



London Plan Fire Statement

45 High Sheldon, Highgate

2 October 2023

Jeff Lerner

16220BC



BB7

Revision History

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1. Introduction

BB7 have been commissioned by Jeff Lerner (leaseholder for Flat 45) to produce a London Plan Fire Safety Statement for the proposed works being carried out to 45 High Sheldon, Sheldon Avenue, London, N6 4NJ. The building in which Flat 45 is situated is existing, and the flat will be undergoing refurbishment works. The proposed works do not include construction changes to the existing internal communal areas of the building.

The works requiring a planning application are being carried out to Flat 45 only, which is situated across the top storey of the building highlighted in Figure 1.1.

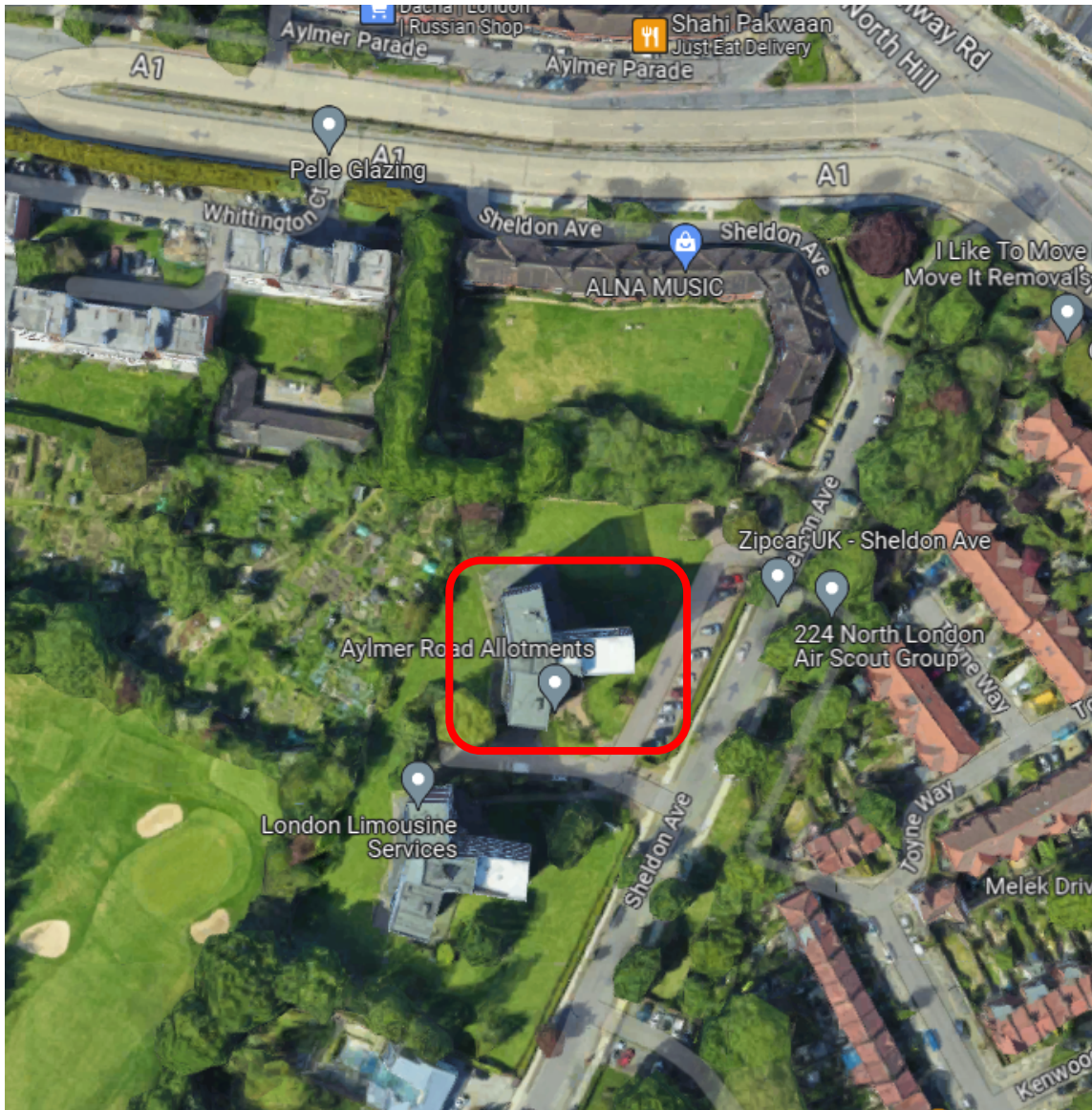


Figure 1.1 Site plan

As the proposed works include alterations to the materials on the external walls, a Planning Fire Safety Statement (PFSS) should be submitted, which addresses Policy D12A of the London Plan. Policies D12B and D5 are not applicable as the works do not constitute a major development, and a new lift core will not be installed as part of the proposed works.

