

Fire Statement – FS 001.3

Project: Napier Court, Reading
Subject: Gateway 1 - Fire Statement
Date: 12 June 2024
Author: Stephen Murphy
Checked: Roy Little



1 Introduction

This Fire Statement has been prepared by Design Fire Consultants (DFC) and is submitted in support of the planning application made by Peveril Securites Limited for the Napier Court development located in Reading.

The Napier Court development consists of the construction of new 11 storey buildings (as defined by planning documentation) to provide 576 residential dwellings. There are two buildings, each with two blocks; Building 1 consists of Blocks A & B, and Building 2 consists of Blocks C & D. From a fire safety design perspective, Building 1 is a 12 storey building and Building 2 is an 11 storey building; both buildings include Ground Floor and 10 above ground storeys; L01 through L10, with amenity at L11 of Building 1. Both buildings have a height of more than 30m to the topmost occupied storey from lowest adjacent ground level.

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

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

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

1.1 Town and Country Planning Order

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

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

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

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

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

A relevant building is currently defined as:

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

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

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

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

1.2 Relevant Documents

Table 1: Relevant documents used to inform the Fire Statement

Name	Reference
Ground Floor Plan - Masterplan	READ-5PA-ZZ-00-DR-A-022200
Ground Floor GA Plan - Block A & B	READ-5PA-AB-GF-DR-A-022200
First Floor GA Plan - Block A & B	READ-5PA-AB-01-DR-A-022200
Second Floor GA Plan - Block A & B	READ-5PA-AB-02-DR-A-022200
Third Floor GA Plan - Block A & B	READ-5PA-AB-03-DR-A-022200
Fourth Floor GA Plan - Block A & B	READ-5PA-AB-04-DR-A-022200
Fifth Floor GA Plan - Block A & B	READ-5PA-AB-05-DR-A-022200
Sixth Floor GA Plan - Block A & B	READ-5PA-AB-06-DR-A-022200
Seventh Floor GA Plan - Block A & B	READ-5PA-AB-07-DR-A-022200
Eighth Floor GA Plan - Block A & B	READ-5PA-AB-08-DR-A-022200
Ninth Floor GA Plan - Block A & B	READ-5PA-AB-09-DR-A-022200
Tenth Floor GA Plan - Block A & B	READ-5PA-AB-10-DR-A-022200
Eleventh Floor GA Plan - Block A & B	READ-5PA-AB-11-DR-A-022200
Roof Level GA Plan - Block A & B	READ-5PA-AB-RF-DR-A-022200
Proposed Sections - Block A	READ-5PA-AA-ZZ-DR-A-052202
Proposed Sections - Block B	READ-5PA-BB-ZZ-DR-A-052203

Name	Reference
Proposed Elevations, Sheet 1 of 2 - Block A	READ-5PA-AA-ZZ-DR-A-042201
Proposed Elevations, Sheet 2 of 2 - Block A	READ-5PA-AA-ZZ-DR-A-042202
Proposed Elevations, Sheet 1 of 2 - Block B	READ-5PA-BB-ZZ-DR-A-042203
Proposed Elevations, Sheet 2 of 2 - Block B	READ-5PA-BB-ZZ-DR-A-042204
Ground Floor GA Plan - Block C & D	READ-5PA-CD-GF-DR-A-022200
First Floor GA Plan - Block C & D	READ-5PA-CD-01-DR-A-022200
Second Floor GA Plan - Block C & D	READ-5PA-CD-02-DR-A-022200
Third Floor GA Plan - Block C & D	READ-5PA-CD-03-DR-A-022200
Fourth Floor GA Plan - Block C & D	READ-5PA-CD-04-DR-A-022200
Fifth Floor GA Plan - Block C & D	READ-5PA-CD-05-DR-A-022200
Sixth Floor GA Plan - Block C & D	READ-5PA-CD-06-DR-A-022200
Seventh Floor GA Plan - Block C & D	READ-5PA-CD-07-DR-A-022200
Eighth Floor GA Plan - Block C & D	READ-5PA-CD-08-DR-A-022200
Ninth Floor GA Plan - Block C & D	READ-5PA-CD-09-DR-A-022200
Tenth Floor GA Plan - Block C & D	READ-5PA-CD-10-DR-A-022200
Roof Level GA Plan - Block C & D	READ-5PA-CD-RF-DR-A-022200
Proposed Sections - Block C	READ-5PA-CC-ZZ-DR-A-052204
Proposed Sections - Block D	READ-5PA-DD-ZZ-DR-A-052205
Proposed Elevations, Sheet 1 of 2 - Block C	READ-5PA-CC-ZZ-DR-A-042203
Proposed Elevations, Sheet 2 of 2 - Block C	READ-5PA-CC-ZZ-DR-A-042204
Proposed Elevations - Block D	READ-5PA-DD-ZZ-DR-A-042204

