Fire Statement – FS 003.3

Project: Viadux Plot 2A

Subject: The Town and Country Planning Order - Fire Statement

Date: 21 January 2025

Author: Iris Chang

Checked: Adam Monaghan

1 Introduction

This Fire Statement has been prepared by Design Fire Consultants (DFC) and is submitted in support of the planning application made by Salboy Ltd for the Viadux Plot 2A development located in Manchester.

The purpose of this Fire Statement is to evidence that fire safety matters, as they relate to planning, have been considered at an early stage of the project.

This Fire Statement includes a concise summary of the approach to the fire safety design, site layout, access and facilities for firefighting, and details of any consultation undertaken on fire safety and consideration of local development documents.

This Fire Statement is a revision to the previously submitted document after review of the Substantive Response received from the HSE, particularly the concerns raised in pgo-6320.

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This Fire Statement forms part of the planning application information only. It is not intended for formal Building Regulations submission and should not be used as such.

1.1 Town and Country Planning Order

The requirement for a Fire Statement is requested under The Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended)[1].

The regulatory regime also establishes the Health and Safety Executive as a statutory consultee.

A Fire Statement is required to be submitted as part of a full planning application (or with the reserved matters planning application) for:

- A development which involves the provision of one or more relevant buildings;
- A development of an existing relevant building; or
- A development within the curtilage of a relevant building.

A relevant building is currently defined as:

- A building that contains two or more dwellings; and is 18m or more in height, or contains 7 or more storeys.
- A building that constitutes educational accommodation; and is 18m or more in height, or contains 7 or more storeys.

[1] UK Government, 'The Town and Country Planning (Development Management Procedure and Section 62A Application (England) (Amendment) Order 2021', July 2021

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Educational accommodation is defined as:

- Residential accommodation for the use of students who are boarders at school in connection with them attending a school; or
- Residential accommodation for use of students attending higher education courses, further education courses, or course at 16 to 19 Academies.

The height of a building is measured from ground level to the top floor surface of the top storey of the building (ignoring any storey which is a roof-top machinery or plant area or consists exclusively of machinery or plant rooms).

When determining the number of storeys a building has: any storey which is below ground level is to be ignored; and any mezzanine floor is a storey if its internal area is at least 50% of the internal floor area of the largest storey in the building which is not below ground level.

A storey is treated as below ground level if any part of the finished surface of the ceiling of the storey is below the ground level immediately adjacent to the part of the building.

1.2 Relevant Documents

Table 1: Relevant documents used to inform the Fire Statement

Name	Reference
Viadux Phase 2 – Plot 2a & 2b Plot Plan	10448-SHP-ZZ- A-B5D9-Z460-XP-XX-001
Viadux Phase 2 – Plot 2a General Arrangement Ground Floor Plan	10448-SHP-ZC- A-B5D9-G200-PL-00-001
Viadux Phase 2 – Plot 2a General Arrangement Level 01 Plan	10448-SHP-ZC- A-B5D9-G200-PL-01-001
Viadux Phase 2 – Plot 2a General Arrangement Level 02 Plan	10448-SHP-ZC- A-B5D9-G200-PL-02-001
Viadux Phase 2 – Plot 2a General Arrangement Level 03 Plan	10448-SHP-ZC- A-B5D9-G200-PL-03-001
Viadux Phase 2 – Plot 2a General Arrangement Level 04 Plan	10448-SHP-ZC- A-B5D9-G200-PL-04-001
Viadux Phase 2 – Plot 2a General Arrangement Level 05 Plan (Hotel BOH)	10448-SHP-ZC- A-B5D9-G200-PL-05-001
Viadux Phase 2 – Plot 2a General Arrangement Level 06 Plan (Restaurant / Bar / Kitchen)	10448-SHP-ZC- A-B5D9-G200-PL-06-001
Viadux Phase 2 – Plot 2a General Arrangement Level 07 Plan (Events)	10448-SHP-ZC- A-B5D9-G200-PL-07-001
Viadux Phase 2 – Plot 2a General Arrangement Level 08 Plan (Bar)	10448-SHP-ZC- A-B5D9-G200-PL-08-001
Viadux Phase 2 – Plot 2a General Arrangement Level 09 Plan (Bar / Events)	10448-SHP-ZC- A-B5D9-G200-PL-09-001

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Name	Reference
Viadux Phase 2 – Plot 2a General Arrangement Level 10 Plan (Plant)	10448-SHP-ZC- A-B5D9-G200-PL-10-001
Viadux Phase 2 – Plot 2a General Arrangement Level 12 Plan (Hotel Maximum Upward)	10448-SHP-ZC- A-B5D9-G200-PL-12-H01
Viadux Phase 2 – Plot 2a General Arrangement Level 17 Plan (Hotel Minimum Downward)	10448-SHP-ZC- A-B5D9-G200-PL-17-H01
Viadux Phase 2 – Plot 2a General Arrangement Level 21 Plan (Hotel Suites)	10448-SHP-ZC- A-B5D9-G200-PL-21-H01
Viadux Phase 2 – Plot 2a General Arrangement Level 23 Plan (Plant)	10448-SHP-ZC- A-B5D9-G200-PL-23-001
Viadux Phase 2 – Plot 2a General Arrangement Level 24 Plan (Amenity – Swimming Pool / Spa)	10448-SHP-ZC- A-B5D9-G200-PL-24-001
Viadux Phase 2 – Plot 2a General Arrangement Level 25 Plan (Amenity – Gym)	10448-SHP-ZC- A-B5D9-G200-PL-25-001
Viadux Phase 2 – Plot 2a General Arrangement Level 26 Plan (Hotel Lift Overrun)	10448-SHP-ZC- A-B5D9-G200-PL-26-001
Viadux Phase 2 – Plot 2a General Arrangement Type A Plan (Maximum Upward)	10448-SHP-ZC- A-B5D9-G200-PL-29-A01
Viadux Phase 2 – Plot 2a General Arrangement Type A Plan (Minimum Downward)	10448-SHP-ZC- A-B5D9-G200-PL-37-A01
Viadux Phase 2 – Plot 2a General Arrangement Level 48 Plan (Intermediate Plant Room)	10448-SHP-ZC- A-B5D9-G200-PL-48-001
Viadux Phase 2 – Plot 2a General Arrangement Type B Plan (Maximum Upward)	10448-SHP-ZC- A-B5D9-G200-PL-51-B01
Viadux Phase 2 – Plot 2a General Arrangement Type B Plan (Minimum Downward)	10448-SHP-ZC- A-B5D9-G200-PL-59-B01
Viadux Phase 2 – Plot 2a General Arrangement Type B Plan (Minimum Upward)	10448-SHP-ZC- A-B5D9-G200-PL-67-B01
Viadux Phase 2 – Plot 2a General Arrangement Type C Plan (Maximum)	10448-SHP-ZC- A-B5D9-G200-PL-68-C01
Viadux Phase 2 – Plot 2a General Arrangement Type C Plan (Minimum)	10448-SHP-ZC- A-B5D9-G200-PL-72-C01
Viadux Phase 2 – Plot 2a General Arrangement Level 73 Plan	10448-SHP-ZC- A-B5D9-G200-PL-73-001

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Name	Reference
Viadux Phase 2 – Plot 2a General Arrangement Level 74 Plan	10448-SHP-ZC- A-B5D9-G200-PL-74-001
Viadux Phase 2 – Plot 2a General Arrangement Level 75 Plan	10448-SHP-ZC- A-B5D9-G200-PL-75-001
Viadux Phase 2 – Plot 2a General Arrangement Roof Plan	10448-SHP-ZC- A-B5D9-G200-PL-RF-001

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2 Fire Statement Form

The Fire Statement form includes a concise summary of the approach to fire safety taken, the site layout, access and facilities for firefighting, details of consultation undertaken on fire safety and consideration of local development documents.

