



EUSTON TOWER

Fire Statement

December 2023



British Land Property Management Limited

Euston Tower

Fire Statement

Reference - EST-ARP-ZZ-XX-RP-R-000001

December 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Introduction

Arup have been appointed by British Land Property Management Limited to produce a Fire Statement to support the full planning application for the proposed Euston Tower. This document describes the fundamental, high-level fire safety considerations.

This Fire Statement is to be submitted to London Borough of Camden and describes how the fire strategy design meets Policy D12 (Fire Safety) of the London Plan 2021, and other relevant policies, specifically Policy D5 (inclusive design).

A RIBA Stage 2 Fire Strategy will be produced separately to outline in more detail the fire safety measures which are required for compliance with Part B of the Building Regulations 2010 (as amended). The Fire Strategy will not be issued as part of the planning submission but is intended to demonstrate compliance, inform the wider Design Team of fire safety measures and to be suitable for consultation with the appointed approval authority.

In order to comply with the functional requirements of the Building Regulations 2010 (incorporating the Building (Amendment) Regulations 2018), the design to date has primarily followed the guidance available within

- BS 9999 (2017) “*Fire safety in the design, management and use of buildings – Code of practice*”,
- Policy D12 (Fire Safety) A.1 to A.6 and Policy D5 (Inclusive Design) B.5 of the London Plan 2021.

Structure of this Fire Statement

This Fire Statement describes how the fire strategy design of the proposed Euston Tower development meets the expectations of Policy D12 (Fire Safety) A.1 to A.6 and Policy D5 (Inclusive Design) B.5 of the London Plan 2021. The report is presented in the following sections

Section 1 – Application information

Section 2 – Fire safety provisions to meet Policy D12 (Fire Safety). *Section 2 of the Fire Statement sets out how the development proposal will function in terms of the following fire aspects set out under Policy D12 (Fire Safety)*

- B.1. Building Construction
- B.2 Means of Escape
- B.3 Fire Safety Systems
- B.4 Firefighting facilities
- B.5 Fire Vehicle Access
- B.6 Future Building Changes

Section 3 - Fire Safety provisions to meet Policy D5 (Inclusive Design). *Section 3 sets out how the development proposal supports Policy D5 (Inclusive Design) B.5 – incorporating safe and dignified emergency evacuation for all building users.*

Section 4 – Competency statement

1. Application information

1.1 Site address

Table 1 below presents the full site address. This will hereafter be referred to as “the Site”.

Table 1 - Site Address

Address	
Site address line 1	Euston Tower
Site address line 2	286 Euston Road
Town	London
Postcode	NW1 3DP

1.2 Description of the proposed development

Euston Tower is situated within the London Borough of Camden (LBC), and the ward of Regent’s Park. The site is bounded by Euston Road (south), Hampstead Road (east), Brock Street (north) and Regent’s Place (west).

The proposed site consists of 32 storeys above ground to a height of approximately 153.3m AOD to the top of the main building parapet. The proposed site will include alterations to the existing basement level.

The proposed site will consist of the partial demolition of the existing building (retention of central core, basement, and foundations) and erection of a 32-storey building (mixed use including office floorspace, lab-enabled floorspace and flexible retail floorspace), alterations to existing basement, improvements to public realm surrounding the building, provision of cycle parking and other associated work. Figure 2 presents the proposed intended use of each storey.

The existing basement sits below the Euston Tower and connects to a wider basement which extends across the entire Regents Place site. The proposed basement redevelopment is limited to two areas. The first and primary area is located directly below the proposed tower and is located within the Euston Tower ownership boundary. The second includes a limited area beyond the immediate Euston Tower footprint, within the wider Regent’s Place basement, to provide additional cycle and vehicle parking and UKPN provision. This second area will remain within the operational boundary of Regent’s Place. Alterations to this second area shall be reviewed against the existing Regent’s Place basement fire strategy, to demonstrate compliance with the Building Regulations. This will require separate coordination with the operational owner, under a separate fire strategy. The details of this fire statement are therefore limited to the main Euston Tower basement only.

Table 2 - Proposed purpose per storey

Level	Proposed intended use
Basement B02 – B01	Plant, bike store, changing rooms and parking
Ground Floor	Community use, public space, retail and cafe
Level L1 – L2	Community use, café (Level L01)
Level L3 – L11	Lab enabled space
Level L12 – L30	Office spaces
Level L31 - Roof	Service areas including plant (MEP and BOH)

1.3 Competency statement - Name, qualifications, professional memberships and experience of author

Dr Charlotte Roben (PhD MIFireE) has over 13 years experience in the UK and is a Chartered Engineer with the Institute of Fire Engineers and an Associate Director at Arup. She has overseen fire safety strategy development at masterplan level for commercial, residential and mixed-use premises.

1.4 Consultation

No formal consultation has been undertaken to date as no deviations are identified in relation to fire service access and facilities for the development.