2 Fire Statement Form

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

Table 2: Application information

Application information		
1.	Site Address line 1	Napier Court
	Site Address Line 2	Napier Road
	Site Address Line 3	
	Town/City	Reading
	County	Berkshire
	Site Postcode (Optional)	RG1 8BW
2.	Description of proposed development including any change of use (as stated on the application form)	Full planning application for demolition of the existing three office buildings, and construction of new 11 storey buildings, with amenity space at roof level (part indoor and set back), to provide 576 residential dwellings consisting of 1, 2 and 3-bedroom apartments. The development will include ancillary facilities for residents, such as a residents' lounge, gym and communal workspace. The buildings will be set in landscaping to the front and between the buildings together with roof terraces. Parking is proposed for 39 cars and 6 motorbikes. Three internal storage spaces are proposed at ground floor for 289 bicycles and an additional 20 cycle spaces are provided externally for visitors. The site is 1.26 ha in size and stretches east to west along Napier Road, bound by the railway line to the south, Napier Road and Kings Meadow to the north, Thames Quarter to the west and a Network Rail site to the east. The site is located within the administrative boundary of Reading Borough Council and is very well connected to the train station, bus services and town centre facilities.
		The above description is as stated in the application form. It is acknowledged that the remainder of the Fire Statement references 11 & 12 storeys; this is due to the alternative definitions used for fire safety guidance, which includes the L11 amenity level as a storey.

Application information		
3.	Name of person completing the Fire Statement (as Section 15), relevant qualifications and experience.	Author's Name: Stephen Murphy Post-Nominals: BSc, MSc Relevant Qualifications and Experience: Stephen has 17 years' experience in fire safety engineering consultancy, including residential and mixed-use developments. Checker's Name: Roy Little Post-Nominals: BEng, MSc, CEng, MIFireE, MSFPE Relevant Qualifications and Experience: Roy is CEng registered through the Engineering Council division of the Institute of Fire Engineers. Roy has technical expertise across the fire engineering discipline having worked on residential projects of different scales; from small residential buildings through to high rise towers and those that form part of larger mixed-use schemes. He is able to draw on experience of working with numerous stakeholders, with the ability to adapt his approach in order to deliver the required fire engineering solution, both practically and regulatory.
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.	The project is currently progressing through RIBA Stage 3. Initial discussions have been undertaken with the Building Regulations advisors; Sweco and Ryders, with technical complexities / fire safety design challenges identified. These are outlined under Application Information Items 7 & 8. Further consultation will be undertaken throughout design development. Information in relation to the project has been submitted to the HSE pre-application service (HSE Ref: PGO-3966-01). Comments provided by the HSE have been utilised to develop the fire safety design and identify relevant information included in this document.
5.	Site layout plan with block numbering as per building schedule referred to in 6. <i>(consistent with other plans drawings and information submitted in connection with the application)</i>	 Key: Block A Block B Block C Block D

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

The principles, concepts and approach relating to fire safety				
6. Building Schedule				
Site Information				
a) Block no. as per site layout plan above	Block A	Block B	Block C	Block D
b) Block height (m)	36m	32m		
	To the topmost occupied storey from lowest adjacent ground level.			
Number of storeys excluding those below ground level	12 above ground storeys (Ground, and L01 through L11).	11 above ground storeys (Ground, and L01 through L10)		
Number of storeys including those below ground level	12 storeys (No basement storeys)	11 storeys (No basement storeys)		
c) Proposed use (one per line)	Residential apartments (1, 2 and 3-bed open plan apartments).			
	Ancillary areas (plant rooms, landlord offices and storage rooms). Amenity areas (residential entrance, post storage rooms, cinema room and gym).		Ancillary areas (plant rooms and storage rooms). Amenity areas (residential entrance and post storage rooms).	
d) Location of use within block by storey	Block A	Block B	Block C	Block D
	L11 – Amenity with terrace	N/A		
	L11 – Roof-top plant (photovoltaics)			
	L01 through L10 – Open-plan apartments			
	L00 – Open-plan apartments			
	L00 – Various ancillary and amenity			

