St. Andrew's Gate, Town Centre Extension, Uxbridge
Hybrid Planning Application: Outline Element

Fire Statement and Gateway 1 Form

ST. ANDREW'S PARK
UXBRIDGE

VINCI PLC | ST.MODWEN

Developed for:
Vinci St Modwen

Fire Statement

Outline Element of St Andrew's Gate

Town Centre Extension, Uxbridge

Hybrid Planning Application: Building Zones A, B and C

Issue 01, 11th June 2024

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Fire Statement

Outline Element of St Andrew's Gate
Building Zones A, B & C

Project Reference: AF2792
Developed for: Vinci St Modwen

Issue	Date	Description	Author	Checked	Approval
01	11.06.24	Initial issue for design team review	AB	GT	AB

AB	Andy Ballantyne BArch MEng CEng MIFireE PMSFPE	Chartered Engineer
GT	George Tirkides MEng (Hons) AIFireE	Senior Fire Engineer

The checker has provided an internal review of the technical content of the report.

The approver confirms the report has received quality assurance in accordance with the principles of ISO 9001 and authorises external release of the document on behalf of Ashton Fire.

THE LONDON PLAN 2021

Ashton Fire has been commissioned to provide fire safety consultancy services for the outline elements (Building Zones A – C) of a proposed new mixed-use residential and commercial development of St Andrews Gate, Town Centre Extension of Uxbridge, in the London Borough of Hillingdon.

This Outline Fire Statement report is provided based on the expectations of the London Plan 2021 [1] for a 'major development', as well as to support the client and design teams with developing their project information into detailed planning design. The report includes completed Form 1 and Form 3 pro-forma as provided within the Greater London Authority document "London Plan Guidance – Fire Safety" (February 2022 version, draft for consultation) [2]. Further supporting fire strategy information as developed to date is also included within the main body of the report, offering technical content which may be of relevance to consultees during the planning process (such as the London Fire Brigade or Health and Safety Executive).

General information

Item	Description
Site address	St. Andrew's Gate, Town Centre Extension, Uxbridge
Description of development	Hybrid planning permission comprising: Outline planning permission (with all matters reserved) for residential development and commercial uses, to be occupied flexibly within Use Classes E(a), E(b), E(c), E(e), E(g)(i), E(g)(ii) and a convenience store (Use Class E(a)); plus car parking, hard and soft landscaping, and all other associated works. Full planning permission for reinstatement of gym use (Use Class E(d)) and change of use to provide a café (Use Class E(b)) within the former cinema building; and external alterations; and associated car parking, hard and soft landscaping and all other associated works. Masterplan to be delivered on a phased basis with Full proposals for the former cinema building to be delivered alongside Outline phases.
Name, qualifications and / or experience of lead author	Mr Andrew O.M. Ballantyne BArch MEng CEng MIFireE PMSFPE, on behalf of Ashton Fire Limited. Andy is a Chartered Engineer registered with the Engineering Council by the Institute of Fire Engineers, being a Full Member of the Institute of Fire Engineers with Membership number 00056660. Andy graduated from the University of Edinburgh with the First Class Master's degree in Structural and Fire Safety Engineering. Prior to this, Andy also received a Batchelor's degree in Architectural Design from the University of Dundee. Following graduation, Andy has worked in fire safety engineering for over 10 years, based primarily in the London area and undertaken numerous commercial, residential, and governmental projects of varying scale and complexity.
Gateway One	This development is also within the scope of Planning Gateway One, and a Gateway One Statement has been submitted alongside this report.
Declaration of Compliance*	
The technical content produced for this planning application is considered to suitably comply with the relevant legislation and requirements of London Plan Policies D5(B5), D12A and D12B, subject to suitable development and implementation during the Building Regulations process, construction, and occupation. Signed: ……	
* Note – a combined declaration for Policies D5(B5) and D12 is included to facilitate use of a digital signature	

Form 1: Fire Statement – Policy D12A & D12B

Item	Description	Section:
The building's construction: methods, products, and materials used		
Structure	Expected to be non-combustible concrete or steel structural frame	-
Internal walls	Expected to be a combination of masonry or gypsum dry-lining walls. Internal wall lining classifications to be accordance with BS 9991 / BS 9999	Section 4
External walls and attachments	External walls and specified attachments to be Class A1 or Class A2-s1, d0 materials to BS EN 13501-1 to meet Regulation 7(2) of the Building Regulations, excluding allowable exemptions set out in Regulation 7(3). External balconies and terraces are to also meet BS 8579.	
Roof coverings	Roofing systems meeting either B_{ROOF}(t4) to BS EN 13501-5, or green (inc. brown or sedum) roofs design in accordance with the GRO code.	
Means of escape for all building users and the evacuation strategy		
Design basis	Means of escape from residential and ancillary areas based on BS 9991 or ADB1 subject to detailed design. Non-residential areas to be developed based on ADB2 or BS 9999 guidance. Selection of design guidance should be provided as part of the detailed planning application for the relevant block.	Section 1.2
Evacuation regime	Defend-in-place regime for the residential areas. Full evacuation of floors, cores, or zones may be initiated by the fire and rescue service if deemed necessary.	Section 3.1 & Form 3
Escape from within apartments	Private apartments are expected to feature open-plan arrangements supported by BS 9991 and as extended based on further published research or be via protected internal entrance halls or stairs.	
Escape through common areas	Common areas to be developed based on fire safety design guidance for the details associated with future reserved matters submissions. Two escape stairs are to serve all apartments in cores featuring an occupied floor at greater than 18 m in height. Evacuation lifts are to be provided to serve residential areas, which each common stair having an associated evacuation lift. Smoke control provided to common areas is expected to protect both the common stair and protected lift waiting area from smoke ingress.	
Escape within non-residential areas	Means of escape based on limited travel distances and sufficiently sized exits in accordance with the recommendations of associated guidance.	Section 3.2