A Gateway One Statement has not been submitted as the proposed site is not considered to be a 'relevant building', it is not the development of an existing 'relevant building' and it is not a development within the curtilage of a 'relevant building' as defined by The Town and Country Planning (Development Management Procedure and Section 62A Applications) (England) (Amendment) Order 2021.

The design will achieve compliance by following applicable prescriptive fire safety guidance (BS 9999 (2017) - *Code of practice for fire safety in the design, management and use of buildings*) as primary design standard. Any issues relating to fire safety for the development identified because of reviewing the architectural layouts will either be resolved by the architects as the design progresses or a fire safety solution which demonstrates an equivalent or better level of fire safety for all building occupants which meets the functional requirements of the Building Regulations will be provided. All such alternative performance-based solutions shall be discussed and agreed with Building Control and the Fire Service during the Building Regulations approval process.

1.5 Site layout plan

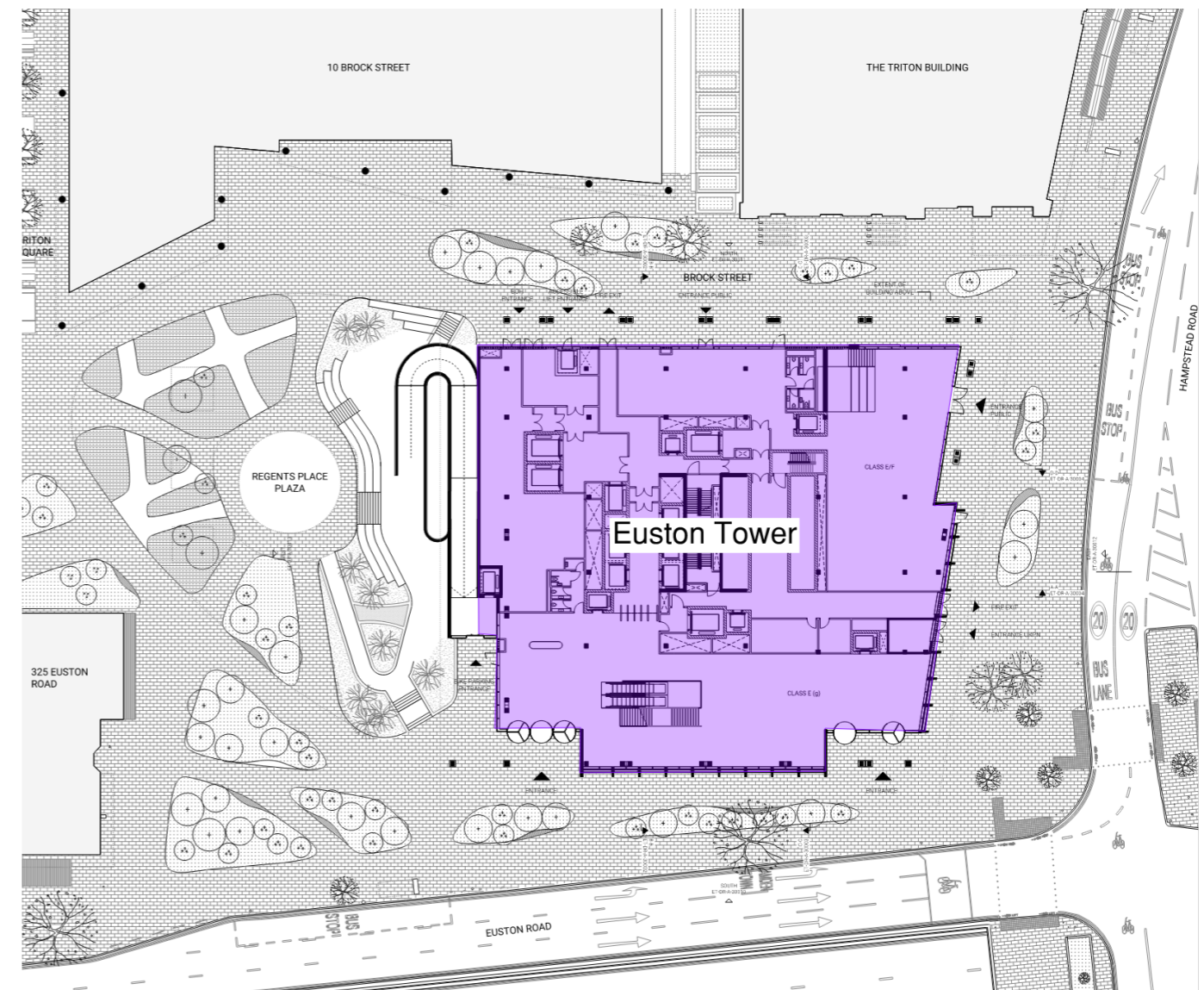


Figure 1 - Euston Tower (in purple) within the context of the wider site surrounded by Euston Road (south), Hampstead Road (east), Brock Street (north) and Regent's Place (west)