Table 2: Application information

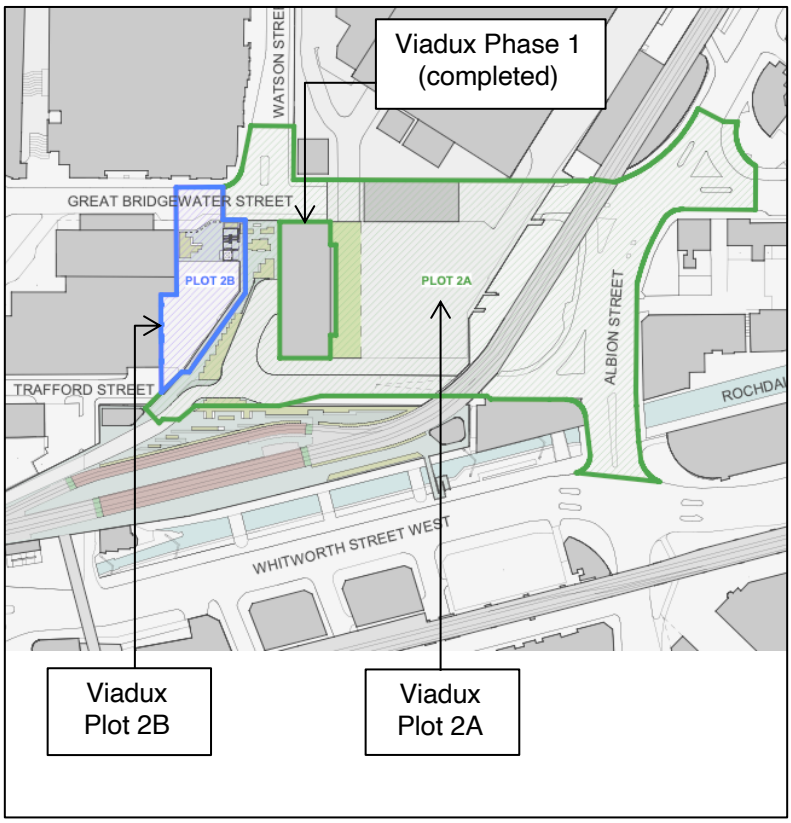
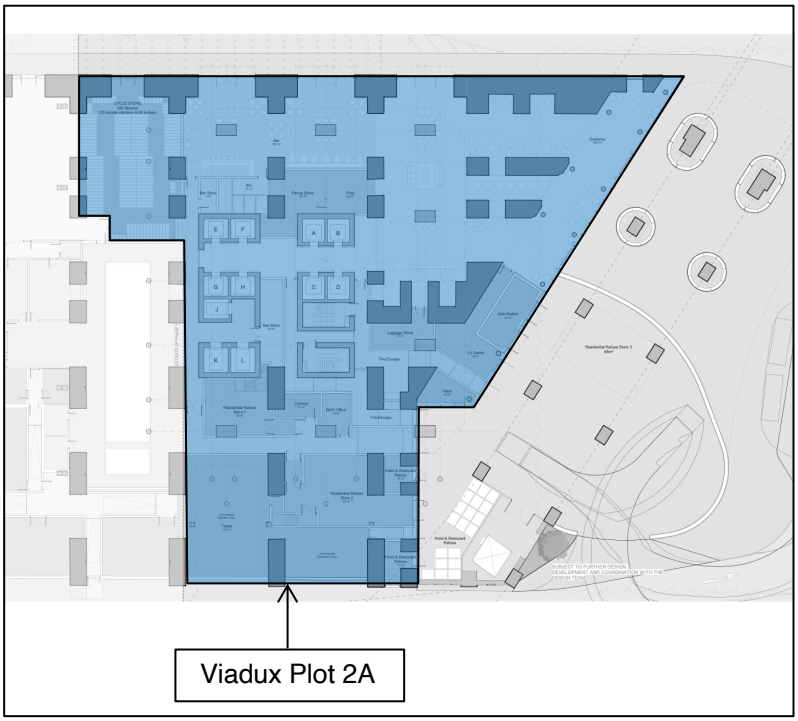
Application information		
1.	Site Address line 1	Former Bauer Millet Site
	Site Address Line 2	Albion Street
	Site Address Line 3	
	Town/City	Manchester
	County	
	Site Postcode (Optional)	M1 5NZ
2.	Description of proposed development including any change of use (as stated on the application form)	The Site is located in Manchester city centre. It is bounded by the Manchester Central Conference Complex and Great Northern Warehouse to the north, Albion Street to the east, the Deansgate Castlefield Metrolink station and Deansgate Locks to the south, and the Beetham Tower to the west. It extends to 1.49 ha. The Proposed Development will be delivered across two plots comprising the following principal uses: Plot 2A: a hotel with residential apartments above. Plot 2B: affordable homes. Together with these principal uses, the Proposed Development comprises residential amenities; secure cycle parking; public realm improvements and new green landscaping; and associated works to the public highway. This Fire Statement is in relation to Plot 2A only. Plot 2A is located immediately east of the recently completed Phase 1 building, on land partially comprising the grade II listed Castlefield Viaduct. This plot will deliver a 76-storey mixed use tower comprising a hotel (Use Class C1) with associated bar and restaurant and residential units above comprising 1, 2 and 3 bed, and penthouse apartments (Use Class C3) with associated residential amenity spaces. Secure cycle spaces, serving this and the Phase 1 building, are provided at the ground floor level. At viaduct level, a redesigned service yard for the conference centre is enclosed by a new podium structure with residents' external amenity space above. A section of the Great Bridgewater Street bridge (deck) is removed to bring light into the street below.

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Application information		
3.	Name of person completing the Fire Statement (as Section 15), relevant qualifications and experience.	*No more than 200 words* **Author's Name:** Iris Chang **Post-Nominals:** MEng, AIFireE **Relevant Qualifications and Experience:** A fire engineer with 12 years of experience in fire safety consultancy, developing fire strategies for various developments, specialising in residential and commercial offices. **Checker's Name:** Adam Monaghan **Post-Nominals:** BSc CEng FIFireE MSFPE **Relevant Qualifications and Experience**: A Chartered Engineer and an active fellow of the Institution of Fire Engineers, 25 years of consulting experience, specialising in residential, commercial offices, heritage, developments.
4.	State what, if any, consultation has been undertaken on issues relating to the fire safety of the development; and what account has been taken of this.	A preliminary fire strategy meeting for Viadux Plot 2A was attended by DFC, Sweco (building control advisor) and Greater Manchester Fire and Rescue Service (GMFRS) on 22/10/2024. Sweco and GMFRS were supportive of the approach being adopted to develop the fire strategy. A set of meeting minutes was produced which can be provided if required.