The principles, concepts and approach relating to fire safety	
Building Information	
e) Standards relating to fire safety/ approach applied	BS 9991, 'Fire safety design, management and use of residential buildings', 2015. BS 9999, 'Code of practice for fire safety in the design, management and use of buildings', 2017. Approved Document B, Volume 1, 'Dwellings', 2019 edition incorporating 2020 and 2022 amendments.
f) Balconies	Class A2-s1, d0 or better
g) External wall systems	Class A2-s1, d0 or better
Residential Safety Information	
h) Approach to evacuation	Stay Put evacuation approach for the apartments. An evacuation alert system will be provided to enable the activation of wider evacuation should this be deemed necessary by the fire service. A simultaneous evacuation strategy will be applied to zones of ancillary and amenity areas; expected to be zoned by block and storey.
i) Automatic suppression	BS 9251², provided throughout the residential areas. BS EN 12845³ sprinkler system to amenity and ancillary. Alternative suppression proposed for electrical rooms unsuitable for sprinkler protection. Enhanced passive protection proposed to substation, and any other room (subject to detailed design) unsuitable for automatic suppression.
j) Accessible housing provided	M4(3) will be provided to 5% of apartments.

² BS 9251, 'Fire sprinkler systems for domestic and residential occupancies – Code of practice', 2021.

³ BS EN 12845 + A1, 'Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance', 2019.

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

Open plan apartment layout: The proposed layouts exceed 8m x 4m in area and consists of open kitchen design. DFC have carried out a literature review to determine that such an arrangement can achieve an adequate level of safety. Apartment layouts have been developed to maintain an escape width from inner rooms of 0.9m that does not pass within 1.8m of hob locations. If required, an assessment into the effectiveness of protection devices, e.g. power cut-off, in conjunction with sprinkler system in protecting means of escape will be quantified during detailed design to support assessment of compliance with Part B of Schedule 1 to the Building Regulations (hereafter referred to as Part B).

Evacuation lifts and the associated lobbies: The design includes lifts suitable for evacuation use in each core. The lifts will have lobbies separate to common corridors, see also mechanical smoke ventilation complexity below. The method of evacuation lift operation, e.g. controlled by a person evacuating, is not subject to recommendations in the stated fire safety guidance documents and therefore requires development.

Mechanical smoke ventilation system (MSVS) detailed design: The design includes multiple smoke shafts providing powered exhaust and natural replacement air. The systems are proposed to draw smoke away from cores, stairs and evacuation lift lobbies. Where extended corridors are proposed, i.e. >15m travel (Block A), the MSVS design will provide clearance in accordance with Annex A of BS 9991. The system design will be developed using computational fluid dynamics (CFD) to demonstrate protection of cores to meet the recommendations of BS 9991.

Fire suppression system coverage: There are rooms, substation as a minimum, that cannot be protected by automatic suppression. A review and potential enhancement of passive fire protection around rooms that cannot be protected by an appropriate automatic suppression system will be developed during detailed design to support assessment of Part B compliance.

Green roof and roof finishes: Certain roof finishes, e.g. portions of green roof, cannot be tested to the relevant roof surface classification tests. Where such elements are proposed, alternative classification and assessments will be undertaken to support assessment of Part B compliance.

Balcony detailed design: Open private balconies are proposed and will adhere to Regulation 7(2) requirements. Open private balconies are not subject to other recommendations in the stated fire safety guidance documents and the proprietary bolt-on balconies proposed do not provide a defined fire resistance period. The balcony design will be developed with due consideration of BS 8579 recommendations to minimise risk to structural impact in the event of fire and to mitigate fire spread.

External wall fire barriers: Cavity barrier and fire stopping details are being developed in conjunction with rainscreen cladding ventilation requirements and façade fixings. There are complexities due to the space available for all slab edge components and fire test limitations. Designs are being developed to avoid penetration of fire barriers where feasible and mitigate the impact of any penetrations necessary to meet the requirements of other Building Regulation requirements.