Passive and active fire safety measures		
Structural fire resistance	Structural elements required to be fire-resisting are to be designed / protected based on the expectations of design guidance for the maximum floor height of the zone. If Zones A & C are constructed as structurally separated parts such that the maximum height of the separate part may be used.	Section 3.4
Compartmentation and fire-resisting construction	Fire resistance ratings provided in accordance with design guidance. Compartment walls and floors to have a fire resistance rating of each or better to the structural fire resistance rating of the block. Protected shafts to meet an equal standard of fire resistance as compartment floors. Firefighting shafts are expected to feature fire-resisting construction rated to at least 120 minutes.	
Fire detection and alarm	Detection and alarm in apartments to BS 5839-6, alongside Category L5 detection and alarm within the common parts to BS 5839-1. Non-residential areas would also be covered by BS 5839-1 detection and alarm systems.	Section 3.1 & 3.2
Smoke control	Natural or mechanical smoke venting from internal common corridors based on utilised design guidance, including smoke protection to the evacuation lift waiting area and common stairs. Mechanical smoke extract fans to meet BS EN 12101-3, AOVs to outside air to meet BS EN 12101-2, and vents to smoke shafts to meet BS EN 12101-8.	Section 3.1 & 3.6
Automatic suppression	A Category 4 sprinkler system (including the design density in Footnote C) of Table 2 and water supplies for 60 minutes) to BS 9251 throughout each of the zones. Protection of non-residential areas at Ground floor to BS EN 12845.	Section 3.3
Stand-by power	Suitable stand-by power is expected to be provided for fire safety systems, typically expected to be via in-built batteries, a diesel generator, or via multiple diverse substations.	Section 3.7
Access and facilities for the fire and rescue service		
Fire hydrants	Existing fire hydrants are available around the site, with at least one new hydrant expected to be provided adjacent to the new Spine Road such that all of the zones will be located within 90 m of a fire hydrant.	Section 5.1
Building access	External doors are provided around the perimeter of each building, offering street level access to the firefighting shafts and Ground floor ancillary areas from the wider masterplan landscaping.	Section 5.2
Firefighting shafts	At least one firefighting shaft should be provided in residential cores with an occupied floor at greater than 18 m above ground level. Multiple firefighting shafts are expected should a core have an area greater than 900 m^2.	Section 3.5
Firefighting lifts	At least one firefighting lift in each firefighting shaft to BS EN 81-72.	
Rising mains	A dry rising main in each firefighting shaft to BS 9990.	
Smoke control	As per means of escape provisions, which also support firefighting.	
Car park venting	Mechanical or natural smoke venting to BS 7346-7.	Section 3.6
Basement venting	Not applicable, where no basement proposed.	

Site access for the fire and rescue service		
Access via public roads	Public highways provide routes of access around the development, including the Spine Road constructed to the east of the site. These are generously sized roads that would allow multiple appliances to access the development.	Section 5.2
Internal road access	Internal routes, including turning areas, will be provided from the Northern Access Road to between both Building Zones A & B and between Building Zones B & C. This will support access for fire appliance hardstanding areas to be provided within 18 m of those firefighting shaft entrances / dry riser inlets which are not sufficiently accessible from public highways.	
Hardstanding areas	Suitable appliance hardstanding areas are provided on the access roads adjacent to the expected firefighting shaft entrances. These hardstanding positions to be within 18 m of firefighting shaft entrances, dry riser inlets, and any sprinkler tank inlets in accordance with BS 9991 / BS 9990 / BS EN 12845.	
Modifications to the development and the 'golden thread' of information		
During design and construction	Further development of the fire safety provisions within this Fire Statement are expected during updated detailed planning design to reference reserved matters and Building Regulations approvals process, including the selection of specific products, systems, or materials to fulfil the expectations of the Fire Statement. Modification to the fire safety provisions in this Fire Statement should not be incorporated unless agreed in writing by the relevant planning or building control authority.	
Handover of information	The as-built fire safety strategy for the various buildings, as agreed by the appointed building control authority, should be documented, and provided to the Accountable Person for the building as defined in the Building Safety Bill 2022, to meet the expectations of the Golden Thread of Information. This should include, but not limited to: • This Fire Statement report • The subsequent Fire Statement / Gateway 1 statement for detailed planning. • The as-built fire safety strategy report and associated fire strategy drawings • Manufacturer's literature for fire safety products and equipment • Drawings indicating the installed locations of fire safety products and equipment	
Storage of information	It is recommended that the above information is provided to the Accountable Person in a digital format that may be retained using a cloud-based or other remote service, to reduce the potential for loss of information in the event of fire, flooding, theft, etc.	
Use of information	The Accountable Person and their appointed Building Safety Manager are expected to ensure that periodic maintenance of the fire safety equipment in the building is undertaken in accordance with the manufacturer's recommendations. The information provided within the Regulation 38 documentation may be used to assist maintenance professionals in identifying the systems, spare parts, operational procedures, maintenance procedures, etc. for the various systems present. The Regulation 38 documentation will also assist the Accountable Person and / or their appointed advisors in the preparation of a 'Safety Case Report', which is to demonstrate how risks are being identified, mitigated and managed on an ongoing basis.	
Future changes to the development	Any amendment to the fire safety provisions at the building will require consent from the Building Safety Regulator. The building owner should consult with a building control or fire safety professional prior to conducting any modification works, to ensure that these will meet any relevant fire safety legislation in force at that time.	

Form 3: Provision of evacuation lifts – Policy D5(B5)

Item	Description
Details of the evacuation lift and shaft	
Design standard	Not applicable for the outline stage application. Further detail regarding the evacuation lift provisions and arrangements should be provided as part of the reserved matters submission for the relevant block. Evacuation lift shafts are expected to be provided at each common stair in accordance with the March 2024 update to Approved Document B.
Location	
Waiting areas	
Capacity assessment	
Size of cars	Not applicable for the outline stage application. Further detail regarding the evacuation lift provisions and arrangements should be provided as part of the reserved matters submission for the relevant block.
Capacity of lifts	
Evacuation strategy	
General philosophy	Not applicable for the outline stage application. Further detail regarding the evacuation lift provisions and arrangements should be provided as part of the reserved matters submission for the relevant block.
Use of lifts	
Use of lifts (cont.)	
Operation	
Evacuation lift management plan	
Responsibility	Not applicable for the outline stage application. Further detail regarding the evacuation lift provisions and arrangements should be provided as part of the reserved matters submission for the relevant block.
Roles	
Maintenance	

CONTENTS

1. INTRODUCTION

1.1 General

1.1.1 Ashton Fire has been commissioned to provide fire safety consultancy services for the design of a new mixed-use residential development at St Andrew's Gate in Uxbridge, west London. This report is intended to support a hybrid planning application, covering the fire strategy developed for those residential blocks being designed to the outline stage (Building Zones A – C). The fire statement for the detailed design element (being the Former Cinema Building toward the south of the site) is to be provided by others.

