AGRI FIRE
Fire Safety Solutions

25 July 2024

D12(A) Fire Statement

Address:

2 London Road,
Twickenham,
TW1 3RR

Client: Skylofts Limited

Document Reference: SL/01/24

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DOCUMENT CONTROL

Project	2 London Road, Twickenham, TW1 3RR
Client	Skylofts Limited
Project Number	G4788

Prepared By	Date
Gary Hastings. Fire engineer and third-party accredited fire risk assessor.	25/07/2024

Approved Guidance Reference
Approved Document B Volume 1 & 2 2019 edition incorporating 2020 and 2022 amendments – for use in England.

Supporting Documentation for Reference / Guidance
London Plan Guidance – Fire Safety Policy D12(A)

Author – Relevant Qualifications and Experience
Retired whole time operational Station Officer and level 2 incident commander. 27 years served with Essex Fire & Rescue Service. Fire Risk Assessor since 2015 – Various positions. GIFireE - Graduate member of the Institute of Fire Engineers. Engineering Technician (Fire engineering council) Level 5 Diploma - Fire Engineering Design. Level 4 Diploma in Fire Safety. NSI – Fire Safety Validator. MIFSM- Member of the Institute of Fire Safety Managers. TIER 3 NAFRAR Registered. FPA - Certification in applied fire risk assessments. Colin Todd – RR(FS)O Fire risk assessment certificate. Professional Membership Details: IFE – 00052587 IFSM – 1740 NAFRAR – N0264

Vocational Fire Safety Experience
Site visits to implement quality assurance inspections on Highrise cladding remediation for a high-profile property developer. Site visits to carry out compartmentation audit checks on new build developments for a high-profile property developer. Site visits to carry out FRA's (Types 1,2,3 &4) on buildings including High-Risk Residential Buildings. Site visits to carry out compartmentation surveys. Mentoring team members and supporting their development to acquire competence. Fire Stopping Technical assurance, Compartmentation surveys, Fire door surveys, Pre- occupancy FRA's & occupancy calculations. Validator for fire safety reports inclusive of fire risk assessments, fire strategies, EWS appraisals & compartmentation surveys. Technical report writing & advisor to colleagues & stakeholders. Supporting colleagues with training sessions on the latest fire safety legislative landscape & informing stakeholders of their respective responsibilities regarding the Fire Safety Act, Fire Safety (England) Regulations & Building Safety Act.

EXECUTIVE SUMMARY

This document relates to the proposed development and refurbishment of the former HSBC Bank at 2 London Road, Twickenham, TW1 3RR to create a commercial unit at Ground floor level extending to the Basement level (B1) and 6 no. residential units on the upper 1st/2nd and 3rd floors.

The commercial unit will have a ground floor gross internal area of 75m2. The residential floors will have a similar gross floor area across the proposed residential plots which will be designed as self-contained apartments with a single common stair core that will be separate from the commercial areas.

The development will be accessed as detailed below from a level site:

Commercial unit from London Road.

Residential on York Street.

The refurbishment of the former HSBC Bank building is not classed as a major development. The London Borough of Richmond-upon- Thames planning department has requested that this application proposal demonstrates consideration of the following in relation to the development of 2 London Road, Twickenham, TW1 3RR:

Building construction methods, products and materials used.

The means of escape for all building users including those who are disabled or who require level access together with the associated management plan.

Access for fire service personnel and equipment.

Ongoing maintenance and monitoring and how provision will be made within the site to enable fire appliances to gain access to the building.

This document is not a design fire strategy and is intended only to summarise the standard of Fire Safety provisions as stated above.

This document sets out the foundation methodology for the design of the building and use of the land to ensure that the highest standards of Fire Safety are incorporated regarding the proposed development at 2 London Road, Twickenham, TW1 3RR namely to refurbish and develop the existing building to meet the requirements and standards of the Richmond-upon- Thames planning departments planning application requirements.

ASSUMPTIONS AND LIMITATIONS

The findings and opinions expressed in this report are based upon information provided at the date of issue of this document and shall be applicable only to the circumstances envisaged herein.