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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)*	The Site consists of 2 plots:  This Fire Statement is relevant to Viadux Plot 2A only. Extent of Plot 2A on Ground Floor: 

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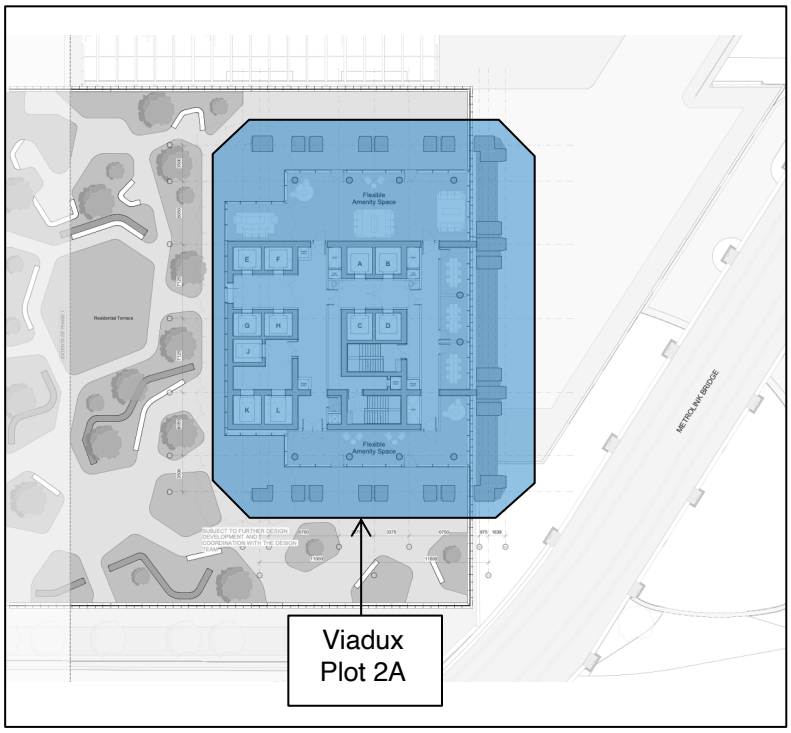
Application information		
		Extent of Plot 2A above existing viaduct structure: 

Table 3: The principles, concepts and approach relating to fire safety

The principles, concepts and approach relating to fire safety	
6. Building Schedule	
Site Information	
a) Block no. as per site layout plan above	Plot 2A
b) Block height (m) Number of storeys excluding those below ground level Number of storeys including those below ground level	Proposed building height is approximately 234.7m to the topmost occupied storey from adjacent ground level. This building consists of 75 storeys (Ground, Level 01 to Level 74). No basement storeys.

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The principles, concepts and approach relating to fire safety	
c) Proposed use (one per line)	Residential apartments (Studio, open plan apartments that contain 1, 2 or 3-bedrooms, and duplex apartments). Hotel bedrooms (twin rooms, double rooms and hotel suites). Ancillary areas (staff use areas, plant rooms and landlord storage rooms). Amenity areas (reception / bar, restaurant spaces, meeting rooms, functions spaces, gym and spa).
d) Location of use within block by storey	Ground Floor: Hotel and residents' reception, hotel bar, cycle store, plant and staff storage spaces. Level 01: Various plant rooms. Level 02: Various plant rooms. Levels 03 to 04: Amenity areas for residential occupants and hotel guests. Use in individual rooms to be confirmed, but will consist of workspaces, meeting rooms, media rooms, karaoke rooms, cinema or media rooms. Level 05: Staff offices and various back of house areas. Level 06: Restaurant and kitchen spaces. Level 07: Events and functions spaces. Level 08: Bar and ancillary back of house rooms. Level 09: Bar and meeting rooms. Level 10: Various plant rooms. Levels 11 to 22: Hotel rooms and ancillary areas. Level 23: Various plant rooms. Level 24: Swimming pool and spa Level 25: Gym and yoga studios. Levels 26 to 47: Open plan apartments. Level 48: Open plan apartments and a plant room. Levels 49 to 72: Open plan apartments. Levels 73 to 74: Penthouse (duplex) apartments Level 75: External roof plant area. The intention would be for the various bar, restaurant, function, meeting spaces and the spa and leisure facilities on Levels 06 to 09 and Levels 24 and 25, respectively to be accessible by advanced booking only. These spaces will not be openly accessible but be managed access only.

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The principles, concepts and approach relating to fire safety	
e) Standards relating to fire safety/ approach applied	Approved Document B Volume 1[2] BS 9991[3] (a 2024 edition of BS 9991 has been published since the previous submission. The 2024 edition is there referenced as part of this revision as appropriate). PD 7974[4] The Building Regulations 2010 (as amended)[5]
f) Balconies	No Balconies
g) External wall systems	Class A2-s1, d0 or Class A1.
h) Approach to evacuation	Stay Put evacuation approach for the apartments. Phased evacuation approach for the hotel, amenity and ancillary areas, subject to design coordination.
i) Automatic suppression	Yes. Residential sprinkler system (Category 4 to BS 9251[6] throughout the building) to be provided throughout the residential (dwelling) demise. Commercial sprinkler system (BS EN 12845[7]) to be provided in the hotel demise and any ancillary or amenity areas not within the scope of BS 9251. System category will be defined by the worst-case fire hazard in the building, to be determined by coordination with the sprinkler system designer.
j) Accessible housing provided	For the residential demise, it is proposed that all of the apartments can be adapted to comply with Part M4(2), which is a new requirement of the Places for Everyone planning policy. For the hotel demise, it is proposed that there is an accessible bedroom on each hotel floor level.

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[2] HM Government, The Building Regulations 2010, Approved Document B (Fire Safety), Volume 1 – Dwellings 2019 edition incorporating 2020 amendments (for use in England).
[3] BS 9991, 'Fire safety design, management and use of residential buildings', 2015.
[4] PD 7974:2019, 'Application of fire safety engineering principles to the design of buildings – Code of practice', 2019.
[5] Statutory Instruments, '2018 No. 1230 Building and Buildings, England, The Building (Amendment) Regulations 2018'.
[6] BS 9251, 'Fire sprinkler systems for domestic and residential occupancies – Code of practice', 2021.
[7] BS EN 12845:2015+A1:2019, 'Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance', 2020.

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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

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Building height and existing site constraints: A Qualitative Design Review (QDR) will be required to ensure an adequate level of robustness is achieved in the fire strategy to address the complexity of the building. A residential and hotel mixed use building that is 234.7m tall is not a common building situation as expected by code guidance. This will consist of relevant documentation of the fire strategy approach being taken with due consideration of the building height, but also of the existing site constraints and interface with adjacent buildings. At this stage, an internal technical review has been carried out to identify the challenges in the scheme and any requirements for testing. As design develops, separate meetings with specific designers and stakeholders i.e. client and / or operator will be carried out to ensure that the fire strategy being developed will be viable.