1.1.2 This report is to be used to support and inform future reserved matters submissions following outline planning. Further development of fire safety management procedures / plans necessary to meet responsibilities under the Building Regulations, Regulatory Reform (Fire Safety) Order 2005 or other applicable fire safety legislation will also be expected during detailed design at Gateway 2.

1.1.3 This document is not intended to portray detailed design information for fire safety systems or construction specifications. As a strategic document supporting and informing the wider design, it should be read in conjunction with the wider project design documentation.

1.1.4 It should be noted that any alternative design solutions proposed within this report are subject to agreement and eventual approval by the relevant authorities having jurisdiction (AHJs), which for this project will be the Building Safety Regulator (BSR) and the appointed Multi-Disciplinary Team (MDT).

1.2 Legislation and basis of design

1.2.1 Fire safety in buildings is governed by several pieces of legislation in the UK. The Building Regulations 2010, Schedule 1 Part B, Fire Safety applies to building design, whilst for fire safety management in buildings, compliance with the Regulatory Reform (Fire Safety) Order 2005 (FSO) is required. These are further supplemented by the Fire Safety Act 2021 and the Building Safety Act 2022.

1.2.2 This outline strategy has been developed to meet the level of fire safety expected under the Building Regulations 2010 (as amended), namely:

- B1 – Means of warning and escape
- B2 – Internal fire spread (linings)
- B3 – Internal fire spread (structure)
- B4 – External fire spread
- B5 – Access and facilities for the fire and rescue service
- Regulation 7 – Materials and workmanship

1.2.3 The fire safety strategy will be developed to satisfy the requirements for fire safety as set out by the Building Regulations. The strategy has not been specifically developed to address property protection or insurer's requirements. However, the features that are included for life safety, as required by the Building Regulations 2010, will contribute in some extent to business and property protection.

1.2.4 In general, the necessary level of life safety will be achieved utilising the guidance within BS 9991 [3] and documents referenced therein in the first instance, though also incorporating consideration of recent updates to Approved Document B including 2020 / 2022 / 2024 amendments (ADB1) [4] [5]. Fire engineering principles are employed to support alternative solutions where strict adherence to the codes would conflict with the wider aspirations for the scheme. Unless otherwise stated, it is expected that fire safety measures will be provided according to recommendations of BS 9991 as appropriate.

1.2.5 Departures from the guidance documents are identified and alternative proposals are documented for facilitating review by the project's approvers. In accordance with the fire safety engineering principles detailed in the PD 7974 [6] codes of practice, it is considered appropriate that all fire precautions are determined based on there being one seat of fire (i.e., accidental fires).

1.2.6 The strategy has been developed in cognisance of the Construction (Design and Management) Regulations 2015 (CDM 2015) [7], which sets out what designers are required to consider protecting anyone involved in the construction or ongoing use of a project.

1.2.7 This strategy does not provide a comprehensive assessment of site fire safety during the building works or the phasing of these works, though a designer's review of construction site fire safety issues is recommended to be conducted during technical design. The Fire Protection Association [8] and the Health and Safety Executive (HSE) [9] issue guidance on identifying and managing fire precautions during the works, which should be consulted by the contractor or their specialist advisor when developing their construction fire safety plan.

1.3 Reference information

1.3.1 This strategy is based on information provided by the design team to Ashton Fire as listed in Table 1. Additional contradictory information or subsequent design variations to the information supplied may render the findings and recommendations of this report invalid.

1.3.2 External references utilised in the generation of this report are summarised in Section 6.

Table 1 – Project documentation referenced

Description	Author	Reference	Rev
Site Location Plan	Pollard Thomas Edwards LLP	SAG-PTE-ZZ-00-DR-A-10000	C01
Existing Site Plan		SAG-PTE-ZZ-00-DR-A-10001	C01
Illustrative Masterplan – Ground Floor		SAG-PTE-ZZ-00-DR-A-10100	C01
Illustrative Masterplan – Typical Floor		SAG-PTE-ZZ-02-DR-A-10102	C01
Parameter Plan 1 – Development Zones		SAG-PTE-ZZ-XX-DR-A-10010	C01
Parameter Plan 2 – Building Uses Ground Floor		SAG-PTE-ZZ-XX-DR-A-10011	C01
Parameter Plan 2.1 – Building Uses Upper Floor		SAG-PTE-ZZ-XX-DR-A-10012	C01
Parameter Plan 3 – Building Heights		SAG-PTE-ZZ-XX-DR-A-10013	C01
Parameter Plan 4 – Access and Movement		SAG-PTE-ZZ-XX-DR-A-10014	C01
Parameter Plan 5 – Landscape and Public Realm		SAG-PTE-ZZ-XX-DR-A-10015	C01
Existing Site Sections		SAG-PTE-ZZ-XX-DR-A-10200	C01
Proposed Illustrative Site Sections		SAG-PTE-ZZ-XX-DR-A-10201	C01

2. PROJECT OVERVIEW

2.1 Development description

2.1.1 The hybrid scheme, as shown in Figure 1, comprises of:

- In outline:
  - Building Zone A: A perimeter block comprising of five elements (Cores A1 to A5) arranged around a central external, first floor podium and car parking.
  - Building Zone B: A mixed-use block, featuring above-ground residential areas (Core B) and commercial areas at Ground floor.
  - Budling Zone C: A mixed-use perimeter block, featuring five distinct above-ground residential areas (Cores C1 – C5) and various commercial and car park areas at Ground floor.
- In full:
  - Former Cinema Building: Reinstatement of the gym use and provision of a café. A separate, stand-alone Fire Statement has been prepared in relation to the refurbishment of this Grade II listed building and is submitted in support of the hybrid planning application.

2.1.2 Indicative arrangements for Ground floor and a typical above-ground floor are provided in Figure 2 and Figure 3. Table 2 provides a summary of proposed accommodation.

2.1.3 As such, each block features multiple occupied storeys at greater than 18 m in height and is considered a 'Relevant Building' under Regulation 7(4) of the Building Regulations. The buildings also feature occupied storeys at greater than 11 m in height and should incorporate automatic suppression throughout the building following the principles of the May 2020 amendments to ADB.

