MARSHALL FIRE

Title:	Enderby Place Planning Fire Statement
Revision:	01
Date:	27th November 2023
Author:	Richard Baker BEng (Hons)
Approver:	Daniel Taylor BSc (Hons) AIFireE

Revision	Description	Author	Approver	Date
00	Draft issue	Richard Baker	Daniel Taylor	24th November 2023
00	Draft issue – minor revisions	Richard Baker	Daniel Taylor	27th November 2023

Contents

1. Introduction

1.1 Overview

Marshall Fire have been appointed by Maritime View Limited to provide a Planning Fire Statement for The Enderby Place development on the land to the north of Telegraph Avenue, London, SE10. Our role is therefore to assist in steering the scheme towards meeting the requirements of the London Plan, Policy D12 and Policy D5.

This Fire Statement will consider the evolution of the development and the principles of the golden thread concept and will form the basis of the developing Fire Strategy.

The 'Golden Thread' refers to a concept where the fire safety information of a building is to be updated and maintained through the whole life cycle of the building. The fire safety information should be maintained and updated as the development evolves in line with the principles of the golden thread. The fire safety information provided at planning application stage should be developed to inform the overall fire strategy for the development. When passing fire safety information to subsequent development stages, consideration should be given to the accessibility, accuracy and relevance of the information to ensure the development is constructed as it has been designed and originally specified.

1.2 Purpose of this report

The purpose of this report is to review the proposals in terms of the Planning Gateway One and London Plan requirements and to demonstrate the development meets the highest standards of fire safety, proportionate to the size and nature of the development.

It is considered a planning requirement to provide a fire statement and best practice is to follow the structure of the digital Planning Gateway One template which also covers the London Plan requirements for Fire Safety.

It should be noted that the project will still need to comply with the requirements of the Building Regulations and therefore the information presented herein may be developed further such that compliance with the requirements of the Building Regulations is demonstrated.

The contents of this report should therefore not be considered sufficient to form a part of the Building Regulations submission for the project and Building Regulation approval should be considered a risk until such time that approval in principle has been granted by the appointed Building Control Body.

The findings of this statement are based on the information available at the time of review. Marshall Fire cannot be held responsible for any subsequent changes to the design that we are not made aware of.

1.3 Scheme description

The development is known as Enderby Place, is located on land to the north of Telegraph Avenue, London, SE10. The project is a new build residential development consisting of three blocks referred to as River Tower, Telcon Tower and Morden Tower that are arranged around central stair and lift cores with floors greater than 30m above ground in each block and each block provided with a two-stair design. All blocks have a firefighting core with firefighting lift and evacuation lift provisions together with a firefighting stair, and a second stair supporting means of escape stair for alternative escape.

There is a change of level on the site with Telcon Tower, and Morden Tower at the east of the site entered at ground and River Tower to the west entered from the podium level that is one storey above ground. The ground, podium and Level 1 provide ancillary spaces as:

- Ground floor – Car park and loading, cycle stores, refuse stores, plant rooms and commercial unit.
- Podium Level - Entrance lobbies entered from central garden, and commercial units.
- Level 1 – Commercial units.

Residential ancillary spaces at ground and podium will be designed in accordance with BS 9991 under ancillary accommodation assuming it is for residents and visitors only. Commercial units will be designed in accordance with BS 9999 and a risk profile would need to be applied accordingly. These are currently shell and core, having more than one escape route and will be developed accordingly.

