

Concept Fire Safety Strategy

Project: 152-154 Uxbridge Road, Hayes

Project Reference: FE1304

Revision: 2

Date: December 2021

1 DOCUMENT TRACKER & REPORT OVERVIEW

Project Address	152-154 Uxbridge Road, Hayes UB4 0JH		
Project Reference	FE1304		
Current Revision	2		
Client	Kumarasamy Sivakumaran, Visvanathan Yoganathan, Ganesh Jeyakumar		
Architect	MS4 Architects Ltd		
Local Fire Service	London Fire Brigade		
Building Control Body	TBC		
Revision	Description	Prepared by	Date
1	Concept Fire Safety Strategy & Fire Statement	J Dowd	09.11.2021
2	Concept Fire Safety Strategy & Fire Statement	J Dowd	23.12.2021
Prepared by	John Dowd MSc BEng (Hons) CEng MIFireE MCABE		
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TABLE OF CONTENTS

1	DOCUMENT TRACKER & REPORT OVERVIEW	2
2	INTRODUCTION	3
3	MEANS OF WARNING AND ESCAPE.....	4
4	INTERNAL FIRE SPREAD	5
5	EXTERNAL FIRE SPREAD	6
6	ACCESS AND FACILITIES FOR THE FIRE SERVICE	7
7	APPENDIX A – FIRE STATEMENT FORM	8

EXECUTIVE SUMMARY

Solas Realta Ltd has been appointed to produce a Concept Fire Safety Strategy & Fire Statement for the proposed new development at 152-154 Uxbridge Road, Hayes UB4 0JH.

This report is aimed at only providing supporting information for this planning application and does not represent a detailed fire safety strategy (to be developed at RIBA Stage 3-4). All aspects of this report are subject to development by the design team and ultimately agreement with the Building Control Body including their statutory consultation with the local Fire Service.

The project represents a new-build, 3 storey (G+2, Roof) mixed-use development split across two cores. The development will be approximately 9.7m in height as measured up to the topmost habitable floor (third floor communal amenity roof garden).

The evacuation strategy for the residential units will be 'defend in place' with only the flat of fire origin evacuating. The commercial / retail unit will employ simultaneous evacuation upon detection therein.

All residential units will be designed as flats with protected entrance halls, serving all habitable rooms and achieving 30-minute fire resistance. Cooking appliances in flats should be located a minimum of 1.8m from internal escape routes.

The common escape routes for both cores (1 & 2) primarily comply with Figure 8.b) of BS 9991 for small single stair arrangements, without the need for a lobby, but with a maximum of two flats served per storey. This will only include an AOV at the head of each staircase achieving a minimum free area of 1.0m². One flat on the first and second floor level will comply with Figure 5.b of BS 9991 whereby access to the Stair 2 will be via a common balcony/deck.

The compartmentation strategy will follow typical residential building design with 60-minute compartment floors, and all dwellings forming individual 60 minutes fire compartments. Staircases, the passenger lift, service risers, the commercial unit and ancillary areas will form individual 60-minute fire compartments.

It is proposed as good practice that the external wall system achieves compliance with the amendment to Regulation 7, even if the building is not a 'Relevant Building'. Space separation calculations indicate sufficient separation from the relevant boundaries; however, party walls will be required in some areas.

Access to and around the site will be primarily via Uxbridge Road at the South of the building, and Brookside Road at the West of the building. There should be vehicle access for a pumping appliance to a block of flats to within 45m along a route suitable for laying hose of all points within each flat. This is not achievable in Stair 2; therefore, a dry rising main in accordance with BS 9990 will need to be installed.

Provided the recommendations within this report are followed, it is Solas Realta Ltd's professional opinion that the proposed design associated with the planning application can be reasonably developed to satisfy the functional requirements of Part B of the Building Regulations.

2 INTRODUCTION

2.1 SCOPE

- 2.1.1 Solas Realta Ltd has been appointed to produce a Concept Fire Safety Strategy & Fire Statement for the proposed new development at 152-154 Uxbridge Road, Hayes UB4 0JH.
- 2.1.2 The report is intended to provide an outline of the key fire safety considerations associated with the project in relation to the requirements of Part B of the Building Regulations as presented below:
- B1 – Means of warning and escape – (see Section 3).
 - B2 – Internal fire spread (linings) – (see Section 4).
 - B3 – Internal fire spread (structure) – (see Section 4).
 - B4 – External fire spread – (see Section 5).
 - B5 – Access and facilities for the fire service – (see Section 6).
- 2.1.3 This report also includes a Fire Statement form (presented in Appendix A) as defined under planning Gateway 1 as required by The Town and Country Planning (Development Management Procedure and Section 62A Applications) (England) (Amendment) Order 2021.
- 2.1.4 Solas Realta Ltd has not reviewed any issues within the project other than those identified in our report. Solas Realta Ltd offers no comment on any other aspects of the development and any absence of such comment should not be regarded as any form of approval.
- 2.1.5 This report is aimed at only providing supporting information for this planning application and does not represent a detailed fire safety strategy (to be developed at RIBA Stage 3-4). All aspects of this report are subject to development by the design team and ultimately agreement with the Building Control Body including their statutory consultation with the local Fire Service.

