Gateway 1 Fire Statement

For

The Residential Development at Traders Yard
Phase 2, Cardiff

Helios Reference: FSE2625

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Revision History

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Stage 3 Planning/Gateway 1 Fire Statement			
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Client Details

Client	Urban Centric Wharf Limited
Client Address	33-35 Southernhay East Exeter EX1 1NX
Project	The Residential Development at Traders Yard Phase 2, Cardiff

Validity

This report is produced on the basis of the information and experience available at the time of preparation. It is applicable to the above-mentioned project only in accordance with the client's instructions. It is only valid provided no other modifications are made other than those for which a formal opinion has been sought from and given by Helios Fire & Construction Consultancy UK.

The report outlines the principal opinion of Helios Fire & Construction Consultancy and is prepared based on information issued by other parties, this report should not be viewed as an approval of that information and no liability is accepted for its accuracy.

All legislation quoted is primarily concerned with life safety and property protection is not specifically considered although the fire protection provisions to be provided for the building will offer some degree of property protection.

Furthermore, other issues such as insurers' requirements, cultural heritage, environmental, or continuity issues have not been specifically addressed or included within the development of the fire safety strategy.

Transmission and receipt of Information used in the preparation of the Fire Safety Strategy is agreed on the basis outlined in the fee proposal as issued by Helios Fire & Construction Consultancy. Should a web-based document management system be used, information that is specifically to be assessed and reviewed by Helios Fire & Construction Consultancy should be issued directly to the representative of Helios Fire & Construction Consultancy. The acceptance of access onto any web-based system by Helios Fire & Construction Consultancy does not constitute an acknowledgement that all information on the specific portal will have been assessed and reviewed. For Helios Fire & Construction Consultancy Ltd Disclaimers and IT Policy please see www.heliosconsultancy.com.

In preparing this fire strategy the design and construction will, unless stated otherwise in this report, be in accordance with the design principles of BS9991:2024 and BS9999:2017, Approved Document B Wales, applicable British Standards /Approved Documents and relevant codes of practice.

The terms 'will' and 'will be' in this report represent Helios Fire & Construction Consultancy's recommendations and understanding regarding the proposed design, construction, or management of the development. The validity of this report depends on these items being implemented as outlined.

This report relates to a project that is subject to third party approval. It must be ensured that the contents of this report are agreed with all relevant approval bodies prior to implementation.

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1 Introduction

This report presents the Gateway 1 Planning Submission Fire Statement for the Traders Yard Phase 2 Development in Cardiff.

2 Application Information

Site Address Line 1	Traders Yard (Phase 2)
Site Address Line 2	
Town	Cardiff
County	
Site Postcode (optional)	
Description of Development	Phase 2 is an extension of the proposed Block 2 13 storey residential building from Phase 1. The extension consists of a 14 storey new building residential section connected to the existing St Mary's House office building. The office building is proposed to be treated separately from the residential building with 120 minutes fire separation between the existing offices and proposed residential.
Further Information	FSE2625 - SK Helios - Traders Yard Phase 2 Markups 21.05.26
Details of consultations undertaken relating to the fire safety of the development.	Currently consultation with Building Control and the Fire and Rescue service has not been undertaken.
Author's Details:	**Richard Jones - BA (Hons), Grad.Dip, AIFireE.** Richard is an Associate with the Institution of Fire Engineers with over 15 years' experience in The Construction Industry. Richard has had significant previous experience in Building Control having worked within multiple sectors, including residential (including HRRB), commercial, industrial, educational, retail, MOJ, MOD and medical facilities at all design/construction stages from feasibility through to handover. Post the initial Building Regulations / Building Control experience Richard progressed into the Fire Engineering Consultancy field in his last two roles, he has provided consultancy advice for compliance with HRRBs including all Gateways Fire Risk Assessments, General Firer Safety Consultancy advice including provision of fire strategy reports, fire safety strategy drawings and general fire safety advice in multiple sectors.
Signature:	
Date:	02/06/2026
Reviewed by:	Paul Currie BEng, PhD, CEng, MIFireE

Site Layout Plan With Block Numbering as Per Building Schedule Referred to Below.