External water supply, hydrants: Existing hydrant locations are available in close proximity to each building. To achieve Part B compliance, an extension to an existing fire main is expected to be necessary, which will be subject to detailed design.

Items above have been discussed in principle with Building Regulations advisors for the project. The assessment to support the above will be fully detailed in the Building Regulations submission fire strategy report.

The principles, concepts and approach relating to fire safety

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.

Building use and fire hazards: The use of all spaces has been developed such that the strategic intent for the fire resisting enclosure and compartmentation strategy, and automatic suppression type and coverage has been developed to align with fire safety guidance for the intended occupancy characteristics.

Means of escape: The potential for occupancy by people who cannot use stairs unaided has been considered and lifts suitable for evacuation have been included in the design.

Technical complexities: The main variations from guidance are detailed in Section 7, these are to be developed further and fully assessed during design development.

Design development: The fire strategy design will be developed in accordance with the stated fire safety guidance, with due consideration to changes in guidance. Any deviations from the guidance as design develops will be assessed and the solution justified for submissions to approval authorities for compliance with Part B. As part of this, the fire strategy design has considered; draft BS 9991 and incorporated some key fire protection features to minimise the impact when the new BS 9991 is published, and Amendments to the Approved Document, March 2024, to include provisions recommended for projects post September 2026.

Future works: The fire strategy is being developed for the base build design. Where future building works (e.g. fit-out or changes post-handover) are exempt from the Building Regulations they would need to be managed under the Regulatory Reform (Fire Safety) Order 2005⁴. If the proposed works are to carry out 'building work' as defined in Regulation 3 of the Building Regulations, then the works must meet the relevant technical requirements in the Building Regulations at the time, and they must not make other fabric, services, and fittings less compliant than they were before – or dangerous.

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.

No local policies have been identified.

⁴ Statutory Instruments, '2005 No. 1541 Regulatory Reform, England and Wales, The Regulatory Reform (Fire Safety) Order 2005', 2005.

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

Emergency road vehicle access and water supplies for firefighting purposes
10. Fire service site plan <i>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?</i> Fire service access to the site is based on the guidance contained within BS 9991 and associated references to BS 9999. Two firefighting shafts are provided to each block, which shall include the following provisions: • A firefighting stair with minimum width of $\geq 1100\text{mm}$, designed in accordance with BS 5395-1. • An automatic opening vent (AOV) located at the head of the firefighting stair. The vent is to provide 1.0m^2 free area. • A firefighting lift designed and installed in accordance with BS EN 81-72 and BS EN 81-1, as appropriate. • A dry internal fire main in accordance with BS 9990, with outlets located within the stair. • A lift lobby, separated from the common corridor and provided with smoke ventilation. At residential storeys, the ventilation shaft in the lift lobby will provide replacement air to common corridor extract, to mitigate smoke spread to the lift lobby. Fire service access is provided by external doors direct to, or via a back-of-house corridor to, substations, primary switchrooms, generator rooms, and sprinkler system plant rooms. Direct access is also provided to residential entrance lobbies, which link to other ancillary and amenity spaces.
11. Emergency road vehicle access <i>Specify emergency road vehicle access to the site entrances indicated on the site plan.</i> Napier Road and a site service road combine to provide vehicle access around the development perimeter. The service road will be used as a one-way system, east to west, during normal operation and includes parking and laybys near each block to allow for long and short-term stopping. A swept path analysis has been completed (see Appendix A) to demonstrate suitable access for a pump appliance. BS 9999 recommended access road specification for pump appliances is proposed for the new site service road. <i>Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?</i> Yes, please refer to Appendix A.

Emergency road vehicle access and water supplies for firefighting purposes**12. Siting of Fire Appliances**

Fire vehicle access is to be provided for a pump appliance to within 18m and in sight of the access to each firefighting stair and dry internal fire main inlet.

The site service road, parking access, and lay-bys provide optional fire appliance siting to the south elevations. Napier Road provides optional fire appliance siting to the north elevations.

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

All Blocks will be provided with sprinkler protection in accordance with BS 9251 and/or BS EN 12845. The sprinkler systems are to be supported by suitably sized tanks which can accommodate the proposed design density and duration of supply.

A dry internal fire main in each firefighting stair will be provided in accordance with BS 9990.