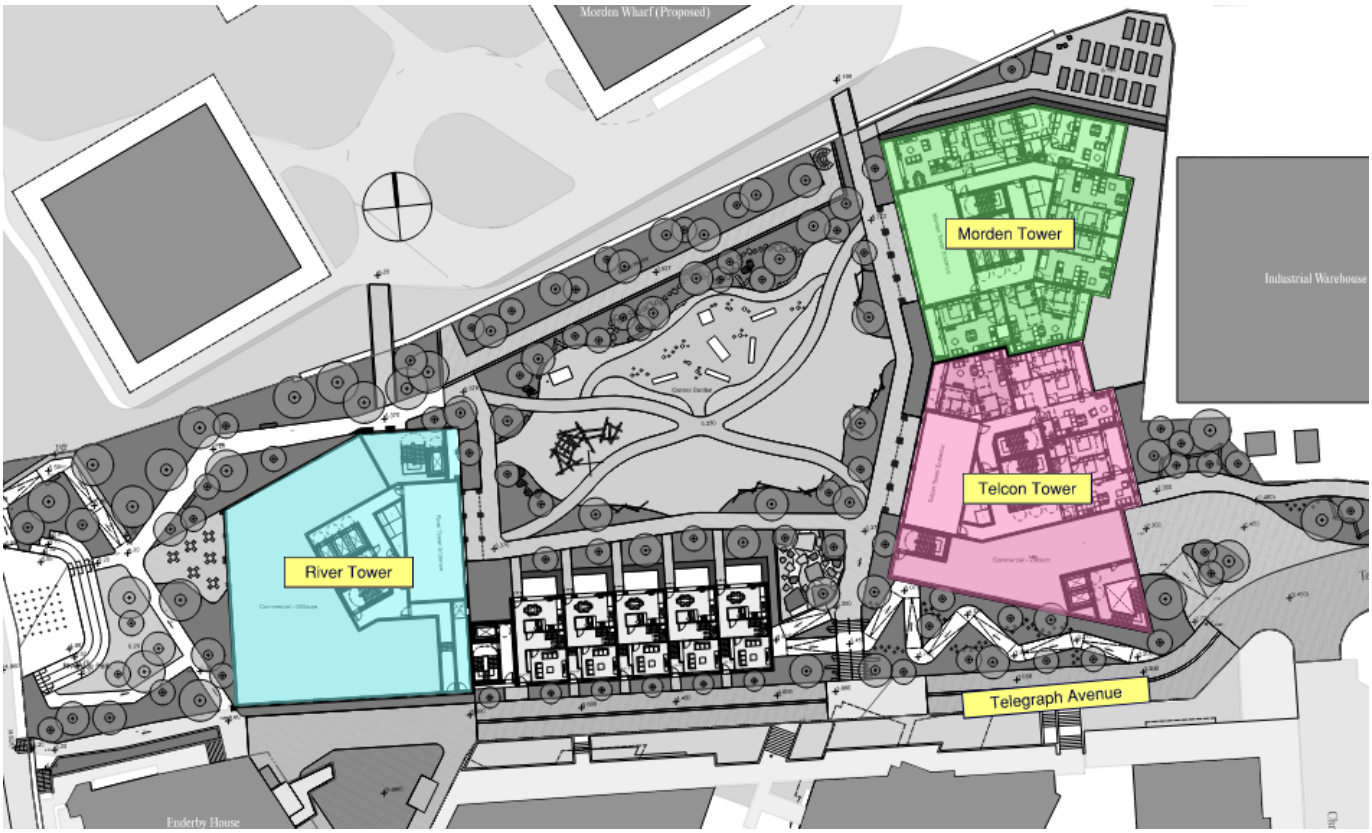

Figure 1: Site Layout

Figure 2: Site Elevation South

2. Fire Statement

2.1 Section 1: Site address

The development is located on land north of Telegraph Avenue, London, SE10.

2.2 Section 2: Description of proposed development including any change of use

The development is known as Enderby Place and is located on land to the north of Telegraph Avenue, London SE10. The project is a new build residential development consisting of three blocks referred to as River Tower, Telcon Tower and Morden Tower that are arranged around central stair and lift cores with floors greater than 30m above ground in each block and each block provided with a two-stair design. There is also a block adjacent to River Tower consisting of 5 terraced two storey houses with a further 3 duplex level flats above accessed from an open deck.

There is a change of level on the site with Telcon Tower, and Morden Tower at the east of the site entered (fire service entry) at ground and River Tower to the west entered from the podium level that is one storey above ground. The ground, podium and Level 1 provide ancillary spaces as:

- Ground floor – Car park and loading, cycle stores, refuse stores, plant rooms and commercial unit.
- Podium Level - Entrance lobbies entered from central garden, and commercial units.
- Level 1 – Commercial units.

The following is a summary of the key build parameters:

Table 1: Building key parameters

Designation	*Designated Use*	*Topmost Story Height*	*Number of Storeys*	*Sprinklers*	*Firefighting Shaft*	*Elements of structure*
River Tower	Residential flats	71.3m above podium	23 (Podium + 1-22)	Yes	Yes	120 minutes
Telcon Tower	Residential flats	77.4m above ground*	24 (Podium + mezzanine + 1-22)	Yes	Yes	120 minutes
Morden Tower	Residential flats	114.63m above ground*	36 (Podium + mezzanine + 1-34)	Yes	Yes	120 minutes

Note: * Ground floor is solely the stair final exit and does not have any apartments.

2.3 Section 3: Name of person completing the fire statement and relevant qualifications and experience

This document was completed by Richard Baker a Technical Director with Marshall Fire Ltd. He has more than 25 years experience in the Fire Engineering industry. His career started in Building Services and with a knowledge of how Fire and Life Safety systems operate and how they integrated into building design went on to develop as a specialist within this field also learning the principles of building design and construction procurement. This then led to take on a more complete Fire Engineering role as a specialist division lead within a mechanical and electrical consultancy.

He has worked on an extensive range of buildings, from listed heritage buildings to modern high rise residential developments and multi-use developments, providing him with experience in delivering bespoke solutions for a wide range of buildings and clients. In addition to his significant amount of experience in the design of a range of buildings he also has a bachelor’s degree in Fire Safety Engineering.

This document was reviewed by Daniel Taylor. He has a BSc (Hons) in Fire Safety Engineering and is an Associate member of the Institution of Fire Engineers. He is a Senior Fire Engineer at Marshall Fire and has at least 5 years of experience in the industry.

Daniel has a high level of understanding Fire Safety compliance and has worked on a wide range of projects including commercial projects across the UK of varying scales whilst acting as the lead fire engineer leading projects from RIBA Stage 2 to RIBA Stage 6 successfully.

2.4 Section 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 consultations have been undertaken to date regarding proposed fire safety measures.

No information regarding proposed fire safety measures has been submitted with the application to date.