Viaduct structure: The new tower sits on an existing viaduct. Structural design (e.g. penetration of columns or services risers) must not compromise the existing viaduct structural system. The structural design is the key constraint for the core location and fire protection features. Several workshops have been carried out with the design team to agree the most viable approach, and the fire strategy is developed around this. Evolution of the core design and fire strategy implications have been recorded as part of the QDR to demonstrate that an adequate approach can be developed to meet Part B without compromising the viaduct structure but also achieve adequate stability for a super tall tower.

Size of footprint: The limited footprint in the building needs to accommodate the operational provisions required for a general day to day basis as well as the fire safety provisions. The number of lifts required for general circulation or transporting of goods, in conjunction with the structural constraints in their placement, has an impact on the layout in each floor. The Part K and Part M requirements for general circulation has impact on the spatial requirements in the layout design. Option reviews have been carried out by the project team to identify the most favourable arrangement that considers the different requirements.

Interaction with adjacencies: The building will have an interaction with the Viadux Phase 1 building and the Manchester Central service yard. Extension of the sprinkler system into the service yard, fire compartmentation and fire detection and alarm system interface capabilities have been specified to enable an interface strategy to be developed.

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Fire detection and alarm: System specification in a block of flats is usually different to that in a hotel building. DFC carried out an internal review that considered the intent of the fire detection and alarm system in the different areas of the building. It was determined that a Category L5 system in accordance with BS 5839-1 would be provided throughout the building (except the individual flats) akin to L1 coverage. This can be programmed to activate the relevant systems, support the evacuation regime in the building and be addressable. A BS 5839-6 Grade LD2 system is considered appropriate within individual flats based on the defend in place evacuation regime, sprinkler system protection and high level of internal compartmentation.

- A further review will be carried out during RIBA Stage 3 design with the project team to determine if a more intelligent system would be of benefit to the residential flats to enable an increase of interfacing between residential and non-residential systems.
- Suitable interfaces have been specified between the service yard (Manchester Central use area) and the Viadux Phase 2A alarm panels to provide the relevant alerts.
- Change to the fire detection and alarm system specification is not expected to affect planning.

Sharing of Stairs: The two firefighting stairs, firefighting and evacuation lifts would be shared by both the residential (dwelling) and hotel demise. To protect the stairs, firefighting and evacuation

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lifts from a fire in any storey for means of escape and firefighting, the following approach is adopted:

- The full building will be under one operation, i.e. one company will be responsible for the operation, general and fire safety management of the building. As such, that single company would be a responsible person to achieve an equivalent level of control (security, fire load control and fire protection systems maintenance) irrespective of the use in the building.
- Being under the same operation, the level of fire safety management will be consistent throughout the building, removing the risk associated with coordination between different parties to rely on the sharing of escape routes.
- Sprinkler system protection and high level of internal fire compartmentation strategy is proposed throughout the building. This combination of protection is intended to limit the fire affected area and thus control the fire severity expected in any area in the building, maintaining protection to the stair cores and lifts. Sprinkler system effectiveness and reliability will be reviewed as part of the QDR to illustrate the expected fire severity in the building. A fire resistance study will be conducted as part of the QDR to give confidence that the specified level of internal fire compartmentation can contain the fire to a limited area in the building.
- The same smoke ventilation strategy will be carried through the different use storeys to maintain an equivalent level of protection. Computational Fluid Dynamics (CFD) analysis and fire load review will be carried out during detailed design to demonstrate that the stairs will be protected from the ingress of smoke and perform the function of a place of safety for those using the stairs for escape or firefighting. The fire protection strategy on the Ground Floor is different, due to the constraints posed by the existing viaduct structure. However, the fire risk posed by open use space in a brick arch construction that are directly accessible to the fire service at level will be different to a fire in the upper storeys. A review of the expected fire severity posed by a Ground Floor fire to the protection of the cores will be detailed in the fire strategy report to be submitted as part of the Building Control Approval Application for HRB's (i.e. Gateway 2) for review by the regulator.

Firefighting vs Means of Escape: The building being provided with two stairs, accessed via its own protected lobby provides a level of redundancy. Should the fire service control a stair, the remaining stair will serve as a place of safety for occupants to exit the building as needed.

- In the event of a fire in a flat, those outside the fire flat are not required to evacuate, anyone that do wish to, the other stair will provide a safe means of exit, should the fire service have taken over one stair.
- In the event of a fire in the hotel, amenity or ancillary areas, the high-level of smoke detection coverage will provide early detection of a fire to initiate evacuation. Based on the automatic alarm programming, occupants that may be exposed to the risk of fire and smoke will have evacuated the building prior to fire service arrival. Those who may still be evacuating on fire service arrival will likely be remote from the fire floor. Should the fire service block access to a stair, evacuation can continue via the remaining stair. This may take longer, but those queuing for the stair would be in a place of relative safety.
- The Ground Floor discharge corridor from each stair in most instances provide a 1700mm width to enable means of escape and fire service access. However, there are areas with smaller pinch-point widths (1300mm being the minimum) due to the extent of the viaduct pier construction. There are generous area in the corridor to allow passing between means of escape and firefighting access. This was a condition that had been discussed with Sweco and GMFRS in a preliminary fire strategy review meeting.
- Based on the high level of internal compartmentation and sprinkler system provision in the building, the likelihood for the fire service to initiate evacuation of multiple residential floors

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outside of the fire floor will be low. Effects of the fire and smoke will likely be contained within a compartment, and / or storey.

- A review into the sequence of events in the event of a fire occurring with respect to means of escape and firefighting will be provided as part of the QDR review to illustrate that adequate provisions in the building has been allowed for to reduce risk for either condition to be compromised.

Means of Escape of Mobility Impaired Persons: An evacuation lift, and a firefighting lift are assigned to each stair, accessed via a protected lobby with smoke ventilation. Therefore, a total of 4 lifts are available for evacuation in the building. The firefighting lifts will be programmed to continue operation as normal (to allow occupants to self-evacuate) until fire service takeover.