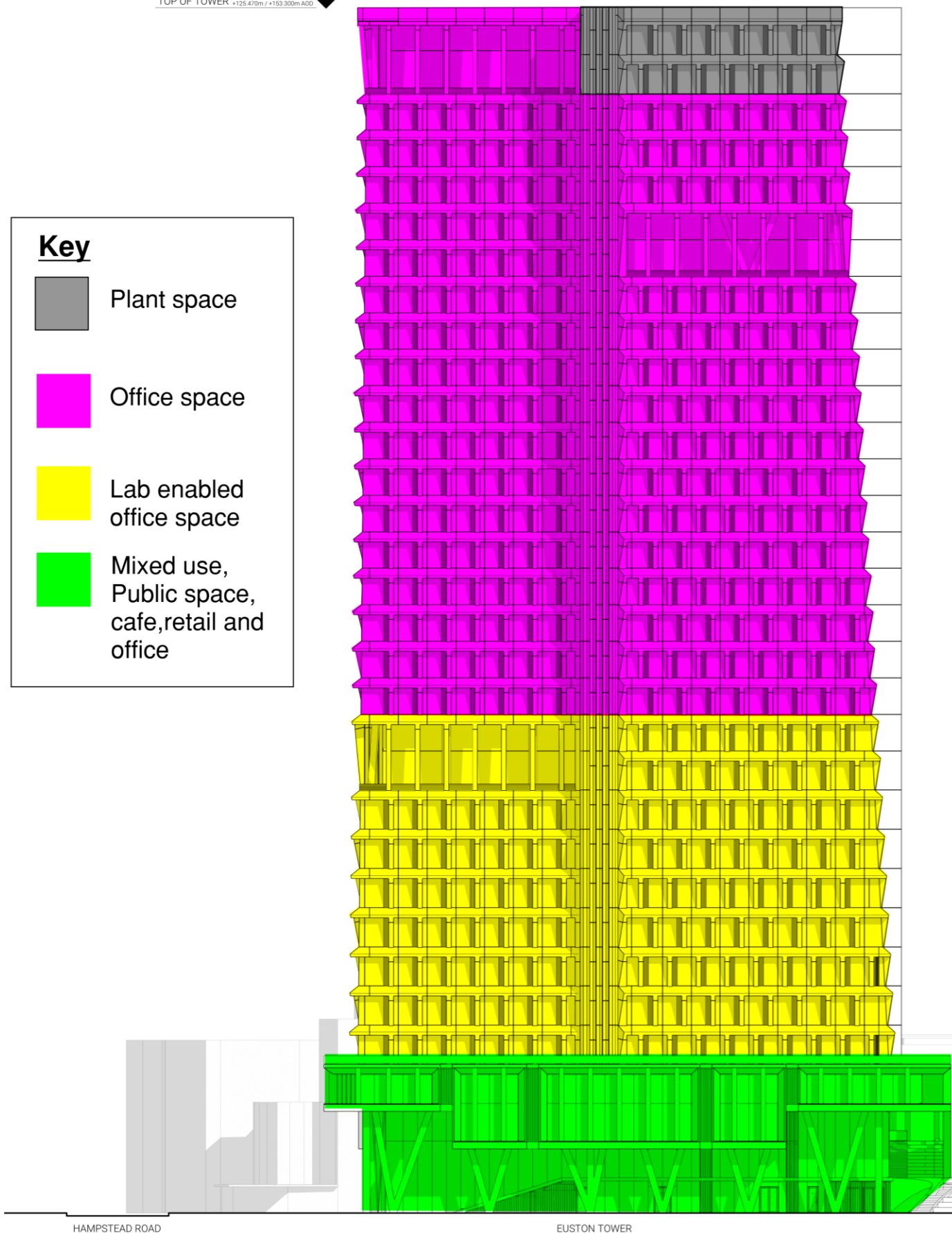


Figure 2 - Proposed intended use per storey

2. Provisions supporting Policy D12 Fire Safety

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

2.1 B.1 – Building Construction

B.1. The building's construction - methods, products and materials used, including manufacturers' details.

2.1.1 Structural methods and materials

The above-ground structure of the building shall be formed of a non-combustible material, the preferred option is a steel braced frame and concrete slabs. The structural central cores from the previous development are intended to be retained, these are formed of reinforced concrete.

Any alterations to the existing basement levels will consist of reinforced concrete structural methods and materials.

2.1.2 Internal fire spread (structural)

All loadbearing elements of structure shall achieve a minimum of 120 minutes fire resistant performance in terms of loadbearing capacity (R 120).

2.1.3 Internal fire spread (linings)

The selection of the products for ceiling and wall linings used in the proposed development shall be in accordance with the guidance given in Table 33 of BS 9999 (2017) and shall achieve the classification in Table 3 when tested in line with BS EN 13501-1.