2.5 Section 5: Site layout plan with block numbering as per building schedule referred to in section 6

Site layout plan shown in Figure 1.

2.6 Section 6: Building schedule

Table 2: Buildings Schedule Table

Note: The proposed guidance will be adopted from BS 9991:2015 while also recognising the more current provisions regarding sprinkler protection and external wall construction as set out in Approved Document B, Volume 1, 2019 edition incorporating 2020 and 2022 amendments. Commercial areas will follow guidance using BS 9999: 2017.

Site Information				Building Information		Resident Safety Information		
Block	**Block height (m)**	**No. of Storeys**	**Proposed use**	**Balconies**	**External Wall Systems**	**Evacuation approach**	**Sprinklers**	**Accessible housing provided**
River Tower	71.3m above podium	23 (Podium + 1-22)	Residential flats	No	Class A2-s1, d0 or better	Stay-put Policy	yes	**Refer to architectural information**
Telcon Tower	77.4m above ground*	24 (Podium + mezzanine + 1-22)	Residential flats	No	Class A2-s1, d0 or better	Stay-put Policy	yes	**Refer to architectural information**
Morden Tower	114.63m above ground*	36 (Podium + mezzanine + 1-34)	Residential flats	No	Class A2-s1, d0 or better	Stay-put Policy	yes	**Refer to architectural information**
Commercial Spaces	Up to 15.4m Single level units, up to 4 storey unit.	Varies 1 - 4 (G)	Commercial office or retail	No	Class A2-s1, d0 or better	Simultaneous Evacuation Policy	Yes	**N/A**
Ancillary spaces	0m (ground)	1	Car parking and cycle stores	No	Class A2-s1, d0 or better	Simultaneous Evacuation Policy	Yes	**N/A**

2.7 Section 7: Specific technical complexities

As part of the fire strategy, guidance will be taken from BS 9991:2015 while also recognising the more current provisions regarding sprinkler protection and external wall construction as set out in Approved Document B, Volume 1, 2019 edition incorporating 2020 and 2022 amendments. Commercial areas will follow guidance using BS 9999: 2017.

Provisions for Fire Detection and Alarm Systems:

- Within the non-residential landlord areas (plant rooms, car park, cycle stores and bin store) a simultaneous evacuation strategy will be adopted with a fire detection and alarm system provided to BS 5839-1. The minimum level of detection is a Category M, consisting of manual call points only but the proposed category of system is to be L2 providing coverage to circulation spaces (escape routes), rooms opening into circulation spaces and high-risk areas.
- Each new flat is to be provided with a standalone automatic detection and alarm system that is to be designed and installed in accordance with BS 5839-6 as Grade D2 system and arranged as a Category LD1. With this type of system, a smoke detector should be provided in each habitable room and a heat detector should be provided in the kitchen.
- Within the common corridors, there will be an automatic fire detection system provided to give automatic operation of the smoke ventilation system and Stair AOV.
- The common corridor/stair core system will not include sounders or manual call points but will have an alarm notification on the main fire alarm panel. This system will be designed and installed in accordance with BS 5839-1 and arranged as a Category L5 system (fire engineered) with the system operation objective to activate the smoke ventilation systems in the common parts only.
- As buildings with an occupied storey over 18m, an evacuation alert system will be provided to all apartments. The evacuation alert systems will be designed in accordance with BS 8629 giving the fire service control to notify all building occupants served by the stair to begin their evacuation from the building or individual floor levels. In detail design consideration should be given to extending the BS 5839-1 system to provide this facility as would be an economic and environmental advantage to not have duplicated systems.
- The commercial units will have a Category L2 fire and detection system to BS 5839-1, with coverage to the escape routes/stairs, rooms off of escape routes and high-risk rooms.

Provisions for Travel Distance are as follows:

The open plan flats will also be provided with sprinkler protection with a system designed and installed in accordance with BS 9251: 2021 and standalone automatic detection and alarm system that is to be designed and installed in accordance with BS 5839-6 as Grade D2 system and arranged as a Category LD1.

- Ventilated corridors serving the apartments travel in single direction is limited to 7.5m from the stair door to the furthest away apartment door.
- Plant rooms/Bin stores/cycle stores: 9m in a dead-end condition and 18m where more than one direction of escape is available.
- Commercial Unit: 18m in a single direction or 45m where alternative escape is available.

From review of the plans, the travel distances appear satisfactory.

Where the furniture layout is unknown, only 2/3rd of the actual travel distance should be used as the direct route to the exit.

Provision for Sprinkler Protection:

Since the residential accommodation has storeys greater than 11m, then automatic sprinkler protection will be provided in accordance with BS 9251: 2021 as a Category 4 with increased duration of supply to 60 minutes. Enhancing the system robustness and duration of supply and other aspects recommended in BS 9251 will be explored in later design stages. Areas not provided with sprinkler protection will include:

- Bathrooms toilets and shower rooms with a floor area less than 5m^2, with linings conforming to BS EN 13501-1:2018, Class A1, A2-s3, d2 and B-s3, d2, and which are not prepared for white goods or water heaters.
- Enclosed staircases and corridors containing only materials conforming to BS EN 13501-1:2018, Class B-s3 or better for construction materials and B(fl) or better for flooring, including subcategories such as d0,

d1, d2 for construction materials and s1 and s2 for flooring, surface spread of flame and constructed as a fire-resistant separation.

