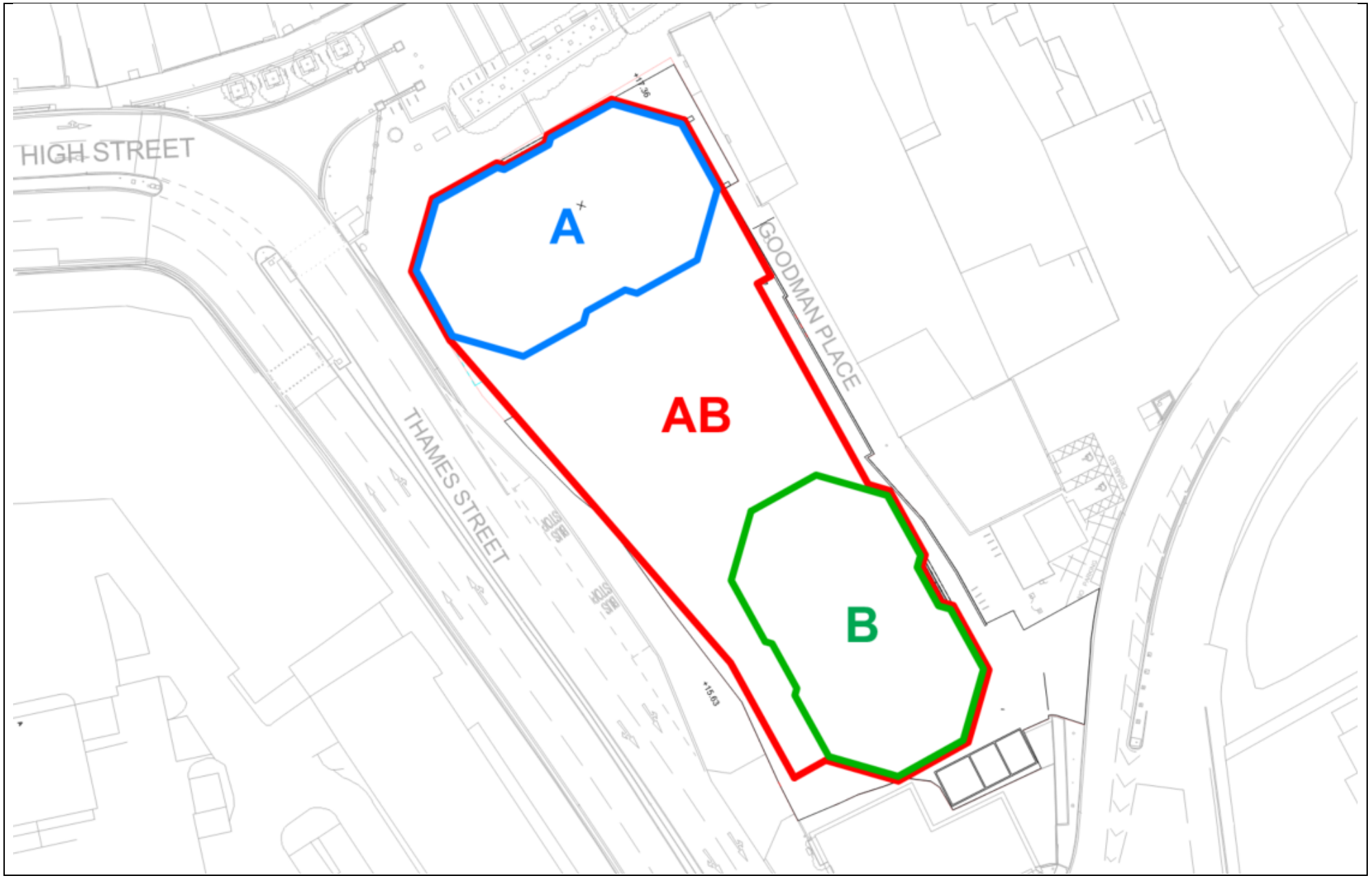
Fire statement form

Application information	
1. Site address line 1	Former Debenhams Store
Site address line 2	High Street/Thames
Site address line 3	
Town	Staines
County	
Site postcode (optional)	
2. Description of proposed development including any change of use (as stated on the application form):	Demolition of the former Debenhams Store and redevelopment of site to provide 226 dwellings (Use Class C3) and commercial units (Use Class E) together with car and cycle parking, hard and soft landscaping, amenity space and other associated infrastructure and works.
3. Name of person completing the fire statement (as section 15.), relevant qualifications and experience. Guide: no more than 200 words	**Name:** Daniel Mois **Role:** Fire Engineer **Academic qualification:** BSc in Civil Engineering; MSc in Civil Engineer, Building Structures **Membership of professional bodies:** Associate Member with the Institute of Fire Engineers (AIFireE) **Experience:** 2 years in the design of fire strategies for residential buildings including high-rise buildings and non-residential buildings such as schools, leisure centres, office buildings, storage facilities, etc. **Name**: Harry McDaid **Role**: Director **Academic qualification**: BSc in Architectural Technology; BSc (Hons) in Fire Safety Engineering **Membership of professional bodies**: Member of the Engineering Council with the Fire Industry Association (FIA) Member of the Fire Engineering Council with Engineers Ireland (MIEI); Associate Member with the Institute of Fire Engineers (AIFireE); Technical Steering Group member for the MHCLG Project 'Construction Technologies, Design & Usage' **Experience:** 8 years in the design of fire strategies for residential buildings including high-rise & super high rise buildings.

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. Guide: no more than 200 words	Ashton Fire have prepared fire strategy mark-ups with comments highlighting areas of design considerations / risk / changes required of the current design proposals. Co-ordination workshops have been held to discuss these mark-ups and comments with amendments in design made to align with Ashton Fire's recommendations. An outline fire strategy report will also be prepared by Ashton Fire. This Fire Strategy will highlight the proposed fire safety design for the development. It will highlights areas which will be subject to further design co-ordination during the technical / detailed design stages of the development.