2.1.4 All areas of each cores featuring an uppermost floor at greater than 18 m above ground level will be accessed by at least two common stairs, to meet revised guidance for residential buildings.

Table 2 – Development summary

Block	Max. no. of floors	Maximum height (m)	Max no. of apartments	Use
A1	6	21.9	356	Residential, ancillary, car park
A2	8	28.2		
A3	5	18.7		
A4	7	25.0		
A5	9	31.3		
B	10	34.5		Residential, ancillary, commercial
C1	6	21.9		Residential, ancillary, commercial, car park
C2	8	28.2		
C3	7	25.0		
C4	6	21.9		
C5	3	12.4		

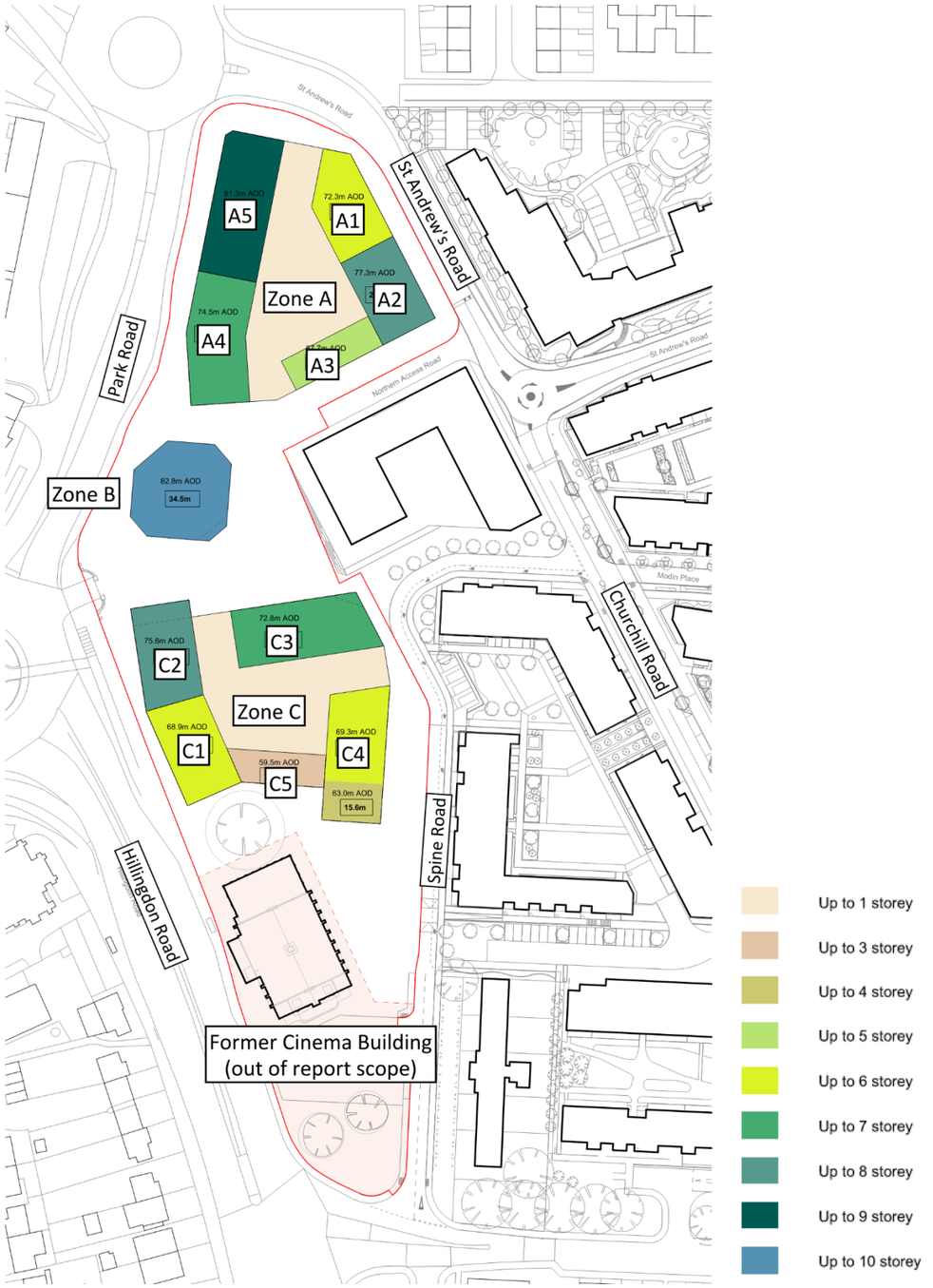

Figure 1 – Marked up Building Parameter Plan

Figure 2 – Ground floor

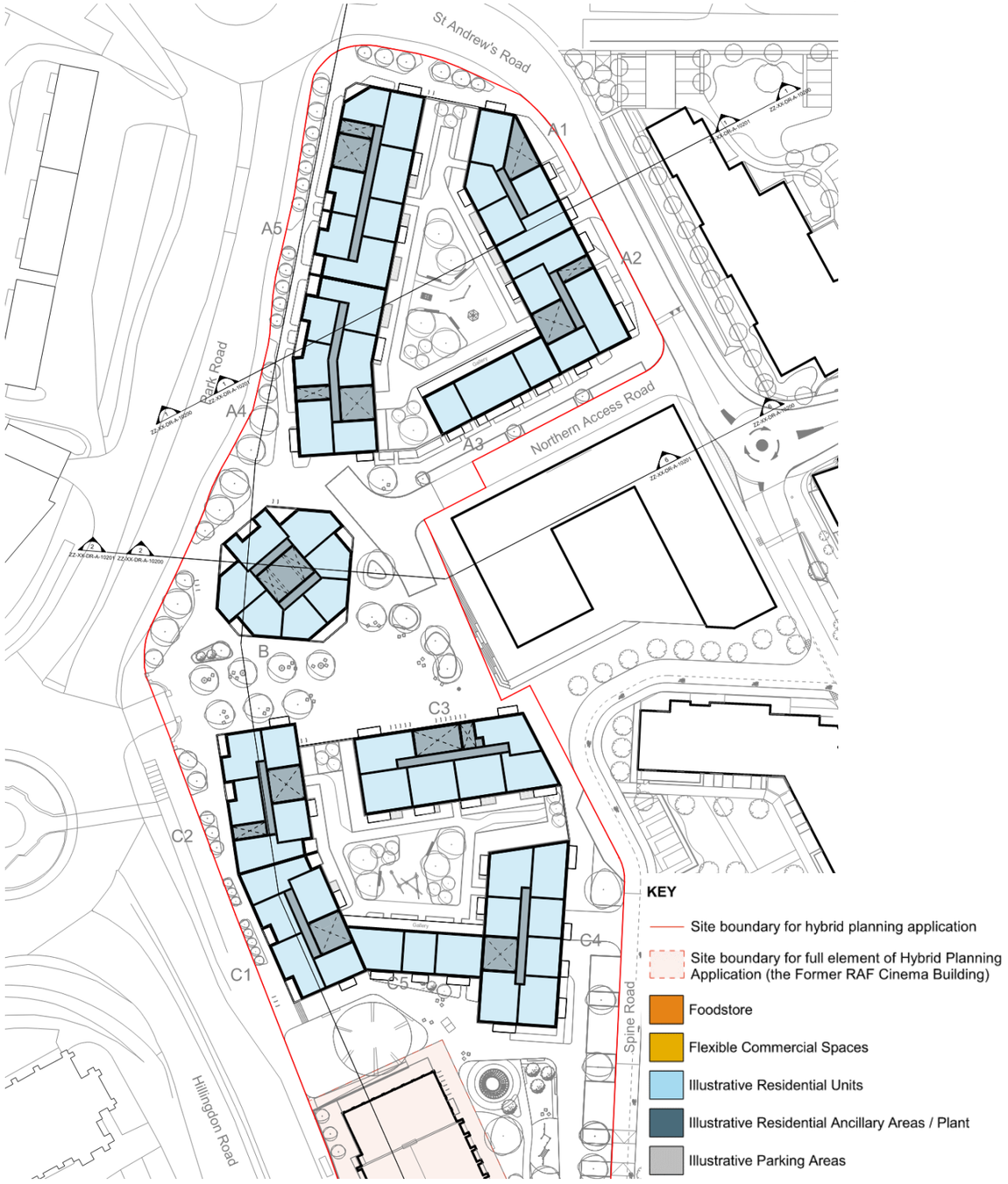

Figure 3 –Typical floor

3. KEY INTERNAL FIRE SAFETY EXPECTATIONS

3.1 Means of escape from residential areas

3.1.1 The residential areas are expected to utilise a defend-in-place evacuation regime. In the event of an apartment fire, only the unit of fire origin will receive a signal to evacuate. If fire were to spread beyond the apartment of fire origin, the wider evacuation of the floor, core, or zone may be initiated by the London Fire Brigade supported by an evacuation alert system.

3.1.2 The single level apartments may utilise an open-plan arrangement (i.e., escape from bedrooms passing through living / kitchen areas) where also provided with Category LD1 detection and alarm to BS 5839-6 [10]. Apartment arrangements should be developed such that cooking appliances are located remotely from the means of escape routes from bedrooms and balconies.

3.1.3 Duplex apartments set across Ground and First floors may feature open plan arrangements at Ground floor provided that bedrooms at First floor are each provided with an escape window having a clear area of at least 0.33 m^2, height and width of at least 450 mm, and be no greater than 1,100 mm above the floor level of the room. In the event that escape windows cannot be provided, a protected internal hallway and stair should be provided within the duplex apartment which connects directly to a final exit at Ground floor.

3.1.4 In accordance with the March 2024 amendments to Approved Document B, multiple stairs are to be provided to serve apartments within a core featuring an occupied floor at greater than 18 m in height:

> **3.30** Flats should be served by more than one common stair if either of the following applies.
>
> a. The flat is on a storey that does not meet the criteria for a single escape route or a small single stair building (see paragraphs 3.27 and 3.32).
>
> b. The building has a top storey of 18m or more in height (see Diagram D6 in Appendix D).

3.1.5 To meet the expectations of the London Plan 2021, each common escape stair should also feature an associated evacuation lift to BS EN 81-76 (once released) [11] and protected waiting area.