2.2 PROJECT DESCRIPTION

- 2.2.1 The project represents a new-build, 3 storey (G+2, Roof) mixed-use development split across two cores. The development will be approximately 9.7m in height as measured up to the topmost habitable floor (third floor communal amenity garden).
- 2.2.2 The building will include a single commercial / retail unit on the ground floor as well as car parking areas. All above ground floors will include residential units split into two small single stair blocks with a maximum of two flats connecting to each staircase per storey.
- 2.2.3 The development is flanked from the West and South by Brookside Road and Uxbridge Road, respectively, as presented in Figure 1.

2.3 DESIGN BASIS AND GUIDANCE

- 2.3.1 BS 9991 and BS 9999 will be the design guidance documents employed in order to indicate that the functional requirements of Part B of the Building Regulations have been satisfied.
- 2.3.2 Where departures from the guidance are proposed, compensatory arguments and / or qualitative arguments will be provided to demonstrate that the overall level of safety achieved by full conformance to the guidance documents is not compromised.
- 2.3.3 Regulation 7 of the Building Regulations identifies a building with a storey at least 18m above the ground level and which contains dwellings to be classed as a ‘Relevant Building’. The proposed building is not a ‘Relevant Building’ as defined by this regulation. Notwithstanding this, it is recommended as good practice that the external walls are designed in accordance with the requirements for a ‘Relevant Building’.

2.4 REFERENCED INFORMATION

- 2.4.1 This report has been developed based upon information contained in the latest drawings provided by the Architect (MS4 Architects Limited). This report should be read in conjunction with these drawings and other supporting documentation prepared and submitted by other consultants who are acting on behalf of the design team. Table 1 presents the drawing plan schedule.
- 2.4.2 This report is not intended to provide detailed system specification, as this information is expected to be included within manufacturer’s recommendations or British Standards. Therefore, all system designers should refer to the latest version of the British Standards referenced within this report and any associated manufacturer’s recommendations.

Drawing Number	Description	Revision	Date
5005-Pre-App-P2	Pre-app Design Development Report	P2	06.05.2021
5005-DAS-V1.0-P2	Design and Access Statement	P2	28.02.2021
5005-203-P2	Roof Floor Plan	P5	22.12.2021
5005-202-P3	Second Floor Plan	P5	22.12.2021
5005-201-P3	First Floor Plan	P5	22.12.2021
5005-200-P3	Ground Floor Plan	P5	22.12.2021

Table 1 – Drawing Plans and Information



Figure 1 – Floor Plans

3 MEANS OF WARNING AND ESCAPE

3.1 EVACUATION STRATEGY

- 3.1.1 The evacuation strategy in the residential units will be based on a 'defend-in-place' strategy, whereby residents in unaffected flats may remain protected within their flats until such time as the Fire Service initiate a phased evacuation of the building, or residents decide to evacuate.
- 3.1.2 The evacuation strategy within commercial / retail unit will be simultaneous, whereby if a fire detector or manual call point is activated, sounders will activate in this area only.

3.2 FIRE ALARM & DETECTION SYSTEM (FADS)

- 3.2.1 In all residential units, a Category LD1 Grade D2 FADS should be provided in accordance with BS 5839-6. Only the sounders within the flat where a local detector activates should operate.
- 3.2.2 In the commercial / retail unit, a Category L2 FADS should be provided in accordance with BS 5839-1.

3.3 AUTOMATIC FIRE SUPPRESSION

- 3.3.1 Automatic fire suppression is not a requirement for a building of this height (<11m) in accordance with the recommendations of BS 9991, or Approved Document B (ADB).

3.4 SMOKE VENTILATION

- 3.4.1 An AOV achieving a minimum of 1.0m² should be provided at the head of each staircase, which will enable the small single stair building design.
- 3.4.2 The covered car park requires smoke ventilation in accordance with BS 7346-7, which will be provided via two natural openings achieving each 24m² free area, even if the car park is 84m².
- 3.4.3 The refuse stores are accessed directly from the permanently ventilated car park and will not require additional smoke ventilation.

3.5 HORIZONTAL ESCAPE

- 3.5.1 All residential units will be designed as flats with protected entrance halls, serving all habitable rooms and achieving 30-minute fire resistance.
- 3.5.2 Cooking appliances in flats should be located a minimum of 1.8m from escape routes, including escape routes from the balconies.
- 3.5.3 Private balconies are considered inner rooms and should also comply with the following:
- The escape route should not have to pass through more than one access room.
 - Smoke detection in the access room should ensure an audible alarm on the balcony.
 - Storage of combustibles, barbequing or any naked flame should be prohibited from balconies.
- 3.5.4 The common escape routes for both blocks (with the exception of Plot 01-04 & 02-04) will comply with Figure 8.b) of BS 9991 for small single stair arrangements, without the need for a lobby, as presented below:
- The blocks do not include a storey more than 11m above ground.
 - The blocks do not include more than 3 above ground storeys.
 - The staircases will include an AOV at high level, achieving a minimum of 1.0m².
 - There are no more than 2 flats connecting to each staircase per storey.
 - Flats include protected entrance halls (30-minute partitions with FD30 fire doors).