- Ceiling voids and uninhabited loft/roof voids
- Enclosed vertical shafts (e.g. lifts or service shafts) containing only materials conforming to BS EN 13501-1:2018, Class B -s3 or better for construction materials and B(fl) or better for flooring (including sub categories such as d0, d1, d2 for construction materials and s1 and s2 for flooring), surface spread of flame and constructed as a fire-resistant separation.
- Cupboards and pantries with a floor area of less than $2m^2$ or where the least dimension does not exceed 1m which are not prepared for consumer units or electrical equipment (excluding a single light).

The commercial units, car park, cycle stores and bin stores will be protected by an automatic sprinkler system that is designed and installed in accordance with BS EN 12845.

Provisions for Horizontal Means of Escape:

The residential apartment entrance doors and storey exit doors are to achieve a minimum clear width of 750mm to comply with Part B and 850mm (reduced mobility) for Part M of the Approved Documents. The cooking hob in each flat is to be remote from the escape route and achieve no less than 1800mm clearance with a width of 900mm available for an escape path.

Due to the low occupancy on each floor level, 850mm is deemed sufficient as it can cater for up to 60 people where a single exit exists.

All corridors and escape routes should be at least 1,200mm wide.

All means of escape routes leading to a final exit should be always kept clear and fire sterile.

The commercial units with an occupancy less than 60 can have a single exit providing limits on single travel are achieved. Where more than 60 occupants then at least two exits should be provided and sized based on the largest exit (width) not being available. Doors serving occupancies greater than 60 should open in the direction of escape.

Provisions for Vertical Means of Escape

The stairs in the development will measure a clear width of 1200mm and be designed to meet the requirements of Part M. The buildings will be provided with an evacuation lift in each core and therefore should they require it the mobility impaired people could use those to make their escape, with all escape routes being suitability designed to be level or where provided, have ramps that do not have a gradient that exceeds 1:12.

An evacuation lift will be located so accessed from a ventilated common corridor. The corridor smoke control will protect the lift and stair from the ingress of smoke. This is to allow the occupant escaping to have a safe place to wait until the lift has reached the floor of fire origin without being subjected to smoke and heat.

The evacuation lift is intended as the primary means of emergency egress for occupants with reduced mobility. The evacuation lift operation will be defined as assisted/managed evacuation operation where the lift will go to ground and wait for management to attend and drive the lift to the fire floor and assist with evacuation. Provisions for persons with reduced mobility are provided as follows:

- Within the community areas of the development, self-horizontal evacuation should be available on the ground floor with step-free egress from the unit with no upper floor level access available.
- Within the residential building cores, an evacuation lift is to be provided to each core accessed from a ventilated corridor as a place of safety while waiting for the lift to enable them to carry out a dignified escape. Emergency power supplies are required to serve the lift so that it remains functional in the event of a fire.
- The evacuation lift operation will be arranged for automatic evacuation operation as given in BS EN 81-20, and BS EN 81-76. This is based on the building characteristics as having onsite management serving the apartments to assist with the evacuation and the building being sprinkler protected.
- Ongoing maintenance and management of the lift will be inline with BS EN 81-20, BS EN 81-76, and any other applicable codes of practice and manufacture’s recommendations.
- The minimum lift car size should be type 2 in accordance with BS EN 81-70:2021, Table 3. Where the evacuation lift is part of a lift group, the car size should be at least the same size as the lift cars in the same group.

All cores are to have one of the stairs terminating at ground floor and have a final exit direct to open air at access level, and where the exit is part of a stair extension, this will be fire rated and defined as part of the stair.

Post-boxes are a fire risk if within the stair enclosure, or any part of the only final exit route and therefore will be required to be constructed of a material that will be of limited combustibility so not to add to the fire load. Parcel deliveries will not be allowed to be stored in any part of the stairway.

Each block has a two-stair core design with each stair accessed from a ventilated corridor, with mechanical smoke extract in the remote locations and replacement air from the stair. The evacuation lift and firefighting lift are part of the primary core with the additional stair solely for alternative means of escape. The corridor will be split so that each portion is independent and allows for a safe waiting space.

CFD modelling will be required to illustrate tenable conditions within the corridor can be achieved post two-minutes of the apartment door closing and with a smoke dree stair during firefighting phase.

Provisions for Loadbearing Elements of Structure:

The loadbearing elements of structure are based on blocks with a floor more than 30m in height, with 120 minutes fire resistance is required for loadbearing structure, as beams columns, load bearing walls and floors.

Provisions for Compartmentation:

The following compartmentation is required, but not limited to:

- All floors in the building will be required to form compartment floors and therefore all penetrations (including the stair and service risers) are required to be appropriately fire-resisting and fire-stopped equal to the elements of structure. All stair, lift shafts and service risers are to be arranged as protected shafts achieving 120 minutes fire resistance with doors having at least half the rating of the wall with smoke seals.
- Apartments will be separated from each other and the common corridors with 60 minutes compartment walls. Each apartment entrance door will be FD30S with a self-closer.
- Ancillary accommodation (cycle store, bin store and plant rooms) will be separated from residential elements by construction achieving 120 minutes fire resistance. Separation between these areas should achieve at least 60 minutes fire resistance with FD60S fire doors.
- Compartment floors will need to meet the same level of fire resistance as per the structure (i.e. 120 minutes).
- External doors are not required to have any fire resistance where the boundary is more than 1m away, where the adjacent escape routes are not affected and are 1800mm away and where the unprotected area allowance is acceptable based on the door being unprotected.