The information relates to building 2 London Road, Twickenham, TW1 3RR alone and is not applicable to any other project in the UK or abroad.

REFERENCE INFORMATION

This document is based upon information provided by the client through an intermediary, Lewis and Hickey Architects as shown in the reference table below. No site visit was conducted.

Document Title	Author	Document Number	Revision Date
Proposed B1 (Basement) Plan	Lewis & Hickey	P-01	13.06.2024
Proposed Ground Floor Plan	Lewis & Hickey	P-02	13.06.2024
Proposed First Floor Plan	Lewis & Hickey	P-03	13.06.2024
Proposed Second Floor Plan	Lewis & Hickey	P-04	13.06.2024
Proposed Third Floor Plan	Lewis & Hickey	P-05	13.06.2024
Proposed Roof Plan	Lewis & Hickey	P-06	13.06.2024
Proposed Southeast Elevation With cross section	Lewis & Hickey	P-15	13.06.2024
Proposed Southwest and North Elevations	Lewis & Hickey	P-17	13.06.2024
Longitudinal Section 2	Lewis & Hickey	P-18	13.06.2024

BUILDING DESCRIPTION

The development will involve the refurbishment and construction of a mixed-use building with retail and residential floor levels over four floors and one basement.

The building threshold height is estimated @ 10.1m measured from the fire service access point (ground floor level) to the highest occupied floor level.

The proposed floor level occupancies are as follows -

Ground Floor – Commercial unit and separate residential stairway.

The street pavement entry door from York Street.

Commercial unit – entry from London Road.

Basement – part of the commercial unit @ground floor level accessed via a stairway from ground floor level.

The proposed area will be for commercial storage with no access for any residents or the public.

First Floor –

A stairway from the ground floor serving all residential floor levels.

Protected lobby serving apartment (plots) entrance doors.

Plot 1 has 1 bedroom, a kitchen*, bathroom, living room, study and a storage cupboard.

Plot 2 has 1 bedroom, a kitchen*, bathroom, living room and a storage cupboard.

*Kitchens are remote from bedroom escape routes.

Second Floor –

A stairway from the ground floor serving all residential floor levels.

Plot 3 has 2 bedrooms, a kitchen*, bathroom, living room and a storage cupboard.

Plot 4 has 1 bedroom, a kitchen*, bathroom, living room and a storage cupboard.

*Kitchens are remote from bedroom escape routes.

Third Floor –

A stairway from the ground floor serving all residential floor levels.

Plot 5 has 1 bedroom, a kitchen*, bathroom, living room and a storage cupboard.

Plot 6 has 1 bedroom, a kitchen*, bathroom, living room and a storage cupboard.

*Kitchens are remote from bedroom escape routes.

Roof access –

Secured from access by residents and members of the public and unauthorized persons.

Purpose Groups –

Table 0.1 of Approved Document B Vol 1 & Vol 2 - 2019 inc 2020 & 2022 amendments

The residential floor levels are Purpose Group Vol 1: Residential (dwellings) 1(a) - Flat

The commercial floor levels are Purpose Group Shop & Commercial -4 - Retail, Public incl sale of food or drink

TOPOGRAPHY

Figure 1 – Footprint of the site in red. Likely FRS RVP, entrance/exits – residential (blue) & commercial (red), Assembly point for commercial unit & nearest hydrants for FRS use.