Table 3 - Surface spread of flame requirements for ceiling and wall linings

Location	European Class
Small room of area not exceeding 30m ²	D-s3,d2
Other rooms	C-s3,d2
Other circulation spaces	B-s3,d2

2.1.4 External fire spread

The building does not contain any dwellings, an institution or a room for residential purposes. Therefore, it is not considered a 'relevant building' under the Building Regulations 2010 (as amended). The fire performance of the external wall will be specified in accordance with the guidance provided in BS 9999 (2017).

2.1.4.1 Reaction to fire across the face of the external wall

As the proposed site has a building height greater than 18m and the distance to the relevant boundary is greater than 1m, the following requirements must be applied as a minimum in accordance with BS 9999

- For the portion of the building's façade up to 18m, the external surfaces of the walls must achieve Class C-s3, d2 or better (or timber cladding greater than 9mm thick);
- For the portion of the building's façade more than 18m, the external surfaces of the wall must achieve Class B-s3, d2 (or better) for the portion of the building exceeding 18m.

Coordination with the façade engineering team has been ongoing and products which can meet these performance requirements have been selected.

2.1.4.2 Insulation and filler products

In accordance with BS 9999 (2017) and ADB Vol. 2, any insulation product, filler material (not including gaskets, sealants and similar), etc will be Class A2-s3, d2 or better.

As this building is not considered to be a ‘relevant building’ under Regulation 7 no further additions are required. A ‘relevant building’ is defined as a building which contains one or more dwellings, an institution or a room for residential purposes, *and* has a storey at least 18m above ground level. This does not apply to Euston Tower.

2.1.4.3 Resisting fire spread from one building to another

In accordance with BS 9999 (2017) Table 22, the external walls require a minimum fire resistance performance dictated by their function and height of the top occupied storey above access level.

The percentage of the façade which is required to achieve this performance is determined based on a sitewide assessment of the building separation conducted in accordance with BRE 187 (2014). An evaluation of the risk of fire spread to and from the proposed development using the Enclosing Rectangle methodology has been undertaken, following the principles and acceptance criteria of BR 187 *External fire spread - Building separation and boundary distances* (2014). A further, more detailed sprinkler controlled assessment may be undertaken to further justify the reduction to the required percentage of fire rated façade.

The assessment will be documented in detail in the RIBA Stage 2 Fire Strategy which will be submitted as part of the Building Regulations application.

2.1.4.4 Terraces

Terraces and planter balconies are provided at

- Level 2 - terraces
- Level 3 – planter balcony
- Levels L7 – planter balcony,
- Levels L11 – planter balcony,
- Levels L19 - L20 – terrace (double-height),
- Level L25 - planter balcony,
- Level L30 – planter balcony.

Limitations to the material build-up of the terraces and planters will be documented in the RIBA Stage 2 Fire Strategy in order to mitigate the impact of a fire event, where reasonably practicable.

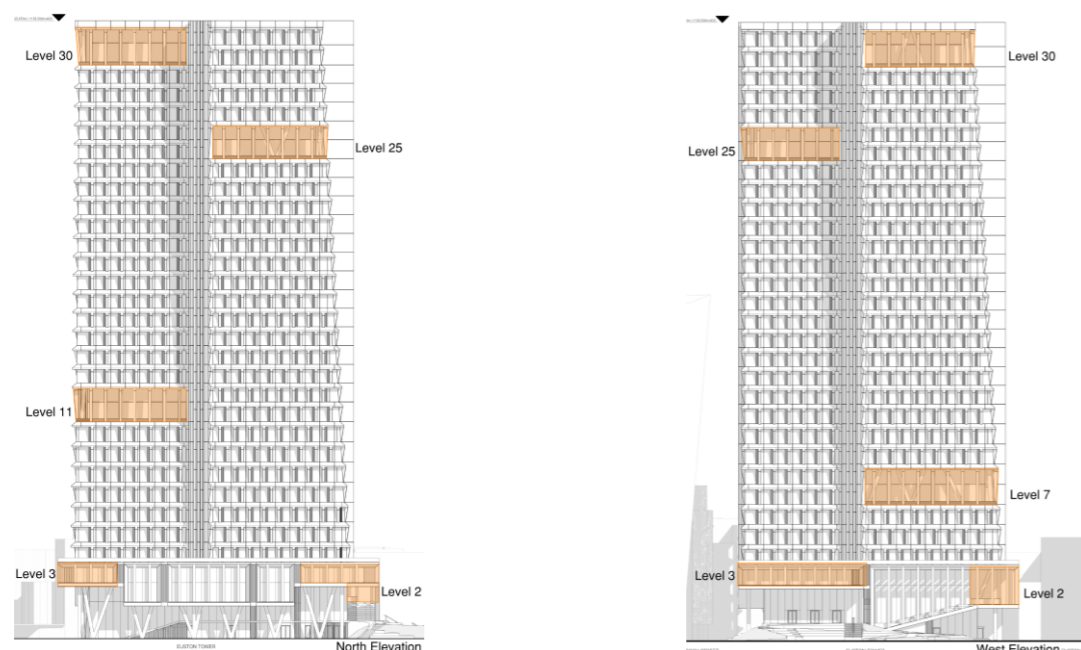


Figure 3 - Orange show the location of the balcony and terraces on the North and West Elevation indicatively

2.2 B.2 – Means of escape

B.2. the means of escape for all building users - suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach.