3.1.6 The level of smoke and fire protection to the protected waiting area is to be equivalent to that expected in fire safety guidance to a protected stair. Typically, this will require the lift lobbies to be separated from the ventilated common corridors. Smoke control provided to the common stairs, lift lobbies, and / or corridors would be expected to feature:

- Inherent venting where being external access decks.
- Natural or mechanical venting for internal corridors with escape in multiple directions or in dead-ends less than 15 m in length.
- Mechanical smoke venting from corridors having dead-ends of greater than 15 m in length, based on Smoke Control Association guidance [12].

3.1.7 In support of the smoke venting systems, the residential cores are expected to each feature automatic smoke detection in accordance with BS 5839-1 [13].

3.1.8 Escape from the common podiums of Building Zones A and C is expected to be in multiple directions via the various surrounding cores.

3.1.9 Further development of the internal fire safety provisions and arrangements would be expected to suit the detailed design of the proposed zone. For the outline stage, two circulation cores have been indicated for those Cores that may feature an occupied storey at greater than 18 m above ground level to support meeting of contemporary guidance at the reserved matters stage.

3.2 Means of escape from ancillary and non-residential areas

3.2.1 Travel distances within residential ancillary areas should be limited to a maximum of 9 m in higher risk areas, or 18 m elsewhere. Where multiple directions of escape are present, the allowable maximum allowable travel distance to the nearer exit would increase to 18 m and 45 m respectively.

3.2.2 Commercial areas may wish to be developed based on Approved Document B Volume 2 (ADB2) [14] or BS 9999 [15] guidance, where being fully separated from the residential areas.

3.2.3 Escape from the commercial or car park areas is expected to feature step-free egress, sufficient for use by disabled occupants without the need for further evacuation lifts.

3.3 Automatic fire suppression

3.3.1 Suppression will be required throughout buildings featuring a residential floor at greater then 11 m above ground level. As such, all zones are to be provided with sprinklers throughout the building.

3.3.2 A single residential sprinkler system to BS 9251 [16] is expected to serve all apartments within a zone. With each zone featuring at floor at greater than 18 m above ground level, these should feature a Category 4 system to BS 9251. These systems may be either a stand-alone system or be shared with the boosted cold-water system.