The objective of the Fire Statement is to summarise how the works will function in terms of fire safety and how it aims to satisfy Policy D12A of the London Plan. The London Plan Policy requires any proposals to achieve the highest standards of fire safety to ensure the safety of the relevant building users.

The principal guidance document used for the evaluation of fire safety precautions for the residential aspects of the development will be BS 9991 2015 edition, as the flat is open plan and Approved Document B Vol 1 2019 edition featuring 2020 and 2022 amendments as this provides the most recent guidance on the construction of external walls for fire safety.

Where appropriate, reference may be made to other relevant British and European standards.

The Fire Statement is based on the following drawings provided by XUL Architecture.

Table 1.2 Reference drawings

Drawing title	Drawing number	Revision
Proposed Floor Plan	22096 PA-01	P-00
Proposed Roof Plan	22096 PA-02	P-00
Proposed Elevations	22096 PA-03	P-03
Proposed Elevations	22096 PA-04	P-04
Proposed Section	22096 PA-05	P-00
Existing Floor Plan	22096 EX-01	P-00
Existing Roof Plan	22096 EX-02	P-00
Existing Elevations	22096 EX-03	P-00
Existing Elevations	22096 EX-04	P-00
Existing Section	22096 EX-05	P-00

There is understood to be no Fire Strategy Report available for the building. This report information sourced from the architect, where available, and observations made during a visual only site inspection.

The Planning application is being made as a result of the proposed works to the existing walls. This includes changes to existing windows and existing window partitions, works to the balcony balustrade, works to the balcony rendered wall, and potentially raising the finished floor level of the existing balcony.

In addition to the above, works are proposed to amend the existing layout of Flat 45. The existing layout features an open-plan layout and the proposed works will not change this. The existing kitchen is currently enclosed, but it is proposed by the leaseholder / architect for the kitchen to become open to the main living space. The existing terrace will be furnished with seating arrangements and a hot tub. It is understood that these works do not require a planning application, but it has been requested that this Planning Fire Safety Strategy (PFSS) considers these works to achieve the highest standards of fire safety to ensure the safety of the relevant building users.

Statement of compliance

BB7 is of the opinion that the fire safety measures outlined within this PFSS have been developed with the highest standards of fire safety in mind and in accordance with the requirements of D12A of the London Plan Policy, as applicable to the extent of the planning application.

2. Competency statement

2.1 BB7 Company Statement

BB7 Consulting Ltd is an independent firm of fire engineers and certified fire risk assessors led by a team of Chartered professionals. Within our specialism, we offer innovative solutions for design optimisation that add tangible value to our clients' projects.

BB7 has a proven track record for securing Building Regulations approval on numerous developments across London (both residential and commercial) and has a positive working relationship with the local statutory authorities.

2.2 Project team

The following table outlines the individuals that have had input on the production of this Fire Statement.

Table 2.1 Project team

	Name	Professional Qualifications	Academic Qualifications
Author	David Werran	• Associate of the Institution of Fire Engineers (AIFireE)	• MEng (Hons) Fire Engineering
Reviewer	Eoin Troy	• Associate of the Institution of Fire Engineers (AIFireE) – Interim Chartered	• MSc Fire Safety Engineering

2.3 Relevant experience

David Werran

David is a Senior Fire Engineer who joined BB7 in 2016. David has nine years of experience within the fire industry, working in both the public sector as a firefighter and more recently, within the private sector as a fire engineer.

David has developed fire strategies for a wide variety of projects nationwide. His residential projects range from single private dwellings to large high rise residential and mixed use developments. He has produced fire strategies for care homes, specialized housing projects, hotels, and hospitals.

In terms of commercial projects, David has an array of experience including universities, schools, museums, offices, shops, and warehouses.

In addition to fire safety design work, David has carried out numerous EWS1 Forms and FRAEWs for existing residential buildings.

Eoin Troy

Eoin is a Director at BB7 with 17 years' experience specialising in fire safety engineering and CFD modelling. Eoin started at BB7 in 2019, working previously as Associate Director with Bureau Veritas and Fire Engineer with Warringtonfire.