[Plan to be consistent with other plans, drawings submitted in connection with the application]

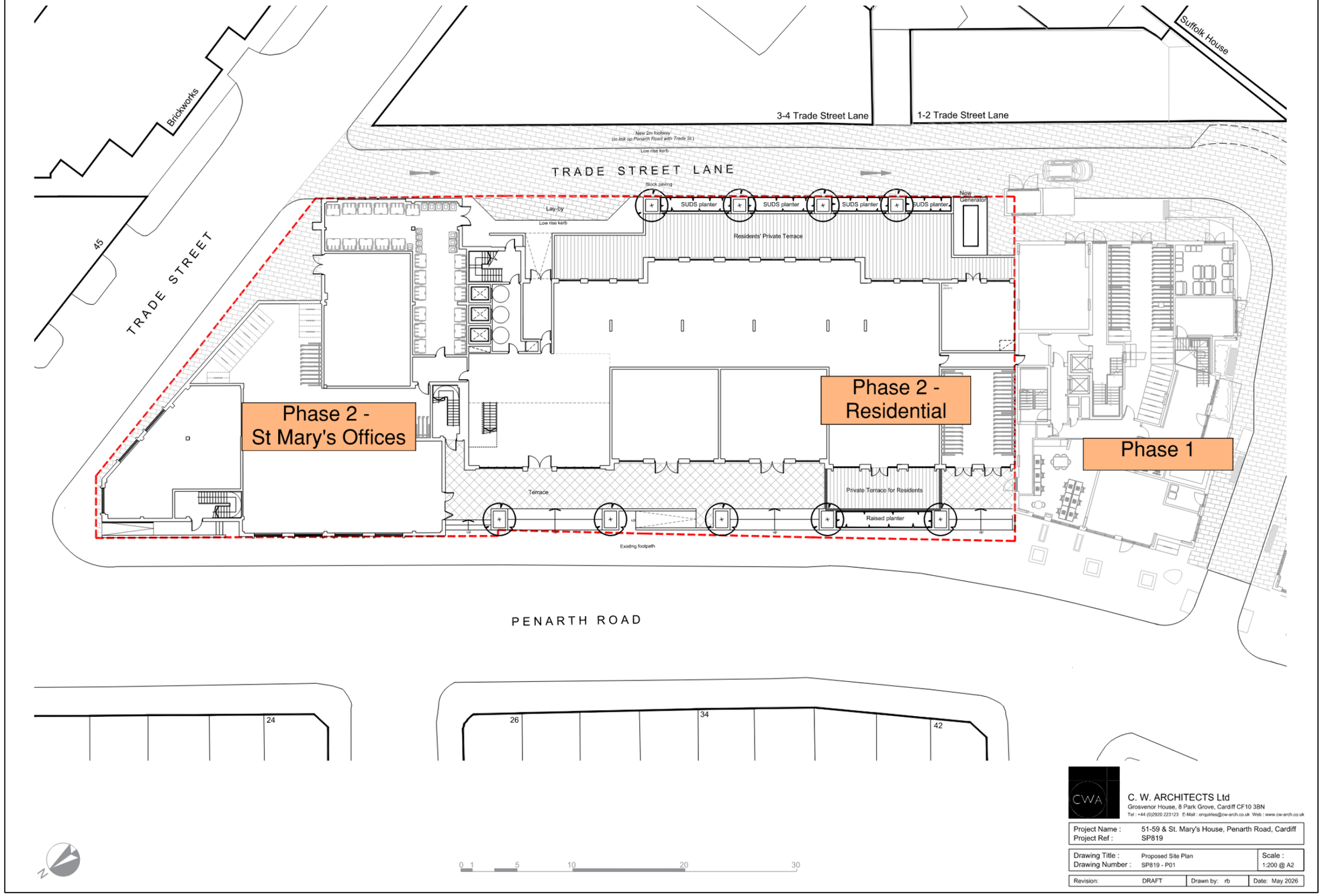

Figure 1: Site Plan

3 The Principles, Concepts and Approach Relating to Fire Safety That Have Been Applied to the Development

Building Schedule									
Site Information				**Building Information**			**Resident Safety Information**		
Block Number	**Block Height (m)** **No Storeys Above Ground** **No of storeys including below ground level**	**Proposed Use**	**Location of Separate uses Within Block**	**Standards Relating to Fire Strategy**	**Balconies**	**External Wall Systems**	**Evacuation Approach**	**Automatic Water Fire Suppression System (AWFSS)**	**Accessible Housing Provided**
Phase 2 Residential Block (Including Retail Units)	Over 30m Ground plus thirteen above ground storeys	Residential Flats and retail units at ground floor.	Commercial Units and Amenity/Ancillary at ground. Residential Accommodation First to Thirteenth.	BS9991:2024 Approved Document B Wales	Yes – common amenity roof terrace and private balconies.	A2-s1, d0 or better	Residential – Stay Put Policy (Defend in Place).	BS9251 2021 and BSEN12845:2015.	TBC.
Phase 2 St. Mary's Offices - Treated as a completely separate building with 120 minutes fire separation in a continuous vertical plane between the existing offices and proposed residential.	Under 18m Ground plus three storeys	Offices, retail and ancillary for the residential building.	Commercial units and ancillary at ground. Offices and ancillary/amenity first to third.	BS9999:2017 Approved Document B Wales	NA	No restrictions in regards to Building Regulations for a commercial building under 18m (noting 120minutes fire separation to residential building). Design team to confirm existing insulation and external wall build ups noting it appears to be an external masonry wall.	Simultaneous Evacuation	BSEN12845:2015.	N/A

Specific Technical Complexities & Issues Which Might Affect the Fire Safety of the Development

Residential BS9991: Stay Put

The residential block has a top floor in excess of 30m. Phase 2 will be provided with a fire-fighting shaft incorporating an escape stair (residential only), a fire-fighting lift and an evacuation lift and a dry riser. As the block will be an extension to Phase 1 it will have access to the two cores within Phase 1 which consist of a fire-fighting core with a fire-fighting/evac lift and a protected stair with an evacuation lift.

The residential building will be provided with an Automatic Water Suppression System to BS9251 2021 (Category 4) to the residential accommodation areas and also to the communal amenity, retail, and ancillary areas where compartments are less than 100m^2. Areas over 100m^2 will be provided with a commercial system in accordance with BSEN12845:2015. The systems will provide suppression coverage to all areas of the building other than permitted exceptions in accordance with the British Standard.

