4 Murray Mews – Fire Safety Statement (Planning Stage)

Project Description

The proposed scheme seeks to develop the currently vacant plot at 4 Murray Mews, previously the site of garages that were demolished in recent years. The proposal is to erect one 3-storey building plus basement comprising of 4 flats (2 x 2 Bed and 2 x 3 Bed).

Introduction

This fire statement has been prepared in line with The London Plan 2021 Policy D12(A) as required by London Borough of Islington.

As this scheme is not classified as a relevant building/major development because it is under 18m, this fire strategy is not intended to be a comprehensive fire statement as defined Part B of Policy D12 of the London Plan (2021).

This statement is intended to serve as a strategic guide to demonstrate compliance with the above-mentioned policy and fulfil the requirements of the Building Regulations 2010 (as amended) whereby ensuring an adequate level of fire safety will be achieved throughout the premise.

As this is a planning stage report, its contents will be subject to separate Building Control approval and London Fire Brigade review, and it is anticipated that further detail may be required during the Building Regulations approval process.

In accordance with Clause 3.12.9 of policy D12, this fire statement has been prepared by Tasou Associates who are a RIBA chartered architecture practice with over 34 years experience in residential and commercial developments ranging from small to large scale major schemes.

Planning Policy

This fire strategy is to demonstrate that the proposal meets the requirements of The London Plan 2021 Policy D12(A):

Policy D12 Fire safety - Part-A:

In the interests of fire safety and to ensure the safety of all building users, all development proposals must achieve the highest standards of fire safety and ensure that they:

1) identify suitably positioned unobstructed outside space:

a) for fire appliances to be positioned on

b) appropriate for use as an evacuation assembly point

2) 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

3) are constructed in an appropriate way to minimise the risk of fire spread

4) provide suitable and convenient means of escape, and associated evacuation strategy for all building users

5) develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in

6) provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.

Criteria 1 – Space provisions for fire appliances and assembly points

In accordance with Building regulations requirement B5, the scheme has been designed to provide reasonable facilities to assist fire fighters in the protection of life. Reasonable provisions will be made within the site of the buildings to enable fire appliances to gain access to the building.

In the event of a fire, it is assumed the fire and rescue services will be notified by a resident.

It is proposed that access will be provided to the front of the building from Murray Mews which is a two-way, access only street. Murray Mews has a distance of 4.3m between kerbs (which is wider than the 3.7m required under Part B).

Within the scheme, the further most corner within the building is the southern corner of flat 4 on the top-most floor. From this location down to the Murray Mews highway is 30m which provides sufficient access for pumping appliances (less than 45m).

Access to the building is from ground level directly into a single storey protected stairwell. Firefighting shafts are not required as the building does not have a top floor height exceeding 18m.

Hydrants will be required in the vicinity of the buildings to support firefighting operations. If an existing hydrant is not located within 100m, a hydrant should be provided within 90m of the building entrance. All associated water supplies will be designed and installed in accordance with BS 9990.

There will be no assembly points within the building, but, as marked on the ground floor plan (figure 2), there will be an external assembly point outside the building on Murray Mews.

Criteria 2 – Passive and active measures

Means of detection and alarm systems

All dwellings should have a fire detection and alarm system, minimum Grade D2 Category LD2 standard, in accordance with the relevant recommendations of BS 5839-6. It is intended that a specialist sub-contractor will provide the detailed design, specification, and installation of the detection and alarm systems. Smoke alarms will be mains operated and conform to BS EN 14604 and heat alarms in the kitchens will be mains operated and conform to BS 5446-2.

Emergency lighting

Emergency lighting will provide temporary illumination in the event of failure of the primary power supplies to the normal lighting system.

It is intended a specialist sub-contractor will provide the detailed design, specification, and installation of emergency lighting in accordance with the recommendations of BS 5266, BS EN 1838 and BS EN 60596-2-22.

Fire signage

Fire safety signs will be installed where necessary to provide clear identification of fire precautions, fire equipment and means of escape in the event of a fire. All associated safety signage will comply with The Health and Safety (Signs and Signals) Regulations 1996 and specified in accordance with BS ISO 3864-1, BS 5499-4, and BS 5499-10.

Emergency (life-safety) power supplies

All life-safety systems shall be provided with robust power supplies in accordance with BS 8519.

The emergency lighting/signage and automatic fire detection and alarm system shall comply with their respective British Standards regarding secondary power supplies.

