



# Planning Fire Safety Statement for Residential Development at 10 Orleans Road, Twickenham, TW1 3BL.



**Introduction**

Context

The proposed works comprise the change of use of a warehouse to 2 no. residential dwellinghouses at 10 Orleans Road, Twickenham, TW2 6NQ.

The existing warehouse comprises ground and mezzanine floor levels only. The 2 no. proposed dwellinghouses will comprise ground and first floor levels. The first floor level has a relevant height in fire safety terms of less than 4.5m (measured from existing ground level). The proposed 2 no. dwellinghouses do not exceed a floor area of 1,000m<sup>2</sup> and therefore are not designated as a Major Development under Annex 6 of the London Plan 2021. The dwellinghouses do not contain a lift. Accordingly, this Planning Fire Safety Statement (PFSS) is structured to address London Plan Policy 12A only and is presented in that order prescribed in Policy D12A, i.e. Policies D12A(1) through D12A(6).

Competence

This Planning Fire Safety Statement (PFSS) has been prepared by Dr. Raymond Connolly of Fire Safety dotLondon Ltd. who is a suitably qualified and experienced Chartered Engineer and Member of the Institution of Fire Engineers, meeting the competency standards contained in Clause 3.12.9 of Policy D12.

Design Objectives

In the first instance the fire safety objectives are those contained outlined in the Greater London Authority's London Plan 2021 **Policy D12A – Fire Safety.**

It is confirmed that London Plan Policies D12B (*Fire Safety - Major Developments*) and D5(B5) (*Evacuation Lifts*) do not apply to the subject development. The proposed development has been evaluated in terms of its capacity to deliver the stated Policy 12A objectives, specifically:-

- 1) Identification of suitably positioned unobstructed outside spaces for (a) fire appliances and (b) evacuation assembly.
- 2) Measures to ameliorate risk to life and of serious injury due to fire (active & passive fire safety precautions).
- 3) Fire safety performance in respect of the building's inherent construction and the fitness for purpose of the materials used therein to limit fire spread.
- 4) Adequate, dignified and universal means of escape in case of fire for all potential building users.
- 5) Evacuation Strategy.
- 6) Access and facilities for London Fire Brigade.

**Design Development**

Building Regulations 2010 (as amended in 2018, 2020 and 2022)

During detailed design, these London Plan policy objectives will be further supplemented by the minimum requirements of Part B to Schedule 1 of the Building Regulations, namely:-

- To ensure the life safety in case of fire of all building, i.e. to permit all building occupants to safely
- To inhibit the spread of fire via the internal wall/ ceiling linings.
- To design and construct the building such that it will retain its stability for a reasonable period during a fire.
- To appropriately sub-divide the building to restrict the internal spread of fire and to inhibit the unseen spread of smoke and fire within concealed spaces.
- To prevent the spread of fire from the building beyond the site boundaries to adjacent buildings.
- To enable access to the building to assist fire-fighting.

These statutory objectives shall be met to the extent determined by the Building Control Body (identity to be confirmed) in consultation with London Fire Brigade as being sufficient to achieve compliance with the specific requirements of Part B to the Building Regulations 2010 (as amended).

The dwellinghouses are defined under Building Regulations as:-

Purpose Group *	
1(c)	Dwellinghouse that does not contain a habitable storey with a floor level a minimum of 4.5m above ground level.

\*Table 0.1 of HM Government Approved Document B Vol. 1  
**Table 1. Building Regulations Purpose Group**

**Relevant Fire Safety Design Code**

This PFSS outlines a means for delivering future compliance with Part B to the Building Regulations (as amended), as will be further developed during the detailed design process within the formal statutory regime under the jurisdiction of the appointed Building Control Body and London Fire Brigade. This approach shall include adoption of the appropriate guidance contained in:-

- **BS 9991, Fire safety in the design, management and use of residential buildings - Code of practice (2015).**

**Future Modifications (The Golden Thread)**

The fire safety strategy underpinning the building design shall be maintained into the design and construction stages (RIBA Stages 3-6), allowing for future modifications as might arise. It is highlighted that the Building Regulations (as amended) will apply to these buildings.

Specific construction products and manufacturer's verification of performance shall be proposed in due course by the Design Team to comply with the statutory obligation of Regulation 7 and specifically Regulation 7(2) with regard to delivery on the principles contained in this Planning Statement, i.e. specification of appropriate materials and standards of workmanship.