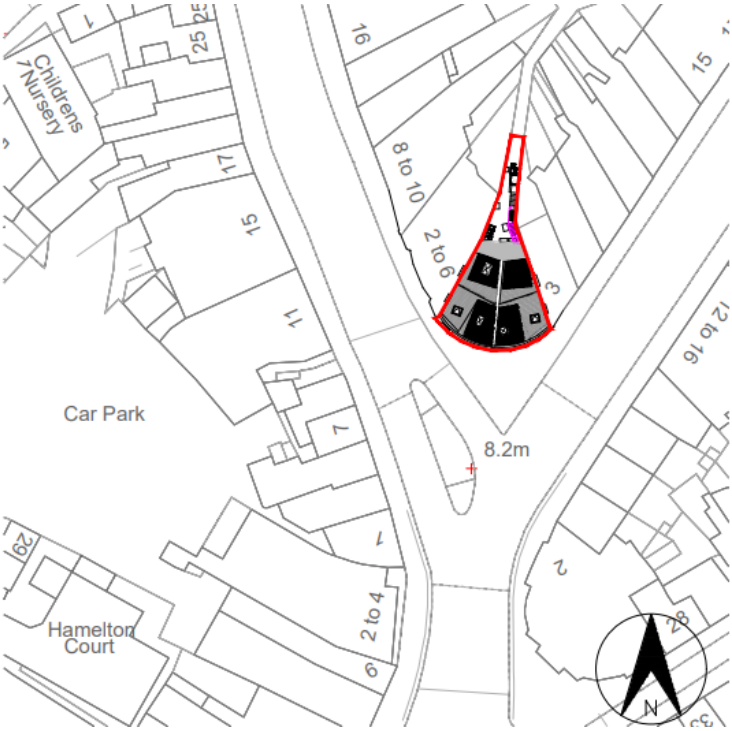


Figure 2 – Outline curtilage of development (red).

FIRE STATEMENT

The Sections that follow are in response to The London Borough of Richmond-upon-Thames' request for information relating to fire safety within the development at 2 London Road, Twickenham, TW1 3RR.

A Fire Statement should be a standalone document which defines the fire safety objectives and performance requirements of a development, and the methods by which these objectives will be provided. It should evidence the provisions made for the safety of occupants and protection of property as well as the provision of suitable access and equipment for firefighting in light of all relevant policy requirements and the justification for these measures.

The Fire Statement will detail how the development proposal will function in terms of satisfying the following headings as stated in the London Plan - Policy D12(A):

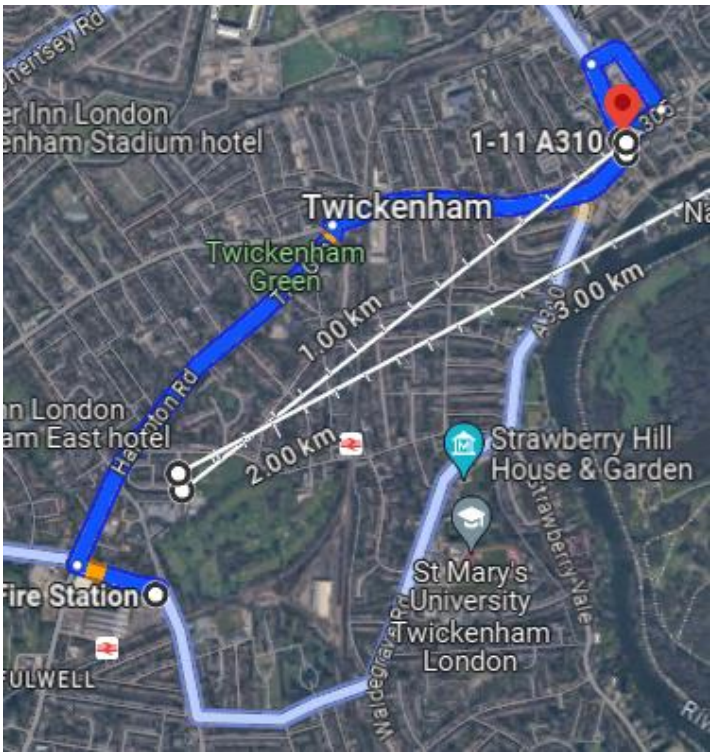
A.1 Identify suitably positioned unobstructed outside space: a) for fire appliances to be positioned on b) appropriate for use as an evacuation assembly point.

The footprint of the existing building will remain relatively unchanged during the refurbishment works therefore the Emergency access provided to the site will remain relatively the same once occupied.