- 3.5.5 The means of escape from Plot 01-04 and 02-04 will be via a common balcony/deck. The common balcony/deck is at first and second floor level, and exclusively serves Plot 01-04 and 02-04 respectively. The common balconies will connect the aforementioned flats to Stair 2. The common balconies should conform to Figure 5.b) of BS 9991 and therefore; be constructed from materials that achieve A2,s1, d0 or better, have a 60-minute fire resisting imperforate deck, and the face of the building adjacent to the walkways should achieve 60-minute fire resistance with no windows.
- 3.5.6 Travel distance limitations are presented in Table 2. It is noted that the current drawings indicate compliance with these travel distance limitations.
- 3.5.7 The two exits within the retail unit will limit occupancy to 60 people. It is expected that the final exit doors will achieve a minimum of 750mm clear width, with a level threshold to the adjacent outside ground in support of independent evacuation for persons with reduced mobility.
- 3.5.8 Escape routes should include suitable emergency lighting in accordance with the relevant parts of BS 5266 and emergency escape signage in accordance with the relevant parts of BS 5499.
- 3.5.9 External escape routes should conform to Approved Document M. All routes from a final exit door and up to a Fire Muster Point are considered external escape routes. Landscape and security design should ensure escape is not obstructed for all occupants.

3.6 VERTICAL ESCAPE

- 3.6.1 The building will be provided with 2 single staircases which should:
- Achieve 1000mm minimum clear width.
 - Be constructed of materials achieving European Class A2-s3, d2 or better.
 - Discharge directly to a final exit at ground floor level.
 - Any riser opening into the staircase should be kept as small as possible, be enclosed in 60-minute fire resisting construction with FD30S 'keep locked shut' fire doors, along with fire-stopping at each floor level akin to a compartment floor.
- 3.6.2 Refuge areas do not represent a minimum requirement for residential buildings. In accordance with Policy D12 of the London Plan, it is indicated that evacuation lifts should be provided for floors with lift access in order to ensure dignified escape is provided in an emergency.
- 3.6.3 The design team will need to include details on how the building complies with The Equality Act 2010 as well as any associated proposals to ensure evacuation of disabled occupants in an emergency.

Area	Risk Profile ⁽¹⁾	Single Direction Travel Distance ⁽²⁾	Multiple Direction Travel Distance ⁽³⁾
Protected Entrance Halls	N/A	9	N/A
Commercial Unit	B3	16	40
Car Park	A3	18	45
Communal Amenity Roof Garden	N/A	18	N/A
Notes:			
1. Travel distance should be measured up to a place where two alternate escape routes are available, either at least 45° apart or separated by fire resisting construction.			
2. Travel distances should be measured up to a storey exit (i.e., exit into a staircase or a final exit).			

Table 2 – Travel Distance Limitations

4 INTERNAL FIRE SPREAD

4.1 WALL AND CEILING LININGS

4.1.1 Restrictions are placed on the wall and ceiling lining materials. This is to limit spread of fire and production of smoke in specific areas. The surface lining of the walls and ceilings should meet the classifications shown in Table 3.

4.2 LOADBEARING ELEMENTS OF STRUCTURE

4.2.1 All elements of structure should achieve 60-minute fire resistance. An element of structure is any member forming part of a structural frame of a building or any other beam or column.

4.3 COMPARTMENTATION

4.3.1 All floors should be compartment floors achieving 60-minute fire resistance. Therefore, any shafts penetrating compartment floors (i.e. staircases, lift, service risers, etc.) should be constructed as protected shafts achieving 60-minute fire resistance.

4.3.2 Any dwelling or common corridor / lobby should be constructed as a separate fire compartment achieving a minimum of 60-minute fire resistance.

4.3.3 Any ancillary area (i.e., car park, refuse store) as well as the commercial / retail unit should be constructed as a separate fire compartment achieving a minimum of 60-minute fire resistance.

4.3.4 The overall compartmentation in the building should be in accordance with Table 3. Fire resisting walls should be constructed effectively up to each compartment floor or the roof.

4.3.5 Junctions of a compartment wall with a roof should include an area 1500mm wide on each side of the wall, with a roof covering of B_{ROOF}(t4) on substrate or deck of material of limited combustibility.

4.3.6 If a fire separating element is to be successful, every joint or imperfect fit, or opening to allow services to pass through the element, should be adequately protected by sealing or fire stopping to the same fire resistance rating so that the fire resistance of the element is not impaired.