2.2.1 Risk profiles

The recommendations of BS 9999 (2017) are defined assuming a risk-based approach where the buildings or areas within are assigned a risk profile. The risk profile is a combination of the expected occupancy type and the fire growth rate.

The following risk profiles have been adopted for the various occupancy classifications in accordance with BS 9999 (2017). The proposed site will be provided with a full commercial sprinkler automatic suppression system. This system will be designed in accordance with BS EN 12845 (2015 and A1 2019). The risk profiles below account for the provision of sprinklers as per BS 9999 (2017).

Table 4 - Risk profiles

Occupancy type	Assumed risk profile	Justification as per Table 2 and Table 3 of BS 9999 (2017)
Office	A1	The occupants are assumed to be awake and familiar. A ‘medium’ fire growth rate category, reduced to ‘slow’ by the provision of sprinklers.
Lab enabled space	A2	The occupants are assumed to be awake and familiar. A ‘fast’ fire growth rate category, reduced to ‘medium’ by the provision of sprinklers.
Retail	B1	The occupants are assumed to be awake but unfamiliar. A ‘medium’ fire growth rate category, reduced to ‘slow’ by the provision of sprinklers.
Public space	B1	The occupants are assumed to be awake but unfamiliar. A ‘medium’ fire growth rate category, reduced to ‘slow’ by the provision of sprinklers.
Plant or BOH	B2	The occupants are assumed to be awake but unfamiliar. A ‘fast’ fire growth rate category, reduced to ‘medium’ by the provision of sprinklers.
Cycle store	B1	The occupants are assumed to be awake but unfamiliar. A ‘medium’ fire growth rate category (considering the potential presence of e-bikes), reduced to ‘slow’ by the provision of sprinklers.

2.2.2 Evacuation strategy

The proposed site will have a phased approach to evacuation.

On detection and confirmation of a fire, evacuation will take place from the floor of fire origin and any levels in the same evacuation zone as the fire. The two floors above the floor of fire origin will be assume ‘standby’ mode and provided with an alert tone. It is proposed that the fire alarm will then cascade throughout the rest of the building, two floors at a time, until all areas have been evacuated.

The evacuation zones include

- Basement B01 - B02 will evacuate simultaneously as a single evacuation zone.
- Levels L0 – L2 will evacuate simultaneously as a single evacuation zone.
- Levels L4 – L30 will evacuate as a single level (floor of fire origin) followed by the cascading of the other office levels two floors at a time.
- L31 and roof will evacuate simultaneously as a single evacuation zone.

2.2.3 Building occupancy load

The building's worst case occupancy load has been determined based on floor space factors provided in BS 9999 (2017) and, in specific instances where not occupant floor space factors were not provided in BS 9999 (2017), ADB Vol. 2 was used. Where spaces such as bike stores and locker rooms exist, the occupancy for each has been taken as

25 percent of the total value of bike or e-bike spaces or lockers. This has been applied due to the transient nature of the space whilst accounting for a reasonable worst-case scenario during peak times.

The maximum design capacity of the proposed site is calculated to be sufficient to accommodate the maximum estimated occupancy; the actual occupancy designed for day to day use, is expected to be lower than the allowable worst case defined in the fire strategy.

2.2.4 Means of escape

Escape from Euston Tower will be facilitated through two escape stairs that discharge via a protected corridor to outside at ground level. For podium levels there is an additional escape stair that will also discharge to outside at ground level.

Escape routes from a typical office level are shown in Figure 4.

Both escape stairs serve all the above and below ground levels of the building.

Means of escape for people with reduced mobility is discussed in detail in Section 3.