As per Regulation 38, all relevant design fire safety information (including operations, maintenance and routine testing of fire safety systems) shall be formally handed over to the responsible persons on completion.

The **Materials Information Register** contained within this PFSS shall be passed to any third party engaged in the future construction phase to maintain the "golden thread" of fire safety design. It is noted that this PFSS is a document of public record and will be available to the Building Control Body overseeing the design and construction stages.

**London Policy Objective D12A(1)a  
Fire Service Access (Building Regulation B5)**

The 2 no. dwellinghouses will be accessed off the main public highway i.e. Orleans Road. This extent of Fire Service access is sufficient for buildings of this size with access to all locations in the proposed dwellinghouses as being within 45 metres of the hard-standing – as measured along the line of a laid hose. The notional hard-standing (shown in red in *Figure 1*) sits on Orleans Road, which is sufficiently wide to accommodate same without undue



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obstruction. As a public highway, the hard-standings shall be available during the construction process.



Figure 1. Fire Service Access within Site

## London Policy Objective D12A(1)b Evacuation Assembly (Building Regulation B1)

The proposed development sits on a private site at the junction of Orleans Road & Chapel Road. Evacuation onto the public pavements on Orleans Road & Chapel Road are available and may be used during the construction process. (Figure 2 refers).



Figure 2. External Assembly Point

## London Policy Objectives D12A(2) Fire Safety Systems (Building Regulation B1)

### Active Fire Precautions

The 2 no. proposed dwellinghouses shall be provided with an automatic fire detection and alarm to BS 5839-6:2019+A1:2020 (Type LD2). Detection shall be minimum **Grade D2**, i.e. mains powered inter-linked detection and alarm.

### Passive Fire Precautions (Figures 4 & 5 refer)

Good design practice and construction standards shall be employed throughout, so as to reduce ignition risks, e.g. suitably sized unjointed electrical wiring, fire-resisting non-combustible post boxes. All electrical wiring shall meet current IET National Wiring Regulations (BS 7671).

The 2 no. dwellinghouses shall be designed on the basis of no inner habitable rooms as indicated on Figures 4 & 5 below.

The gable walls within 1 metre of the legal site boundary shall include minimum 60 minutes fire-resisting construction, e.g. min. 100mm thick brickwork.

### Fire Safety Management (Regulation 38)

The homeowners shall be appraised of the fire safety systems installed within the dwellinghouses including advice on the routine testing and maintenance of the fire detection and alarm system to BS 5839:Part 6 requirements.

## London Policy Objective D12A(3) Building Construction (Building Regulations B2, B3, B4 & Regulation 7)

### Materials Information Register (Regulation B2)

Notwithstanding that the building is not yet procured, it is proposed to restrict future construction materials by means of performance classification to BS EN 13501-1 as follows:-

- Roof (clay/slate finished tiles) to minimum **Class B<sub>ROOF</sub>(t4)**
- External walls (cement board, masonry & brickwork/render) to **Class C<sub>s3,d2</sub>**
- Internal walls and ceilings to escape routes to **Class C<sub>s3,d2</sub>**
- Other internal walls/ceilings generally to minimum **Class C<sub>s3,d2</sub>**, with the exception of small rooms (having areas < 4m<sup>2</sup>), which may be relaxed to **Class D<sub>s3,d2</sub>**.

The proposed dwellinghouses are not “relevant buildings” as defined in Building Regulation 7(4) and where the spatial separation of the external walls to the relevant site boundary is more than 1 metre, the components within the external wall assembly are unrestricted. Where the spatial separation of the external walls to the relevant site boundary is less than 1 metre, the components within the external wall assembly are required a Class B-s3, d2 or better.

Electrical sockets shall be provided within all rooms in sufficient locations and numbers to minimise any end-user need to introduce portable adapters and extension leads as might pose an increased risk of electrical fire ignitions.

### Protection against undue fire spread via structure (Regulation B3)

The proposed building shall be designed to retain its stability in the event of a fire for a reasonable period. This shall be verified during detailed design through:-

- Specification of gable walls as **60 minutes** fire-resisting as described in Figures 4 & 5. Red Lines= 60 mins fire-resisting;
- Other internal walls to be provided with fire ratings as described in Figures 4 & 5. Blue Lines= **30 mins** fire-resisting;
- Provision of elements of structure (beams, columns and floor slabs) having minimum fire resistance ratings of **30 minutes**.
- Enclosure between the bedrooms/store and entrance hallway/stair to be provided with **30 minutes** fire-resisting construction, accessed via FD30 doorsets.

