Cross Deep Court,
Heath Road,
Twickenham, TW1 1AG

Planning Fire Safety Strategy

APEX STRATEGIES

Control Sheet

Client Name:	Archway Investments Ltd
Project Title:	Cross Deep Court, Heath Road, Twickenham, TW1 1AG
Report Reference:	F1045-01
Status:	Final
Prepared By:	Brett Littlewood MIHE
Issue Date:	12/12/2022

Revision Record			
Rev.	**Description**	**Prepared By**	**Date**

Disclaimer

This document has been prepared for the purposes of Planning. It is not a specification, schedule of works or tender document. Unless a specification or manufacturers reference is given, the contractor is responsible for specifying all materials, fittings etc. within the context of the regulations and British Standards referred to herein. The contractor is also responsible for notifying the Planning Authority / Fire officer / Building Control when works are due to commence and the HSE where appropriate.

The works are to be carried out to the approval and satisfaction of the Building Control Officer, to accepted good building practice and with full compliance and in accordance with all relevant British Standards and Codes of Practice.

The Contractor must comply with relevant building control instructions and Directives.

Contents

1. Introduction

1.1 - Overview

This Planning Fire Safety Strategy ('The Strategy', hereafter) has been prepared by Apex Strategies Ltd. on behalf of Archway Investments Ltd in relation to development proposals at Cross Deep Court (Units 3 & 15), Heath Road, Twickenham, TW1 1AG.

The proposal comprises the change of use of part ground floor and part first floor to form 6 apartments (2 x 2B4P and 4 x 1B2P).

The Strategy is being submitted due to impending validation requirements being introduced by the Council in response to London Plan (2021) Policy D12(a) 'Fire Safety', which states;

"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."*

London Plan paragraph 3.12.2 notes that;

"The matter of fire safety compliance is covered by Part B of the Building Regulations. However, to ensure that development proposals achieve the highest standards of fire safety, reducing risk to life, minimising the risk of fire spread, and providing suitable and convenient means of escape which all building users can have confidence in, applicants should consider issues of fire safety before building control application stage, taking into account the diversity of and likely behaviour of the population as a whole."

The aim of this document is therefore to demonstrate the relevant fire safety aspects of the proposed development design to date. This document does not constitute the detailed fire strategy under the Building Regulations which will be developed as the scheme progresses. However, this Strategy evidences the provisions made for the safety of occupants and protection of property as well as the provision of suitable access and provisions for firefighting in light of London Plan fire safety policy requirements and the rationale for these measures.

This Strategy is presented in a format which responds to the listed criteria of London Plan Policy D12(A).

1.2 - Drawing Information

This Strategy has been informed by the submitted layouts and elevations prepared by Create Design, copies of which are included at **Appendix A**.

1.3 - Statement of Competency

This Planning Fire Safety Strategy has been prepared by Brett Littlewood, who is qualified with a HND in Construction and the Built Environment (Civil Engineering), a higher level apprenticeship in Construction Management, has 9+ years experience as a consulting Highways Engineer and is a Member of the Institute of Highways Engineers (MIHE). The author's qualifications and experience are considered to be commensurate with the size, scope and complexity of the development.

2. Fire Service Vehicle Access & Assembly

2.1 - Fire Service Vehicle Access

Approved Document B Volume 1 (ADB1) requirement B5 states that, for flats, either of the following provisions should be made;

a. *Provide access for a pumping appliance should be provided within 45m of all points inside each flat of a block, measured along the route of a hose.*

b. *Provide fire mains in accordance with paragraphs 13.5 [Dry Fire Mains] and 13.6 [Wet Fire Mains].*

The site has direct frontage onto Cross Deep Road (A310) to the east and Heath Road to the north. The distance between the likely servicing position of the pumping appliance and the furthest point within the proposed first floor development (measured along the route of the hose) is within the recommended 45m limit. It is therefore considered that suitable access for the fire service can be achieved.

Unobstructed access for fire service vehicles is achievable, therefore, London Plan (2021) Policy 12(A) Criteria 1a is satisfied.

