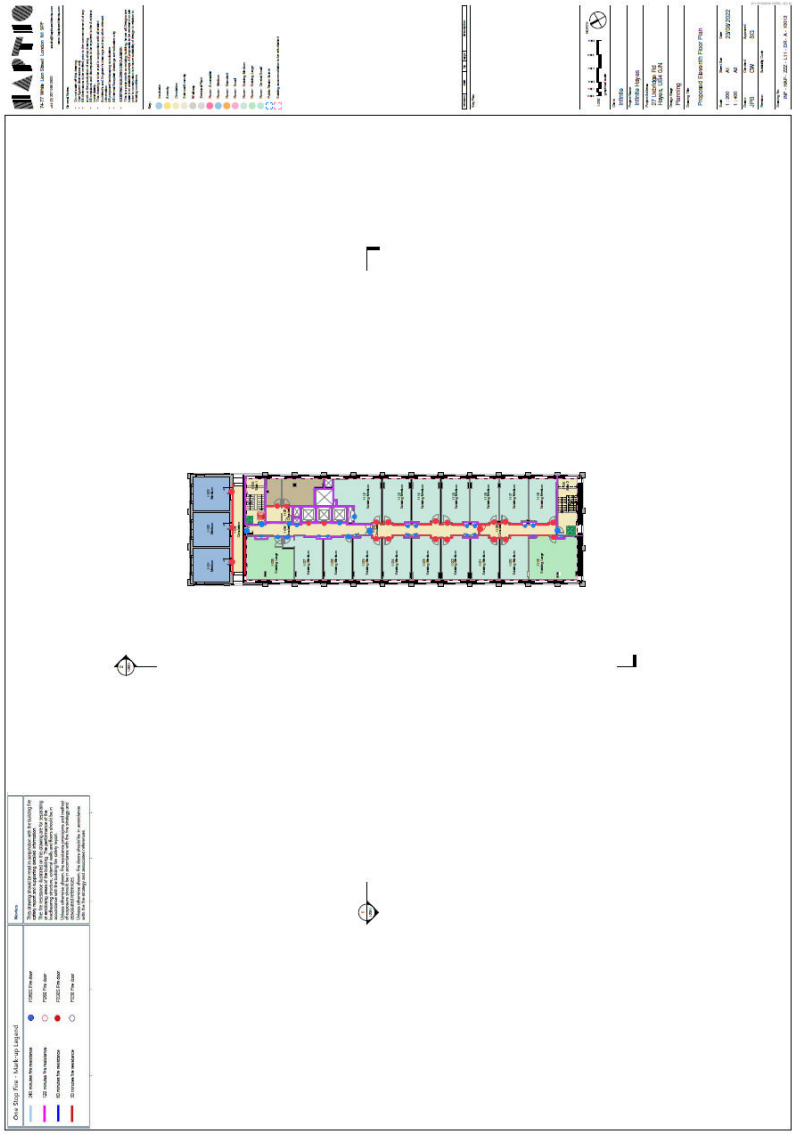
Floor 3, 4 & 5



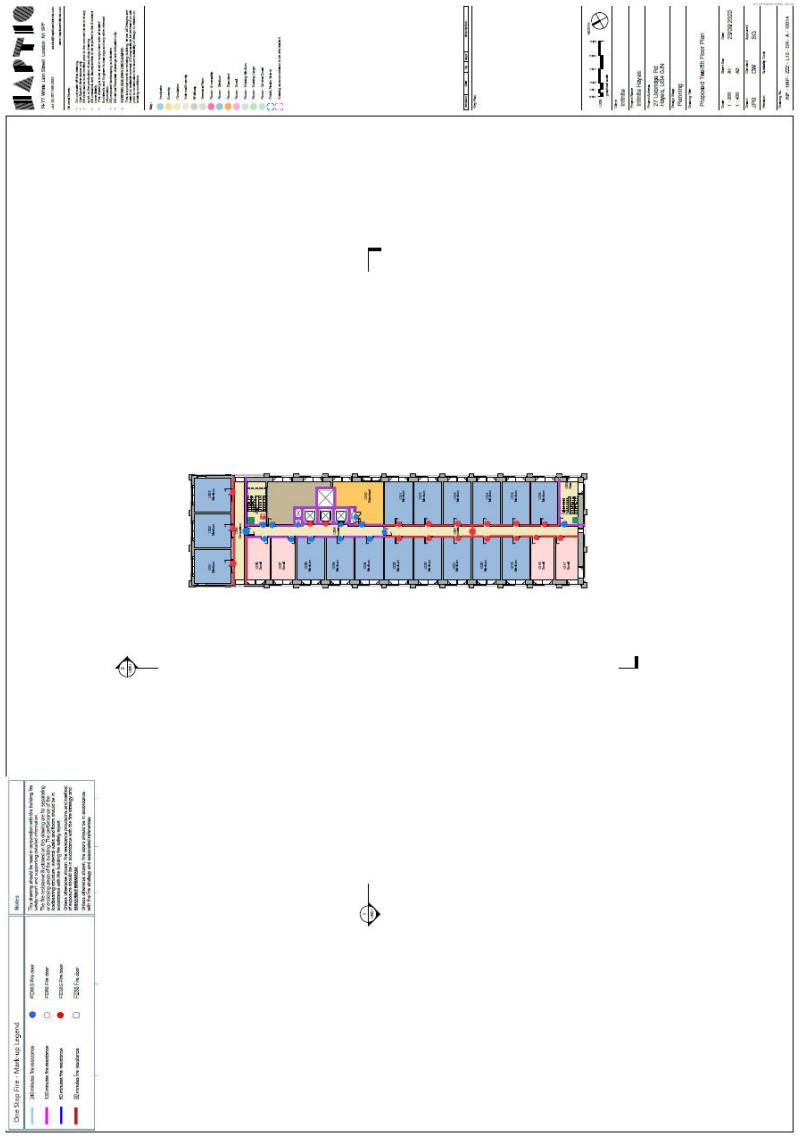
Floor 6



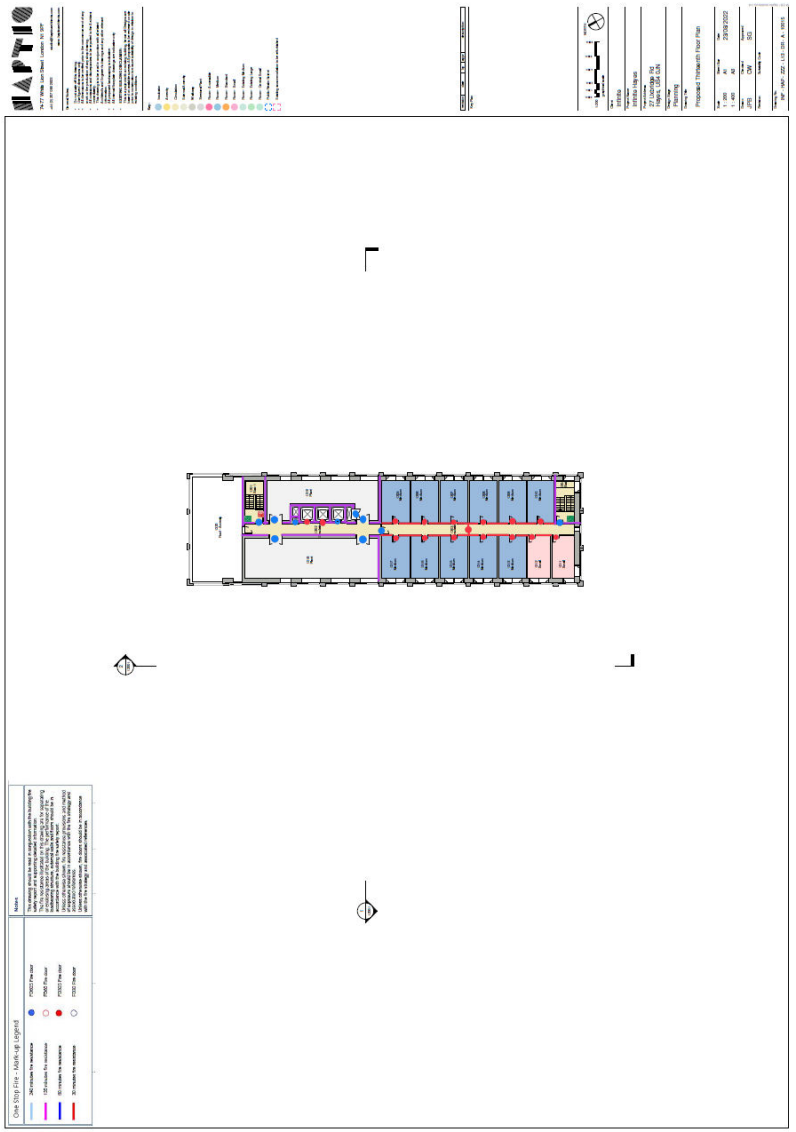
Floor 7



Floors 8, 9, 10 & 11



Floor 12



Floor 13

5 A3.1 Form 1 – Fire Statement Template (London Plan Policy D12B) for major development

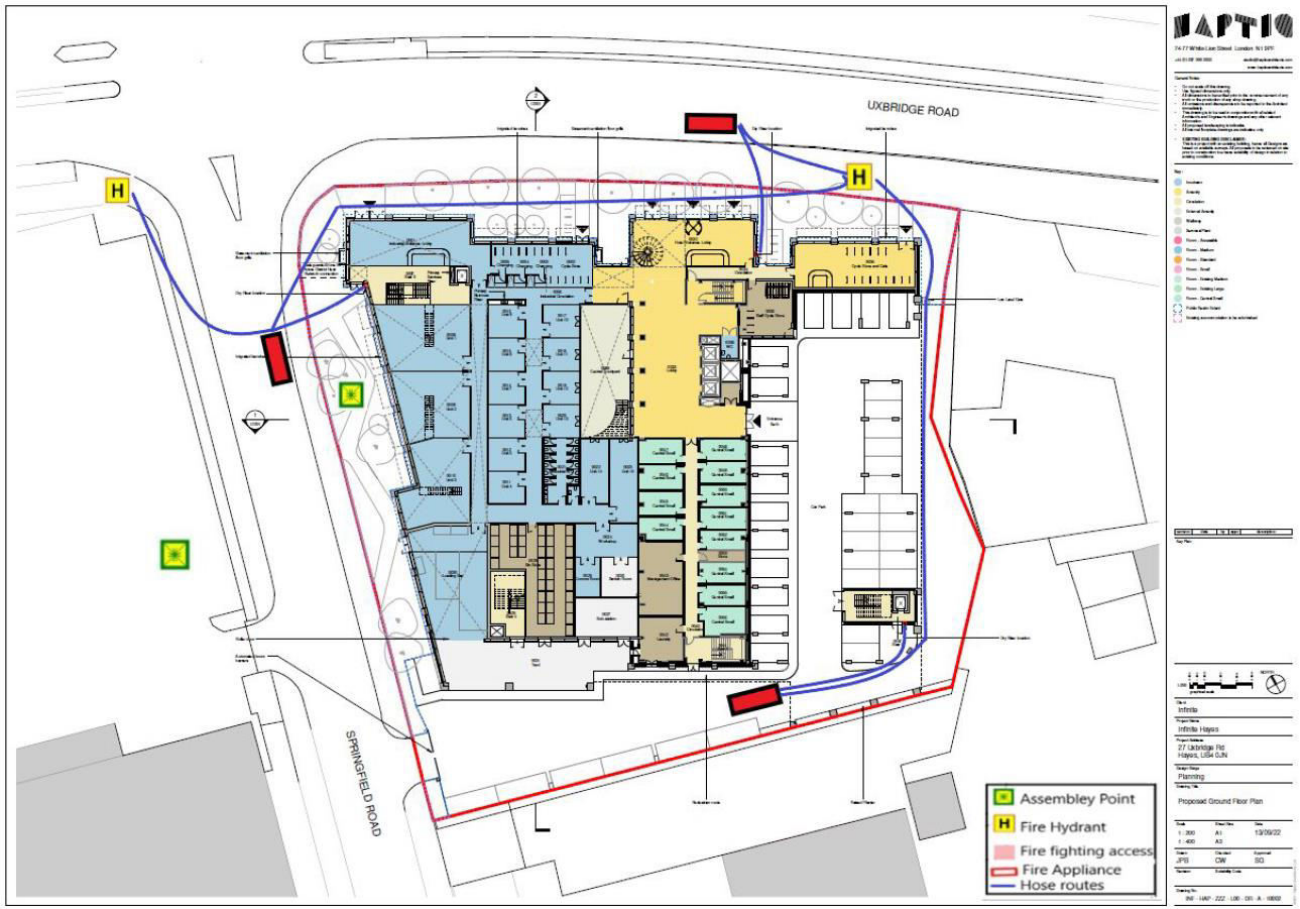
Application information	
1. Site address line 1	Infinite Hayes Hotel
Site address line 2	27 Uxbridge Road
Site address line 3	
Town	Hayes
County	
Site postcode (optional)	UB4 0JN
2. Description of proposed development including any change of use (as stated on the application form):	The development at 27 Uxbridge Road, Hayes, UB4 0JN consists of demolition of ground floor entrance, parking structure and north-east and south-west wings of the existing building, and refurbishment and extension of existing hotel to include additional accommodation at roof level and full height extension on the north elevation, together with walkways connecting to new buildings of between 6 and 8 storeys, to create additional hotel floor space (Use Class C1) and commercial floorspace (Use Class E(g)), along with ancillary facilities, parking and landscaping.
3. Name of person completing the fire statement (as section 15.), relevant qualifications and experience. Guide: no more than 200 words	David Bromley MIFSM Until January 2020 David was employed by the second largest Metropolitan Fire Service, reaching the rank of Station Commander. David has 32 years of fire related experience including 12 years within a Fire Safety Department, ranging from auditing, enforcement, licensing, approving, events work and also as head of technical fire safety. He worked on many buildings and led on many prosecutions and events within the West Midlands ranging from small shops to major developments. During his time in fire safety, he completed all courses expected of a fully qualified fire safety inspector.
4. State what, if any,	As an ex-fire officer, it is always our intention to work closely with the local fire service and to incorporate any