### Protection against undue fire spread externally (Regulation B4)

The relevant boundaries are identified in Figure 3. The buildings' elevations shall be controlled as necessary to include fire-resisting construction as necessary to ensure that fire does not spread beyond the site's relevant boundaries.

The gable walls adjoining adjacent property (north eastern elevation) shall be constructed as separating walls and will provided a minimum of 60 minutes fire-resisting construction.

The gable walls within 1 metre of the legal site boundary shall be provided with a minimum of **60 minutes** fire-resistance and no unprotected openings. External wall surfaces within 1 metre of the site boundary shall be **Class B<sub>s3,d2</sub>**.



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**Figure 3. Overview of Relevant Boundaries**

The south eastern elevation is within 1 metre of the legal site boundary and will be fire-rated as indicated on the floor plans (Figures 4 & 5 refer) to ensure space separation compliance.

The wall separating 10a & 10b and the north eastern elevations adjoining the adjacent property shall be constructed as separating walls and will provided a minimum of 60 minutes fire-resisting construction as indicated on the floor plans (Figures 4 & 5 refer).

Materials and Workmanship (Regulation 7)

Specific new construction products and manufacturer's verification of performance shall be proposed in due course by the Design Team to comply with the statutory obligation of Regulation 7 and specifically Regulation 7(2) with regard to delivery on the principles contained in this Planning Statement, i.e. specification of appropriate new materials and standards of workmanship.

**London Policy Objectives D12A(4)  
Means of Escape for all building users  
(Building Regulation B1)**

Design Philosophy

The proposed dwellinghouses have been appraised in terms of the means of escape infra-structure for all occupants comprising a single family dwellinghouse. The fire safety design shall deliver compliance with Part B1 of the Building Regulations by adhering to the principles contained in BS 9991, Fire safety in the design, management and use of residential buildings - Code of practice, 2015.

Proposed Means of Escape

The dwellinghouses are not provided with a lift. Evacuation shall not rely on Fire Service intervention. The sounding of the automatic fire detection and alarm system shall motivate the simultaneous single-phase evacuation of all residents.

Dwellinghouse 10A may be summarised in fire safety terms as comprising no storey in excess of 4.5 metres above ground floor level with no inner habitable rooms i.e. the bedrooms/store at the ground floor level shall be enclosed with 30 minutes fire-resisting construction with FD30 doorsets. The 2 no. bedrooms at the ground floor level shall be provided with windows suitable for escape i.e. no inner habitable rooms. The upper floor level shall be separated from the bedrooms/store by 30 minutes fire-resisting construction with FD30 doorset.

Dwellinghouse 10B may be summarised in fire safety terms as comprising no storey in excess of 4.5 metres above ground floor level. The bedrooms at the first floor level shall be enclosed with 30 minutes fire-resisting construction with FD30 doorsets. The 2 no. bedrooms shall be provided with windows suitable for escape i.e. no inner habitable rooms.

The importance of maintaining the integrity of the protected stair infra-structure through closing of fire doors shall be emphasized in writing to the end-user occupier as part of handover.

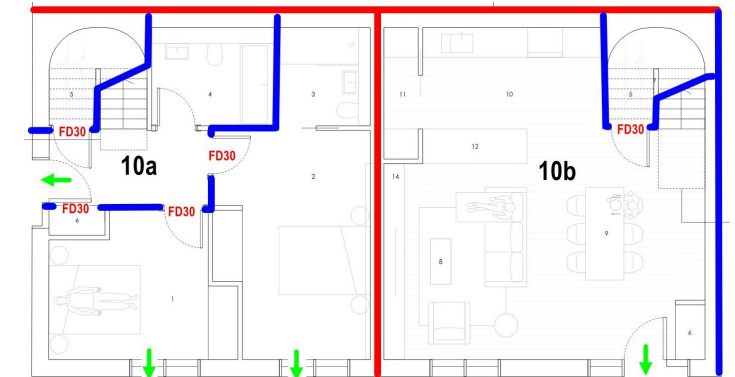
**London Policy Objective D12A(5)  
Evacuation Strategy  
(Building Regulation B1)**

A household specific Escape Plan should be developed by the final building occupier that recognises:-

- (i) The critical reliance of the protected escape stairway on fire doors being closed at all material times.
- (ii) The need for self-reliance in terms of escape with appropriate assistance provided from within the household where necessary for younger, older or cognitively/mobility impaired occupants.