Eoin now manages a large team in our Antrim and Glasgow offices comprising fire engineering and fire assurance services, while leading major projects within his team. He has worked on a wide range of complex projects throughout the UK and Ireland including residential, mixed use developments, offices, hotels shopping centres, healthcare and educational premises. This has involved producing fire strategies through different RIBA Stages, providing support during construction and undertaking complex engineering studies utilising computational fluid dynamics, zone modelling and fire engineering calculations.

3. PFSS – Policy D12A

3.1 Fire service vehicle access

Policy criterion - Identify suitably positioned unobstructed outside space for fire appliances to be positioned on

The PFSS should identify areas where fire and rescue service pumping appliances can be sited. Ideally areas should be identified on the development site so that they remain in the control of the development. Where this is not possible, the PFSS should set out the implications of not having control of this area and any proposed mitigation measures such as obtaining the agreement of the landowner to keep the area clear for emergencies.

The fire service access to the overall building is existing and will not be changed as a result of the proposed works and planning application. There is vehicular access to the gated site from Sheldon Avenue; this existing public road will continue to give access to the building. This can be seen in the image below.



Figure 3.1 Fire service vehicle access route

Based on visual observations, the fire service vehicle access route specification given in contemporary guidance appears to be achieved by the existing arrangements for pump appliances.

Appliance type	Minimum width of road between kerbs (m)	Minimum width of gateways (m)	Minimum turning circle between kerbs (m)	Minimum turning circle between walls (m)	Minimum clearance height (m)	Minimum carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	12.5

The fire service pumping appliances can park either along the main road – Sheldon Avenue- or can gain entry through the gate and be sited within the development’s car park where there would be sufficient room for the vehicles to park and manoeuvre. This area is within control of the existing development and gives fire service personnel direct access into the building via the main entrance.

3.2 Evacuation assembly point

Policy criterion – Identify suitably positioned unobstructed outside space appropriate for use as an evacuation assembly point

The PFSS should identify a suitably sized evacuation assembly point for both the construction and occupation phases of the development. Ideally areas should be identified on the development site so that they remain in the control of the development. Where this is not possible, the PFSS should set out the implications of not having control of this area and any proposed mitigation measures such as obtaining the agreement of the landowner to keep the area clear for an assembly point during an evacuation.

The areas discussed in Section 3.1 of this PFSS or the grassy areas seen in Figure 3.1 are existing and will not be affected as a result of the works requiring a planning application. These areas can be used as an evacuation assembly point both during the construction works, for Flat 45 occupants, and all building occupants, as necessary. This area is within control of the existing development and there is sufficient space for both evacuating occupants and the responding fire service.

3.3 Passive and active fire safety measures

Policy criterion – Are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire, including appropriate fire alarm systems and passive and active fire safety measures

The PFSS should set out what passive and active fire safety measures have been incorporated into the development and what fire safety codes, standards and regulations these measures have been designed to meet. The PFSS should identify any additional measures that have been included to achieve the highest standards of fire safety, proportionate to the size and nature of the development. Identifying the role these measures play in the design and fire safety of the development supports the golden thread approach. If the fire safety measures are altered, the impact on fire safety should be assessed and mitigation measures included, where required.

Passive and active fire safety measures within a building increase levels of personal safety and the protection of property in the event of a fire. Passive measures are the elementary parts of a building or structure that do not require a reaction or human intervention during a fire. Passive fire protection is achieved through compartmentalisation, effectively sub-dividing a building into compartments to prevent the spread of fire, such as with the use of fire- resistance rated walls, floors and fire doors. Dampers are used to prevent the spread of smoke throughout any ductwork.

Active fire protection systems require a reaction or action to mitigate the effects of a fire. Systems are mostly automatic, such as fire alarms, smoke detectors, sprinkler systems and ventilation systems. Some measures require manual intervention such as fire extinguishers.

The Planning application is required as a result of the proposed works to the building’s external areas such as the flat’s windows, balcony flooring, and balcony balustrades. This PFSS is specifically required to address

these items only but it has been requested that this PFSS considers the proposed internal arrangement of Flat 45.

The top storey height of the existing building is estimated as 21m above ground level. This is discussed further below but the works being carried out to the external areas – windows, balcony, and balustrades – will be carried out in accordance with Regulation 7 which will be required as part of the Building Regulations application.

This is considered to ensure that works under this cope of works being carried out to the building's existing areas will contribute robust passive fire safety measures as the primary components of the external walls will need to achieve Euro class A2-s1, d0 or better, except where exempt. Limiting the use of combustible materials as part of the works being carried out to the existing external walls should reduce the likelihood of external fire spread along the external walls as a result of the works. These works will not amend portions of the external walls which will remain untouched or external walls to floors below the uppermost floor.