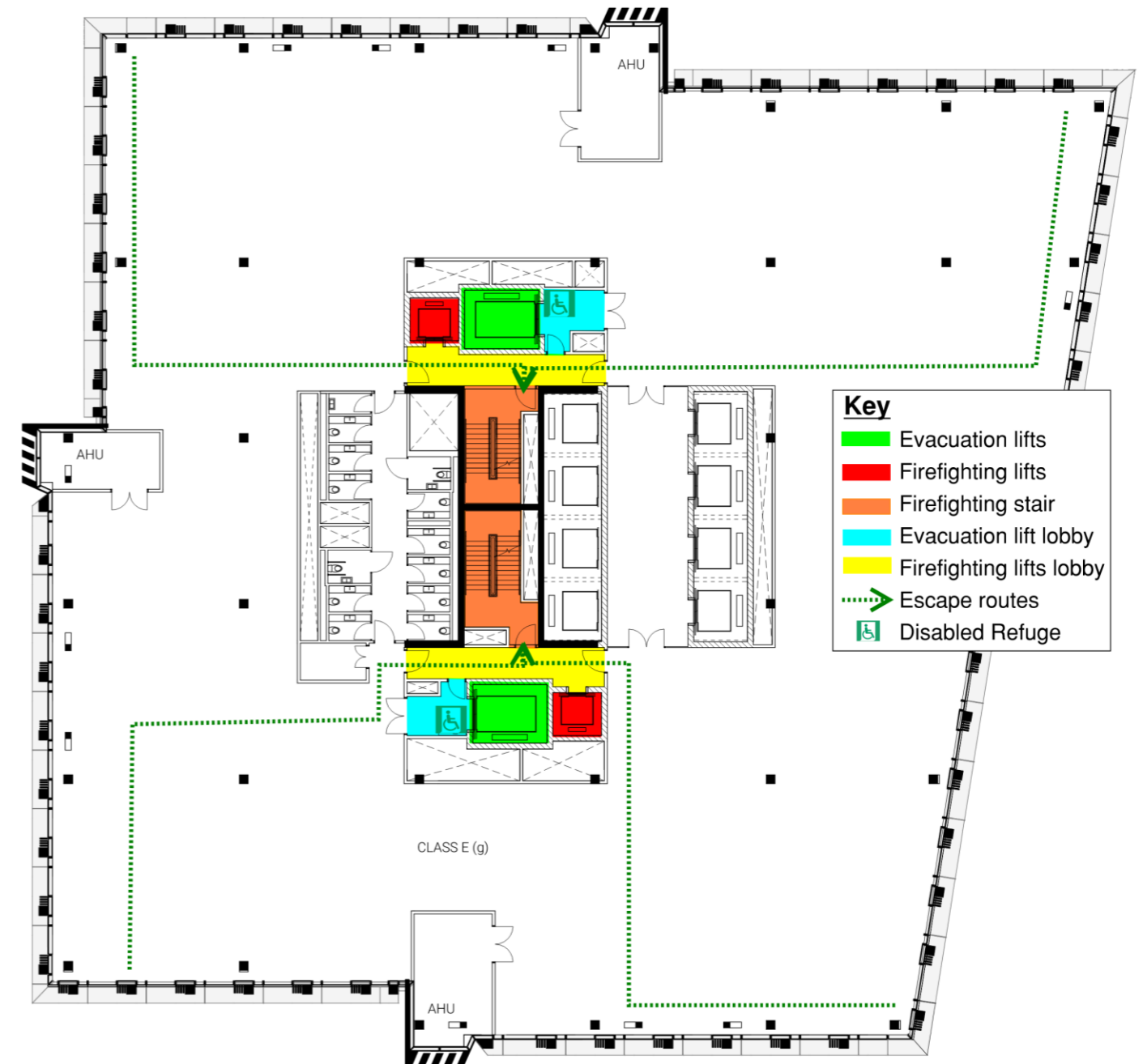


Figure 4 - Typical office level escape routes

2.2.5 Travel distances

Travel distances are within the limits set out in BS 9999 (2017). Where applicable a 15 percent increase in the permitted travel distance limits are applied, due to the provisions of an enhanced automatic fire detection and alarm system, in accordance with BS 9999 (2017).

2.2.6 Emergency lighting and signage

Emergency lighting shall be provided in accordance with BS 5266-1 (2016) and BS EN 1838 (2013).

Escape signage shall be provided in accordance with BS ISO 3864-1 (2011) and BS 5499-4 (2013).

2.3 B.3 – Passive and active fire safety measures

B.3. features which reduce the risk to life - fire alarm systems, passive and active fire safety measures and associated management and maintenance plans.

2.3.1 Passive fire protections measures

2.3.1.1 Compartmentation

Fire resistant performance of compartment construction (walls and floors) will be determined in accordance with BS 9999 (2017).

2.3.1.2 Fire Doors

Fire doors shall be provided where they form part of any compartment wall and shall meet the fire resistance requirements in accordance with Table 23 of BS 9999 (2017).

2.3.1.3 Fire Dampers

The protection of openings and fire stopping shall be provided in accordance with Section 32.6 of BS 9999 (2017).

Any services passing through fire rated compartment enclosures shall be fire stopped or fitted with fire or fire and smoke dampers in accordance with Section 32.5 of BS 9999 (2017).

Any ductwork passing through compartment lines such as compartment walls or the enclosures to protected escape routes, shall be protected using one of the methods listed in Section 32.5.2 of BS 9999 (2017).

Any ductwork which passes through or serves an escape route needs to be

- Fitted with automatically actuated fire and smoke dampers triggered by smoke detectors or
- Installed within a fire-resisting enclosure or protected using fire-resisting ductwork when the ductwork does not serve the escape route it passes through.