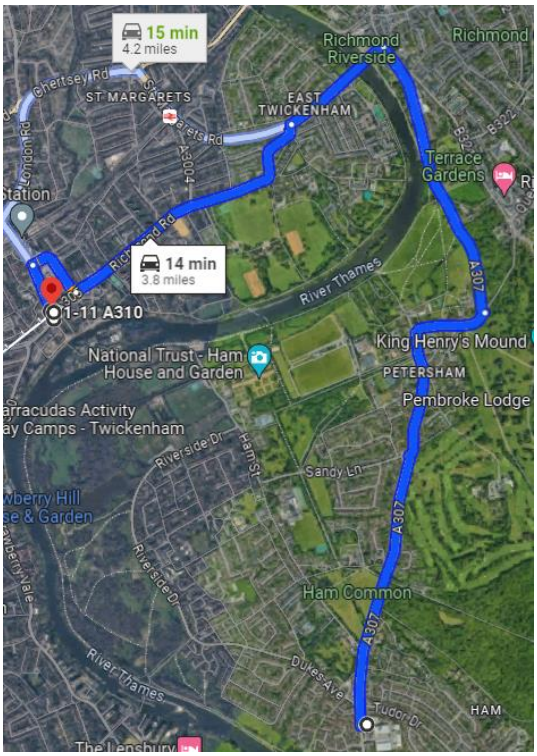
On approaching the property, the likely Fire Rescue Service (FRS) access will be from either London Road or York Street (A305) with the nearest hydrant located 30m from the main junction of York Street and London Road outside Barclays Bank on King Street.

The nearest fire stations are Twickenham Fire Station (A) located on South Street (if available) with an estimated travel time of between 4-6 mins and Kingston Fire Station (B) located on Richmond Road (if available) with an estimated travel time of between 8-10 mins both depending on traffic.

The pavement at the front elevation immediately outside the building will be the likely Rendezvous Point (RVP) for the Fire & Rescue Service.



(A) Twickenham Fire Station



(B) Kingston Fire Station

Figure 3 – Fire Station Topography and travel routes

The location of the site during development and upon completion will allow vehicle access to the building from the main highways London Road and York Street (A305).

Residents will generally be familiar with the escape routes within the building due to the simple nature of the design, single stairway and regular use.

A.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.

The protected stairway will serve all floor levels from the ground to the highest floor level protected by the apartment lobby fire doors fitted with positive action self-closers at each floor level. The stairway enclosure will be constructed to provide a minimum fire resistance of REI 60. The stairway enclosure will provide a single route to safety for those evacuating from any apartment. There will be access/egress to the rear elevation at the first-floor level, but this will not be used for a means of escape and will not require protection (fire resistance) and will be duly signposted.

This development will meet the definition of a 'single escape stair' building and have 2 apartments per floor provisioned with a protected lobby between the stairs and the residential apartments to provide 60-minutes fire protection by the design of two 30-minute fire doors at each floor level. The head of the stair will be fitted with an Opening Vent (OV) with a geometric free area of at least 1.0m² located at the head of the stair operable manually via a wall mounted smoke control panel at the FRS access level.

Each apartment will be constructed with a protected internal hallway (as stated above) which will serve all habitable rooms. The apartment entrance hallway walls will provide a minimum of 30 minutes fire resistance (REI 30), to include fire doors with a minimum specification of FD20 (there will be no requirement for these doors to be self-closing except the kitchen fire door). In all cases, the travel distance from each habitable room door within the hallways to the flat entrance door will not exceed 9m.

The proposed development will result in six residential fire compartments in total being constructed with a minimum fire resistance of REI 60.

The entrance door to each apartment will be required to meet the minimum specification of FD30S with fire rated hinges and a positive-action self-closing device.

The commercial unit will be constructed as a fire compartment with a REI60 floor between ground and basement levels.

Fire Alarm and Detection systems

Each residential apartment will be provided with a fire detection and alarm system complying with BS 5839-6:2019 (The 'Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic buildings') Grade D2: Category LD2 standard.

Grade D2: The fire alarm system also comprises one or more detectors powered by a mains supply with a user-replaceable battery-powered standby supply.

LD2 - A system incorporating detectors in all circulation spaces that form part of the escape routes from the premises, and in all rooms or areas that present a high risk of fire to occupants.

Figure 4 – LD2 Fire alarm and detection coverage.