The works proposed to be carried out to the internal arrangements of the flat are not subject to a planning application, but the proposed passive and active measures being provided as part of the works have been outlined here for consideration.

It will be ensured that there will be at least 60 minutes fire-resistant construction between the flat and the communal areas of the building. This is consistent with the contemporary design of residential buildings. Compartmentation and passive fire protection measures are critical parts of the stay-put evacuation strategy the building operates and needs to be maintained.

In addition to this, two primary active fire protection systems will be installed as part of the work. The flat will continue to feature an open-plan layout – this remains consistent with the existing arrangements. To improve fire safety, to be consistent with contemporary fire safety design guidance, and to achieve the highest standards of fire safety to ensure the safety of the relevant building users, Flat 45 will be provided with a new fire detection and alarm system and a watermist fire suppression system.

As part of the proposed works, the kitchen enclosure is proposed to be removed and the kitchen hobs will be re-located. It has been agreed that the hobs' new location will not be within 1.8m of the flat's internal escape route and a clear width of 900mm will be allowed for at least 1.8m from the hobs.

Currently, there is a single detector within the flat which is not considered acceptable for a large open plan flat arrangement. The new fire detection and alarm system will be a category LD1 system designed, installed, and maintained to BS 5839-6 which will include detection throughout the flat except where exempted from that standard. This should provide early warning to occupants within the flat for a more efficient evacuation response. This is considered to be a significant improvement to the fire safety of the relevant occupants.

Currently, there is no suppression within the flat. The watermist fire suppression system will be designed, installed, and maintained in accordance with BS 8458 and will include coverage throughout the flat except where exempted from that standard. Automatic suppression should improve conditions within the flat in the event of fire for evacuating occupants. This is considered to be a significant improvement to the fire safety of the relevant occupants.

The proposed arrangements discussed above are consistent with contemporary and draft guidance in BS 9991 which accepts open kitchens with the above criteria achieved.

The hallway between the main flat and the communal stair is understood to form part of the lease for the flat and is not under the control of the building's landlord. This is understood to be an existing arrangement and has not occurred as a result of the works to the building that require a PFSS.

To remain consistent with other floor levels, at least one of the windows in the hallway should be manually openable by the fire service to provide smoke ventilation to protect the stair. The openable window should have an opening area at least that of the windows on other floor levels.

3.4 Construction

Policy criterion – Are constructed in an appropriate way to minimise the risk of fire spread

The PFSS should detail the construction methods of the development. The method of construction such as block and brick, timber frame or modular construction will influence how a fire could spread. The potential fire spread risks associated with the proposed method of construction should be identified along with any potential impact on the fire safety of neighbouring units, sites, buildings and occupants. The PFSS should set out the measures that will be implemented to limit fire safety risks such as suitable fire control systems.

The intended fire safety performance of construction materials should be provided within the PFSS. The identification of the construction methods and fire resistance performance of materials as part of the initial design phase supports the golden thread principle and if altered should be assessed for any adverse impacts and mitigation measures included.

The following table provides an overview of the key building components of the existing building. This is based on visual observations made during a site visit and discussion with the project architect.

Element	Existing arrangements
Structure	Concrete frame, concrete slabs, and concrete stair
External walls	Brick outer leaf and floor slab appears to close external wall cavity
Roofs	Unknown – existing roof and the works is understood to not change the roof covering performance
Internal floors	Reinforced concrete slab
Balconies / terraces	Concrete floor slab projection, concrete and glazed balustrades, aluminium balustrade framing

The existing arrangements of the building's construction appears to be predominantly non-combustible and robust which limits the potential for the construction to contribute to fire spread.

Any openings in fire-resisting construction should be appropriately fire-stopped as part of the works.

The building has a top storey height of more than 18m above ground and is considered a 'relevant building' as defined in Regulation 7(4) for works being carried out to the external walls. As the building is a 'relevant building', other than the exemptions outlined within Regulation 7(3), all works being carried out to the external walls will be in accordance with Regulation 7 including any new primary components achieving Euro class A2-s1, d0 or A1.

3.5 Means of escape and evacuation strategy

Policy criterion – Provide suitable and convenient means of escape, and associated evacuation strategy for all building users

The PFSS should clearly state how the means of escape for all building users has been considered and planned for from the initial design of the development (also see guidance for the provision of evacuation lifts below). The PFSS should evidence, including through plans, the codes and standards the means of escape have been designed to meet and any additional measures that have been included in order for the development to achieve the highest standards of fire safety, proportionate to the size and nature of the development.