consultation has been undertaken on issues relating to the fire safety of the development; and what account has been taken of this. Guide: no more than 200 words	measures they feel necessary for the safety of firefighters. Attempts were made to contact London Fire Brigade by email and phone but were unsuccessful as One Stop Fire was informed that there is no planning officer to deal with queries and to go through the planning route. Information requested was. • Size requirements for current London Fire Appliances. These are in accordance with London Fire Brigade guidance note 29. (31). • Open plan firefighting staircases. Due to the open deck approach to the bedrooms that links the whole development and number of firefighting shafts with the enhanced safety that this brings, it is proposed that the firefighting staircases are open deck approach. London Fire Brigade Water Team have confirmed the nearest fire hydrant on Uxbridge Road is working.

5. Site layout plan with block numbering as per building schedule referred to in 6.

(consistent with other plans drawings and information submitted in connection with the application)

Site layout plan is:
inserted in the form



The principles, concepts and approach relating to fire safety that have been applied to the development

6. Building schedule

Site information				Building information			Resident safety information		
a) block no. as per site layout plan above	b) • block height (m) • number of storeys excluding those below ground level • number of storeys including those below ground level	c) proposed use (one per line)	d) location of use within block by storey	e) standards relating to fire safety/ approach applied	f) balconies	g) external wall systems	h) approach to evacuation	i) automatic suppression	j) accessible housing provided
	4155mm 12 excluding basement 13 including basement	hotel		BS9999 Also BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	simultaneous	yes- commercial sprinklers, full	none
		Choose an item.		Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

7. Specific technical complexities

Explain any specific technical complexities in terms of fire safety (for example green walls) and/or departures from information in building schedule

above
Guide: no more than 500 words
There are only 2 departures from code in this major development.

Open plan firefighting staircases. Due to the open deck approach to the bedrooms that links the whole development and number of firefighting shafts with the enhanced safety that this brings, it is proposed that the additional 2 new firefighting staircases are open deck approach.

Core 3 at the North-West wing of the building and Core 5 at the South-East wing of the building are part of the open plan/ open sided deck/ balcony approach concept. Due to the open sides, there should be no requirement for a traditional fire fighting shaft. If a shaft were built, the first thing to do would be to provide a vent. This design is fully ventilated and so smoke logging should not take place.
As there are three shafts, all provided with lifts and dry rising mains, firefighters have many options to access the fire floor. They will be able to ascend the stairs without the need to don breathing apparatus and be able to set bridge heads up on the balcony below or even at the same level as the fire itself. If fact the Officer in Charge would be able to have full access to the front door of the bedroom on fire due to the open plan nature of the building.

This design even assists to make the original hotel part of the building safer in fire as if there was a rescue from the original part of the building new entrance doors to the open balcony approach could allow firefighters to simply walk out of the building at the same level and into fresh air on the balcony to perform vital first aid within fresh air.

Alternative access to the building is also available via the other original protected stair at Core 2, South and by another new open plan stair at Core 4 South/ West wing.

Basement
As the basement is over 200m², BS9999 requires ventilation.

When you consider BS 9999 you read the following clause.
COMMENTARY ON CLAUSE 27
The build-up of smoke and heat as a result of a fire can seriously inhibit the ability of the fire service to carry out rescue and fire-fighting operations within a building.
Products of combustion from basement fires tend to escape via stairways, making access difficult for fire service personnel. Providing outlets for smoke can reduce this problem. Venting can improve visibility and reduce temperatures, making search, rescue and fire-fighting more effective (see 27.2). Measures are needed to keep smoke from restricting the use of any fire-fighting shafts and to remove smoke from basements, car parks, loading docks and covered roadways (see 27.3 and 27.4).