Visual Alarms

Visual alarms will be provided where required in accordance with BS 5839-1.

In addition, communal areas that could facilitate occupants with hearing difficulties shall also be provided with visual alarms as well as areas with high ambient noise.

Electromagnetic locking/hold-open devices

Where doors are provided with electromagnetic locking or hold-open devices, these devices are to operate (either release the door to close normally, or release the door to be opened) upon:

- Activation of the detection and alarm system
- Failure of the power supply
- Operation of a hand operated which is located to the side of the door
- Malfunction

Sprinklers/suppression systems

The proposal is below 11m above ground level, therefore sprinklers are not a requirement under Approved Document B.

Smoke Outlets

In accordance with Approved Document B V1 and V2, because both lower ground flats have doors and windows in the basement storey and compartments containing rooms, the provision of smoke outlets is not required.

Criteria 3 – Construction products and materials

The development will be constructed in accordance with Building Regulation B3.

The required period of fire resistance of the structural elements will be based upon the recommendations of Table 3 and Table 4 of BS 9991, as such because the top floor is greater than 5m but less the 18m, the structural elements required to be fire resisting should achieve at least a minimum rating of 60-minutes.

As all the floors in the proposed scheme contain flats, the floors are required to be built as compartment floors with a minimum 60-minute fire resistance.

All fire protected stairs will be required to be built to achieve a minimum of 60-minute fire resistance.

Fire Doors

All door assemblies shall comply with BS 476-22 or BS EN 1634-2 for fire resistance, and BS 476-31 or BS EN 1634-3 for smoke leakage.

Flat entrance doors and office entrance doors will be FD30S.

Doors to internal protected entrance halls/internal stairway doors will be FD30.

Doors on escape routes will not be fitted with locks, latch, or bolt fastenings.

Cavity barriers and concealed spaces

Cavity barriers will be provided to prevent the rapid spread of unseen fire or smoke in voids, and to prevent the spread of fire around compartmentation via voids. All cavity barriers will have a fire resistance rating of at least 30 minutes for integrity (E) and 15 minutes for insulation (I).

Cavity barriers will be provided around openings within the external wall.

Fire-stopping will be provided at the junction of fire-separating walls and external walls to maintain the fire resistance period of fire-separating walls using one of the methods set out in Section 21.4 in BS 9991.

Criteria 4 – Means of escape and evacuation strategy

In accordance with Approved Document B V1 there is a protected stair (highlighted **green** in figures 1-4).

At ground floor and basement level, flats 1 and 2 are duplex units that have habitable rooms at basement level. In accordance with Approved Document B V1 Approach 2, from these basement rooms, there is direct access via FD30 fire rated doors to an FD30 protected landing leading to the ground floor, and from there to the final exit into the main protected stair (highlighted **orange** in figures 1-4).

At first floor, flats 2 is single storey and has a 30min protected entrance hall serving all habitable rooms with FD30 doors (highlighted **orange** in figures 1-4).

Also at first floor is flat 4, another duplex flat that has direct access via fire rated doors to a protected landing leading to the first floor flat entrance. From the flat entrance it is a maximum of 7.5 meters to the final exit, via the single flight of communal stairs (highlighted **orange** in figures 1-4).

All habitable rooms have travel distances less than 9m from the furthest point of the room to the protected hallway/landing within the flat.