- In the residential storeys, where a defend in place evacuation regime is adopted, only one flat is required to evacuate in the first instance. The largest flat would be the 4-bed penthouse unit which could consist of 8 persons evacuating at the same time. The 4 lifts available for evacuation should be adequate. Each lift lobby on access to the lifts serve as a place for safe waiting, protected by compartmentation and smoke ventilation.
- In the hotel storeys, currently one accessible bedroom or 1-bed suite is provided on each storey. This results in potentially 2 occupants on each storey who would require assistance to evacuate. This is typical of hotel buildings with onsite staff management. The 4 lifts available to allow self-evacuation is considered reasonable to support management. The lift lobbies serve as temporary waiting space. During the means of escape phase of a fire (prior to fire service arrival to hold a fire room door open), the corridors also serve a suitable protected waiting areas for those waiting for lifts.
- On the more densely populated amenity storeys, the 4 lifts available should be adequate for means of escape. However, as per any hotel buildings or function spaces, the operator will be required to develop a management strategy to address the means of escape strategy for mobility impaired persons. The evacuation and firefighting lifts in the building will provide benefit to their management strategy and the high level of internal fire compartmentation creates places of safe waiting in the form of protected lobbies, stair landings, protected corridors, even floors remote from the fire floor, to help management prioritise a floor.
- The smoke ventilation strategy adopted in the building will protect the evacuation lift lobbies and thus the stairs from smoke ingress to protect means of escape. This will create safe spaces for waiting.
- Mobility impaired persons means of escape can be more complex on the hotel and amenity storeys. These are located below the storeys containing flats; limited to Level 03 to Level 25. The operation expectations with regards to assisting in the evacuation of mobility impaired persons should be like other 26 storey hotel buildings.
- Unlike other tall hotel buildings, this building is provided with evacuation lifts and areas of relative safety for waiting that are protected by compartmentation, sprinkler system protection and smoke ventilation. Level of protection afforded to a typical hotel occupant will be improved considering the protection systems in this building.
- Based on the above, there will be adequate provisions to aid the evacuation of mobility impaired persons from the building. The protection to the means of escape of mobility impaired persons will be discussed in the fire strategy as part of the Building Control Approval Application for HRB's (i.e. Gateway 2) for review by the regulator.

Stair Capacity: The building consists of a generous provision of amenity spaces and function areas. A dynamic evacuation approach will be developed during RIBA Stage 3 design to address the mixed-use nature of the building.

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- The stairs will be adequate to support a simultaneous evacuation approach in the building. Levels 06 to 09 is the largest cluster of densely populated storeys (restaurant, bar or event spaces), whilst other storeys that could be high populated as spaced out by hotel bedrooms storeys or staff BOH areas that have lower occupant load. The two 1200mm wide stairs will be adequate to serve the hotel and amenity storeys.
- A phased evacuation approach however will be adopted for the storeys below flats to simplify the management strategy, and reduce the number of occupants using the stair at the one time. The two 1200mm wide stairs can provided 260 persons exit capacity per storey. This exceeds the 220 persons maximum permitted on the storeys containing function / event spaces. The other storeys will contain significantly lower occupant load due to the limited floor area and intended use of the space.
- The means of escape strategy is to be further developed with the project team. The client is aware that the occupant load will be limited by the exit provisions that can be accommodated within the limited footprint of the building.
- It is understood that the individual event or function spaces will be accessible by advanced booking only and will therefore be managed spaces.

Open plan apartment layout: The proposed layouts exceed 8m x 4m in area and consists of open kitchen design. DFC have carried out a literature review to determine that such an arrangement can achieve an adequate level of safety.

- Cooking facilities will be located away from the apartment entrance and the layouts will be reviewed during detailed design, where required, be amended to address the risk on means of escape.
- Where the cooking facilities are closer to an internal escape route (will be reviewed against the 2024 edition of BS 9991), a detailed assessment will be carried out to demonstrate that the adopted cooking hob location will not compromise internal means of escape. The assessment will consider the effects of smoke, toxicity, heat transfer and human behaviours.

Travel distances: Extended travel distances are created in some plant rooms due to their content (e.g. to accommodate the sprinkler tank required to serve the building). Where these conditions occur, they are low risk and will be subject to risk assessment.

Site boundary: Areas in the East and South elevations are in proximity to the tram structure. This is relevant to the lower storeys containing plant rooms, where sections of the elevations that are close to the tram structure will consist of fire resisting construction. The residential and amenity above the service yard structure are above the tram line and set back from it (worst case separation being 4.5m at the corner of the building). The orientation of the building means that majority of the building elevation is remote from the tramline (as far as 20m), with the proximity being localised to the Southeast corner of the building. Preliminary calculations have been carried out to inform the percentage area in each elevation that are to be fire protected to reduce impact to the existing structure. Detailed assessments will be carried out during detailed design to confirm that adequate fire protection has been achieved.

Stair discharge and access: Cores are at the centre of the building, minimising impact on the structural integrity of the existing viaduct. One of the firefighting lifts is separated from its stair by approximately 11.5m, exceeding the BS 9991 recommended 7.5m limit. Each stair discharges through a protected corridor that exceeds 18m in distance to outside at ground; 20m and 23m respectively in the 2 firefighting stair discharge corridors. These extended distances are borne from the structural constraints posed by the viaduct as well as the lift access requirements. Minimal connection to the discharge corridor has been allowed in design to minimise its exposure to fire risk areas.

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Security: The building is in the city centre with various function spaces. Security considerations in design and in the building management strategy will be addressed. The function and event spaces offered in the building are accessible by pre-booking and storey exits will be access controlled. The likelihood for an arson attack in the building to occur will be negligible.

- It is considered that should the fire strategy design address potential arson attacks, it could result in fire system provisions that are disproportionate to the scheme that may never be used.
- A commercial sprinkler system will be specified for all non-residential areas of the building and be designed to be capable of addressing the service yard. The supply of water onsite will therefore be more than adequate to address any fire that may occur in the building as the expected fire load within any storey is unlikely to exceed that of an OH2 system described in BS EN 12845. The system provided in the building will exceed OH3 due to the height of the building and potentially be an HHP system to address the service yard.

Occupant type: The generous offering of amenities in the building means that occupants may be under the influence of alcohol or other substances. All function, restaurant or bar areas will be staffed who will guidance guests to the stairs or lifts or evacuation. Once in the stairs, guests would be in a place of relative safety even if it takes them longer to exit the building.

- This is no different to what might be expected by hotel operators or firefighting personnel in other hotel buildings, except that this building has an increased level of fire protection from that typically provided in a hotel building due to there being flats in the building.
- The sprinkler system provision in the building, high level of compartmentation and smoke ventilation will increase the protection of the stairs to that typically provided in a hotel.
- The presence of evacuation lifts will reduce the management implications in the building.
- Based on the above, having large occupancy that may be under the influence of alcohol is not expected to impact the safety of those in the flats above, given the level of fire protection offered to the stairs.

The assessment to support the above will be fully detailed in the fire strategy report. In brief, this will consist of the following:

- Various QDR assessments that tests the resilience of the fire strategy, considering the height of the building and any risks posed by the mixed use nature of the building on those occupying the flats in the building.
- A review into the effectiveness of sprinklers and the likely fire severity in each compartment to validate the fire protection strategy to maintain the stairs and lift lobbies at safe conditions for means of escape and fire service access, irrespective of fire location in the building.
- A review into the different fire detection and alarm system specifications and their benefit to determine the most appropriate provision to support the fire strategy and support management implications.
- Means of escape assessment to demonstrate that adequate exit capacities will be provide to the building.
- Review into the mobility impaired persons means of escape provisions against the client aspiration for disabled persons access into the building.
- Sequence of events to review to illustrate that any overlap between fire service operations and means of escape will not compromise both processes.