The guidance in BS9991 recommends that in buildings with a floor higher than 18m above fire and rescue service access level should be provided with firefighting shafts(s) containing firefighting lifts.

It also recommends that a sufficient number of firefighting shafts should be provided to meet hose laying requirements (e.g., a maximum of 60m in buildings provided with sprinklers in accordance with BSEN12845 or BS9251).

The proposals have been based on the actual hose distances where all parts of all floors can be accessed with a 60m hose distance as stipulated in BS9991 for suitable hose distances between Phase 1 and 2.

Commercial: BS9999 Simultaneous

BS9999 is a risk-based document and requires a risk profile to be established in order to determine the appropriate means of escape and design features for the building. The risk profile is a key measure of the potential for fire risk to people, property, and business continuity. This reflects the occupancy characteristics and the fire growth rate for the building, and is derived as follows:

BS9999 defines the building's occupancy characteristics according to whether they are awake or asleep and if the occupants are familiar or unfamiliar with the building. The building has been considered to have an Occupancy Characteristic B. This means occupants are awake and unfamiliar with the building.

BS9999:2017 defines the Fire Growth Rate as the rate at which a fire in the building is estimated to grow. BS9999 has four categories of fire growth rate:

- Slow (1) – evenly distribute low level fire load, small discrete packets of fuel or material of limited combustibility.
- Medium (2) – evenly distributed low to mid-level fire load comprising a mix of combustible materials.
- Fast (3) – stacked combustibles (on or off racking and shelving but exclude high rack storage), of some small materials other than materials of limited combustibility (or where larger quantities are stored in separate fire-resisting enclosures), process, manufacturing, or storage of combustible materials.
- Ultra-Fast (4) – medium to large quantities of materials other than materials of limited combustibility, high racked storage, flammable liquids and gases or where rapid uncontrolled fire growth could occur.

The following growth rate is proposed for the building - Medium (2) reduced to Slow (1) taking into account the provision of sprinklers.

The primary risk profile for the office building will be **B1** based on the occupancy characteristics and fire growth rate with sprinklers. The primary risk profile for the retail will be **B2** based on the occupancy characteristics and fire growth rate with sprinklers. The retail units are situated in their own ground floor compartments.