Provision of Construction Materials:

The main building frame of columns, beams, loadbearing walls and floors will be of reinforced concrete. Internal walls will be formed using traditional masonry/block construction with internal partitions constructed from lightweight metal stud walls and gypsum plasterboard.

Any roof within 6m of a boundary will need to achieve at least a B_{ROOF}(t4) rating. Any roof more than 6m from a boundary will need to achieve at least a C_{ROOF}(t4) rating.

The external wall surface spread of flame requirements are:

Any building having a topmost storey over 18m in height will have external walls constructed with main elements achieving Class A2-s1, d0 or better.

Protection of Openings and Firestopping

Any ductwork passing through compartment/fire resistant walls will maintain integrity of those elements by either:

- Be contained within fire resisting construction.
- Containment by using fire resistant ductwork.
- Protection by installing fire dampers.

Ventilation ducts supplying or extracting air directly to or from a protected stairway should not serve any other areas. Ductwork serving other areas and passing through a stair enclosure should be fire rated duct or separated by a fire-resistant enclosure.

Ductwork serving both escape routes and accommodation will be provided with fire and smoke dampers (ES Rated) that are activated automatically on the activation of the building fire alarm and detection system. Dampers to be fully in accordance with Approved Document B Section 9.

Ductwork passing through fire rated walls separating fire compartments could be provided with fusible link fire dampers in accordance with Approved Document B Section 9. All dampers are to be mechanically fixed to the structure so they are self-supporting and be fitted within the fire line in accordance with the manufacturer's installation guidelines.

Any openings for pipes with a restricted diameter breaching compartment walls are required to be fire stopped (unless protected along its entire length with fire resisting material), keeping the opening as small as possible, in accordance with Approved Document B, Vol1 Table 9.1. All other pipes (of any diameter) should be provided with a proprietary seal, tested in accordance with BS EN 1366-3:2015.

Provisions for Cavities

The unseen spread of fire and smoke will be controlled by the provision of cavity barriers. Cavity barriers will be provided to close cavities and openings in the following locations:

- At the edges of cavities, including around openings such as doors and windows.
- At the junction between an internal cavity wall and every compartment floor, compartment wall or other wall or door assembly forming a fire resisting barrier.

In addition to the above locations cavity barriers are also proposed in any newly created cavities (including ceiling voids and under floor service voids) where the cavity exceeds 20m (i.e. at 20m centres).

The cavity barriers will provide a 30 minute fire rating (i.e. 30 minutes integrity and 15 minutes insulation). Any penetrations through the cavity barriers will be either:

- Fitted with a proprietary sealing system.
- Pipes of limited diameters that are sealed with fire-stopping, or sealed with sleeving of non-combustible pipe material.
- Dampers are required to ductwork.

Provisions for Firefighting Intervention:

Each block will have a firefighting shaft provision consisting of a firefighting lift and firefighting stair. These will be accessed at each level via a ventilated and protected corridor. Each firefighting shaft shall be provided with a wet rising mains system designed and installed in accordance with BS 9990. The wet riser system will be served by duty/standby pumps that will be supplied by a water storage tank of not less than $80m^3$ and provided with a firefighting infill point located within 18m from a location accessible to a firefighting pumped appliance. The wet riser pumps will be provided with a suitable backed up power supplies.

Proposed Smoke Control for the development are:

Common corridors to escape stairs will be provided with a mechanical smoke extract system consisting of a non-combustible extract shaft with automatic opening vents at each corridor. Make-up air will be from the head of the stair which is provided with a $1.0m^2$ automatic open vent (AOV) to always maintain tenable conditions for all apartment blocks.

Any common stair which does not form part of the only escape route from a flat may also serve ancillary accommodation if it is separated from the ancillary accommodation by a protected lobby. If the stair serves an area with a higher fire risk, the lobby should be provided with an area of permanent ventilation of not less than $0.4m^2$ or be protected from the ingress of smoke by a mechanical smoke ventilation system.

The cycle stores, and bin stores are below the podium slab and so below ground with no external walls and will be provided with a means to extract smoke by either natural ventilation openings or a mechanical smoke extract system achieving at least 10 air changes.

The car park loading bay will be provided with a means to extract smoke by either natural ventilation openings or a hybrid solution consisting of open vents (including the entrance ramp) and mechanical fans installed to the soffit that will assist with smoke movement to the point of extract.

2.8 Section 8: Issues which might affect the fire safety of the development

The following issues are noted as departures that require gaining the approving authorities' sign off.

1. The Blocks are over 30m and with two stairs, a mechanical smoke control system is proposed and will require CFD modelling to demonstrate tenable conditions during the means of escape and firefighting phase..