Nature of water supply:

Hydrant – Public

Existing hydrants are located within 90m of each building.

In consideration of core access being on the service road side of the buildings, additional hydrants will be provided where necessary to assure a reasonable hose laying distance between hydrant and dry internal fire main inlets. Hose laying routes would be alongside the vehicle access routes and through the landscaping between the buildings.

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

The location of existing operational hydrants has been confirmed by the Water Officer department of Royal Berkshire Fire and Rescue Service.

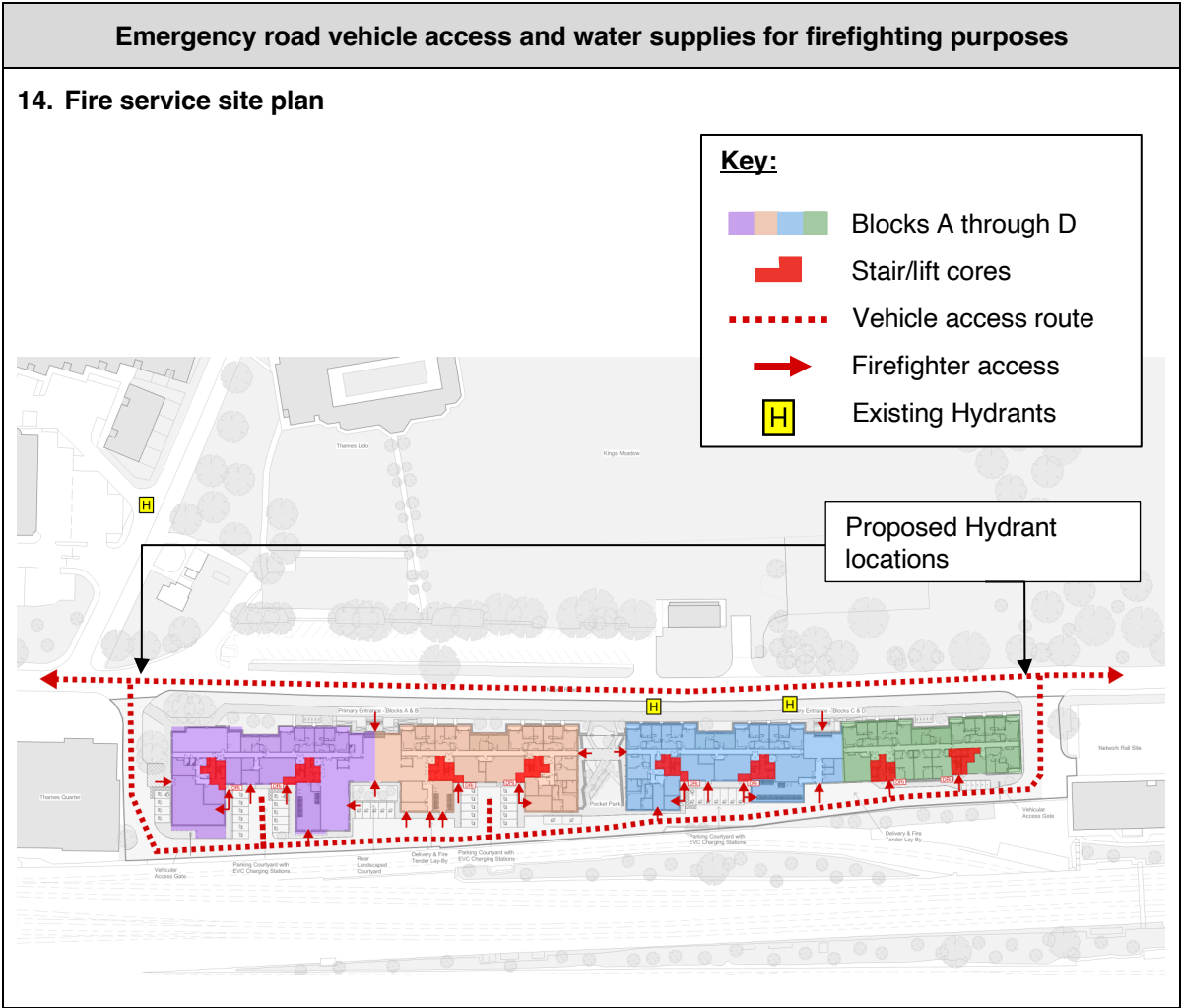
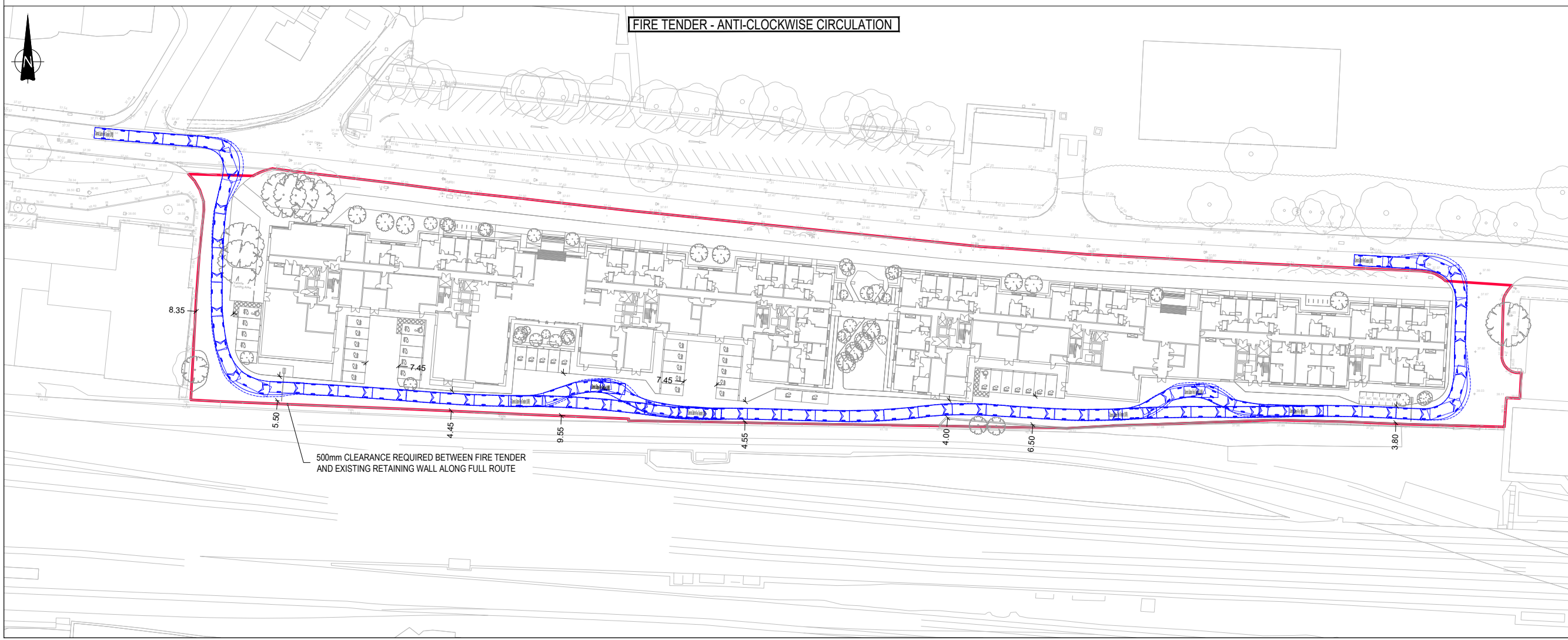
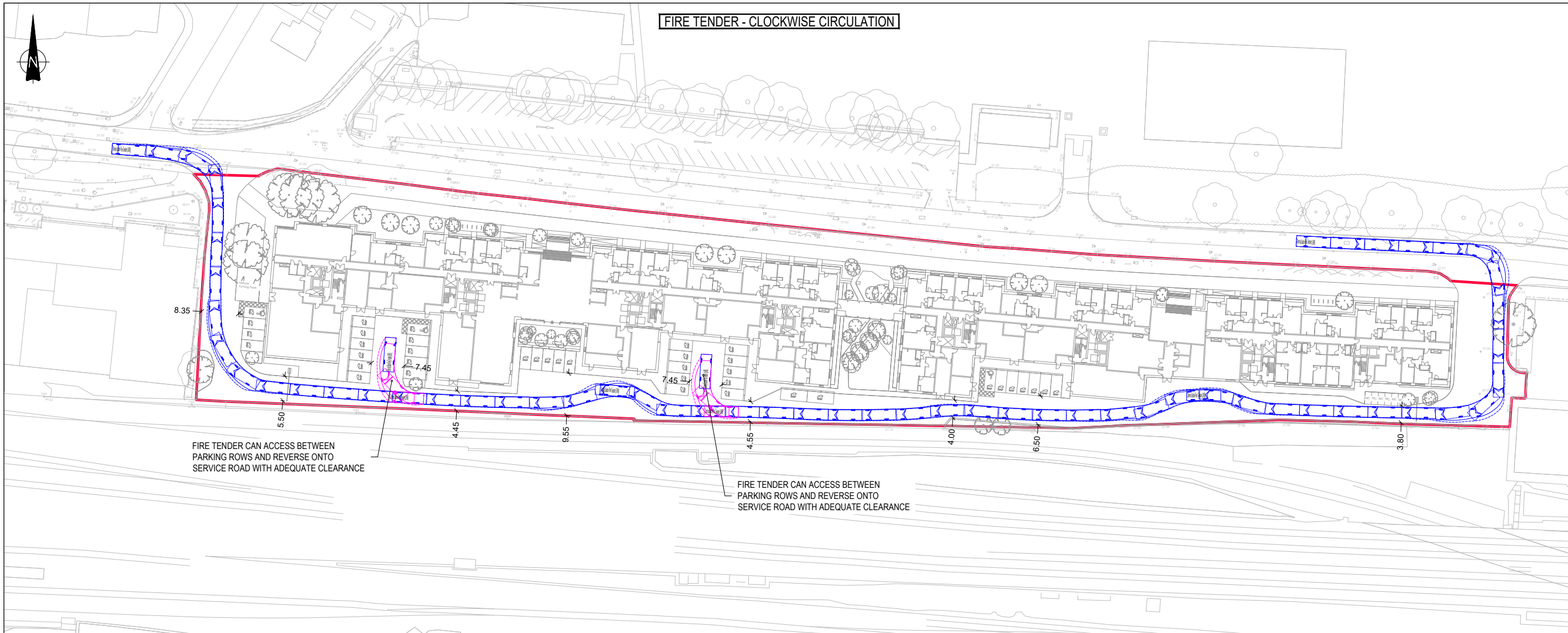