5. Site layout plan with block numbering as per building schedule referred to in 6. (consistent with other plans drawings and information submitted in connection with the application)	
Site layout plan is: inserted in the form	


HIGH STREET
THAMES STREET
GOODMAN PLACE
A
AB
B

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

6. Building schedule

Site information				Building information			Resident safety information		
a) block no. as per site layout plan above	b) • block height (m) • number of storeys excluding those below ground level • number of storeys including those below ground level	c) proposed use (one per line)	d) location of use within block by storey	e) standards relating to fire safety/ approach applied	f) balconies	g) external wall systems	h) approach to evacuation	i) automatic suppression	j) accessible housing provided
A	• 45.8m • 16 (G + Mezz + 14) • 17 (B + G + Mezz +14)	residential flats, maisonettes, studios	1 to 14	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes- residential sprinklers, full	none
B	• 45.8m • 16 (G + Mezz + 14) 17 (B + G + Mezz +14)	residential flats, maisonettes, studios	1 to 14	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	yes- residential sprinklers, full	none

A & B	• 45.8m • 16 (G + Mezz + 14) • 17 (B + G + Mezz +14)	car parking	Basement, Ground Floor and Mezzanine Level	BS9999	no balconies	class A2-s1, d0 or better	simultaneous	yes-commercial sprinklers, full	N/A non resi
A & B	• 45.8m • 16 (G + Mezz + 14) • 17 (B + G + Mezz +14)	flexible use	Ground Floor	BS9999	no balconies	class A2-s1, d0 or better	simultaneous	yes-commercial sprinklers, full	N/A non resi
		Choose an item.		Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

7. Specific technical complexities

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

Guide: no more than 500 words

Mechanical Ventilation to communal corridors (Tower A and B – Levels 1 to 14): due to increased height of the building, a mechanical smoke ventilation system (MSVS) will be provided within communal corridors, instead of a natural ventilation system. The efficiency of the MSVS will be verified by CFD modelling, of which findings are to be outlined in a separate report during the technical / detailed design stages of the development.