2.3.2 Active fire protection measures

2.3.2.1 Alarm and detection

A category L1 smoke detection system will be provided throughout the building conforming to the standard in BS 5839-1, with a voice alarm system provided in accordance with BS 5839-8, Type V1 (capable of automatic operation against a pre-programmed set of rules).

In addition to internal areas, alarm sounders should be provided to the external terrace spaces and roof, situated where necessary to achieve adequate volume, audibility and intelligibility to all external areas. Visible flashing alarm beacons should be provided to the external space and roof, in addition to the audible alarm, in accordance with BS EN 54-23. Flashing warning beacons will also be installed within disabled washrooms to ensure hearing impaired occupants can be alerted.

Both the audible and alarm and flashing beacons shall operate on a two-stage alarm basis ('double knock').

2.3.2.2 Automatic sprinkler systems

The proposed site will be provided with a full commercial sprinkler automatic suppression system. This system will be designed in accordance with BS EN 12845 (2015 and A1 2019).

2.3.2.3 Backup power supply

In accordance with BS 9999 (2017) Clause 37.2.3.3, a secondary power supply will be provided to all life safety system in the proposed development, including (but not limited to) the following

- Smoke control systems
- Sprinkler automatic suppression system

- Firefighting and evacuation lifts
- Emergency lighting.

2.4 B.4 – Access and facilities for the fire and rescue service

B.4. access for fire service personnel and equipment - how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these.

2.4.1 Fire service access within the building

In accordance with BS 9999 (2017), the proposed site will be served by two central firefighting shafts as the building has a topmost occupied floor greater than 18m above access level and a floor plate exceeding 900sqm.

Each core consists of a firefighting stair with associated firefighting lobby (including a wet rising main) and firefighting lift. The fire service site plan is presented in Figure 5. The two firefighting cores will be pressurized in accordance with BS EN 12101-6 (2005). To mitigate potential counter flow of the Fire Service with escaping occupants escaping via the stairs, an additional 500mm width is provided in addition to the width required for means of escape.

The development is to be served by a fire command centre (FCC). The location of the FCC is shown in Figure 5.

2.4.2 Basement smoke clearance

The basement of Euston Tower will be served by a mechanical smoke clearance system. The system will achieve a performance of 10 air changes per hour (10air changes per hour). The cycle store shall be provided with natural ventilation, in line with the recommendations set out in BS 9999 (2017) Clause 27.2.2.

2.4.3 Water supply for firefighting operations

In accordance with BS 9999 (2017), hose coverage will be provided to ensure coverage to all areas of the floorplate within 60m of the hose outlet point in a firefighting shaft, measured over a route suitable for laying hose. The maximum hose distances are not exceeded.

The provisions of the wet fire mains in both central firefighting cores enables the 60m hose coverage to be met.



Figure 5 - Firefighting facilities provided within the building. Ground Floor access presented.

2.5 B.5 – Site access for the fire and rescue service

B.5. How provision will be made within curtilage of the site to enable fire appliances to gain access to the building

2.5.1 Firefighting access to and into the building

Fire vehicle access is provided to the south core via Hampstead Road. Access to the north core is via Brock Street. These routes are shown in the Figure 6.

Access for fire appliances is provided within 18m of each fire main inlet connection point. Perimeter access is provided via the Euston Road, Hampstead Road and Triton Square.