So BS9999,s way of achieving the above is to provide ventilation by natural or mechanical to any basement over 200m². This keeps the heat and smoke to a tolerable level so that firefighters can enter through the heat layer and assist searching. This is not the only way to achieve compliance and

so we have to look at every situation differently and as a complete package.

The following will give another perspective to achieve the same level of protection to the firefighters.

1. Although the basement is over 200m², due to the rooms within the basement being classed as life safety systems or plant they will be within either 60 or 120 minute fire compartments. Apart from the original basement space, the largest compartment is 135m² and that contains the sprinkler tank. The other rooms are cold water tank, grey water tank and rainwater tank with a plant room of just 70m². One of the main reasons for compartmentation is to ensure we keep fires smaller and easier to put out so we should not have any fire larger than the largest compartment and as already started this is a sprinkler tank.
2. Another issue is smoke clearance, but this basement will have two exits so the fire service would be able to open one to provide an inlet and the other to provide an outlet in order to use positive pressure fans to drive heat and the products of combustion out.
3. Sprinklers will be installed throughout the basement and so delaying any fire, preventing it spreading from a compartment and ensuring heat is kept as low as possible.
4. An L1 fire alarm system will be installed which is the top standard you can have and thus giving the earliest opportunity to know there is a fire and to react to it. Seconds do count and can have a positive effect on the overall outcome.
5. All areas are for a small number of trained service staff only and so the doors and hence compartmentation should be in good order.

It is One Stop Fire's opinion that the above satisfies the standard as although the risk to fire in nearly all the rooms apart from the heating plantroom is extremely low, if there was one then any fire would be contained in an area smaller than that required to have ventilation, otherwise why do we require compartmentation and sprinklers if we do not trust how they react in fire. Early discussions with the Approved Inspector indicate this approach is acceptable. London Fire Brigade have not been available for comment.

8. Issues which might affect the fire safety of the development

Explain how any issues which might affect the fire safety of the development have been addressed.
Guide: no more than 500 words
We are not aware of any part of the proposals which will affect the fire safety of the development

9. Local development document policies relating to fire safety

Explain how any policies relating to fire safety in relevant local development documents have been taken into account.
Guide: no more than 500 words
All sections of Policy D5 and D12 of the London Plan in relation to fire have been considered.

Emergency road vehicle access and water supplies for firefighting purposes

10. Fire service site plan

Explanation of fire service site plan(s) provided in 14. including what guidance documents have informed the proposed arrangements for fire service access and facilities?

Guide: no more than 200 words

Arrangements for the fire service will be in accordance with BS9999.

3 separate fire fighting shafts complete with dry rising mains and lifts be be provided

The building will be provided with two new fire fighting shafts making a total of three to ensure hose lay distances are within the 60m of the fire main outlet to all areas of the building in accordance with 20.1.3 of BS9999.

The new fire fighting shafts will be located in Core 3 at the North-West wing of the building and Core 5 at the South-East wing of the building. The original 120-minute fire fighting, Core 1 stair is located in the North end of the original building. Fire Appliance access will be within 18m of all three.

All firefighting shafts are in excess of the required 1100mm in width.

An additional protected escape stair will be provided to the basement at the opposite end of the original staircase, joined by a protected corridor, making firefighting conditions much safer and easier to extinguish and ventilate within smaller compartments.

All fire-fighting shafts will be provided with fire fighting lift installations, dry rising mains, ventilation where required and wayfinding signage to assist the fire and rescue service to identify each floor.

Clause 20.1 of BS 9999, BS9991 open deck approach.

11. Emergency road vehicle access

Specify emergency road vehicle access to the site entrances indicated on the site plan

Guide: no more than 200 words

The site is existing and currently fire appliances park on Uxbridge Road and access the site from the main entrance.

This development will offer a further access point off Springfield Road to Core 3 and an on-site access to Core 5 via the loading bay area off Springfield Road. Both are to be within 18m of the inlet.

Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?

yes

12. Siting of fire appliances

Guide: no more than 200 words

The site is existing and currently fire appliance access is on Uxbridge Road and gain entry to the site from the main entrance.

This development will offer a further access point off Springfield Road to Core 3 and an on-site access to Core 5 via a driveway to the South of the building off Springfield Road. Both are to be within 18m of the inlet.

If the length of the access route is more than 20m long, then turning facilities should be provided. This can be in the form of a hammerhead or turning circle. The access route will have the following specifications as shown below for an appliance as a minimum.

- Minimum width of road between kerbs: 3.7m
- Minimum width of gateways: 3.2m
- Minimum width considering equipment trays 4.18m
- Minimum turning circle between kerbs: 16m
- Minimum turning circle between walls: 17m
- Minimum clearance height: 3.4m
- Minimum carrying capacity: 14 tonnes

The above is as per recommendations from the LFB guidance note 29. (31).