2.9 Section 9: Local development document policies relating to fire safety

The project is located within the Greater London Authority (GLA) region and therefore should support the design intent of the London Plan Sections D12. Since the application is for a minor development, Policy D12(A) has been addressed.

Policy D5(B5) in the London Plan is to support dignified escape for persons of reduced mobility. The proposed development has introduced evacuation lifts into each core, separate from a firefighting lift providing a dignified escape from all upper floor levels to the ground floor and then a protected route leading to open air with level access to atmosphere.

2.10 Section 10: Fire service site plan

Access to the firefighting facilities will be available directly from the outside of the building via the main building entry points leading to the firefighting shafts. For buildings having a topmost storey over 18m will have a firefighting shaft consisting of a firefighting stair and firefighting lift. A 120 minute fire resisting construction is required to provide access into the building for the fire service.

Access to Morden Tower for firefighting vehicles is at ground floor with distance from vehicle access on driveway into the car park about 14m from the building entry point. The building entry point leads to a corridor of about 20m to the base of the firefighting shaft. Access to any rooms from this corridor will be provided with lobby protection. The corridor being 20m is 2m longer than guidance recommends at 18m. In this instance it is deemed acceptable given the following:

- The distance from vehicle hardstanding to building entry point is only 14m so 4m less than the recommended 18m. The overall horizontal distance to the base of the firefighting shaft is less than 36m as would be permitted in a comparable compliant scenario.
- The building is provided with a wet rising mains system so the attending firefighters do not need to charge a dry rising main that would take considerably longer and require more physical effort than having to negotiate the additional 2m travel in the corridor.

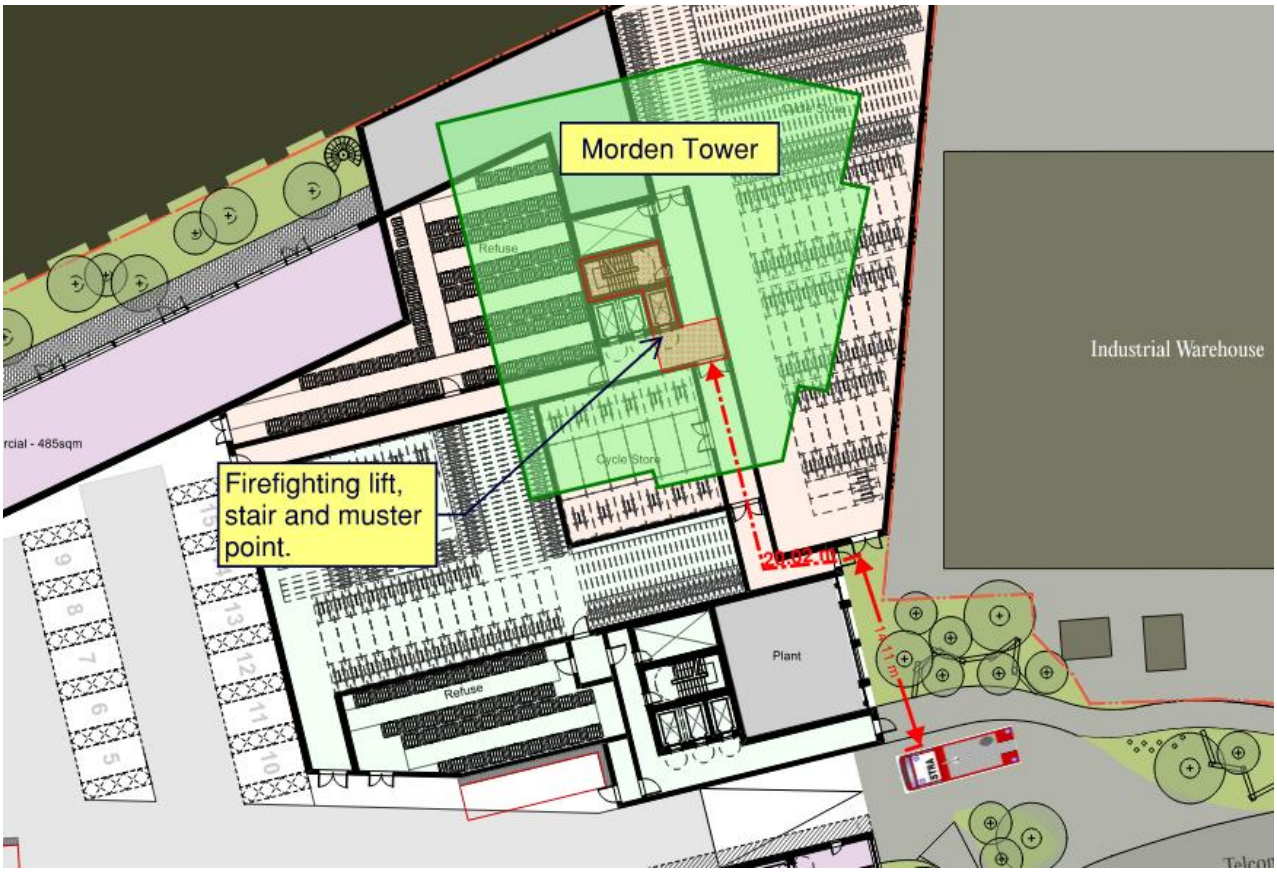

Figure 3: Firefighting Access to Morden Tower at Ground

Access to Telcon Tower for firefighting vehicles is at ground floor with distance from vehicle access on driveway immediately adjacent to the building entry point. The building entry point leads to a corridor of about 13m to the base of the firefighting shaft. Access to any rooms from this corridor will be provided with lobby protection.