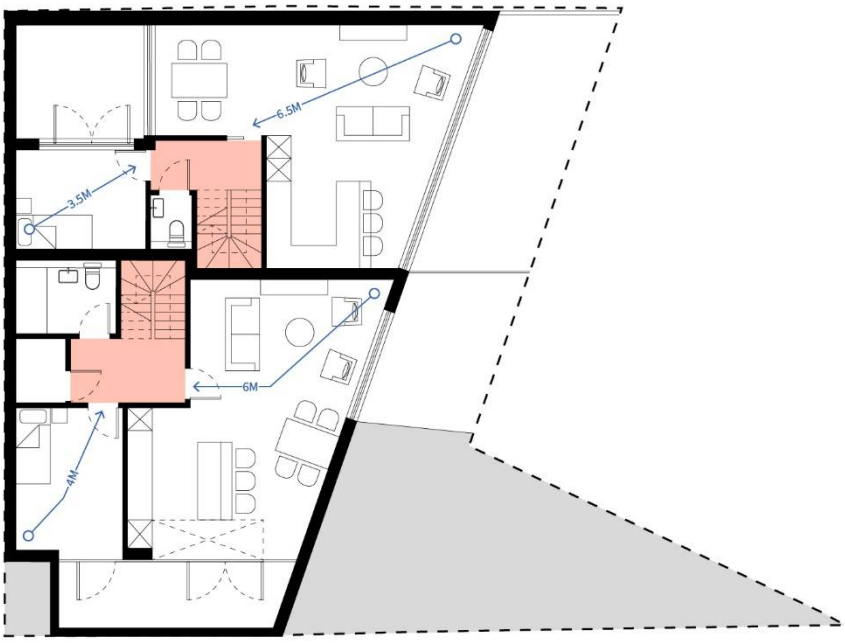

Figure 1 - Basement Means of Escape (not to scale)

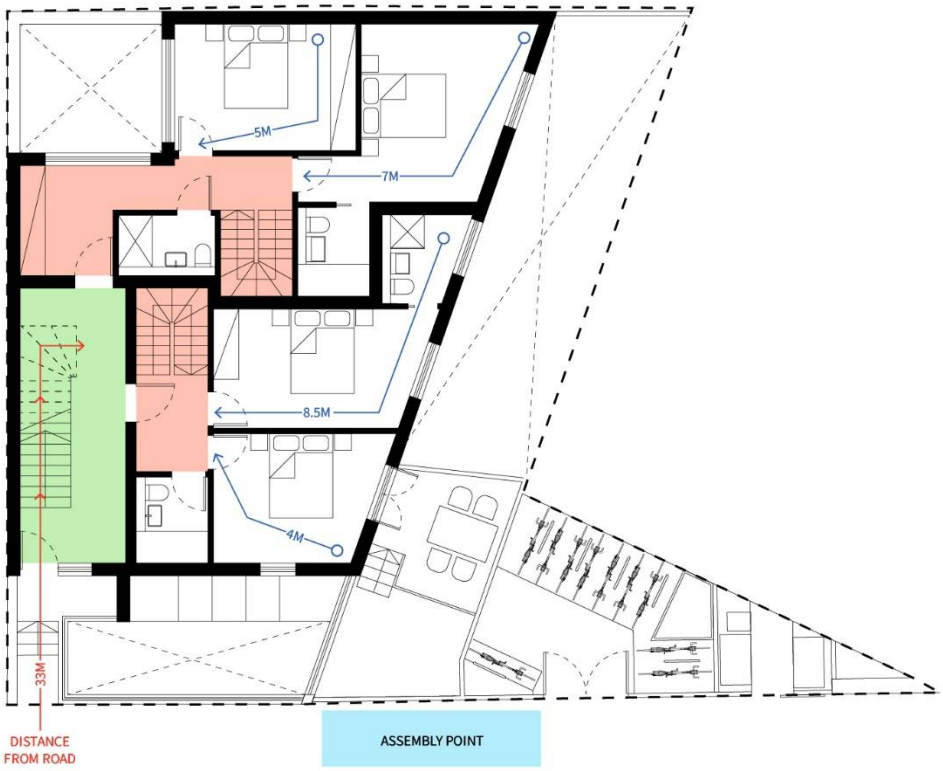

Figure 2 - Ground Floor Means of Escape (not to scale)

