

Client	Old House Development Ltd
Project	Belsize Park
Discipline	Fire Engineering
Revision	Rev 02
Author	Shane Ryan
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1. Introduction

36 Lancaster Grove is a Grade II* listed building, which was a former fire station building constructed in 1915. Currently the building is being refurbished and converted into residential apartments. The conversion consists of a small single staircase building, which is provided with apartments on the basement (accessed separately) ground, first and second level of the building.

The building is provided with a third, fourth and fifth floor, which is not part of the current refurbishment. However, planning is being submitted to convert these floors into a multi-storey apartment, which is accessed at second level. This design note will detail the fire safety design of the multi-storey apartment.

2. Means of escape

The entrance door to the dwelling will be FD30S (E30 Sa) and self-closing.

The apartment will be provided with a protected staircase that consists of 30 minutes fire resistant construction and all doors to habitable rooms should be FD30 (or E30) doors but self-closers will not be required. The apartment will also be provided with a water mist system throughout and therefore the apartment is considered to be in accordance with section 9.5.2, bullet point D of ADB. The water mist is required because the height of the apartment is greater than 7.5m from the front door to the top floor slab and should be designed and installed in accordance with BS8458:2015.

The apartment will be accessed via a communal lobby as the communal staircase requires lobby protection on the top floor. This is due to the fact there are more than two apartments opening directly into the staircase.

3. Internal fire spread and fire resistance

The structure of the building should achieve 60 minutes fire protection.

The internal stairway will have a minimum fire resistance of 30 minutes with FD30 doors, but will not require self-closing devices. Doors to cupboards /stores entered off protected hallways will have a minimum fire rating of FD30 but will not be self-closing.

The apartment main entrance door leading onto the staircase will be provided with FD30s doors with a self-closer.

Any services going through the protected internal hallway should be fire stopped as detailed in the buildings main fire strategy.

The internal surface finishes and linings should comply with the following restrictions:

Table 1: Internal Surface Finishes & Linings

Location	Integrity	European Class
Small rooms of area not more than:		
a. 4m ² in residential accommodation	3	D-s3, d2
b. 30m ² in non-residential accommodation		
Other rooms	1	C-s3, d2
Circulation spaces within dwellings		
Other circulation spaces, including the common areas of blocks of flats	0	B-s3, d2

4. Fire Safety Systems

Fire Alarm and Detection Systems

Other than where mentioned below, automatic fire detection and alarm system will be provided within each dwelling to meet the recommendations of BS 5839-6 (2013 edition) to a Grade D Category LD2.

Automatic water mist system

A water mist system should be provided throughout the apartment, which is designed and installed in accordance with BS8458: 2015.

5. Fire Service Access

The fire service access to the apartment will be the same as the main building, which is via the main staircase.