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The principles, concepts and approach relating to fire safety	
• External fire spread calculations to confirm that the risk of fire spread between the building and the existing tram line is adequately mitigated. • CFD analysis to validate the smoke ventilation system in protecting the stairs and evacuation lift lobbies in the building. • Constraints posed on the building to ensure that the fire strategy approach will be balanced in meeting the Part B requirements in conjunction with other requirements in the building (e.g. structural, operational intent, heritage, social and environmental costs and ongoing implications on the building).	Amended Rev. 03

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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.

The design and construction process are likely to span over 8 years; construction to commence in 2026 with completion in 2032. The above referenced guidance documents may change. When this occurs, a review of the new guidance and any implications on the developed fire strategy will be carried out to determine any risks that requires addressing. The approach being adopted would be documented for submission to the regulator for review. As part of this, current fire strategy design has considered the draft version of BS 9991 and will be reviewed against the 2024 edition of BS 9991 during RIBA Stage 3 design, to confirm that the fire strategy approach taken remains adequately robust. Any departures against the latest guidance will be duly assessed and documented in the fire strategy report for review by the regulator.

The mixed-use nature of the building (i.e. consisting of dwelling and hotel use), can present the following issues:

- Each area could be subject to different operator control, relying on coordination and cooperation between the different parties that result in there being grey areas in responsibility.
- The full building will be under a single operator control that maintains overall responsibility over the full building. A consistent level of fire safety management can be relied upon between the different used areas in the building.
- This has been communicated to the client (Salboy Ltd) via email correspondence and verbally during design team meetings. Salboy Ltd have acknowledged this and is aware of the reliance on a single operator approach to maintain an adequate level of fire safety management. This condition has been recorded in the minutes from a QDR meeting that had been circulated onto the project team and the client; it will be recorded in the fire strategy report when it is produced.

The generous amenity offerings in the building introduces different occupancy profile in the building. For example, there could be guests who are not familiar with the building, and under the influence of alcohol, in the function rooms under the residential demise adopting a stay-put policy:

- The limited footprint in the building and escape routes being central to the floorplate reduces the risk associated with wayfinding for unfamiliar guests.
- Functions rooms, restaurant, bars and spa and leisure facilities are accessible by advanced booking. Management will be onsite to direct evacuation in the event of an alarm.
- Exit widths are sized to accommodate the expected number of occupants that are to be evacuated at the one time.
- Occupants in apartments who may wish to evacuate when the amenity areas are under alarm will not affect the evacuation of the non-apartment areas.

Height of the building can present the following issues:

- Active life safety systems such as sprinkler systems and smoke shafts requirements might be different to that typically expected by code guidance due to the height of the building. High level of provision has been allowed for in design (e.g. increased number of smoke shafts than that specified by current guidance) to pre-empt the system requirements that may be deemed necessary by specialist system design. Consultations will be carried out with the M & E designer and relevant system designers to develop the requires system specification to support the fire strategy.

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• Means of escape that relies on occupants to walk down a >200m tall tower might not be appropriate. Two dedicated evacuation lifts have been allowed for in the building. The Site is bound by the existing viaduct structure and operating service yard for Manchester Central: • Review into the implications on the building due to a fire in the Manchester Central service yard and vice versa have been carried out to inform necessary fire protection system allowances. Consultations with Manchester Central to agree the proposed strategy will be ongoing throughout design and construction to ensure that the fire safety of the operational service yard will not be compromised. • The contractor will develop the phasing of works that duly consider the risks posed by these interactions at the relevant stages of work. Fire strategy reviews are being carried out as part of this process to ensure that adequate means of escape and fire service access conditions are being maintained through the service yard to minimise impact on the operating Manchester Central development during construction. The project team has begun liaison with Manchester Central which will be ongoing as design develops. Should the interface with the Manchester Central and Viadux Phase 1 result in design changes, they will be reviewed and assessed and submitted to the approving authorities. The structural constraints due to the height of the building and existing viaduct structure have been discussed in Section 7. Internal layouts may change as design develops. Fire strategy design will be developed in accordance with BS 9991 and ADB guidance. Any deviations from the guidance as design develops will be assessed. The solution will be justified with supporting assessment for review by the regulator, to obtain agreement in compliance with Part B of the Building Regulations. The fire strategy is limited to the base build design. Where future building works (e.g. fit-out or changes post-handover) are exempt from the Building Regulations they would need to be managed under the Regulatory Reform (Fire Safety) Order 2005[8]. However, if the proposed works are to carry out 'building work' as defined in Regulation 3 of the Building Regulations, then the works must meet the relevant technical requirements in the Building Regulations at the time, and they must not make other fabric, services, and fittings less compliant than they were before – or dangerous. The fire strategy does rely on validation by detailed assessments that will be carried out when the design is more developed (e.g. CFD assessment, means of escape assessments, external fire spread calculations or QDR assessments). It is recognised that should the outcome of any such assessments result in changes to design that impact planning, a suitable planning application can be required and will be made. Any design change will be reviewed against the fire strategy to demonstrate that Part B can be achieved and documented accordingly as part of the Building Control Approval Application for HRB's (i.e. Gateway 2) for review by the regulator.
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.* Not applicable. No local policies have been identified.

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[8] Statutory Instruments, '2005 No. 1541 Regulatory Reform, England and Wales, The Regulatory Reform (Fire Safety) Order 2005', 2005.

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Table 4: Emergency road vehicle access and water supplies for firefighting purposes

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?* The building exceeds 18m in height and the gross internal area is circa 1,126m^2. Therefore, two firefighting shafts have been allowed for in the building. Each consists of: • A firefighting stair with a minimum width of 1100mm, design in accordance with BS 5395-1[9]. • An AOV providing a minimum of 1.5m^2 geometric free area, in accordance with BS EN 12101-2[10], at the head of each stair. • A firefighting lift in accordance with BS 9999[11], BS EN 81-72[12]. • A wet fire main to be provided in accordance with BS 9990[13] in each firefighting stair. The firefighting stairs and lifts will be accessed via protected common corridors and evacuation / firefighting lobbies provided with smoke ventilation. Vehicle access to The Site will be possible as shown in Section 14.

[9] BS 5395-1, 'Stairs. Code of practice for the design of stairs with straight flights and winders,' 2010.
[10] BS EN 12101-2, 'Smoke and heat control systems. Specification for natural smoke heat and exhaust smoke ventilators,' 2017.
[11] BS 9991, 'Fire safety design, management and use of residential buildings', 2015.
[12] BS EN 81-72, 'Safety rules for the construction and installation of lifts. Particular applications for passenger and goods lifts. Fire fighting lifts,' 2020.
[13] BS 9990, 'Non automatic fire-fighting systems in buildings', 2015.

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Emergency road vehicle access and water supplies for firefighting purposes

11. Emergency road vehicle access

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

Fire Service vehicles will approach via Trumpet Street off Albion Street. There is also access into the building via Great Bridgewater Street, but this would be a secondary access point for the fire service. These are existing roads expected to meet the following requirements for a pump appliance:

- Min. width of road between kerbs = 3.7m.
- Min. width of gateways = 3.1m.
- Min. clearance height = 3.7m.
- Min. turning circle between kerbs = 16.8m.
- Min. carrying capacity = 12.5 tonnes.