The proposed means of escape will inform the evacuation strategy. The PFSS should justify the proposed evacuation strategy, including by identifying the codes and standards that have informed the strategy. The evacuation strategy must be inclusive and appropriate for people with disabilities and those who may not speak or understand English (see London Plan Policy D5 and guidance on evacuation strategies, including the provision of evacuation lifts below).

The existing evacuation strategy is stay-put whereby only the occupants in the flat of fire origin initially evacuate from the building. Occupants in other parts of the building may evacuate if they want to or if they are directed to by the responding fire service. The car park and any other ancillary areas of the building would operate a simultaneous evacuation strategy. It is not considered necessary for occupants of flats to evacuate in the event of fire in the car park unless they want to or are directed to by the fire service.

The existing building construction appears to be largely non-combustible and robust based on the visual site inspection carried out. Unless identified in the FRA or an FRAEW or other report, a stay-put evacuation strategy is considered appropriate for this building as the existing arrangement.

The proposed works being carried out to the external walls will be in accordance with Regulation 7 and will utilise materials of Euro class A2-s1, d0 or better. It is not considered necessary for the evacuation strategy to be amended as a result of the works being carried out to the external walls. These are the works that require the planning application and PFSS.

The proposed works within the flat include removing the enclosure to the kitchen and works to the internal layout regarding access to the bedrooms, for example. The works will include making improvements to active fire safety systems within the flat. This includes the provision of new fire detection and alarm system and a new watermist fire suppression system to improve fire safety arrangements within the flat. It is not considered necessary for the evacuation strategy to be amended as a result of the works being carried out to the internal arrangements.

3.6 Review of evacuation strategy

Policy criterion – Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in

The evacuation strategy should set out how the users of a development will exit a building to a safe location in the event of an emergency. It should be relevant to the use, size, anticipated occupancy and associated risk to the building and its occupants with contingency measures, where necessary. The PFSS should include a timeframe for the periodic review and update of the evacuation strategy over the lifetime of the development.

The evacuation routes from the building remain unchanged as a result of the works. The base of the stair has access to final exits at ground floor and lower-ground floor and occupants can move immediately away from the building from a final exit.

The building is existing and the means of escape arrangements should be reviewed each time the building's fire risk assessment is reviewed or updated.

It is not considered necessary for the final exit arrangements to change as a direct result of the works requiring a planning application and PFSS.

3.7 Access and equipment for the fire service

Policy criterion – Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development

The PFSS should identify how emergency access is to be provided to and within the development site and what fire safety equipment for the fire and rescue services has been included in the scheme; temporarily for the construction phase of the development and permanently for the occupation phase. The author should ensure and confirm in the PFSS that there is an adequate firefighting water supply.

Section B5 of Approved Document B (ADB) Parts 1 and 2 provide a way to comply with Part B of Schedule 1 to The Building Regulations 2010 requirement 'access and facilities for the fire service'. The proposed access for the fire and rescue service may be provided in line with ADB as a minimum standard, however the PFSS should set out how the proposed measures are specific and relevant to the proposed development. The PFSS should identify any potential obstacles and delays that would impede access to the site and potential alternative access routes.

Firefighting facilities (where required) can be provided in line with ADB as a minimum standard, however the PFSS should set out how the proposed facilities are specific and relevant to the proposed development. The PFSS should include an outline management plan for the ongoing maintenance of both the on-site access and firefighting equipment provisions.

The building is existing and the works being carried out to the external walls are not expected to affect the existing fire service access and facilities available.

The works to the external walls will be carried out in accordance with Regulation 7 which will not contribute to fire spread along the external walls.

The internal works involve amendments to the internal arrangements of one flat. The layout will be amended but there will be a new fire detection and alarm system and watermist fire suppression system installed.

The provision of the suppression system should mean the fire service is responding to a suppressed fire.

The existing building is understood to have been constructed in circa. 1960s. The building is not fitted with a firefighting lift or dry rising fire main or automatic smoke ventilation to the communal areas. This arrangement is understood to have been considered acceptable at the time of design and construction.

To remain consistent with other floor levels, at least one of the windows in the hallway should be manually openable by the fire service to provide smoke ventilation to protect the stair. The openable window should have an opening area at least that of the windows on other floor levels.

The building height is not significantly tall and there is good perimeter access around the building. Upgrade to the existing fire service access and facilities is not considered necessary as a direct result of the works that require a planning application and PFSS.

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