Small ancillary areas with different risk profiles will be separated from the remainder of the building by fire resisting construction in line with BS9999 e.g., Plant Areas.

The office building is in excess of 11m but under 18m to the top storey. It is currently provided with two escape stairs with refuges.

Areas over 100m^2 will be provided with a commercial system in accordance with BSEN12845:2015. The systems will provide suppression coverage to all areas of the building. [Excluding permitted areas of variation due to risk e.g., electrical switch rooms].

Evacuation Approach

The base code compliant evacuation process is a stay put evacuation strategy for the residential areas. This means that the only occupants who evacuate are the occupants who are directly affected by the effects of fire. The remaining occupants remain within their apartments unless asked to evacuate by the fire service. However, as the building is proposed to provide an emergency evacuation alert system, the occupancy of the building has been reviewed to ensure the buildings stairs contain sufficient capacity in the event of a managed evacuation by the fire service.

The standard evacuation approach for the commercial units is a single staged simultaneous evacuation of the entire unit. This means on activation of detection, or a manual call point, the whole unit will be put into alarm and all occupants of the unit will evacuate.

A Category L1 system is proposed.

Smoke Ventilation

Ventilation is required to the residential common corridors for both means of escape and firefighting to maintain the staircase free of smoke.

The communal corridors / lobbies to the residential building are required to be ventilated by a mechanical system.

- A mechanical smoke ventilation system (conforming to the following section) that is fitted in the protected lobby or protected corridor, directly adjacent to the staircase enclosure and an automatic openable vent that is sited at a high as level practicable on the top storey of the stairway and having a aerodynamic free area of not less than 0·7m^2.

There are additional lobbies that require 0.4m^2 permanent ventilation.

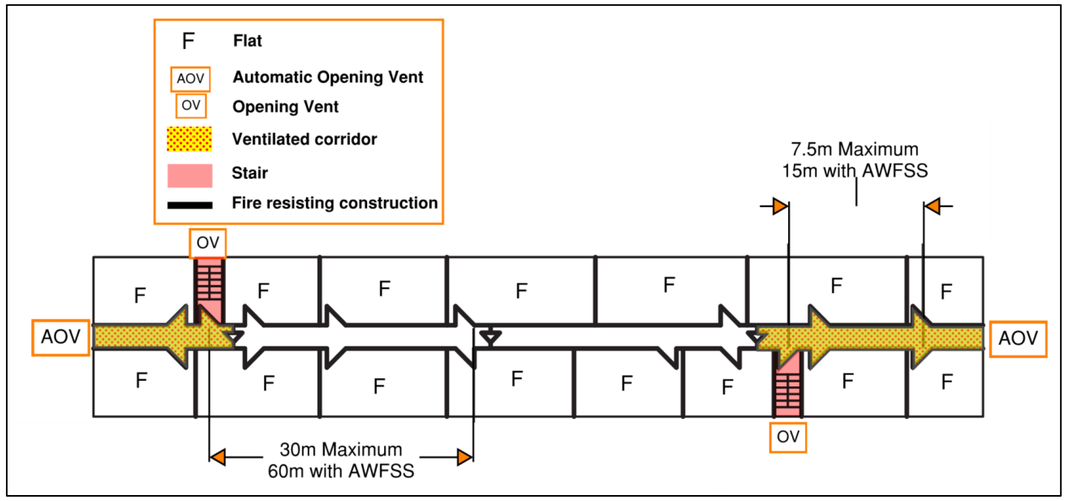

Figure 2: Typical Smoke Control Layout

Travel Distances

All travel distances are within the allowable distances with AWFSS to the residential areas as indicated below.

Area	Single Direction of Travel	Multiple Directions of Travel
Common Corridor	15m	60m

The ancillary / communal area travel distances are in accordance with the BS9991 limits as shown below.

Area	Single Direction of Travel	Multiple Directions of Travel
Plant	9m	18m
Refuse	9m	18m
Cycle Stores	9m	45m
Common Lounges Amenity	18m	45m

The offices for a B1 risk profile and retail for a B2 risk profile are shown below.

Area	Single Direction of Travel	Multiple Directions of Travel
Office/Amenity B1	24m	60m
Retail B2	20m	50m

Vertical Clear Widths

There is a single fire-fighting stair to the residential section of Phase 2. The connected Phase 1 building has a further firefighting stair and a protected stair. The minimum required clear width for the firefighting stair is 1100mm for firefighting access. The office building has two escape stairs.