Great Bridgewater Street is a through road for vehicle access.

Trumpet Street is not a through road but connects to the existing vehicle ramp up to the Manchester Central service yard. A minimum 16.8m diameter area is provided at the top of this vehicle ramp, meeting the ADB recommendation to allow turning.

The pump appliance would not be required to reverse for more than 20m to access or exit The Site.

Several fire service appliances may be called out onto site in the event of a fire, due to the scale of the building. As outlined above, there is good vehicle access to the site which will allow several appliances to park in proximity.

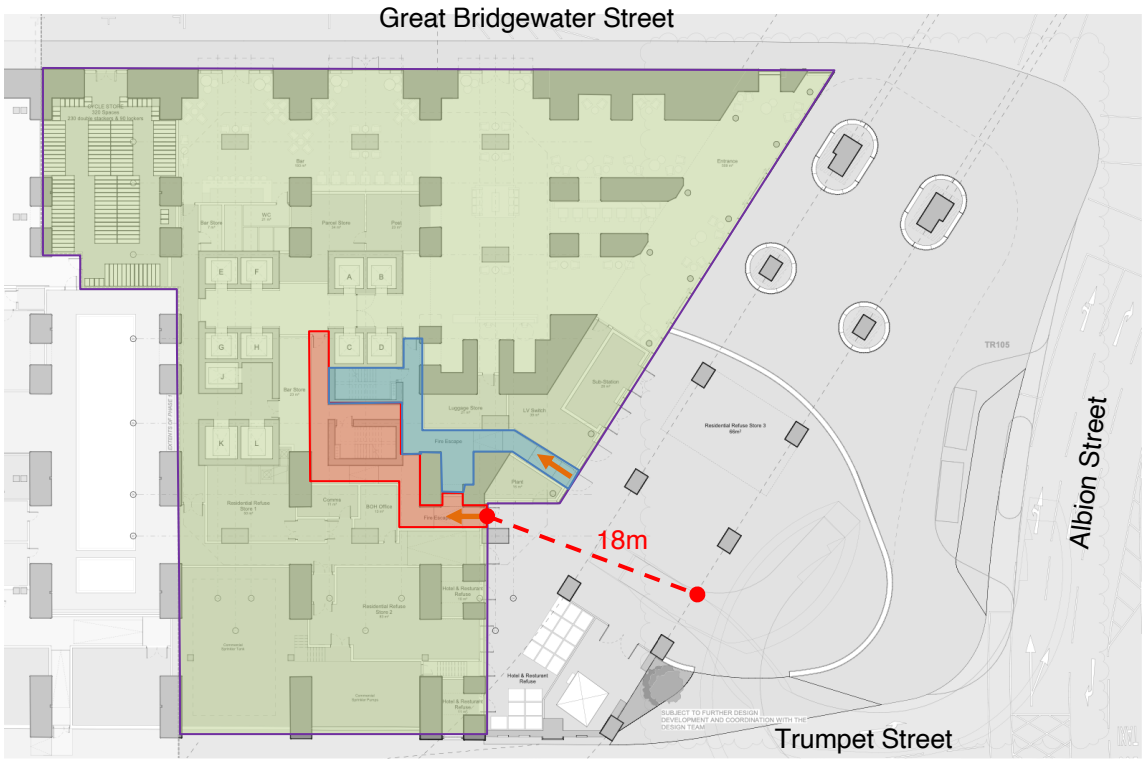
Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?

Yes

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12. Siting of Fire Appliances

Each firefighting stair access door will be within 18m hose laying distance from where a pump appliance can access and park.

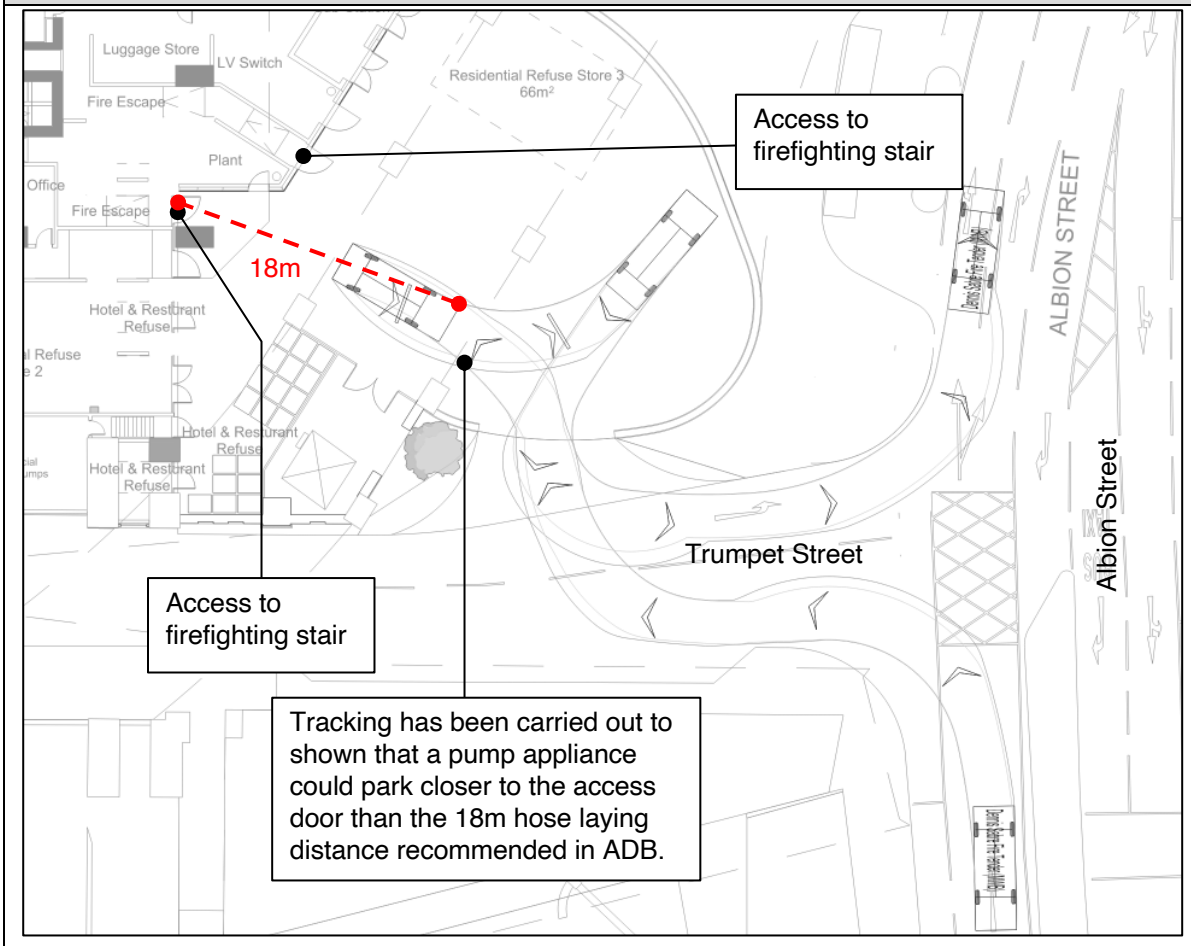


- Viadux Plot 2A
- Firefighting stair / access corridor
- Firefighting stair / access corridor
- Firefighting stair access
- Hose laying distance from a pump appliance

A swept path analysis has been produced to show that vehicle access to the building via Trumpet Street will be provided to reduce the distance to the firefighting stair.