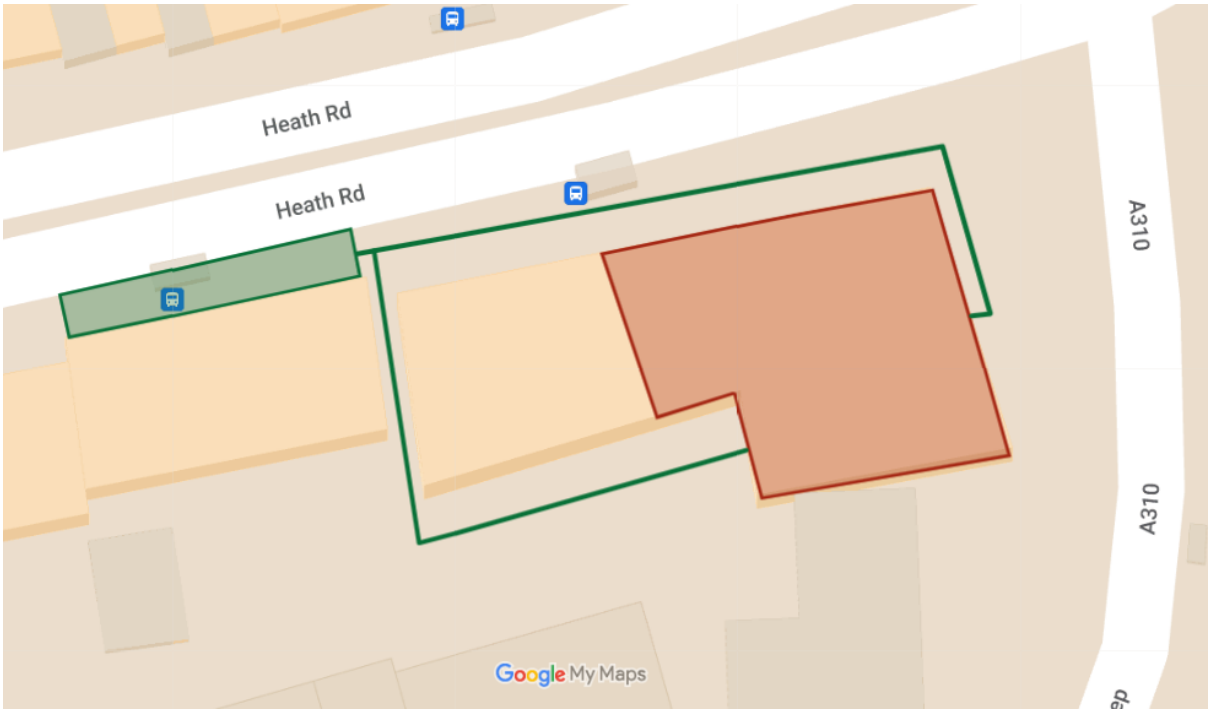
2.2 - Assembly Points

In principle, assembly points should be located sufficiently far from the premises to minimise interference with the fire and rescue service or danger from falling debris, but should be accessible and not so far away as to discourage people from assembling. Ideally the Fire Assembly Point should be located so as not to require the crossing of a road or movement through trafficked areas.

Figure 1 (overleaf) shows a proposed assembly point located within the public footway along Heath Road towards the west of the development site.

The area is considered of sufficient size to accommodate simultaneous evacuation of the development should this be necessary, and is appropriately located to minimise interference with fire and rescue service operations.

Figure 1 - Indicative Assembly Point and Evacuation Routes



Suitably sized, unobstructed outside spaces have been identified for use as an evacuation assembly point therefore, London Plan (2021) Policy 12(A) Criteria 1b is considered to be satisfied.

3. Fire Safety Measures

The inclusion of active and passive fire safety systems within a building is intended to ensure that the means of escape provided remains available to occupants throughout the evacuation of the building in fire conditions and maintain tenable conditions for longer periods during fire-fighting operations.

3.1 - Active Fire Safety

3.1.1 - Detection and Alarm

An automatic detection and alarm system in a building provides an effective means to identify a fire scenario in the early stages of fire growth and provide an alarm notifying building occupants automatically of the fire scenario with a clear message or sound.

A Grade D1 Category LD2 (or better) fire detection and alarm system designed, installed & commissioned in accordance with BS 5839-6:2019+A1:2020 shall be provided within all circulation spaces that form part of the escape routes from each premises, and in all rooms or areas that present a high risk of fire to occupants with heat detectors in the kitchen ares and smoke detectors in all principal habitable rooms.