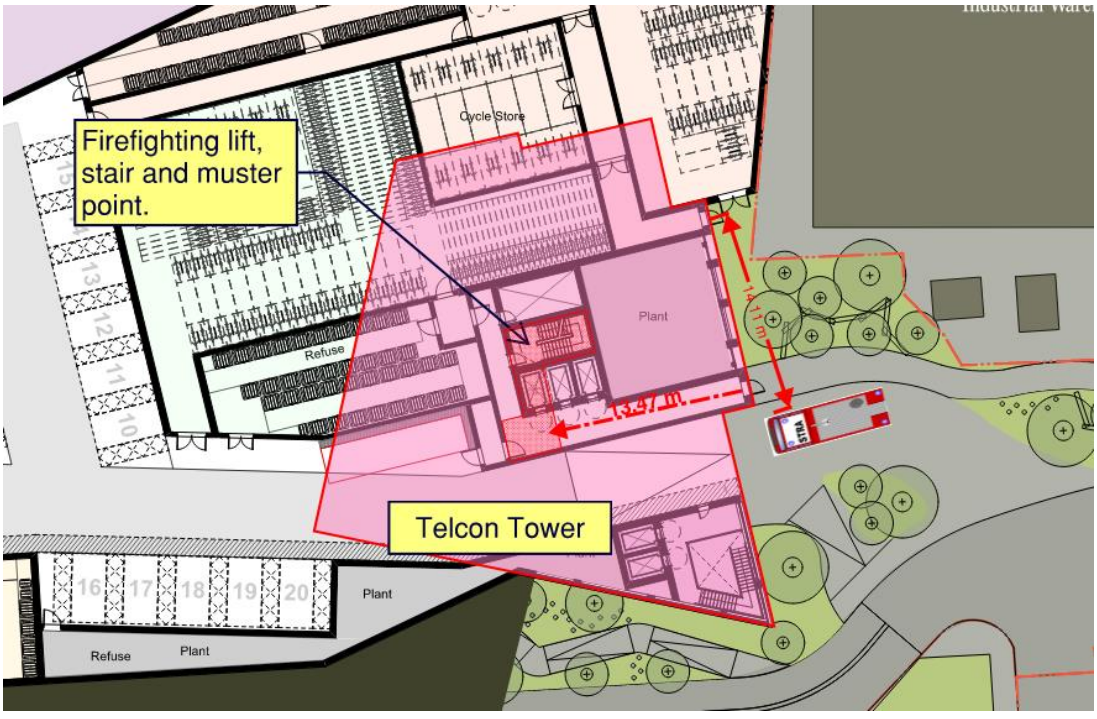

Figure 4: Firefighting Access to Telcon Tower at Ground

Access to River Tower for firefighting vehicles is at podium along Telegraph Avenue to a turning head in front of Enderby House as provided for adjacent buildings. Access is to a point immediately adjacent to the building entry point. The building entry point leads to a corridor of about 20m to the base of the firefighting shaft. Access to any rooms from this corridor will be provided with lobby protection. The corridor being 20m is 2m longer than guidance recommends at 18m. In this instance it is deemed acceptable given the following:

- The distance from vehicle hardstanding to building entry point is immediately adjacent to the entry point so the overall horizontal distance to the base of the firefighting shaft is less than 36m as would be permitted in a comparable compliant scenario.
- The building is provided with a wet rising mains system so the attending firefighters do not need to charge a dry rising main that would take considerably longer and require more physical effort than having to negotiate the additional 2m travel in the corridor.