4.3.7 Service risers should be fire stopped at each floor level to achieve 60-minute fire resistance.

4.4 PROTECTION OF DUCTWORK

4.4.1 Ductwork passing through fire resisting elements should either be fire resisting to the same rating or be provided with fire and smoke dampers interlinked to the fire detection and alarm system. However, fire and smoke dampers are not suitable for escape stairs, where fire resisting ductwork should be provided.

4.5 CONCEALED SPACES

4.5.1 Cavity barriers should be provided within cavities for all other areas, in all the following locations:

- At the edge of cavities, including around openings (windows, doors, service penetrations, etc).
- At the junction of a cavity and a compartment floor / wall or a fire resisting partition.
- To limit cavities to 20m (if surfaces exposed achieve Class C-s3, d2 or better) or 10m.

Classification of Linings	European Classification
Circulation Spaces Outside Dwellings	B-s3, d2
Circulation Spaces Within Dwellings	C-s3, d2
Other Rooms	C-s3, d2
Small Rooms not more than 4m ² or 30m ² in residential and non-residential accommodation, respectively	D-s3, d2

Note:

- A wall or ceiling does not include the following
 - Doors and door frames.
 - Window frames and frames in which glass is fitted.
 - Picture rails, skirtings, exposed beams, and similar narrow members
- Parts of walls in rooms may be of lower performance than stated above, but no worse than class D-s3, d2. In any one room, the total area of lower performance wall lining, should be less than an area equivalent to half of the room's floor area, up to a maximum of 20m² or 60m² of wall lining in residential and non-residential accommodation, respectively.

Table 3 – Wall and Ceiling Linings

Building Element	Minimum Resistance Rating ⁽¹⁾	Method of Exposure	Fire Doors ⁽²⁾
Structure	60 R	Exposed faces	N/A
Compartment Floors	60 REI	From below	N/A
Common Balcony Floors	60 REI	From below	N/A
Wall Adjacent to Common Balcony	60 REI	From below	N/A
Staircases	60 REI	Each side separately	FD30S
Passenger Lift	60 REI	Each side separately	FD30
Service Riser	60 REI	Each side separately	FD30S
Residential Flats	60 REI	Each side separately	FD30S
Common Corridors	60 REI	Each side separately	FD30S
Protected Entrance Halls	30 REI	Each side separately	FD30
Commercial Unit	60 REI	Each side separately	FD60S
Ancillary Areas	60 REI	Each side separately	FD30S
External Walls (Protected)	60 REI	From inside	N/A
Party Walls	60 REI	Each side separately	N/A
Cavity Barriers	60 REI	Each side separately	N/A

Notes:

- "R", "E" and "I" – are the European classification for fire performance in respect to load-bearing capacity, integrity and insulation tested to the relevant part of BS 476 or European Standard.
- All fire doors should be tested to the relevant part of BS 476 or European Standard. "S" denotes smoke seal.

Table 4 – Fire Resisting Construction

5 EXTERNAL FIRE SPREAD

5.1 RELEVANT BOUNDARIES

- 5.1.1 Relevant boundaries depend on the site layout as presented below:
- a) Where a building is facing a public road, railway, canal or river, the relevant boundary is taken as the centreline of that public road, railway, canal or river (boundaries A, B and E).
 - b) Where a building is facing only the site boundary, the relevant boundary should be taken as the actual site boundary (boundaries C and D).
 - c) For large sites with more than one building on the same site, relevant boundaries should be taken as notional boundaries in between buildings on the same site, including in between the different blocks forming part of the development (boundaries F as taken from both sides).

5.2 EXTERNAL WALL CONSTRUCTION

- 5.2.1 Regulation 7 of the Building Regulations identifies a building with a storey at least 18m above the ground level and which contains dwellings to be classed as a ‘Relevant Building’. The proposed building is not a ‘Relevant Building’ as defined by this regulation.
- 5.2.2 Notwithstanding this, it is recommended that the external walls are designed in accordance with the requirements for a ‘Relevant Building’. Therefore, it is proposed that materials forming part of the external wall achieve European Class A2-s1, d0 or better in accordance with BS EN 13501-1:2007+A1:2009, as good practice. Specified attachments for external walls such as balconies should also achieve European Class A2-s1, d0 or better. The Designer should refer to Regulation 7 of the Building Regulations for further details on a ‘Relevant Building’.
- 5.2.3 Fire resisting external wall areas achieving 60-minute fire resistance should be provided within 1.0m of a relevant boundary (i.e. party walls towards boundaries C and D as presented in Figure 2) in order to limit fire spread to other buildings. Any glazing should be 60 minutes integrity and insulation and kept locked shut.
- 5.2.4 Fire resisting external wall areas achieving 60 minutes fire resistance should be provided within 1.8m either side of re-entrant corners (i.e. corners of 130° or less) in order to limit fire spread in between different fire compartments (including, but not limited to, flats and staircases).
- 5.2.5 Cavity barriers should be provided within external wall cavities, in accordance with Section 4.1.12.