Communal areas connecting with the communal means of escape within single stair cores (Tower A and B – First Floor): The amenity spaces shall be separated from the single stair cores by mechanically ventilated corridors. Furthermore, as justification for the arrangement, the fire detection and alarm system will be programmed to raise an alarm throughout the communal amenity areas in the event of a fire on that same storey. This will also include the provision of a visual alarm, and those occupying these areas will be prompted to evacuate simultaneously. Early detection and warning will ensure that those on the terrace evacuate within the flat of fire origin.

Car Park connecting with the single stair cores (Tower A and B – Basement, Ground Floor and Mezzanine Level): To support the proposed arrangement, the car park shall be separated from the stairs and final escape route serving the stairways by a mechanically ventilated lobby. The mechanical ventilation is required to keep the final escape route and the stairways free of smoke ingress in the event of a fire within the car park and

shall be demonstrated through the use of CFD modelling of which findings are to be outlined in a separate report during the technical / detailed design stages of the development.

Refuse stores connecting with the final escape routes (Tower A and B – Ground Floor): To support the proposed arrangement, the refuse store shall be separated from the final escape route serving the stairways by a mechanically ventilated lobby. The mechanical ventilation is required to keep the final escape route free of smoke ingress in the event of a fire within the refuse stores and shall be demonstrated through the use of CFD modelling of which findings are to be outlined in a separate report during the technical / detailed design stages of the development.

Sprinkler provision within commercial areas, car park and ancillary areas (Tower A and B – Basement, Ground Floor and Mezzanine Level): In accordance with the guidance in the updated version of Approved Document B – Volume 1, sprinklers are recommended throughout all blocks (as they both feature a top storey height that exceeds 11m). A commercial sprinkler system in accordance with BS EN 12845 will be required in commercial areas, the car park and the ancillary areas.

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

Explain how any issues which might affect the fire safety of the development have been addressed.
Guide: no more than 500 words

All specific technical complexities have been outlined in Section 7 above. In each case, the deviations from prescriptive guidance have been carefully considered and robust solution put in place. In terms of the mechanical ventilation to communal corridors and lobbies, the performance of the system will be measured by CFD analysis, of which a separate report will be produced. In all cases, the above departures and solutions will be discussed and agreed with the relevant AHJ. Ashton Fire are committed to transparent and open communication with the relevant authorities to ensure that the design meets their expectations.

9. Local development document policies relating to fire safety

Explain how any policies relating to fire safety in relevant local development documents have been taken into account.
Guide: no more than 500 words

For all residential areas, BS 9991 will be used to demonstrate compliance with the functional requirements of the Building Regulations 2010; for all areas which fall outside of this scope (for example, commercial areas at ground floor and amenity spaces), the recommendations given within BS 9999 will be followed.

Where the design does not meet the guidance given in either BS 9991 or BS 9999 (for example, those technical complexities outlined in Section 7), fire engineering first principles are employed to support alternative solutions. The use of fire safety engineering is recognised within BS 9991 as an acceptable means of complying with the functional requirements of the Building Regulations. Any departures from the code guidance have been identified and any alternative solutions follow the methodology outlined within PD 7974 or within other appropriate documents.

Where Computational Fluid Dynamics (CFD) modelling will be undertaken to assess the performance of mechanical smoke ventilation within communal corridors, the acceptance criteria is outlined within the PD 7974 series (PD 7974 Part 6 & 7), and Smoke Control Association (SCA) guidance. The methodology and assumptions used will be in line with the SCA guide; a CFD briefing document will be produced prior to modelling being undertaken and will be discussed and agreed with the approving authorities.

Emergency road vehicle access and water supplies for firefighting purposes

10. Fire service site plan

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

Guide: no more than 200 words

Guidance within BS 9991 and BS 9999 will inform the proposed firefighting access and facilities.

Both cores (A and B) within the building have a top-most occupied floor of > 18m, and floors over 18m should be served by a firefighting shaft. Therefore, the core of each tower will be designed as a firefighting stair. The firefighting stair will be one part of the firefighting shaft arrangement, this arrangement will also include a firefighting lift and a firefighting lobby (generally formed by the residential communal corridor, as per guidance within BS 9991, and provided with adequate ventilation). The firefighting stairs are provided with a dry fire main, of which outlets will be sited at on the full landing of the stairway at each storey.