3.3.3 With each zone featuring a commercial, ancillary or car parks area greater than 100 m^2, a commercial grade sprinkler system to BS EN 12845 [17] to protect these areas. It would be recommended that Category OH3 sprinklers are available to each of the zones, being sufficient for larger commercial areas, plant rooms, as well as offering a greater level of robustness in car parks in support of the inclusion of electrical vehicles (subject to ongoing review and development of guidance regarding electrical vehicles and charging).

3.3.4 Development of an efficient means of suppressing multiple blocks from a single BS EN 12845 system could be considered to reduce the capital and space costs of the commercial suppression systems. However, sharing of the sprinkler systems will depend on ownership structure, preferred management arrangements, and / or whether blocks are expected to operate on a stand-alone basis.

3.3.5 The BS EN 12845 sprinkler system should include the expectations of Annex F for improved reliability systems. At this stage it is not expected that the additional Loss Prevention Council (LPC) Rules [18] are to be expected for the automatic sprinkler system.

3.4 Fire-resisting construction

3.4.1 Internal wall and ceiling linings will typically be required to achieve Class B-s3, d2 or better to BS EN 13501-1 [19] in common circulation areas, and Class C-s3, d2 or better in residential, commercial, ancillary, or car park areas.

3.4.2 Elements of structure should be designed and / or protected to achieve an appropriate level of fire resistance depending on the maximum height of the uppermost floor of the relevant building or separated part, typically expected to require:

- >30 m: 120 minutes
- 18 – 30 m: 90 minutes

- Up to 18 m: 60 minutes

3.4.3 All floors should be constructed as compartment floors, where each building contains residential accommodation. All shafts (e.g., risers, lift shafts and stair cores) are to be constructed as protected shafts where these will pass through compartment floors. Compartment floors and protected risers should be constructed to have a fire resistance rating at least equal to the expectation for the structural fire resistance. Protected shafts being part of a firefighting shaft should achieve a fire-resistance rating of at least 120 minutes.

3.4.4 Further fire-resisting construction should be provided in accordance with the recommendations of the guidance utilised for the proposed building. This is likely to include:

- Separation of apartments from each other and common areas: 60 minutes
- Separation to ancillary or non-residential areas: Equal to the structural fire resistance
- Protected internal hallways or stairs within apartments: 30 minutes
- Enclosure of life safety plant: 120 minutes
- Separation to car parks: subject to detailed review based on ongoing guidance with respect to electric vehicle fire risk.

3.4.5 Any electrical substations are expected to be separated from the wider building in accordance with relevant UKPN guidance [20]. This typically expects fire-resisting separation rated to 240 minutes.

3.5 Firefighting facilities

3.5.1 Except for Cores A3 and C5, all cores may feature one or more floors at greater than 18 m above ground level and would be expected to be feature a firefighting shaft, with multiple firefighting shafts to be provided if a core exceeds 900 m^2 in area. The firefighting shafts will be expected to have the following key features:

- Firefighting stairs having a clear width of at least 1,100 mm.
- A dry rising main with outlets in the firefighting stair at each floor in accordance with BS 9990 [21]. The maximum hose laying distance at each floor should not exceed 60 m where supported by automatic suppression.
- Suitable smoke control is to be provided to the firefighting shaft and common corridors in accordance with the expectations of BS 9991 and SCA guidance.
- A firefighting lift in accordance with BS EN 81-72 [22], with lift doors within 7.5 m of the firefighting stair door.
- Evacuation lifts in support of London Plan requirements, though also available to assist the fire and rescue service if required.
- Access to each of the firefighting shafts will be available from outside at Ground floor, with the stair being located at no greater than 18 m from the final exit based on Figure 20(b) in BS 9999.
- Pumping appliance access is to be provided to within 18 m of the dry riser inlet position for each core (see Section 5).

3.5.2 To meet contemporary guidance, cores featuring occupied residential floors at greater than 18 m above ground level will also be expected to feature an evacuation alert system to BS 8629 [23] which may be used by firefighters to initiate the evacuation of whole floors, cores, or zones.

3.6 Smoke clearance

3.6.1 No basement is proposed at the development. As such, no means of basement smoke venting are expected to be required.

3.6.2 The internal car parks within Building Zones A & C will be required to include suitable ventilation for both smoke clearance and day-to-day venting. Further detail of the proposed system should be developed at the reserved matters stage, to be in accordance with BS 7346-7 [24] and anticipated to be via either:

- Natural venting via sufficiently sized openings around the perimeter and / or through the podium soffit of the car park.
- Mechanical smoke venting where supported by an automatic suppression system in accordance with BS EN 12845.

3.7 Stand-by power supplies

3.7.1 All powered life safety systems, including emergency lighting, internally illuminated signage, fire detection and alarm systems, suppression systems, automatically opening vents, firefighting lifts, and evacuation lifts will be expected to be provided with emergency back-up power in accordance with BS 9991 and BS 8519 [25]. This may be via:

- Internal battery back-up for systems with lower power demand.
- A stand-by diesel generator.
- A UPS system (noting the recommendations within Appendix A of BS 8519).
- A secondary incoming power supply from a sufficiently diverse alternative substation.

3.7.2 Specification of the stand-by power supplies is to be provided to be provided during detailed design of the various zones.

4. EXTERNAL WALLS AND ROOFS

4.1 External wall construction

4.1.1 Each of the buildings will contain residential accommodation at a floor height greater than 18 m above ground level and will be deemed as a 'Relevant Buildings' under Regulation 7(4) of the Building Regulations.

4.1.2 The buildings are to comply with the requirements of Regulation 7(2), which states that: "building work shall be carried out so that materials which become part of an external wall, or specified attachment, of a relevant building are of European Classification A2-s1, d0 or A1 (classified in accordance with the reaction to fire classification)." Only materials that meet an exemption as set out in Regulation 7(3) of the Building Regulations may be of a lower combustibility standard than required by Regulation 7(2).

4.1.3 Balconies and terraces are to be provided in accordance with the expectations of BS 8579 [26].

4.2 Roof coverings

4.2.1 Roof coverings are to meet the recommendations of Table 3. Roof coverings may constitute several materials (but does not include the roof structure as a whole). Therefore, the top covering material should be considered in tandem with the substrate(s) to assess the performance of the coverings.

4.2.2 Any areas of green (inc. brown or sedum) roofing are to meet the GRO Green Roof Code [27] rather than having $B_{ROOF}(t4)$ classification.