5.3 SPACE SEPARATION

- 5.3.1 To prevent the risk of external fire spread from one building to another, the amount of unprotected area that is allowed on an elevation should be limited, or the separating distance should be sufficient as to reduce the risk of excessive radiation causing fire spread.
- 5.3.2 BR 187 has been employed in order to assess space separation. The radiation intensity has been selected as 84kW/m² for residential areas and 168kW/m² for the commercial / retail unit.
- 5.3.3 Figure 2 and Table 5 present the results of the assessment, indicating the largest enclosing rectangle on each elevation. The design team should review the dimensions identified in Table 6 to ensure these are accurate.

5.4 ROOF COVERINGS

- 5.4.1 Performance of the resistance of roofs to external fire exposure, is measured in terms of penetration through the roof construction and the spread of flame over its surface. The roof should achieve European Class B_{ROOF}(t4).
- 5.4.2 Green roofs should comply with DCLG publication ‘[Fire Performance of Green Roofs and Walls](#)’.

Building Elevation	Enclosing Rectangle (H × W)	Unprotected % Allowed	Minimum Boundary Distance Required (m)	Actual Boundary Distance (m)	Maximum Unprotected area allowed per unit (m²)
Residential areas (84kW/m²)					
A	3m × 12m	100	3.5	>3.5	36
B ⁽¹⁾	3m × 12m	60	2.5	>2.5	21
C	3m × 12m	0 ⁽²⁾	0.0	0.0	1 ^{(2) (3)}
D	100% protected 60-minute party wall ⁽²⁾				
E	3m × 12m	100	3.5	>3.5	Yes
F	3m × 12m	100	3.5	>3.5	Yes
Commercial / retail unit (168kW/m²)					
A	3m × 18m	100	6.5	>6.5	Yes
F	100% protected 60-minute party wall ⁽²⁾				
D	100% protected 60-minute party wall ⁽²⁾				
E	3m × 15m	100	6.0	>6m	Yes
Notes:					
1. The adjoining road at the North of the development is assumed to be a public road.					
2. This elevational wall should achieve 60-minute fire resistance from both sides (inside and outside)					
3. The balcony edge should be at least 1.5m away from the site boundary.					