The commercial unit will be provided with a fire detection and alarm system complying with BS 5839- 1:2017 ('Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in non-domestic buildings') Category L5 a system incorporating manual call points and sounders.

The residential alarm systems and the commercial unit fire alarm systems need not be interlinked.

Escape Lighting systems

The residential means of escape have no borrowed light and therefore will be provided with an emergency lighting system.

The commercial unit incorporates a basement level and will operate outside of the hours of darkness. The commercial areas will be provided with an emergency lighting system.

The emergency lighting installations will comply with the requirements of BS 5266-1: 2016.

Emergency lighting will be located to illuminate the following areas (where applicable) –

- Changes in direction.
- Stairways.
- Steps and ramps.
- Fire and first aid points.
- Exit doors (External & Internal).

Maintenance

It is essential that the active and passive fire protection measures integrated into the building are maintained in line with the manufacturer's guidelines and legislative requirements on commissioning of such measures.

The principal contractor will be responsible for the maintenance of all fire safety arrangements that are commissioned and active up until the handover and occupation of the building.

Maintenance, testing and inspections during construction and upon occupation may include -

Escape routes to be always kept clear – landlord and residents.

Apartment front entrance fire doors to be maintained by the (lease holders - to be confirmed) upon occupation.

Stairway to apartment lobby fire doors – (Duty Holder; the landlord or managing agent).

Internal apartment fire doors (apartment internal hallways) will be reasonably maintained in good order (the responsibility of the new apartment occupant/leaseholder).

Fire alarms, smoke control and emergency lighting systems will be maintained and tested in accordance with the relevant standards by a competent person – (Duty Holder; the landlord or managing agent).

Common lobby doors will be maintained as operational and in good condition with all components working adequately (Duty Holder; the landlord or managing agent).

The ongoing control and responsibilities regarding the maintenance, remediation and future replacement of the fire alarm and detection installations will be effectively planned, monitored and reviewed by the relevant responsible persons.

Any changes, additions or adaptations to the active or passive fire safety arrangements as part of this development should not be undertaken without the prior involvement of relevant stakeholders and by 3rd party approved competent persons.

A.3 Are constructed in an appropriate way to minimise the risk of fire spread.

The design and construction of this development will meet the minimum functional requirements of the Building Regulations 2010 using industry approved guidance.

There are no proposed wall façades which are likely to affect the neighbouring properties. The East and West elevations will incorporate imperforate compartment walls (REI 60). The construction of the North and South elevations will result in additional unprotected openings, but these will not fall within 6m of any other building or structure. The dimensions of these apertures are sufficiently small that they will not adversely impact the fire safety of the neighbouring property.

Construction materials

The information provided states that the external wall construction is of traditional solid masonry construction with any infills that are subsequently created to match the existing construction in terms of integrity and insulation properties. There are no proposed attachments to the building such as balconies.

There is no expectation that flammable materials will be used in the construction and make-up of the external walls.

Internal wall linings will meet the required classification as stated within the approved document guidance.

Table 4.1 Classification of linings

Location	Classification
Small rooms of maximum internal floor area of 4m²	D-s3, d2
Garages (as part of a dwellinghouse) of maximum internal floor area of 40m²	
Other rooms (including garages)	C-s3, d2
Circulation spaces within a dwelling	
Other circulation spaces (including the common areas of blocks of flats)	B-s3, d2[1]

NOTE:

1. Wallcoverings which conform to **BS EN 15102**, achieving at least class C-s3, d2 and bonded to a class A2-s3, d2 substrate, will also be acceptable.

Figure 5 – Classification of Linings

There are no relevant boundaries within 1.0m of any of the front or rear elevations of the building.

The 'mansard roof' will not be accessible to residents and will be of such dimensions that it would not adversely contribute to external fire spread with any roof spaces duly compartmented if larger than 20m in length and in line with lower floor level compartment walls where reasonable to do so. The wall systems of the compartment junctions separating all top storey plots (apartments) and the stair enclosure will extend fully to the underside of the roof.