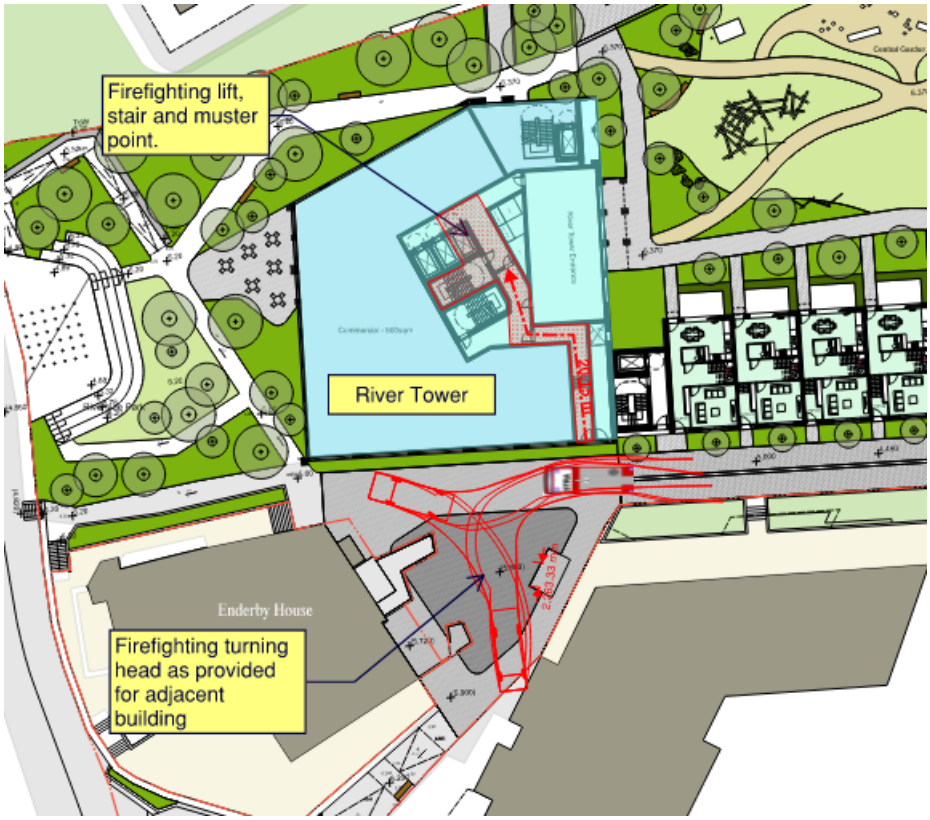

Figure 5: Firefighting Access to River Tower at Podium

2.11 Section 11: Emergency road vehicle access

Firefighting access is key for successful firefighting and therefore the appropriate provisions must be made regarding site access.

Turning facilities should be provided in any dead-end access route that is more than 20m long. This can be by a hammerhead or turning circle. From inspection of the plans, the public roadways will allow access into the development and with the internal roads satisfying the following table requirements.

Table 3: Pump appliance access route requirements

Appliance Type	*Min. width of road between kerbs*	*Min. width of gateways*	*Min. turning circle between kerbs*	*Min. turning circle between walls*	*Min. clearance height*	*Min. carrying capacity*
Pump	3.7	3.1	16.8	19.2	3.7	12.5*
High Reach	3.7	3.1	26.0	29.0	4.0	17.0*

Note: * The minimum carrying capacity should be checked with the local fire brigade.

2.12 Section 12: Siting of fire appliances

Siting of the fire appliances will be to the front of the main building entry point on the ground and podium levels as illustrated in Figures 3, 4 and 5.

2.13 Section 13: Suitability of water supply for the scale of development proposed

Existing public hydrant locations for the site are required to be checked and new hydrants provided if required to ensure hydrants are located within 90m of an entry point to the building and not more than 90m apart. Design team have confirmed the public hydrants is 25.3m from the front door.

The water supplies will be via the public mains.

2.14 Section 14: Fire service site plan

The design team will provide a site plan as stated in Section 12. See also Figure 3.

2.15 Section 15: Signature

The following overview has been produced by Richard Baker.

2.16 Section 16: Date

The following fire safety statement is dated **27/11/2023.**

2.17 Conclusion

Having reviewed the documentation issued to Marshall Fire Ltd by Centro Planning Consultancy and BYG Architects on behalf of the end-user/client, we agree with the overall design proposals and conclusion presented in the drawings that the proposed works can be developed to satisfy the functional requirements of the Building Regulations.

It is considered that the scheme meets Planning Gateway One and gives respect to the proposed changes to Fire Safety in Approved Document B, Volume 1 2022 and Approved Document B, Vol2 2022.

The London Plan requests that the ‘Highest Standards of Fire Safety’ be considered and therefore property protection whilst not a Building Regulation requirement maybe considered to increase the life safety and fire safety of the building.

Further review of the following is necessary:

1. Means of escape and firefighting access to the commercial unit to the north of the site.
2. Wet riser infill positions on the façade of the development.

The evolution of the design development and the principles of the golden thread concept and will form the basis of the developing Fire Strategy through further design, construction and operating of the building.

We would however reiterate that the findings are limited to the information reviewed only and the installation, maintenance and ongoing maintenance are not our responsibility.

3. References

i. Approved Document B, Volume 1, 2019 + 2020 & 2022 amendments - Dwellings

ii. BS 9991: 2015, Fire safety in the design, management and use of buildings – Code of practice.

iii. BS 9999: 2017 Fire Safety in buildings other than dwellings.

iv. Fire Statement Guidance, Annex D Gov.co.uk

v. BS 5839-6:2017, Fire detection and fire alarm systems for dwellings. Code of practice for system design, installation, commissioning and maintenance.

vi. BS 5839-1:2019, Fire detection and fire alarm systems for non-residential buildings. Code of practice for system design, installation, commissioning and maintenance.

vii. BS 9251: 2021 Fire sprinkler systems for domestic and residential occupancies. Code of practice.

viii. BS 9990:2015, Non automatic fire-fighting systems in buildings. Code of practice.

ix. BS 476 series: 1987, Fire tests on building materials.

x. BS EN 1366-3:2009, Fire resistance tests for service installations. Penetration seals.

xi. BR 187: 2014 External Fire Spread Building Separation and Boundary Distances.

xii. Gateway One Online Template.

xiii. London Plan Policy D5 and Fire Safety Policy D12(A), March 2021 Pre-consultation draft.