# 17-37 William Road, NW1 3ER

# FIRE STATEMENT

EL7081/ks/43rc
16th April 2021

## AUTHORS

Report By: Ken Seow, Associate BSc MSc AIFireE

Approved By: Boris Tang, Technical Director CEng MIFireE

The development must be carried out in accordance with the provisions of the Fire Statement prepared, checked and approved by the authors in this document dated 16th April 2021 unless otherwise approved in writing by the Local Planning Authority.

The Fire Statement defines the fire safety objectives and performance requirements of the development, and the methods by which these objectives will be provided/ satisfied. It is intended to ensure that the development incorporates the necessary fire safety measures in accordance with the Mayor's London Plan Policy D12.

## INFORMATION

### Overview of Development

The Site is located at 17-37 William Road, London Brough of Camden.

The Site comprises two adjoining buildings situated to the south of William Road:

- No. 35-37 (Plot A) comprises a dated part two-storey, part six-storey office building with basement level, situated on the corner of William Road and Stanhope Street.
- No. 17-33 (Plot B) comprises a seven-storey building with ancillary office accommodation at ground floor level and residential units above.

The proposed redevelopment of the Site includes the following:

- Demolition of no. 35-37 and redevelopment of the site to provide a student accommodation-led scheme comprising a 15-storey building with basement level;
- Retention of no. 17-33 and provision of a 1,255m$^2$ (GIA) of affordable workspace at ground floor level, delivered alongside improvements to the existing ground floor façade, providing active frontages along William Road;
- Provision of 168 high-quality student units (239 bedspaces), including 84 affordable units (35% of overall total), alongside shared internal and external amenity spaces;
- Delivery of public realm improvements along William Road and Stanhope Street through the addition of planters and trees providing an enhanced pedestrian experience;
- Provision of 36m$^2$ (GIA) of replacement ancillary residential storage space serving existing residents within no. 17-33;
- Provision of secure cycle parking in line with emerging London Plan standards; and
- Improved servicing strategy to maximise servicing options.

The topmost occupied storey is greater than 30m above ground at approximately 41m from the ground level.

Ken Seow
Ken.Seow@jensenhughes.com
O: +44 207202 8484

# ACTIVE FIRE SAFETY SYSTEMS

## Sprinklers

The building will be provided with a sprinkler system design and install in accordance with BS 9251 and BS EN 12845.

## Automatic Fire Detection

Domestic fire detection and alarm system will be provided within the student apartments in accordance with BS 5839-6.

The remaining areas of the building will be provided with automatic fire detection and alarm system in accordance with BS 5839-1.

## Smoke Control

The common lobby in which is adjacent to the stair serving the student accommodation will be served with a mechanical smoke extract system on all floors. Additional smoke vents (1.5$m^2$ Automatic Openable Vent) will be provided on the external elevation of each level to serve any common corridor that has travel distance above 7.5m but below 15m.

A 1$m^2$ Automatic Openable Vent will be situated at the head of the stair serving the student accommodation.

A mechanical smoke venting system achieving 10 air changes per hour will be provided to the basement. The extract rate is sized based on the largest compartment served.

## Emergency Voice Communication (EVC) Systems

Disabled refuges will be provided to other non-residential levels i.e. basement and 14$^{th}$ floor. Refuges will be at least 900mm x 1400mm and will include Emergency Voice Communication (EVC) system with a link to the building management office.

## Evacuation Alert System (EAS)

An EAS designed to BS 8629 will be provided to the building.

## Emergency Lighting

Emergency lighting will be provided in accordance with BS 9999, BS9991 and BS 5266-1:2016.

## Signage

Signage will be provided throughout the buildings and in accordance with the recommendations of BS 9999, BS 9991 and BS ISO 3864-1:2011.

## EVACUATION STRATEGY

The student accommodation will operate on a “defend in place” evacuation strategy; where only the unit on fire will evacuate initially and subsequent evacuation may occur through the fire service notification if necessary or if the residents are concerned or fire or smoke affects their units.

The building will be managed, and student residential building operators often require more flexibility in managing the building evacuation in the event of a fire. The fire strategy will therefore be developed so that a simultaneous evacuation strategy could also be implemented by the end operator if required.

The office area in Plot B will be designed as an individual evacuation zone. Only an affected zone will be evacuated. A fire alarm signal will be sent to alert the building management if a fire were to originate within the office and vice versa.

## MEANS OF ESCAPE

Each student apartment at each upper level will be separated from the stair with a smoke vented lobby and/or corridor.

Travel distances within the common areas will be provided in accordance with the limit recommended in BS 9991 guidance.