Table 5: Fire Statement completed by

Fire Statement completed by	
15. Signature	Author: Stephen Murphy  Checker: Roy Little 
16. Date	12 June 2024

Appendix A – Swept Path Analysis



GENERAL NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING.
- THE CONTENTS OF THIS DRAWING ARE FOR INDICATIVE INFORMATION ONLY AND ARE NOT SUITABLE FOR CONSTRUCTION PURPOSES.
- BASED ON SPLUS ARCHITECTS' LAYOUT.
DRAWING REF: 'READ-SPA-ZZ-00-DR-A-022200-Ground Floor Plan - Masterplan'

KEY: — EXTENTS OF RED LINE (as supplied by Splus)

VEHICLE PROFILE:

Dennis Sabre Fire Tender (LWB)
Overall Length: 7.700m
Overall Width: 2.500m
Overall Body Height: 3.500m
Max Body Ground Clearance: 1.000m
Track Width: 2.000m
Lock to Lock Size: 3.000m
Kerb to Kerb Turning Radius: 7.000m

P10	Layout updated	04/06/24	MQ	AT
P09	Layout updated	23/05/24	JM	AT
P08	Layout updated	15/05/24	JM	AT
P07	Layout & redline updated	02/05/24	JM	KOB
P06	Layout updated	22/03/24	JM	KOB
P05	Layout & redline updated	07/02/24	JM	KOB
P04	Layout updated	27/10/23	JM	KOB
P03	Layout updated	29/09/23	JM	KOB
P02	Layout updated	19/09/23	JM	KOB

Rev:	Description:	Date:	By:	Chkd:
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Status: FOR PLANNING

Project: NAPIER COURT, READING

Dig Title: SWEPT PATH ANALYSIS
7.7m FIRE TENDER

Drawn By JM	Designed By JM	Checked By BT
Date 15/09/23		Scales @ A1 1:500

Project No - Originator - Function - Spatial - Form - Discipline - Number			Revision
80908 - CUR - XX - 00 - D -TP- 05006			P10

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