Basement level

The basement level will be accessible from the commercial areas and not accessible to residents. The use of the basement level will be purposed for commercial storage with transient persons visiting the storage areas and therefore not classed as a permanent place of work. The maximum single direction travel distance will be no more than 18m.

NOTE: The details of the construction methodology and approved materials including photographic evidence of the stages of construction supported by commentary will be retained digitally by the client, to form the O&M manual and to satisfy the principles of the 'Golden Thread of Information – Single Source of Truth'.

A.4 Provide suitable and convenient means of escape, and associated evacuation strategy for all building users.

The residential floors will be subject to a 'Stay-Put / Defend in Place' fire strategy and will therefore residents may remain in their respective apartments unless a fire occurs within an apartment with those residents subsequently evacuating the building and raising the fire alarm.

There is no mandatory requirement for residents to abide by the 'Stay-Put / Defend in Place' fire strategy and they may leave the building at any time.

The commercial floor levels will be subject to the 'Full Simultaneous' fire strategy with a designated assembly point (Figure 1 - 'AP') duly located to ensure where reasonably possible the assembled persons outside of the building will not impede the firefighters from accessing the property and that the assembled persons are in a place of ultimate safety.

The building is being designed primarily as a 'general needs' property atop retail space. According to the previous fire statement a higher standard of design has been incorporated into the new dwellings so that they are more easily accessed and adapted for disabled persons should the need arise in the future.

Disabled persons like able-bodied persons would stay in their respective flats if a fire were to occur within the building other than within their respective flats as they will be designed as fire compartments. Disabled residents are advised to leave their apartment if a fire occurs within their respective flats, closing any doors (where safe to do so) behind them. Options available will then be provided such as the protected stairway as a place of relative safety until the Fire & Rescue Service arrives and extinguishes the fire.

In the unusual event of a full evacuation, or the evacuation of a single apartment containing occupants who are unable to self- evacuate, the responsible person of the apartments will need to ensure that there are facilities in place to inform the fire service on their arrival so that as part of the tactical plan the disabled persons can be prioritised. This may be in the form of a secure information box (SIB) located in the residential stairway lobby at ground floor level which will also be the fire service access point of entry.

The proposed dimensions of the stairway will not include space to allow for a refuge for any disabled persons or wheelchair users which is a required to be a flat and level space of 900mm x 1400mm. This stair enclosure is not expected to be used by wheelchair users.

Signs and Notices

The common means of escape within the commercial unit and the residential common areas will be accessible to persons who do not have a good understanding of the English language as all signage will meet the recommendations of BS 5499-4:2013 – 'Code of practice for escape route signing' and will take the form of pictorial symbols wherever necessary.

The evacuation strategy will be communicated via displayed notices detailing the evacuation strategy for each occupancy in the form of 'Fire Action Notices' within the communal areas of each entrance lobby with pictorial instructions.

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

The residential floor levels of the building will implement a Stay Put/ Defend in Place fire evacuation strategy that is inclusive and appropriate for residents with disabilities including mobility impairment, sensory and/or cognitive disabilities. Where residential occupants need to evacuate the building, the single protected stairway will provide a place of relative safety until the ground floor final exit door is reached that discharges to open air and a place of ultimate safety.

The building design dictates the evacuation strategies for the building and should be duly reviewed where there are any proposed changes in purpose groups or material alterations to the building over the life cycle of the building.

Information to residents

Regulation 6 of the Fire Safety (England) Regulations 2022 make it a legal requirement for responsible persons of all multi-occupied residential buildings in England, which contains two or more sets of domestic premises; and which contains common parts through which residents would need to evacuate in the case of an emergency to provide residents with fire safety instructions. Responsible persons should make sure that these instructions are shared with their residents in a form that residents can reasonably be expected to understand.

Responsible persons will need to provide residents with instructions on:

- how to report a fire.
- a reminder of what the evacuation strategy is for that building.
- any other instruction that tells residents what they must do once a fire has occurred, based on the building's evacuation strategy; and
- information relating to the importance of fire doors in fire safety.

Responsible persons should display these instructions clearly in their building's communal areas and share directly with residents when they move into the building.