Dry riser inlets will be positioned within 18m of the vehicle parking position, and clearly visible from the parking position – generally inlets are provided on the external wall of the building and are clearly marked. The dry rising main will be designed and installed in accordance with BS 9990.

FRS vehicle access is also provided within 45m from all points within the commercial units at Ground Floor. FRS vehicle access will be also provided within 45m of all points within the car park at Ground Floor. This is measured on a suitable route for laying hose.

11. Emergency road vehicle access

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

Guide: no more than 200 words

Emergency vehicles can access the site:

- Via High Street and egress at eastern end of High Street (junction with South Street).
- Via the A308 Thames Street

Access the loading bay area via Elmsleigh Road

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

yes

12. Siting of fire appliances

Guide: no more than 200 words

The fire appliances can stop on Thames Street and High Street within 18m of the dry riser inlet point and within 45m hose laying distances of commercial units, as shown in the attached drawing (Drawings No. 21115-CW-XX-00-A-0316

13. Suitability of water supply for the scale of development proposed
Guide: no more than 200 words
Existing Public Fire Hydrants are located on A308 adjacent to bus stop area and within the High Street on the corner of A308.

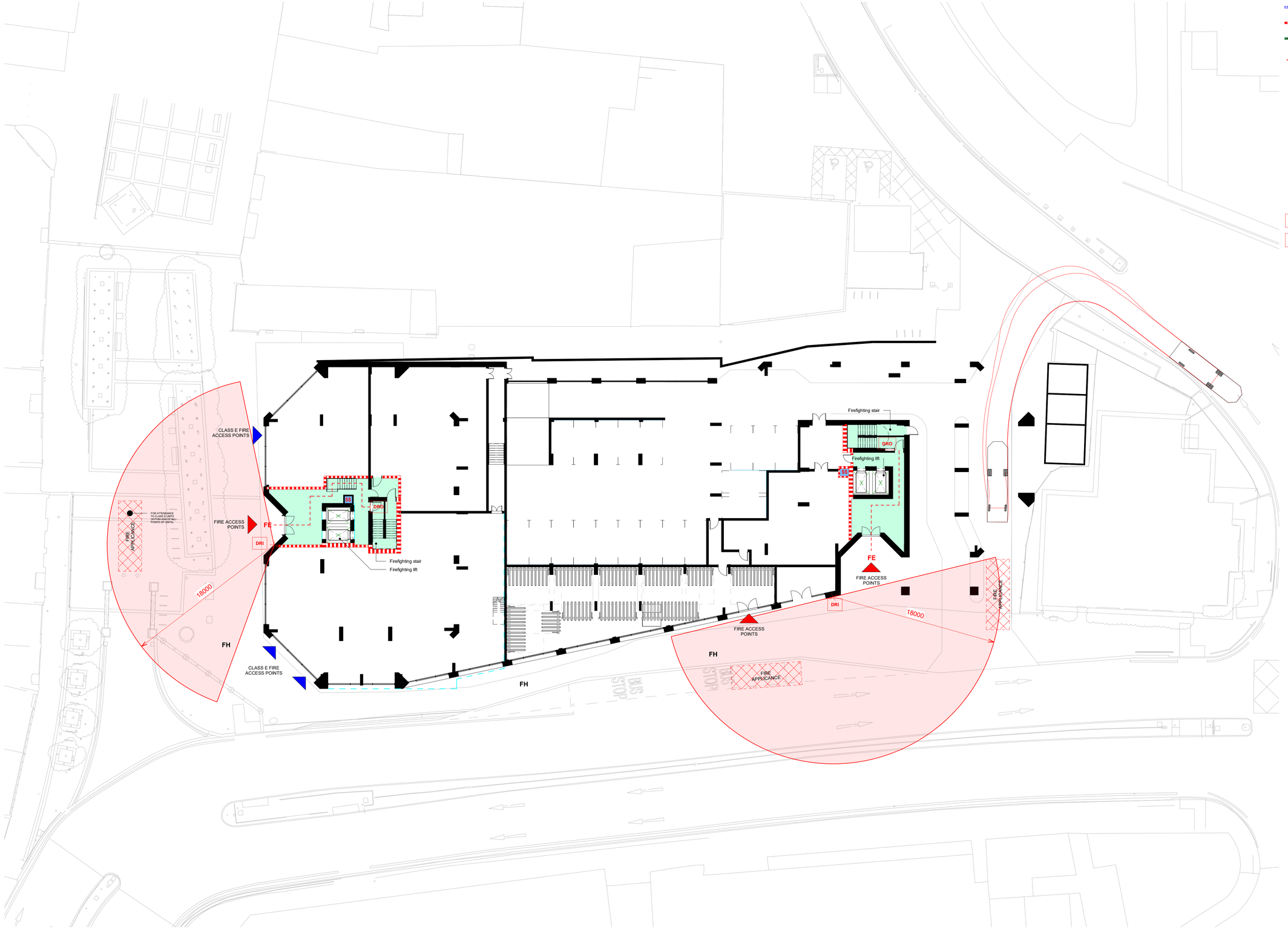
Nature of water supply:
hydrant- public

Does the proposed development rely on existing hydrants and if so are they currently usable / operable?
don't know

14. Fire service site plan
Fire service site plan is:
provided as a separate plan
See attached plan (Drawing No. 21115-CW-XX-00-A-0316) for reference.

Fire statement completed by

15. Signature	Daniel Mois
16. Date	29/10/2021



30 Minute Fire resistant compartment wall taken up to underside of structure and fire stopped.

60 Minute Fire resistant compartment wall taken up to underside of structure and fire stopped.