3.1.2 - Smoke and Heat Control

In the event of a fire within any given compartment of the building, there arises a potential for smoke ingress into areas of the development which are intended to facilitate escape in the event of emergency (i.e. the stairwell and corridors).

In order to ensure that conditions along the escape routes remain tenable, a mechanical ventilation system is proposed within the common protected lobby area. The system shall be designed, installed and maintained in accordance with BS EN 12101-6:2022 / BS EN 12101-13:2022.

3.1.3 - Emergency Lighting

An emergency lighting system will be installed in accordance with the recommendations of BS 5266-1. The purpose of this system is to provide temporary illumination in the event that the primary power supply fails on the normal lighting system.

Dedicated escape lighting will ensure escape routes are illuminated in the event of an emergency. This system will illuminate a safe exit route including the fire exits, manual call points, changes in level or direction and firefighting equipment.

3.2 - Passive Fire Safety

In order to limit the spread of smoke from areas of risk, Fire Doorsets (FD30S) shall be provided within each doorway separating private residential areas from communal areas of the building and to the protected lobby area. FD20 Doorsets shall be provided within each flat to each habitable room, except bathrooms.

As the building is still being developed, the recommendations regarding fire stopping and protection of openings and concealed spaces will be discussed once the building design has progressed through RIBA Stage 3.

Appropriate fire safety features which reduce the risk to life and the risk of serious injury in the event of a fire are to be accommodated throughout the development, therefore, London Plan (2021) Policy 12(a) Criteria 2 is considered to be satisfied.

4. Risk of Fire Spread

4.1 - Internal Fire Spread

To minimise the risk of fire spreading throughout the building, appropriate compartmentation is proposed. Compartmentation is the process of dividing a structure into compartments for effective risk management.

The main objective of compartmentation is to contain a fire within a specific section of a building, limiting the passage of flames and smoke. This then allows more time for occupants to safely evacuate a building and for fire services to extinguish the flames.

The compartments shall be constructed to meet the fire resistance requirements set out within Tables B3 and B4 of ADB1, which can be summarised as follows;

- Floors separating first floor flats from ground floor retail **= REI 60**;
- Walls separating flats from other parts of the building and other flats **= REI 60**;
- Protected Lobby and Corridor **= REI 30**;
- Protected entrance halls (within each flat)**= REI 30**; and
- Ceilings **= EI 30**

NB: In the European classification:

- ➢ *'R' is the resistance to fire in terms of loadbearing capacity.*
- ➢ *'E' is the resistance to fire in terms of integrity.*
- ➢ *'I' is the resistance to fire in terms of insulation.*

As noted, to reduce the risk of fire spread between compartments, fire doorsets (FD30S) shall be provided at the entrances to each flat which separate the living space from the common hallway. Meanwhile, FD20 doorsets are proposed where they form part of the enclosure to a protected entrance hall or protected landing within each flat.

The recommendations regarding fire stopping and protection of openings and concealed spaces will be discussed once the building design has progressed through RIBA Stage 3.

4.2 - External Fire Spread

No changes are proposed to the external fabric of the existing building which has a brick facade and is inherently fire resistant.

4.3 - Construction Methods

At this early stage of the planning process, no contractor has been appointed for the construction of the proposed development and a detailed Construction Method Statement (CMS) has not yet been prepared. A detailed CMS may be secured through a suitably worded planning condition.

Notwithstanding the above, it is recommended that any future CMS includes a commitment to ensure that the Site Management and all operatives must;

- ➢ Develop a Fire Risk Assessment and update throughout the construction period;
- ➢ Consider how to detect fires and how to warn people quickly if they start (e.g. installing smoke alarms and fire alarms or bells), and have the correct fire-fighting equipment for putting a fire out quickly;
- ➢ Ensure good housekeeping at all times (e.g. avoid build-up of rubbish that could burn);
- ➢ Identify sources of fuel, sources of ignition and sources of oxygen and keep sources of ignition and flammable substances apart;
- ➢ Ensure workers receive appropriate training on procedures they need to follow, including fire drills;
- ➢ The latest Fire Plan showing the emergency exit routes and fire points should be displayed and updated regularly as the site progresses. Keep fire exits and escape routes clearly marked and unobstructed at all times;
- ➢ If any visitors are on site it is the responsibility of those who they are visiting to ensure that they are evacuated from the site. A roll call will then be taken to ensure all persons are accounted for.