BS 9999, London Fire Brigade guidance note 29. (31).

13. Suitability of water supply for the scale of development proposed

Guide: no more than 200 words

Arrangements for the fire service will be in accordance with BS9999. In accordance with clause 22.2 fire hydrants will be located within 90m of the dry fire main inlets on a route suitable for laying hose.

There is an existing fire hydrant at the front of the development on Uxbridge Road. This is also within 90m of the dry riser inlets.

London Fire Brigade Water Team have confirmed this hydrant is working.

A sprinkler tank is also to be provided for the building within the basement.

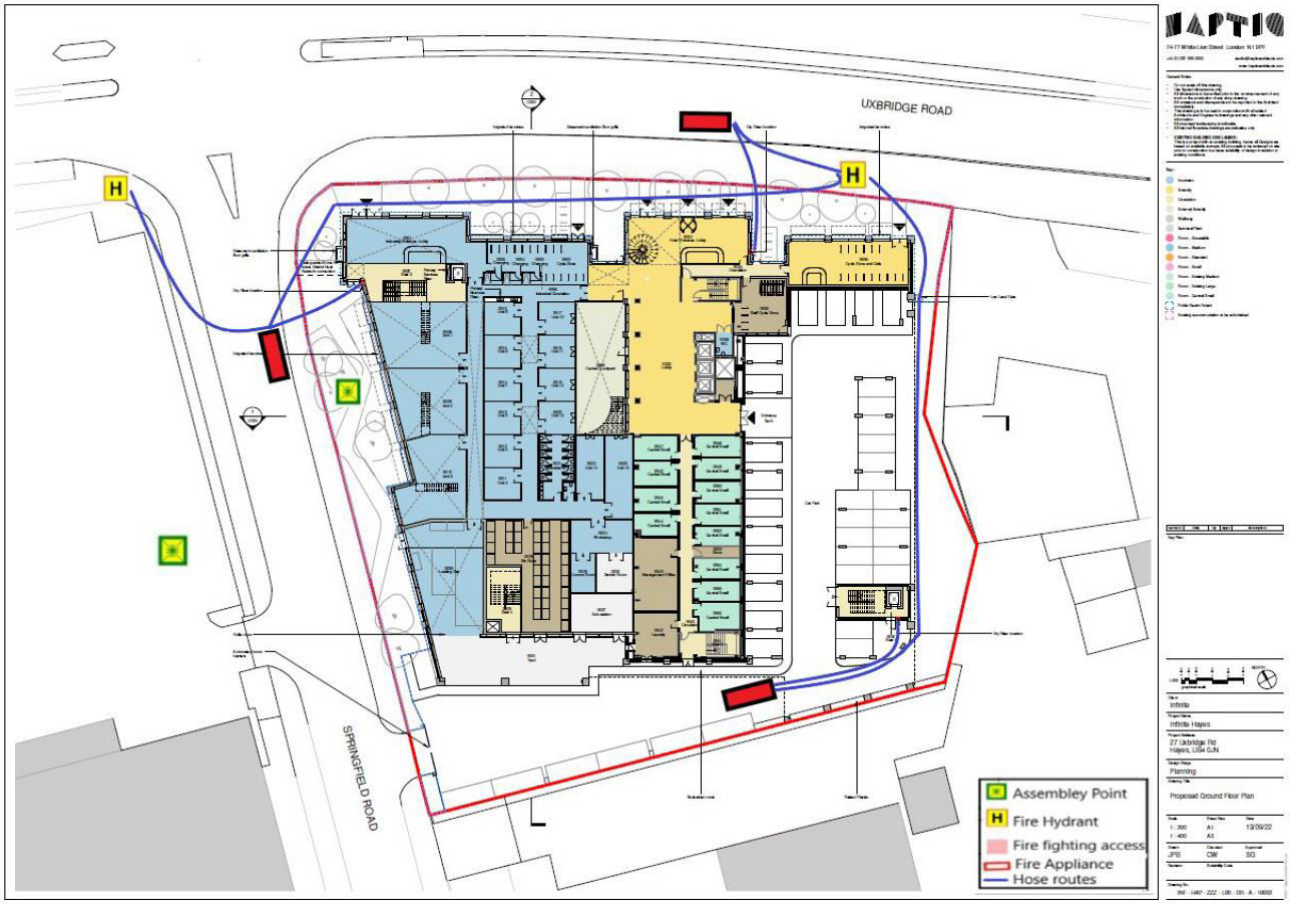
Nature of water supply:

hydrant- public

Does the proposed development rely on existing hydrants and if so are they currently usable / operable?