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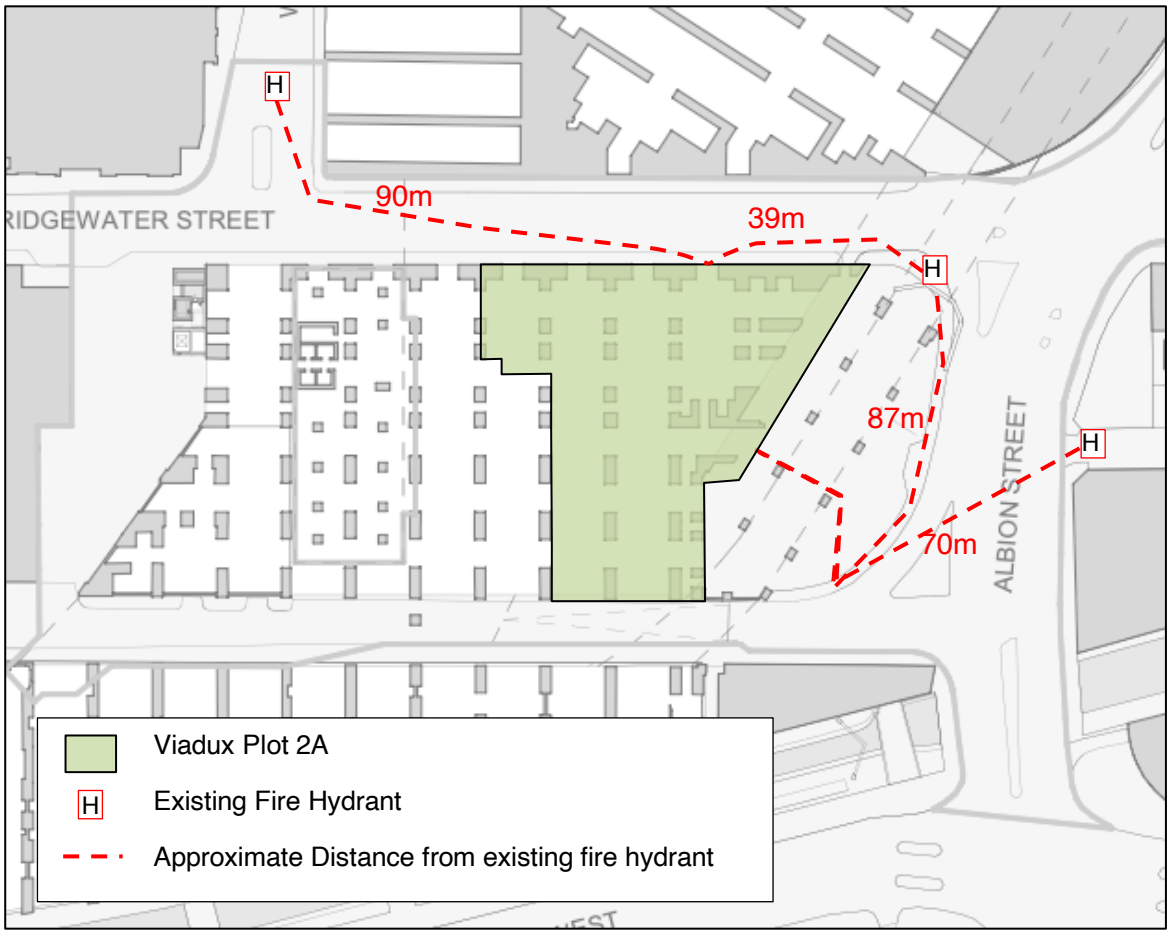
Emergency road vehicle access and water supplies for firefighting purposes



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Emergency road vehicle access and water supplies for firefighting purposes

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



Nature of water supply (Choose one below):

Hydrant – Public

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

Yes. The MEP engineer has obtained a record from United Utilities confirming the fire hydrant positions annotated above.

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Emergency road vehicle access and water supplies for firefighting purposes

14. Fire service site plan

Fire service site plan is as follows:

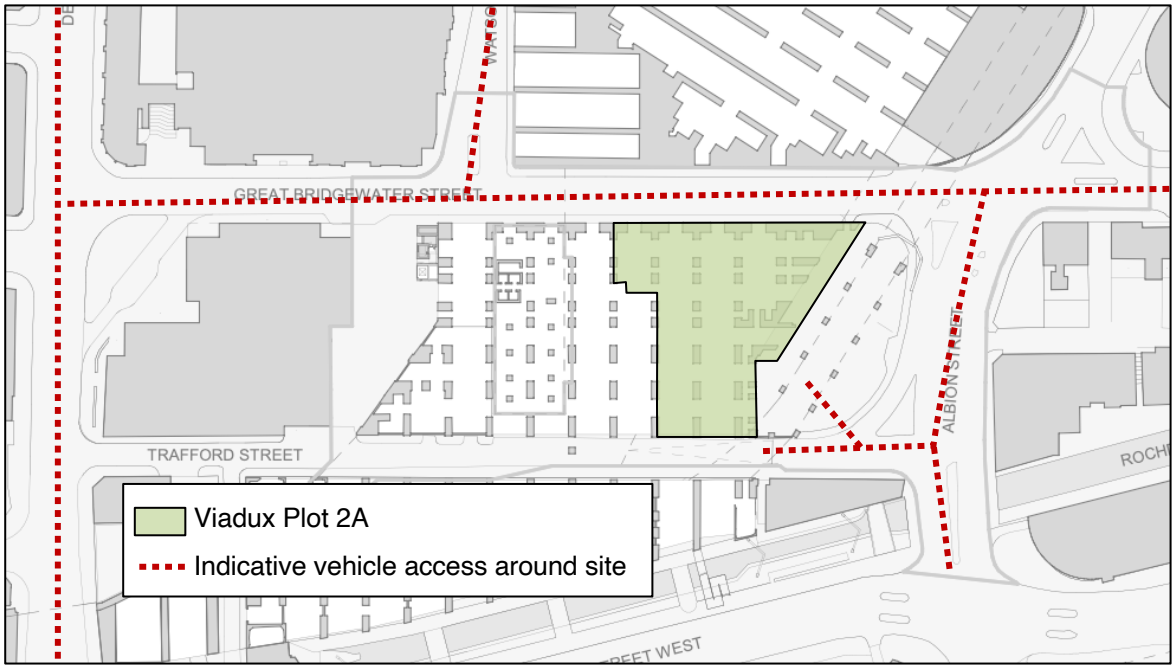


Table 5: Fire Statement completed by

Fire Statement completed by		
15. Signature	Author: Iris Chang [redacted] Checker: Adam Monaghan [redacted]	Amended Rev. 03
16. Date	21 January 2025	Amended Rev. 03

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