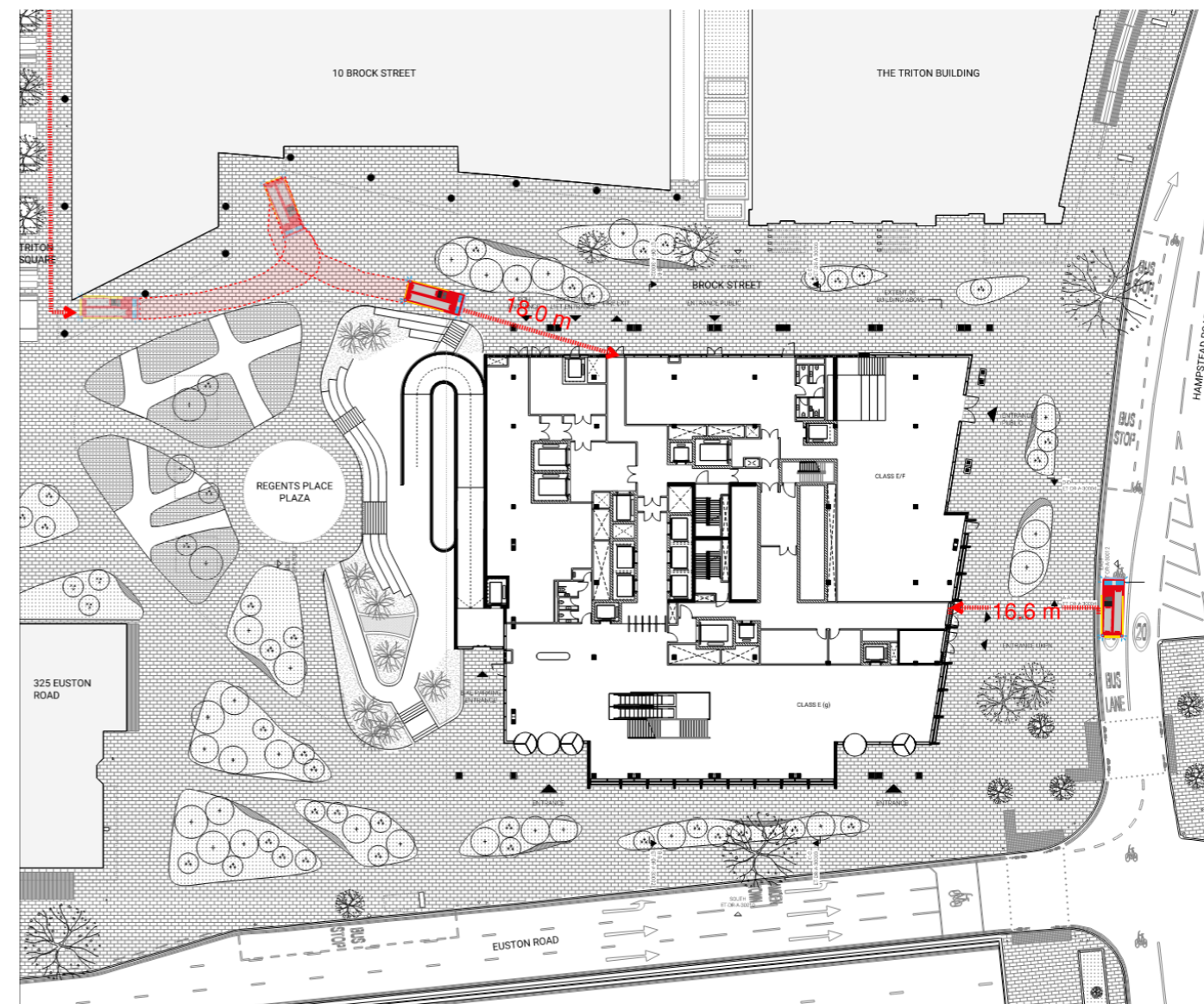


Figure 6 - Fire service site plan including vehicle parking and building entry locations

2.5.2 Water Supply

The nature of water supply comprises of hydrants provided by the water supply company on the street mains.

A wet riser tank shall be provided for the building.

It is understood that the proposed development relies on the provisions of existing hydrants on site. Further review will be undertaken with the design team to fully coordinate the hydrant provision.

2.6 B.6 Modification to the development and the 'golden thread' of information

B.6. Ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety or protection measures

Any changes to the building design or use type will need to be assessed with regards to the proposed fire strategy to ensure the strategy satisfies the functional life safety requirements of the Building Regulations 2010 (as amended). The responsible person as defined in the RR(FS)O will be responsible for ensuring that this assessment is undertaken.

The fire safety management plan will need to ensure that any potential future modifications to the building will consider and not compromise the base build fire safety or protection measures.

3. Provisions supporting Policy D5 Inclusive Design

3.1 B.5 Emergency evacuation for all building users

The two central escape stair cores are provided with an associated evacuation lift which can be used by People with Reduced Mobility (PRMs). Evacuation lifts serve every floor. This meets Policy D5 of The London Plan 2021. Occupants who are unable to use the stairs can take refuge in the protected lobby associated with each of the stair cores as shown in Figure 4. There will be an emergency voice communication system installed at each refuge point where any people who require assistance can communicate with building management or the fire service.

The evacuation lifts shall comply with Annex G of BS 9999 (2017) and be designed in accordance with the relevant provisions in BS EN 81-20 (2020) and BS EN 81-70 (2018). This includes the provision of protected refuges provided at all floors, within each goods lift or evacuation lift lobby, with minimum plan dimensions of 900 x 1400 mm.

A two-way Emergency Voice Communication (EVC) system in compliance with the requirements of BS 5839- 9 (2011) shall be provided for each refuge space to enable communication with the building management and the FCC. This follows guidance within BS 9999.

The responsible person for fire safety (as defined under the Regulatory Reform (Fire Safety) Order) will need to ensure that a management procedure involving personal emergency evacuation plans (PEEPs) is developed and put in place for any occupants requiring assistance to exit the building, and that sufficient training is provided to the staff to assist with this. This will be developed specific to their requirements of the occupant and will allow them to be briefed on their preferred independent evacuation route. In addition, it is the building management who are responsible for conducting PRM assisted evacuation.

4. Competency statement

It is concluded that the Euston Tower proposal is designed to meet the requirement of London Plan 2021 Policy D12 Fire Safety A.1-6. It will also meet the requirements of Policy D5 Inclusive Design B.5.

This report has been prepared by Arjun Dhanjal and Clare Russell, checked and approved by Charlotte Roben CEng.