It is highlighted that this latter responsibility is likely to evolve over time and the Evacuation Plan shall be subject of periodic review (not less than annually).

It is recommended that the Evacuation Plan should also be extended to consideration of wider fire safety matters such as regular weekly testing and maintenance of the fire alarm system.



**Figure 4. Proposed Ground Floor Plan**



**Figure 5. Proposed First Floor Plan**

**London Policy Objective D12A(6)  
Fire Service Access in and around the building  
(Building Regulation B5)**

The dwellinghouses are located within 100 metres of an existing fire hydrant and as a result does not require provision of any specialist fire-fighting facilities or dedicated fire hydrant. It was previously confirmed in Figure 1 that all locations within the proposed dwellinghouses are within the 45 metres range of a hose laid from the Fire Service vehicle (pumping appliance) notional hard-standing on Orleans Road.

The notional vehicle hard-standing is served by the existing public fire hydrant located on Orleans Road as shown in Figure 6. This provides a supplementary water supply for residential fire-fighting and is in addition to the London Fire Brigade pumping appliance on-board water storage capacity.

These facilities shall remain available during the construction phase, with a number of secondary vehicular hard-standings



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available on Orleans Road & Chapel Road should there be a temporary instance of a construction vehicle obstructing the preferred location.

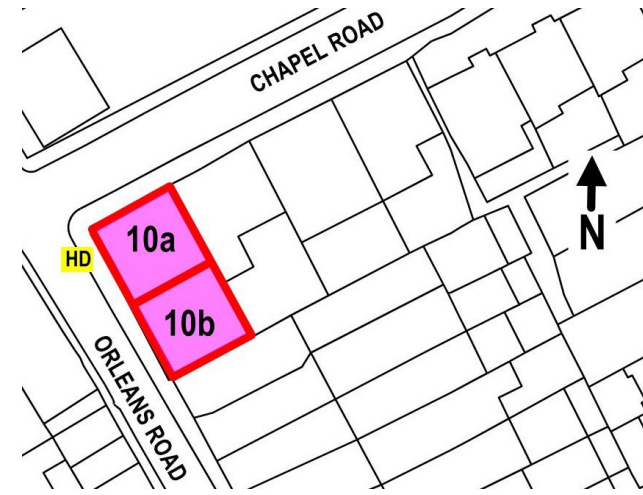


Figure 6. Existing Fire Hydrant Location on Orleans Road

### Declaration by Expert Assessor

This Planning Fire Safety Statement has been prepared in good faith using our specific fire safety expertise to meet our best understanding of the requirements of Policies D12A of *The London Plan 2021* using the recommended checklist therein.

The subject buildings are amenable to achieving full compliance with Part B (Fire Safety) to the Building Regulations, 2010 and Building Regulations (as amended). Any future modifications to the building as described in this PFSS should be assumed to adversely affect this declaration, unless demonstrated to the contrary by a competent person.

- Reduction in any fire resistance ratings contained in this PFSS.
- Omission of fire-resisting enclosures.

Dr Raymond J. Connolly  
BE, PhD, CEng, MIEI, MIFireE, MSFPE  
**Chartered Engineer & Fire Safety Specialist**  
For Fire Safety dotLondon Ltd

### Supporting Schedule of Relevant Planning Drawings

This Fire Statement has been prepared following our appraisal of

Ref.	Title
22001_P100 P1	Proposed Ground Floor Plan
22001_P101 P1	Proposed First Floor Plan

the drawings (as prepared by 2C Architects Ltd) as per Table 2.

Table 2. Schedule of Relevant Planning Drawings

A3.2 Form 2 – Planning Fire Safety Strategy template (London Plan Policy D12A) for non-major development as set out in Appendix 1

Form 2 – Planning Fire Safety Strategy template (London Plan Policy D12A) for non-major development	
Site address	✓
Description of development	✓
Name, qualifications, professional memberships and experience of author	✓
Has a Gateway One Statement been submitted?	THIS REPORT IS NOT SUBJECT TO THE GATEWAY ONE STATEMENT REQUIREMENT AS IT IS LESS THAN 18m
Policy considerations	Potential Gateway One cross reference
Identifies suitably positioned unobstructed outside space for fire appliances to be positioned on	✓ Gateway One Q12
Identifies suitably positioned unobstructed outside space appropriate for use as an evacuation assembly point	✓ Gateway One Q6h
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	✓ Gateway One Q6i (part)
Constructed in an appropriate way to minimise the risk of fire spread	✓ Gateway One Q6g