The student apartments will be designed with an open plan arrangement. To accommodate this, the following will be met in accordance with BS 9991:

- The flats will be provided with sprinklers and a Category LD1 automatic fire detection and alarm system.
- Travel distances within the flats will be limited to within 20m,
- The cooking hobs/kitchens will be adequately separated from the apartment entrance doors and escape routes.

Suitable means of escape will also be provided to the ground level office space in Plot B.

## DISABLED EVACUATION

### Disabled Refuges

Each apartment has its own self-contained smoke alarms with a ‘defend in place’ strategy whereby only the occupants of the apartment on fire would escape initially. The occupants of all other unaffected apartments will stay in place.

Under the current guidance there is no requirement to provide disabled refuges within the common areas of the apartment floors. If necessary, any occupant who is unable to escape using the stair will wait for assistance either in the protected corridor/lobby or stair. The building operator will develop a Personal Emergency Evacuation Plans (PEEPs) to assist any mobility impaired occupants to evacuate.

Disabled refuges will be provided to other non-residential levels i.e. basement and 14$^{th}$ floor. Refuges will be at least 900mm x 1400mm and will include Emergency Voice Communication (EVC) system with a link to the building management office.

### Evacuation Lifts

An evacuation lift will be provided within the building to meet Policy D5 of the London Plan guidance.

# FIRE FIGHTING

## Fire Fighting Facilities

The main staircore serving the student accommodation will be constructed as a firefighting shaft that includes the following firefighting features:

- A firefighting lift including backup power supply located within 7.5m of the door to the stair on all floors;
- 1.1m wide firefighting stair;
- 2 hours fire resisting enclosure around the stair and the firefighting lift;
- Dry fire main with an outlet located within the stair enclosure on all floors;
- 1m$^2$ automatically opening vent at the head of the stair

## Fire Hydrant Provision

The site is well covered by the existing street hydrants and additional private hydrants are not required.

## Fire Vehicle Access

Fire vehicle access will be sufficient to serve the site from the surrounding roads.

Fire vehicle access will be provided to within 18m and in sight of the dry fire main inlet.

# STRUCTURE AND COMPARTMENTATION

## Elements of Structure

Elements of structure of the building will achieve at least 120 minutes fire resistance.

Fire protection to the concrete elements will be achieved by providing adequate cover to the reinforcement and minimum concrete section sizes as recommended in BS EN 1992-1-1. Fire protection to steel elements is assumed by intumescent paint or encapsulation as specified by Architect.

## Compartmentation

Each floor will be designed as a compartment floor achieving 120-minute fire resistance.

The firefighting shaft will be enclosed in 120-minute fire rated walls, with 60-minute fire doors. Internal partitions within the firefighting shafts, e.g. between the firefighting lobby and the stair, will achieve at least 60 minutes fire resistance.

Each apartment will be separated from the remaining areas such as common corridor and adjoining apartments by at least 60-minute fire rated walls.

Walls between office and student accommodation will be provided to achieve at least 120-minute fire resistance.

Basement plant rooms (except for life safety plant rooms or fuel storage room) will be enclosed in at least 60-minute fire resisting construction. Life safety plant rooms e.g. sprinkler tank room, generator room etc or fuel storage rooms will be enclosed at least 120-minute fire resisting construction.

# EXTERNAL FIRE SPREAD

## Fire Spread to Adjacent Buildings

The extent of unprotected openings within external walls have been determined based on the methodology within BR 187. The elevations of the buildings generally need not be fire rated to address external fire spread,

except for the South and East office external elevations and parts of the residential south elevation that run in coincidence with the site boundary, which will be 100% fire rated:

Small, unprotected areas are permitted in an otherwise protected façade, following the guidance outlined in BS 9999.

## External Wall Construction

The external wall construction for the building will be non-combustible i.e. European Class A1 or A2-s1, d0. This includes any thermal insulation materials within external wall cavities and specified attachments such as balcony. Sealants, gaskets, doors and windows (including frames) are exempted; (see regulation 7(3) for the full list of exemptions). Membranes within the external wall will achieve a minimum Class B-s3, d0.

Cavity barriers will also be provided within the external wall construction in accordance with the guidance.

## Roofs

Based on the separation distances between the building and the boundaries (less than 6m), the roof coverings including the terrace will require a $B_{roof}$ European classification.

# FIRE SAFETY MANAGEMENT

It is a fundamental assumption that features described in this Fire Statement will require management and maintenance throughout the life of the building. This is to ensure any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

Managing fire safety is the whole process throughout the life of a building, starting with the initial design, which is intended both to minimize the incidence of fire and to ensure that, when a fire does occur, appropriate fire safety systems (including active, passive and procedural systems) are in place and are fully functional.

The building management is expected to comply with Level 1 management from BS 9999.