yes

14. Fire service site plan
Fire service site plan is:
inserted in the form



Fire statement completed by	
15. Signature	

	 David Bromley MIFSM
16. Date	14/09/2022

6 A3.3 Form 3 - Provision of evacuation lift (Policy D5(B5))

(to supplement Forms 1 or 2, where a lift is provided)

Form 3 - Provision of evacuation lift (Policy D5(B5))

Site address	Infinite Hayes Hotel 27 Uxbridge Road Hayes UB4 0JN
Description of development	The development at 27 Uxbridge Road, Hayes, UB4 0JN consists of demolition of ground floor entrance, parking structure and north-east and south-west wings of the existing building, and refurbishment and extension of existing hotel to include additional accommodation at roof level and full height extension on the north elevation, together with walkways connecting to new buildings of between 6 and 8 storeys, to create additional hotel floor space (Use Class C1) and commercial floorspace (Use Class E(g)), along with ancillary facilities, parking and landscaping.
Name, qualifications and / or experience of author	David Bromley MIFSM Until January 2020 David was employed by the second largest Metropolitan Fire Service, reaching the rank of Station Commander. David has 32 years of fire related experience including 12 years within a Fire Safety Department, ranging from auditing, enforcement, licensing, approving, events work and also as head of technical fire safety. He worked on many buildings and led on many prosecutions and events within the West Midlands ranging from small shops to major developments. During his time in fire safety, he completed all courses expected of a fully qualified fire safety inspector.

Policy considerations Policy D5(B5)

Potential cross reference London Plan Policy D12A(4&5) and Policy D12B(2)

Details of the evacuation lift and shaft

The building will be served by 5 stairs, two of which are from the original hotel building. The new stairs will form part of the open plan structure and themselves be open plan design with open sides where possible. This is believed to be safer as any smoke, heat and products of combustion would simply leave through the open walls and so not produce smoke logging. In nearly all areas access to the stairs will be via two-way travel and as such persons can simply turn their back from a fire and use another staircase.

The two original staircases will still be located within the building and be able to be used by any person who does not wish to use the open plan stairs.

The original Core 1, the new Core 3 in the North-West of the building and the new Core 5 in the South-East side of the building will be designed as fire fighting cores, complete with firefighting / evacuation lifts serving all floors making a total of 3. The 2 new cores will be open plan

connecting to open deck / balcony approach to the bedrooms. This is felt to offer greater safety to the firefighters who will be able to walk upstairs in fresh air. If smoke is drifting across a staircase, then firefighters can simply use another staircase or revert back as if they were approaching a high-rise incident within a building.

Evacuation lifts, provided for compliance with London Building Plan, Policy D12, should comply with Annex G of BS 9999, BS EN 81-20 and BS EN 81-70. As the development will have 3 firefighting lifts, these can be used as an evacuation lift.

The firefighter/ evacuation lifts should be provided with alternative power supply. This allows for continuous operation of the lift in the event of a primary power supply failure in the building.

Each lift will be provided with a switch marked “Escape lift” at Level 00. On the operation of the “Escape lift” switch, or on a signal from a fire detection system:

1. The evacuation lift will isolate all car and landing call controls and return to the final exit level (Level 00) and park with its doors open.

2. The car controls will be enabled; the evacuation lift will then operate only in response to the car controls and the communication system provided will be in operation.

3. The lift car will be taken only to those levels where a person is in need of assistance.

As the lifts are also designated as a lift for use by firefighters, additional controls in accordance with BS 5588-5 will be provided that are only operable by fire authority personnel.

Communications and signage will be provided at all refuge points including the 2 additional staircases that are not designated fire fighting shafts as they have no lift.

Capacity Assessment

Existing disabled refuges are located in the protected lobbies of core 1 and 2 stairs at all levels. The original fire strategy states the following

- Each refuge is provided with two-way emergency voice communication points linked to the reception area.
- Refuges should be 1400mm by 900mm and clear of the escape path should be clearly identified by appropriate signage. They are not required at ground floor level.
- The firefighting lift can be utilised for vertical transport of disabled people to exit level as an added benefit. This could minimise guest and staff injuries carrying people downstairs. In order that the lift is not used to evacuate to ground floor in the event of a fire at this level, it is recommended that the automatic fire detection and alarm system is linked to the lift controls to prevent it serving ground floor in this scenario and stopping at first floor level.