Table 3 – Limitations on roof coverings

Distance from relevant boundary	$B_{ROOF}(t4)$	$C_{ROOF}(t4)$	$D_{ROOF}(t4)$
Less than 6 m	✓	×	×
At least 6 m	✓	✓	×
At least 20 m	✓	✓	✓
The relevant test and classification standard is BS EN 13501-5 [28]			

4.3 Space separation and unprotected areas of the façade

4.3.1 Should a fire occur in a building, heat will radiate through non-fire resisting openings in the external walls. This heat can be enough to set fire to nearby buildings. To reduce the chance of this occurring, fire safety guidance places limits on the area of the external elevation with no fire resistance, known as the unprotected area.

4.3.2 The relevant boundaries are the reference point at which the potential for fire spread, being the site boundary, a notional boundary created on the centreline of an adjacent carriage way, a notional boundary created midway between a block and the nearest adjacent block within a site.

4.3.3 As indicated in Figure 4, ample distance is provided generally around the site between adjacent buildings or to the indicative relevant boundaries. The closest boundary is at circa 3 m from the outline Core C3 to the site boundary. With suppression and compartmentation provided throughout the buildings, the available distances to boundaries are expected to be sufficient to support unprotected areas of façade which may also be used to support the overheating strategy, where windows are permitted to be openable.

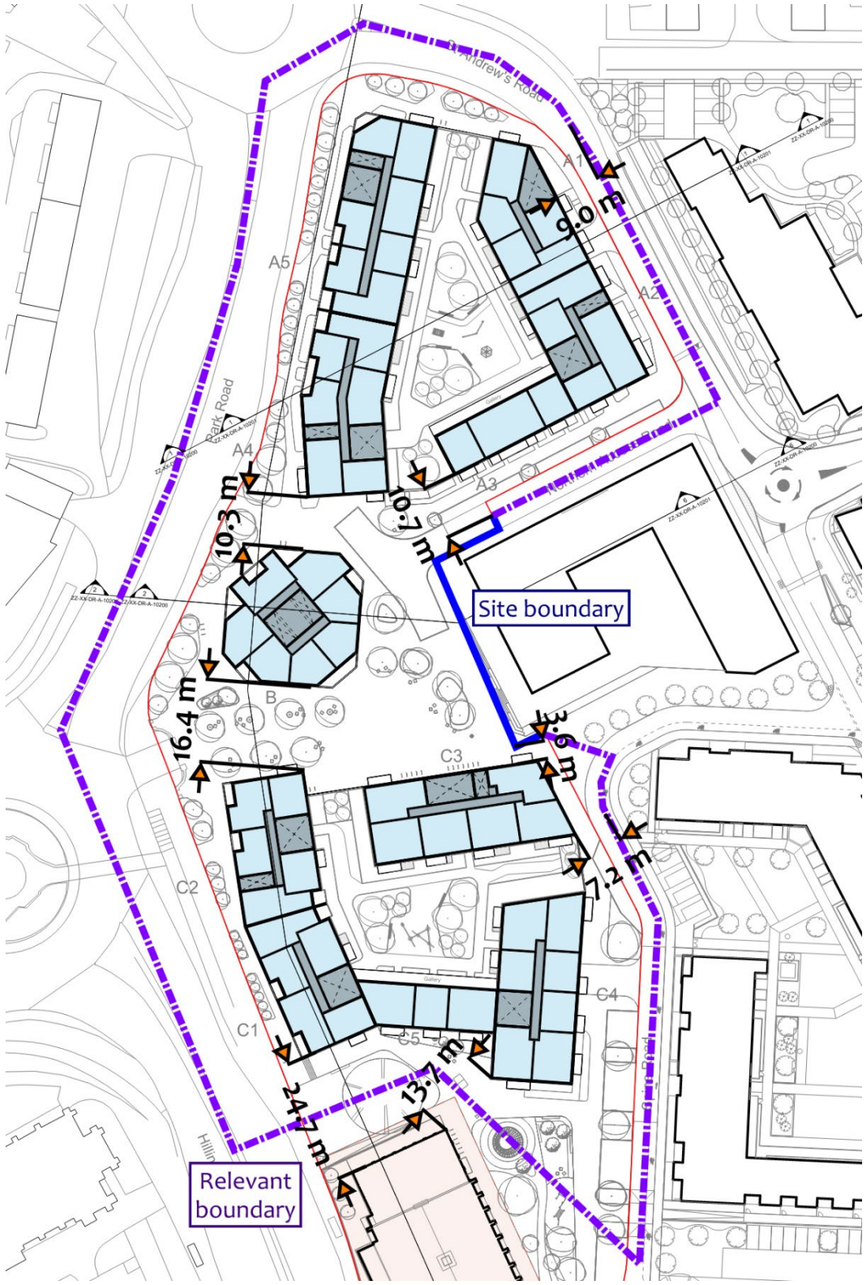

Figure 4 – Indicative separation distances around the site

5. MATERPLAN ACCESS FOR THE FIRE AND RESCUE SERVICE

5.1 Water supplies

5.1.1 Section 51.2 of BS 9991 recommends that where a building is located within 90 m of an existing fire hydrant, this is sufficient without further provision of firefighting water supplies.

5.1.2 Existing fire hydrants are located around the site as illustrated in yellow on Figure 5. A new hydrant also has approval for installation to the east of the Spine Road as part of the adjacent development (Town Centre West phase), approximately located as indicated in blue on Figure 5.

5.1.3 Through a combination of the existing and the new fire hydrant, all areas of the site will be located within 90 m of the nearest fire hydrant.

5.2 Vehicle access to and around the site

5.2.1 The access routes for the fire appliances are to meet typical values noted in Table 4, being those dimensions recommended by London Fire Brigade in document GN29 [29].

5.2.2 Access and hardstanding areas will be provided for a pump appliance such that these give access to within 18 m of the firefighting shaft entrances, dry riser inlets, and sprinkler tank inlets, to be available approximately as indicated in Figure 5.

5.2.3 Fire appliance access and a suitable turning area are to be provided within the public landscaping between Building Zones B & C, as indicated on Figure 5, to provide access to a suitable hardstanding area within 18 m of the entrance to Core C2.

5.2.4 The reversing distances will not exceed 20 m, where suitable turning areas are to be provided for any dead-ends that exceed 20 m in depth.