For the means of escape stairs the minimum require clear width is 750mm (as noted in BS 9991) for the residential stairs; however, they have been assumed to be a minimum of 1000mm. The office stairs should be a minimum clear width of 1000mm. The escape capacity is as existing with further details to be provided at the next stage.

Residential Stair Escape Capacity

Based on a stair width of 1100mm and a C2 risk profile from BS9999, each stair serving 10+ floors can accommodate 647 [1.7mm PP] people; on the basis of the AWFSS system and lobby protection as noted in BS9999 there is no requirement to discount a staircase in this scenario the stairs can serve 1941 people. There are 1,382 occupants on the residential floors. The stair can therefore safely accommodate a full evacuation if initiated by the fire service.

Accessible Means of Escape

Residential

There are temporary waiting areas associated with the evacuation lifts within the residential areas of the buildings as the primary evacuation strategy is defend in place.

A firefighting lift (which is provided principally for the use of the fire and rescue service in fighting fires) may be used for the evacuation of disabled people prior to the arrival of the fire and rescue service. There are also a further two evacuation lifts provided. Accessible escape can therefore be made from each of the three cores.

Commercial

The two stairs are provided with refuges and a new lift is being provided.

Compartmentation

Compartment floors (residential) should be rated at the same structural fire resistance as the compartment in which it is sited i.e., 120 minutes.

All shafts should be considered as protected shafts within the building and will require the same fire resistance as the elements of structure.

All flats are considered individual compartments and should be separated from one another by 60 minutes fire resistance.

A 120 minute compartment wall is being provided to separate the residential and existing office buildings.

Residential Structure:

Part of the Building	Minimum Provisions When Tested To The Relevant Parts Of BS 476 Or Relevant European Standard (Minutes)			Method of Exposure
	Load-Bearing Capacity [R]	Integrity [E]	Insulation [I]	
Structural Frame, Beam or Column	120	N/A	N/A	Exposed Faces
Load-Bearing Wall	120	N/A	N/A	Each Side Separately
Compartment Floors	120	120	120	From Underside
Floors	120	120	120	From Underside
Compartment Wall	120	120	120	Each Side Separately
Compartment Wall Separating Commercial From Residential	120	120	120	Each Side Separately
Compartment Walls Enclosing Flats	60	60	60	Each Side Separately
Protected Entrance Hall to Flats	30	30	30	
Enclosure to Ancillary Accommodation	See Section **Error! Reference source not found.** of this report			Each Side Separately / From Underside
Roofs				
Any floor forming part of an escape route;	30	30	30	From Underside
Any roof that forms the function of a floor or is essential for the stability of external fire rated walls	120	120	120	
External Fire Spread				
Any part less than 1000mm from a point in the relevant boundary	120	120	120	Each Side Separately
Any part more than 1000mm from the relevant boundary Note 1	120	120	15	From Inside the Building
Any part adjacent to an external escape route or stair	30	30	N/A	From Inside the Building
Re-entrant corners/ Maintaining Compartmentation	Same as the compartment wall it serves			Each Side Separately
Firefighting Stair	120	120	120	Each Side Separately
Firefighting Lift	120	120	120	Each Side Separately
Evacuation Lift Lobby	120	120	120	Each Side Separately
Protected Shafts (Stairs, lifts, risers)	120	120	120	Each Side Separately
Cross Corridor Doors	30	30	30	Each Side Separately
Cavity Barriers	N/A	30	15	Each Side Separately

Commercial Structure:

Part of the Building	Minimum Provisions When Tested To The Relevant Parts Of BS 476 Or Relevant European Standard (Minutes)			Method of Exposure
	Load-Bearing Capacity [R]	Integrity [E]	Insulation [I]	
Structural Frame, Beam or Column	60	N/A	N/A	Exposed Faces
Load-Bearing Wall	60	N/A	N/A	Each Side Separately
Floors	60	60	60	From Underside
Compartment Wall Separating Commercial/Retail/Office	60	60	60	Each Side Separately
Compartment Wall Separating Commercial From Residential	120	120	120	Each Side Separately
Compartment Walls Enclosing Flats	60	60	60	Each Side Separately
Enclosure to Ancillary Accommodation	See Section **Error! Reference source not found.** of this report			Each Side Separately / From Underside
Roofs				
Any floor forming part of an escape route;	30	30	30	From Underside
Any roof that forms the function of a floor or is essential for the stability of external fire rated walls	60	60	60	
External Fire Spread				
Any part less than 1000mm from a point in the relevant boundary	60	60	60	Each Side Separately
Any part more than 1000mm from the relevant boundary Note 1	60	60	15	From Inside the Building
Any part adjacent to an external escape route or stair	30	30	N/A	From Inside the Building
Re-entrant corners/ Maintaining Compartmentation	Same as the compartment wall it serves			Each Side Separately
Protected Shafts (stairs, lifts, risers)	60	60	60	Each Side Separately
Cavity Barriers	N/A	30	15	Each Side Separately

4 Emergency Road Vehicle Access and Water Supplies for Firefighting Purposes

Fire Service Site Plan, Emergency Road Vehicle Access and Siting of Fire Appliances

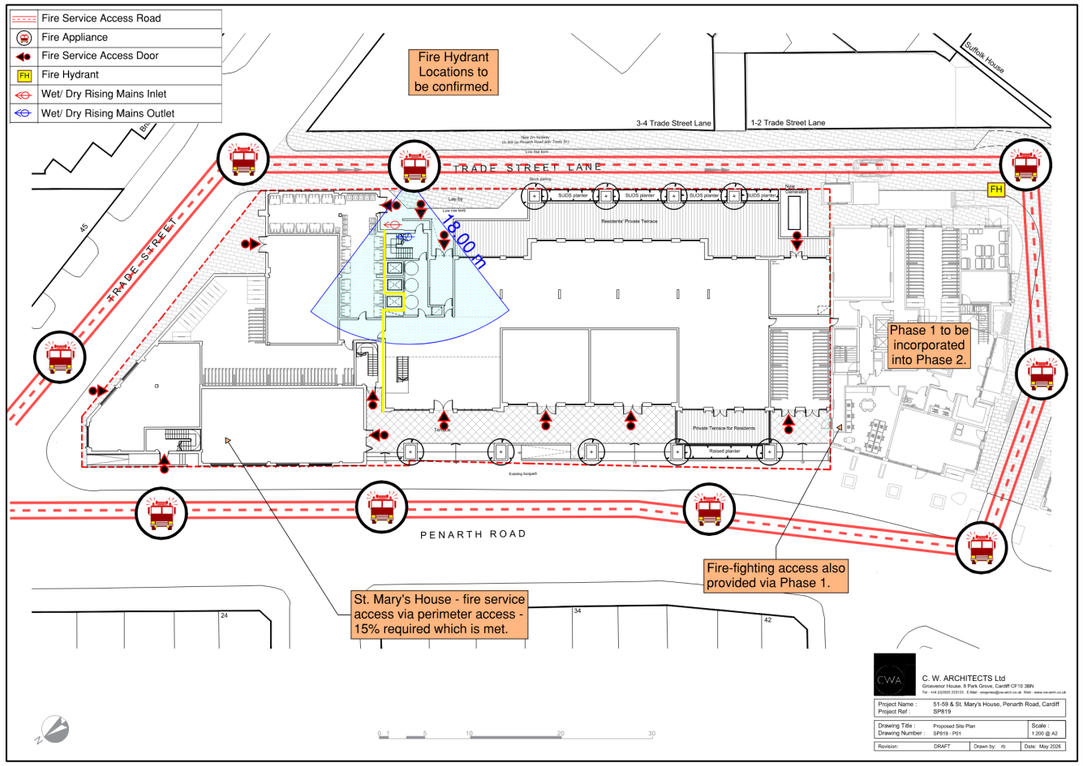

Figure 3: Fire Service Access

Source: 3d Warehouse. Sketchup Image

Appliance	Width of Road between Kerbs	Gateway Width	Clearance Height	Carrying Capacity	Turning Circle	
					Kerb to Kerb	Wall to Wall
Pump	3.7m	3.1m	3.7m	12.5 – 15 tonnes	16.8m	19.2m
Combined Aerial Platform	3.7m	3.1 - 6m	4.0m	17 – 26 tonnes	26.0m	29.0m

Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?	Yes	No

Suitability of Water Supply for the Scale of Development Proposed			
Nature of Water Supply:	Open Water - Limited	Open Water - Unlimited	Tanked Supply
	Hydrant – Public	Hydrant - Private	
Does the proposed development rely on existing hydrants?	Yes	No	
If so, are they currently usable / operable?	Yes	No	Don't know
Additional Comments:			

Fire Service Site Plan

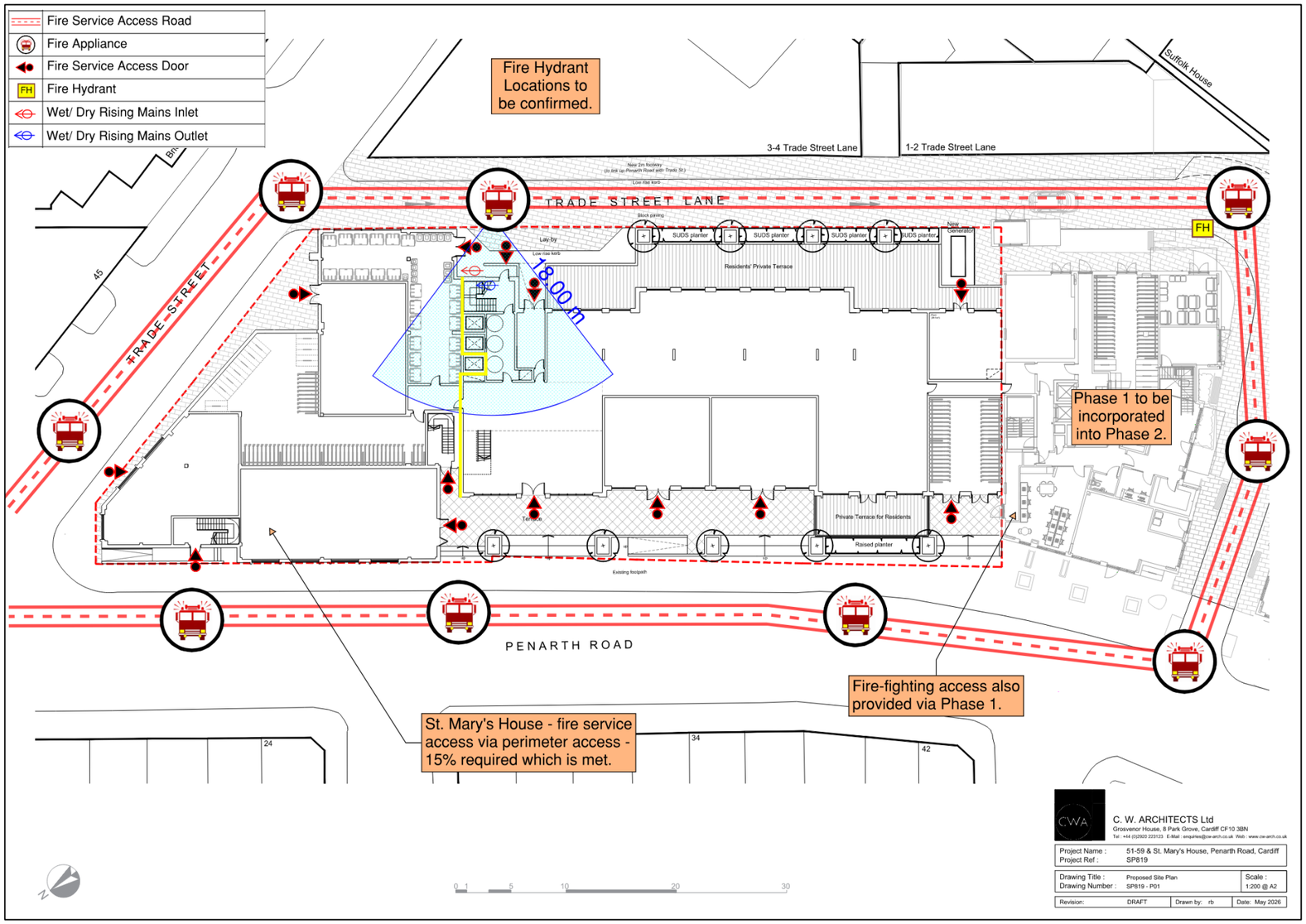

Figure 4: Fire Service Access