This information will need to be re-provided in both the communal area and to residents when a document is updated. This information must also be re-provided to residents on an annual basis.

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

The footprint of the existing building will not change therefore the Emergency access provided to the site will remain relatively the same once occupied.

The location of the site during development and upon completion will allow vehicle access to the building from the main highways London Road and York Street (A305). Fire appliances will be able to park along the main highways.

Rear access to the building is limited to a narrow access road estimated @ 3m in width that would be unsuitable for FRS appliances from Garfield Road accessed from York Street as guidelines state that any street or private drive forming part of such a fire access way must be no less than 3.7m wide between the kerbs (though this may reduce to 3.1m for a gateway or similar short narrowing) The estimated travel distance by foot from Garfield Road to the rear of the property is 55m. (Note: Black rectangle is to blank out pedestrian identity)

Figure 6 – Access to front and rear elevations

For the residential apartments and common areas Approved Document B, Volume 1, recommends that low-rise buildings should include access for firefighting personnel by providing suitable measures for fire service vehicle access. In this case, the furthest point in the building (taken to be the Living/Dining/Kitchen of Plot 6) can be accessed within 45m (the maximum permissible) from the location of the parked FRS appliance, when measured along a route suitable for hose-laying.

For small commercial buildings (up to 2000m2), vehicle access for an appliance should be provided to whichever is the less onerous of the following.

15% of the perimeter, or

Within 45m of every point of the footprint of the building.

In the case of a) and b) above, both will be achieved for the commercial unit.

External firefighting water supplies can be obtained from highway provided water hydrants that are maintained and tested by the fire authority and provisioned for use by the fire service to augment water supplies to the fire appliances where required.

The nearest hydrants are located –

30m from the main junction of York Street and London Road outside Barclays Bank on King Street.

The route travelled to this building and the parking locations along the highways will not adversely impact the neighbouring sites and will be made available throughout the period of the construction and throughout the lifespan of the development as it is proposed.

The London Fire Brigade Guidance Note (GN29) covers the access arrangements needed for fire appliances to park close enough to a building to fight a fire. The GN29 document details requirements such as minimum road widths, turning circles, road humps and projections from buildings. Considering all the relevant content of this document, there are no matters envisaged within this planning proposal that will negatively affect access for fire appliances.

The following firefighting facility will be provided.

One OV at the head of the stairway with a free area of at least 1.0m2, operable remotely at the fire and rescue service access level as detailed within this document.

The route from the RVP to the residential and commercial entrances will be level and non-complicated. The access points will be suitable for firefighters proceeding on foot to any elevation with ladders, should rescues be required from the upper floor levels. Accordingly, there is no requirement for additional firefighting facilities (other than the required smoke vent in the stairway) at this property.

For the purposes of the floor levels that will be subject to the 'Full Simultaneous' fire strategy an assembly point (Figure 1 - 'AP') is located to ensure where reasonably possible the assembled persons outside of the building will not impede the firefighters from accessing the property and that the assembled persons are in a place of ultimate safety.

In occupation manual firefighting equipment is not recommend for the residential common areas of the building.

The commercial areas of the building should secure the services of a competent fire safety person to calculate the number of fire extinguishers required for the floor area of their place of work.

As a rule, each floor level will require one water-based fire extinguisher such as water, water additive or foam (3 litre or bigger) for every 2000 square foot or 200 square metres of floor space.

The principal contractor will be responsible for securing the access points for the fire service during the refurbishment works to ensure that fire service operations are not delayed or obstructed if a fire were to occur.

Upon occupation the responsible person has the responsibility to ensure the maintenance of the fire access locations to the building are always satisfactory for use where reasonably possible.

Throughout the construction phase, the developer (Principal Contractor) will employ 3rd party approved contractors and sub-contractors who may be engaged in hot works or general construction. Throughout this period, they will have a duty under the CDM Regulations 2015 to prevent the risk of fire and fire spread. They will discharge this duty by providing a means to tackle a small fire to prevent it becoming a large or developing fire. An appropriate number of contractors will be trained in the selection and use of fire extinguishers and fire safety awareness.