Table 5 – Space Separation Calculations

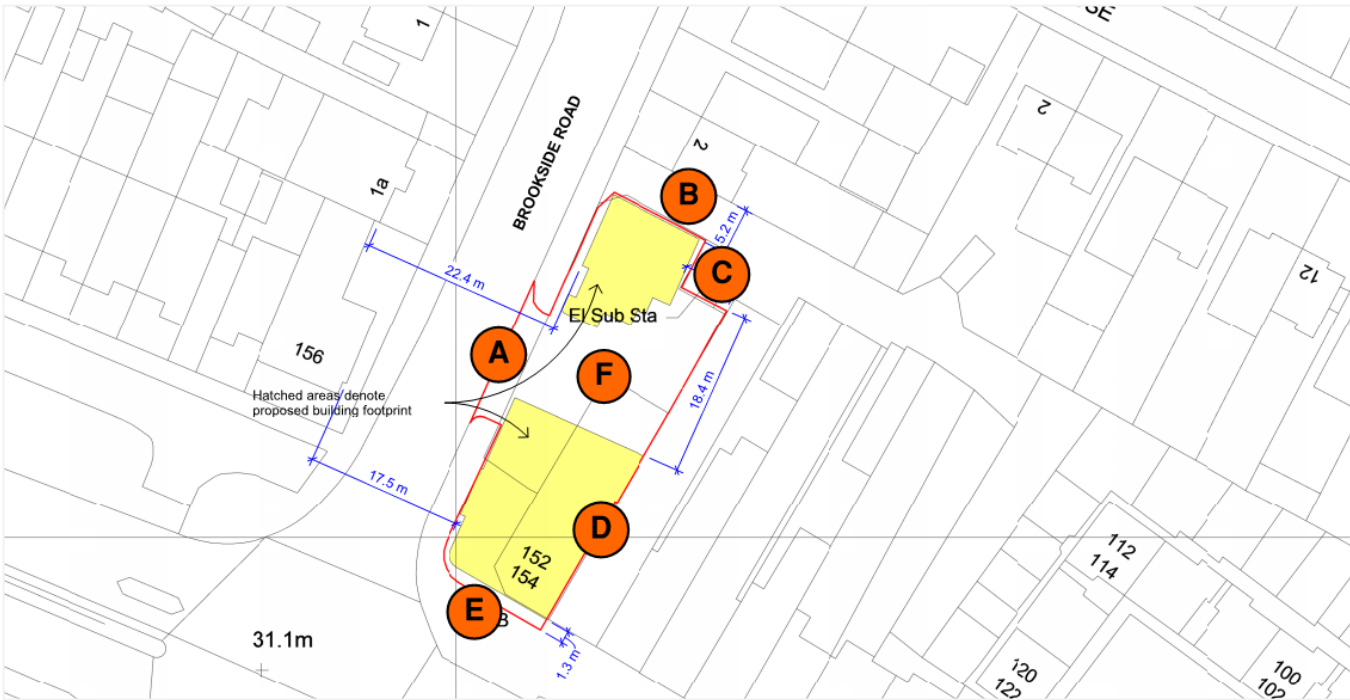


Figure 2 – Elevations Identification

6 ACCESS AND FACILITIES FOR THE FIRE SERVICE

6.1 VEHICLE ACCESS

- 6.1.1 Access to and around the site will be primarily via Uxbridge Road at the South of the building, and Brookside Road at the West of the building.
- 6.1.2 There should be vehicle access for a pumping appliance to a block of flats to within 45m along a route suitable for laying hose of all points within each flat. This is not achievable; therefore, a dry rising main is required in Stair 2. The dry riser main should conform to BS 9990 and comprise of a dry riser inlet positioned on the front of the building adjacent to Stair 2, and a dry riser outlet valve at each full landing in the staircase. A pumping appliance should be capable of getting within 18m of the dry riser inlet.
- 6.1.3 From the vehicle access route, there is suitable perimeter access to fight a fire in the commercial / retail unit such that all areas are within 45m along a route suitable for laying hose. The access route is presented in Figure 3.
- 6.1.4 Due care should be given to ensure that the vehicle access route meets the requirements of a pumping appliance as presented in Table 6, however it is expected that the adjacent public roads achieve these requirements

6.2 FACILITIES FOR THE FIRE SERVICE

- 6.2.1 Access into the building for Fire Service personnel is provided via the entrance doors to each staircase. The access points are presented in Figure 3. Additional access will be provided via perimeter doors for the commercial / retail unit and the ancillary areas on the ground floor.
- 6.2.2 A summary of the provisions in support of firefighting operations is presented in Table 7. It is noted that staircases 1 and 2 will each include a small single stair building design.
- 6.2.3 It is noted that within the building, firefighting operations will be via the normal circulation routes.
- 6.2.4 The covered car park requires smoke ventilation in accordance with BS 7346-7, which will be provided via two natural openings achieving each 24m² free area, even if the car park is 84m².
- 6.2.5 A fireman’s switch should be provided within each staircase, controlling each smoke ventilation systems (i.e. AOV) that are associated with the staircase.
- 6.2.6 Even if the building will not be more than 11m tall, it is recommended to include wayfinding signage for the responding Fire Service. Each floor level should have its floor number clearly marked on each landing within each staircase. Additionally, flat indicator signs which provide information relating to the flat number accessed on each storey should be provided.

6.3 WATER SUPPLIES

- 6.3.1 There should be a hydrant in accordance with BS 9990 within 90m of the building entrance. Each fire hydrant should be clearly indicated by a plate, affixed nearby in a conspicuous position in accordance with BS 3251.
- 6.3.2 A site survey should be carried out to confirm the above criteria are achieved based on any existing hydrant provisions. If this survey establishes that the existing hydrants are inadequate, then additional private hydrants should be included on site.

Appliance type	Minimum width of road between kerbs	Minimum width of gateways	Minimum turning circle between kerbs	Minimum turning circle between walls	Minimum clearance height	Minimum carrying capacity
Pump	3.7m	3.1m	16.8m	19.2m	3.7m	14.0 tonnes
Notes: 1. Fire appliances are not standardised. The local Fire Service may use other dimensions. 2. The road base can be designed to 14 tonnes. Structures such as bridges should have the full 17 tonne capacity. The weight of high reach appliances is distributed over several axles, so infrequent use of a route designed to accommodate 14 tonnes should not cause damage.						

Table 6 – Typical Fire Service Vehicle Access Route Specification

Staircase	Areas served	Dry Riser Main	Smoke Ventilation		
			Type	Size	Position
1	Residential (G+2, Roof)	No	AOV	1.0m²	Head of the stair
2	Residential (G+2, Roof)	Yes	AOV	1.0m²	Head of the stair