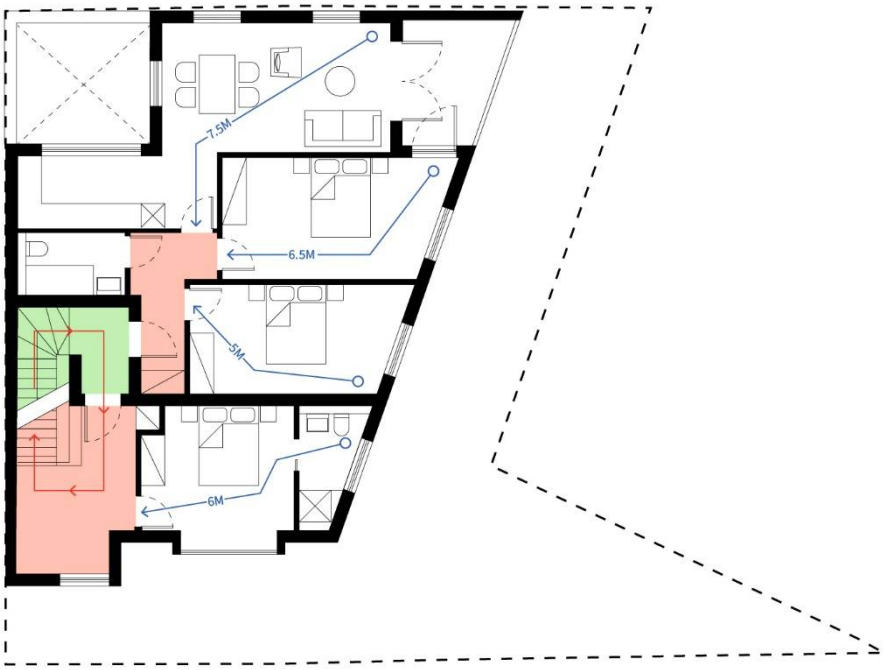

Figure 3 - First Floor Means of Escape (not to scale)

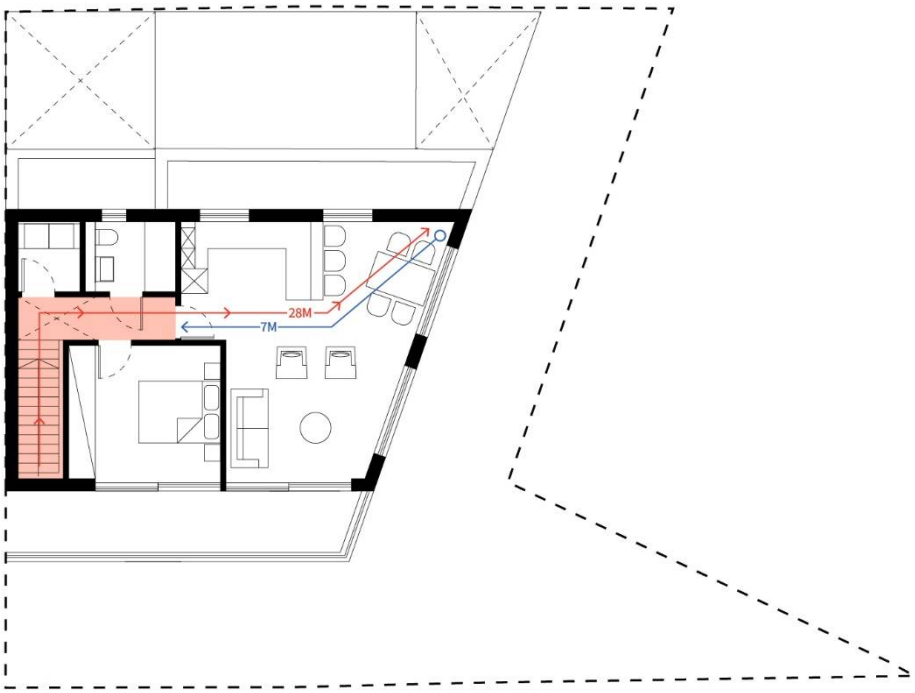

Figure 4 - Second Floor Means of Escape (not to scale)

Criteria 5 – Evacuation Strategy/philosophy

A 'stay-put' or 'defend-in-place' strategy will be implemented in the scheme whereby in the event of a fire, only the unit of fire origin will receive a signal to evacuate. Further evacuation of other units may be enacted by the fire and rescue service, as needed depending on the development of the fire.

The automatic fire detection and alarm system shall be configured to support the evacuation philosophy discussed above.

Criteria 6 – Access and equipment for fire services

Wayfinding signage

In accordance with Approved Document B:2020, wayfinding signage is not required for the scheme as the height of the top storey is under 11m.

Fire Safety Information

Regulation 38 of The Building Regulations 2010 requires that fire safety information be given to the dwelling owners. It is imperative that the fire strategy is handed over to the occupiers of the dwelling so that he / she is aware of the importance of the fire safety provisions within this report and can adhere to them throughout the life cycle of the building. All fire safety systems must be serviced and maintained in accordance with the manufacturer's specifications and the relevant British Standards throughout the life cycle of the building. This includes, but is not limited to, the following systems:

- Fire Alarm and Detection System (FADS)
- Fire resisting partitions
- Emergency Escape Windows/AOV's
- Fire doors and final exits
- Dry riser mains
- Evacuation strategy