Table 4 – Typical pump-type firefighting appliance access requirements

Minimum access route specification	Dimension
Width between kerbs	3.7 m
Width between gateways	3.1 m
Turning circle between kerbs	16.8 m
Turning circle between walls	19.2 m
Clearance height	3.7 m
Carrying capacity	14 tonnes
Maximum reversing distance	20 m

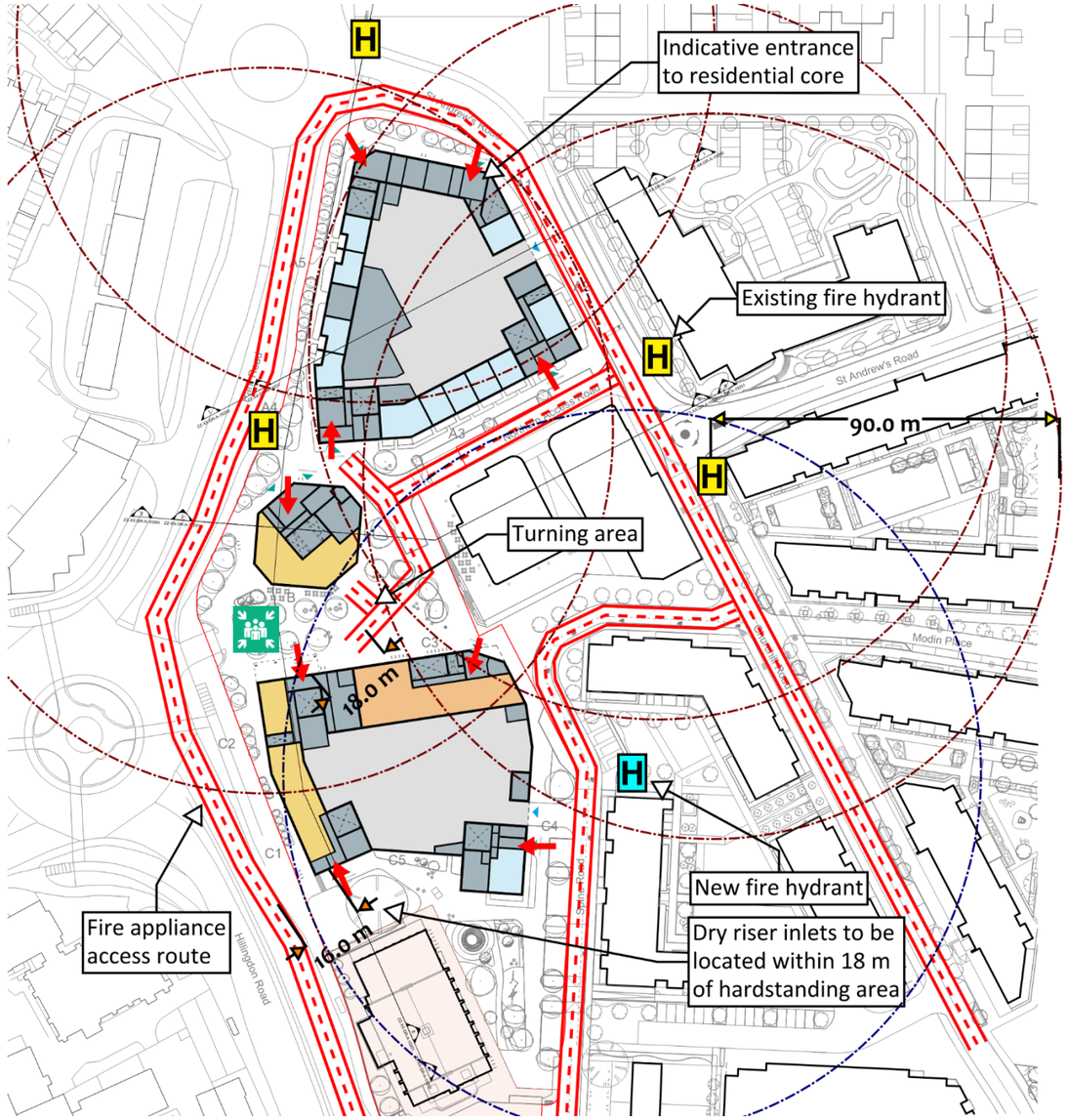

Figure 5 – Fire service vehicle access and water supplies around the site

6. SUMMARY

Table 5 – Summary of key fire safety provisions

Core	Max. no. of storeys	Non-combustible external walls	Second stair	Sprinklers	Lifts
A1	6	Relevant building to meet Regulation 7(2), subject to exemptions in Regulation 7(3)	Not expected if uppermost storey is <18m	Cat. 4 sprinklers to BS 9251 in apartments. Ancillary, and car park to be covered by BS EN 12845, initially suggested to Cat. OH3.	Evacuation lift with protected waiting area
A2	8		Expected where having an occupied floor at >18m, as per March 2024 amendment to ADB2.		Evacuation lift with protected waiting area at each stair, plus firefighting lift at firefighting stair.
A3	5		Not expected if uppermost storey is <18m		Evacuation lift with protected waiting area
A4	7		Expected where having an occupied floor at >18m, as per March 2024 amendment to ADB2.		Evacuation lift with protected waiting area at each stair, plus firefighting lift at firefighting stair.
A5	9				
B	10	Relevant building to meet Regulation 7(2), subject to exemptions in Regulation 7(3)	Expected where having an occupied floor at >18m, as per March 2024 amendment to ADB2.	Cat. 4 sprinklers to BS 9251. Commercial and ancillary to be covered by BS EN 12845, initially suggested to Cat. OH3.	Evacuation lift with protected waiting area at each stair, plus firefighting lift at firefighting stair.
C1	6	Relevant building to meet Regulation 7(2), subject to exemptions in Regulation 7(3)	Not expected if uppermost storey is <18m	Cat. 4 sprinklers to BS 9251 in apartments. Commercial, ancillary, and car park to be covered by BS EN 12845, initially suggested to Cat. OH3.	Evacuation lift with protected waiting area
C2	8		Expected where having an occupied floor at >18m, as per March 2024 amendment to ADB2.		Evacuation lift with protected waiting area at each stair, plus firefighting lift at firefighting stair.
C3	7				
C4	6		Not expected if uppermost storey is <18m		Evacuation lift with protected waiting area
C5	3				

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