New elements of the building greatly increase safety and facilities for people with mobility issues.

- New build bedrooms will be accessed via open sided external deck access corridors, wrapping the inner courtyard facing elevations. It is recognised in section 7 of BS9991 that “there is little risk of a balcony or deck becoming smoke-logged and there is thus no need to impose a limitation on the travel distance from the dwelling entrance to the stairway”. This statement shows that open deck approach is believed to be very safe. As soon as a person leaves their bedroom from a fire they will be in open air and not inside an enclosed bedroom corridor. Deck approach/ balconies are considered that safe that guidance allows them to be used as a refuge

- The design includes two further firefighting cores complete with firefighting lifts that could be available for escape for those with limited mobility.
- With 3 available firefighting lifts that can all be accessed from anywhere on the floor, it gives greater flexibility to those organising the safe evacuation of people with mobility issues.
- Any person within the original one or two stair core could simply exit at the same level through the new door adjacent to the staircase onto the open plan balcony and into fresh air where they could continue their escape along the balconies in safety.
- Having 3 firefighting/ evacuation lifts gives the premises greater flexibility for maintenance as 2 others should always be available.

Evacuation Strategy
Simultaneous evacuation

It is well known that seconds count in a fire situation and more importantly for persons with limited movement. The development will incorporate an L1 fire alarm system which is the highest standard there is and above the minimum requirements.

In addition, sprinkler protection is provided to suppress the outbreak of fire, limit growth and limit the products of combustion. This again creates more time for escape and eases the burden on firefighters tactically and physically.

In the event that a person with limited mobility needs to evacuate they can leave their room and in nearly all cases choose two-way travel from the room to a place of safety and refuge point.

Within the new build areas, they are able to simply walk out their bedroom doors and onto the open deck balcony access and so into fresh air. From here they can make their way depending on the location of the fire to three separate firefighting / evacuation lifts where they can use the communication equipment provided to alert the building management they are there.

Within the existing hotel new doors from the staircases will be made onto the balconies so once again giving persons with limited mobility greater options. They can stay within the lobby and call for assistance or choose to move away from fire out of the building and along the balconies in fresh air. From here make their way to an unaffected part of the building without the need to any stairs.

As the firefighting/ evacuation lifts remains powered in the event of a fire within the building, they allow wheelchair users and other non-ambulant residents to make a dignified escape from the building.

Evacuation Lift Management Plan
Each lift will be associated with a refuge which will be provided with an emergency voice communication system (Type B outstations in accordance with BS 5839: Part 9).

This will enable two-way communication with a staffed location and the people in each refuge will be assured that their presence there is known to the building management and will be kept informed of the situation and informed what actions the building management are taking in order to effect their safe evacuation.

The evacuation procedure for people requiring assistance should begin at the first warning of fire.

The hotel operator will need to determine the minimum number of staff (“lift wardens”) required to manage the use of the evacuation lifts and continuously monitor this through training and drills.

The evacuation procedure will include contingency plans for the failure of a lift or group of lifts under evacuation service, i.e. staff will be trained to evacuate people other lifts or even the stairs if necessary and appropriate evacuation equipment will be provided.

By caring out regular training and drills improvements can be made to develop and document the fire safety management plan by the hotel operator in more detail as this only forms an overall strategic plan as part of the planning fire statement. For example, in line with clause 45.9 of BS9999 and subject to a risk assessment there are 2 other lifts that could be used for evacuation in some circumstances such as a small fire in one of the building structures that does not affect the other structures on the opposite end of the development. The risk assessment should include that.
a) the interface between the lift control system and the fire detection and fire alarm system will support the evacuation management strategy;
b) controlled operation of the lift will be possible during an evacuation;
c) the power supply to the lift is likely to remain usable throughout the time required for evacuation;
d) the lift enclosure and associated escape routes will remain free from the effects of fire, heat and smoke during the evacuation;
e) there is a suitable communications system available to ensure that staff can use the lifts safely to evacuate mobility-impaired people;
f) there is an alternative escape route available for situations when the use of the lift is not viable.

Declaration of Compliance by a competent person[17]
The above demonstrates that inclusive fire safety has been included in the initial design stage and will continue to be an integral part of the design and management of the building throughout its life.

Not only have 3 firefighting / evacuation lifts been provided but also persons can travel in fresh air within the open deck / balcony access areas without the need to negotiate stairs, giving them significantly more time to feel safe and make their escape.

The fire safety of the proposed development and the fire safety information satisfies the requirements of London Plan Policy D12 and D5(B5), where applicable?

DT Bromley MIFSM

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Quality Assurance

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