Table 7 – Summary of Firefighting Provisions

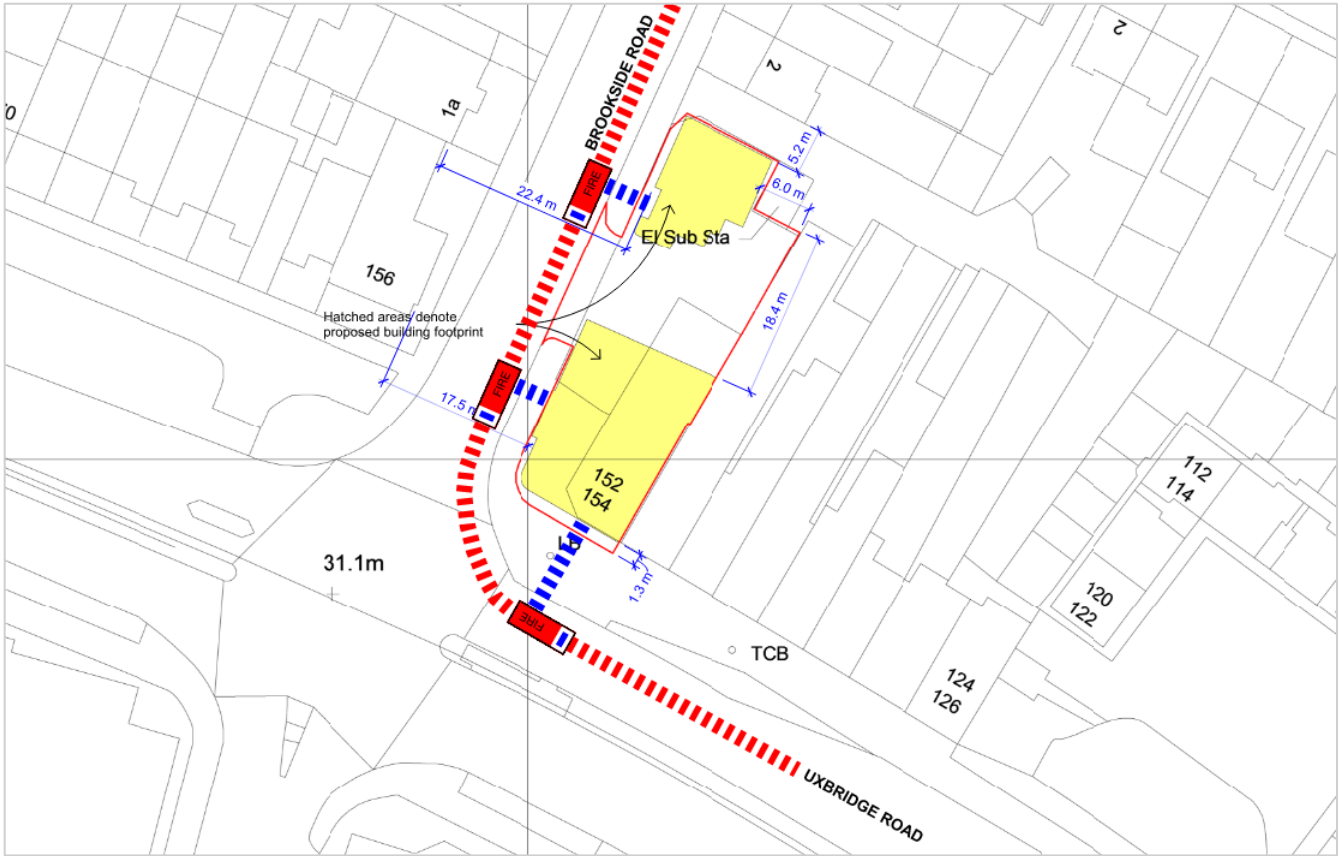


Figure 3 – Fire Service Vehicle Access

7 APPENDIX A – FIRE STATEMENT FORM

Application information	
1. Site address	152-154 Uxbridge Road, Hayes UB4 0JH
2. Description of proposed development including any change of use (as stated on the application form):	The project represents a new-build, 3 storey (G+2, Roof) mixed-use development split across two cores. The development will be approximately 9.7m in height as measured up to the topmost habitable floor (third floor communal amenity garden). The building will include one commercial / retail unit on the ground floor. All above ground floors will include residential units split into two cores. There will also be a partially covered car park at ground floor.
3. Name of person completing the fire statement, relevant qualifications and experience.	John Dowd BEng (Hons) MSc CEng MIFireE MCABE <u>Professional Accreditation and Registrations</u> • UK Engineering Council – Chartered Engineer (CEng) • The Institution of Fire Engineers – Member (MIFireE) • Chartered Association of Building Engineers – Member (MCABE) <u>Academic Qualifications</u> • Master of Science in Fire Safety Engineering – University of Central Lancashire • Bachelor of Engineering in Fire Engineering – University of Central Lancashire <u>Experience</u> • Director Solas Realta Ltd 2018 – Present • Director Clarke Banks Ltd 2016 – 2018 • Principal Fire Engineer 3SFire Ltd 2014 – 2016 • Senior Fire Engineer Hampshire Fire and Rescue Service 2014 – 2016 • Fire Safety Inspector Hampshire Fire and Rescue Service 2013 - 2014 • Fire Alarm Engineer - Cube Fire and Security 2006 -2013
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.	No consultation has been undertaken up to this point with any statutory body such as the local fire service or the building safety regulator / local authority.
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: provided as a separate plan Please see Figure 1 in the report indicating both blocks as served by a single core each on the above ground floors.	
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
1 & 2	- 9.7m in accordance with Diagram D6 of ADB - 3 storeys (GF+2+Roof)	residential flats, maisonettes, studios (GF + Upper Floors)	ground floor and above	BS9991	class A2-s1, d0 or better	class A2-s1, d0 or better	stay put	none	M4(2) & M4(3)
		car parking & Retail Unit (Ground Floor)	ground floor	BS9999	no balconies	class A2-s1, d0 or better	simultaneous	none	N/A non resi
7. Specific technical complexities									
The development will achieve code compliance with BS 9991 and BS 9999.									
The residential cores will achieve compliance with small single stair building design and this is not considered to represent an unconventional design.									
The top floor of core 1 will include communal amenity garden as per BS 9991 recommendations.									
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.									
A Concept Fire Strategy Report was developed for this project to begin the Golden Thread process. It is understood that the design will be developed from this report herein, and this report will evolve into a Detailed Fire Safety Strategy Report which will be issued to a Building Control Body and the Fire Service for approval. Please see the key provisions below that have being addressed in addition to those discussed in Point 7 above:									
Escape within Flats									
All residential units will be designed as flats with protected entrance halls, serving all habitable rooms and achieving 30 minutes fire resistance. Cooking appliances in flats should be located a minimum of 1.8m from escape routes.									
Smoke Ventilation									
An AOV achieving a minimum of 1.0m2 should be provided at the head of each stair.									
The covered car park requires smoke ventilation in accordance with BS 7346-7, which will be provided via two natural openings achieving each 24m2 free area, even if the car park is 84m2.									
Cladding System									
It is proposed as good practice that the external wall system achieves compliance with the amendment to Regulation 7, even if the building is not a ‘Relevant Building’. Space separation calculations indicate sufficient separation from the relevant boundaries; however party walls will be required in some areas.									