120 Minute Fire resistant compartment wall taken up to underside of structure and fire stopped.

Means of Escape Route

FD30 Denotes 30 Minute Fire Door

FD60 Denotes 60 Minute Fire Door

FD120 Denotes 120 Minute Fire Door

FR30 Denotes 30 Minute rated window

CB30 Denotes 30 Minute Cavity Barrier

CB60 Denotes 60 Minute Cavity Barrier

Ventilated circulation zone

Fire sterile zone

FE — Final Exit doors to be fitted with panic release mechanisms and entrance doors to be fitted with thumb turn release to internal face where required. Please refer to Door Schedule for clarification

Denotes Panic Bar to door, permanently marked with 'Push bar to open' in white 50mm lettering on green background.

DRI — Denotes Dry Riser Input

DRO — Denotes Dry Riser Outlet

FH — Assumed position of existing Fire Hydrants

SS — Smoke shafts (0.6m² min mechanically vented)

Indicative Final Escape Signage. TBC by Fire Engineer

NOTE

All SVP & RWP penetrations through floor slabs to be seal with intumescent fire collars.

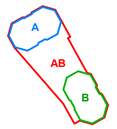
All existing Fire Hydrant positions within 45m of Fire Appliance positions.

Building at basement level, ground floor and mezzanine level to referred to as block AB to be read in conjunction with fire engineers report.

Fire appliance tracking as per highways consultants drawing ADC2743-DR-06-P1.

Drawing to be read in conjunction with fire engineers report.

DRAWING TO BE PRINTED IN COLOUR ONLY.



Rev.	Description	Date	Drawn	Chk.
SK-3	Fire consultants comments	211029	AL	RK
SK-2	For Client Approval	211028	AL	RK
SK-1	Fire consultants comments	211028	AL	RK
SK-0	First Issue	211027	AL	RK

Client:
Future High Street Living (Staines)

Project:
Debenhams,
Staines-Upon-Thames

Drawing Title
Fire Strategy - Ground Floor

Drawing Status
WIP

Corstorphine & Wright

Birmingham Studio
Alpha Building, Suffolk Street Queensway, Birmingham, B1 1TT
0121 737 8350
corstorphine-wright.com

Drawing No.	Revision
21115-CW-XX-00-A-0316	SK-3

Drawn	Checked	Paper Size	Scale	Date
AL	RK	A1	As indicated	27/10/21