9. Local development document policies relating to fire safety									
BS9991 and BS9999 were the only fire safety documents used for this building, with residential areas covered by BS9991 and commercial / ancillary areas covered by BS9999.									
Consideration should be given by the design team to Policy D12 of the London Plan which indicates that all disabled occupants should include dignified escape (i.e. via an evacuation lift). The design team should also indicate how compliance is achieved with The Equality Act 2010.									

Emergency road vehicle access and water supplies for firefighting purposes	
10. Fire service site plan BS 9991 and BS 9999 were the guidance documents used to ensure the development has reasonable provisions for the Fire Service. Access to and around the site will be primarily via Uxbridge Road at the South of the building, and Brookside Road at the West of the building. There should be vehicle access for a pumping appliance to a block of flats to within 45m along a route suitable for laying hose of all points within each flat. This is achievable; therefore, dry rising mains are not required. From the vehicle access route, there is suitable perimeter access to fight a fire in the commercial / retail unit such that all areas are within 45m along a route suitable for laying hose. Public hydrants (existing) should be provided within 90m of the cores, achieving a flow rate of at least 1,500 litres/minute in accordance with BS 9990. A site survey should be carried out to confirm the above criteria are achieved based on any existing hydrant provisions. If this survey establishes that the existing hydrants are inadequate, then additional private hydrants should be included on site. An AOV achieving a minimum of 1.0m² should be provided at the head of each stair. The covered car park requires smoke ventilation in accordance with BS 7346-7, which will be provided via two natural openings achieving each 24m² free area, even if the car park is 84m².	
11. Emergency road vehicle access Specify emergency road vehicle access to the site entrances indicated on the site plan Access to and around the site will be primarily via Uxbridge Road at the South of the building, and Brookside Road at the West of the building. There should be vehicle access for a pumping appliance to a block of flats to within 45m along a route suitable for laying hose of all points within each flat. This is achievable; therefore, dry rising mains are not required. From the vehicle access route, there is suitable perimeter access to fight a fire in the commercial / retail unit such that all areas are within 45m along a route suitable for laying hose. Due care will be given to ensure that the vehicle access route achieves the requirements for the local Fire Service with typical values presented in Table 6. Any access / security measures in and around the site (especially any barriers or bollards preventing vehicle access) will need to be by-passable by the Fire Service. This should be confirmed by tracking exercises, but it is likely to be satisfactory as the access to the site is via public highways. Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed? yes	
12. Siting of fire appliances There should be vehicle access for a pumping appliance to a block of flats to within 45m hose laying distance of all points within each flat. This is achievable; therefore, dry rising mains are not required. From the vehicle access route, there is suitable perimeter access to fight a fire in the commercial / retail unit such that all areas are within 45m along a route suitable for laying hose.	
13. Suitability of water supply for the scale of development proposed Public hydrants (existing) should be provided within 90m of the cores, achieving a flow rate of at least 1,500 litres/minute in accordance with BS 9990. A site survey should be carried out to confirm the above criteria are achieved based on any existing hydrant provisions. If this survey establishes that the existing hydrants are inadequate, then additional private hydrants should be included on site. 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 is: Please see Figure 3. provided as a separate plan	
Fire statement completed by	
15. Signature	
16. Date	23/12/2021