Measures to reduce the risk of fire spread to neighbouring sites, buildings and occupants are proposed, therefore, London Plan (2021) Policy 12(a) Criteria 3 is considered to be satisfied.

5. Escape and Evacuation

5.1 - Means of Escape

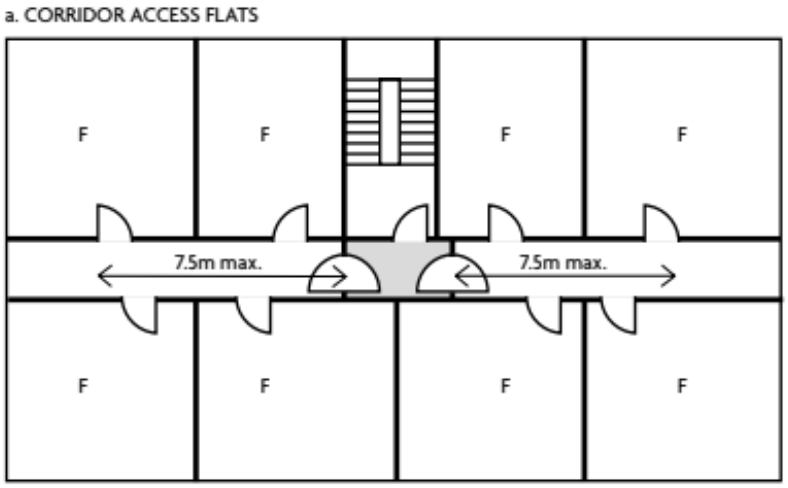
Means of escape is to be provided to facilitate occupancy escape from the building to a place of safety.

In accordance with ADB1, each of the proposed flats have been designed so that;

- A protected entrance hall (minimum REI 30) serving all habitable rooms;
- Travel distances within the protected entrance halls are within 9m;

Within the common areas of the development, all flat entrances are separated from the single protected stair by a protected lobby area. In accordance with ADB1 Table 3.1 / Diagram 3.7a, travel distances between the flat entrances and the protected lobby area are limited to <7.5m.

Figure 2 - ADB1: Diagram 3.7a



5.2 - Evacuation Strategy

Provisions are made throughout the development to ensure that a fire is contained within the flat / area of origin and that common escape routes, safe areas and stairways remain relatively free from smoke and heat in the event of a fire. This is premised upon the high levels of fire compartmentation (i.e. walls and floors of fire-resisting construction) and smoke control systems in place, as life safety features (see details in Chapter 3 of this Strategy).

The ‘stay in place’ evacuation regime is the standard approach to residential developments in the UK . This means that only the flat of fire origin is expected to evacuate in the event of a fire and other flats will not be automatically notified. Furthermore, the activation of a detector in the common areas or ancillary spaces is not intended to cause a general building evacuation.

Simultaneous evacuation of the building is unlikely to be necessary. Further evacuation of apartments will not take place automatically but will be reliant upon the Fire Service, building management or the independent action of individual occupants.

Details of the means of escape and proposed evacuation strategy have been provided and therefore London Plan (2021) Policy 12(a) Criteria 4 is considered satisfied.

Appendix B contains a template Residential Fire Evacuation Strategy which sets out how residents and other building occupants will move to a safe location in the event of an emergency. The evacuation strategy will support the Golden Thread of fire safety information that is to be updated and maintained through the whole life cycle of the building.

The evacuation strategy template provided is considered to satisfy London Plan (2021) Policy 12(a) Criteria 5.

6. Access and Facilities for Fire Fighting

In low rise buildings without deep basements, access for firefighting personnel is typically achieved by providing measures for fire service vehicle access (as detailed in Chapter 2) and means of escape (as detailed in Chapter 5).

As previously noted, suitable unobstructed space for a fire service vehicle is available immediately outside the development along Cross Deep and means of escape in accordance with ADB requirements are proposed.

With regards to facilities, the nearest fire hydrant is located along the site frontage on the opposite side of Cross Deep between 43 & 45 King Street.

As well as supporting the building occupant life safety objectives, the provision of both passive and active fire safety systems also provides substantial benefits to firefighter operations.

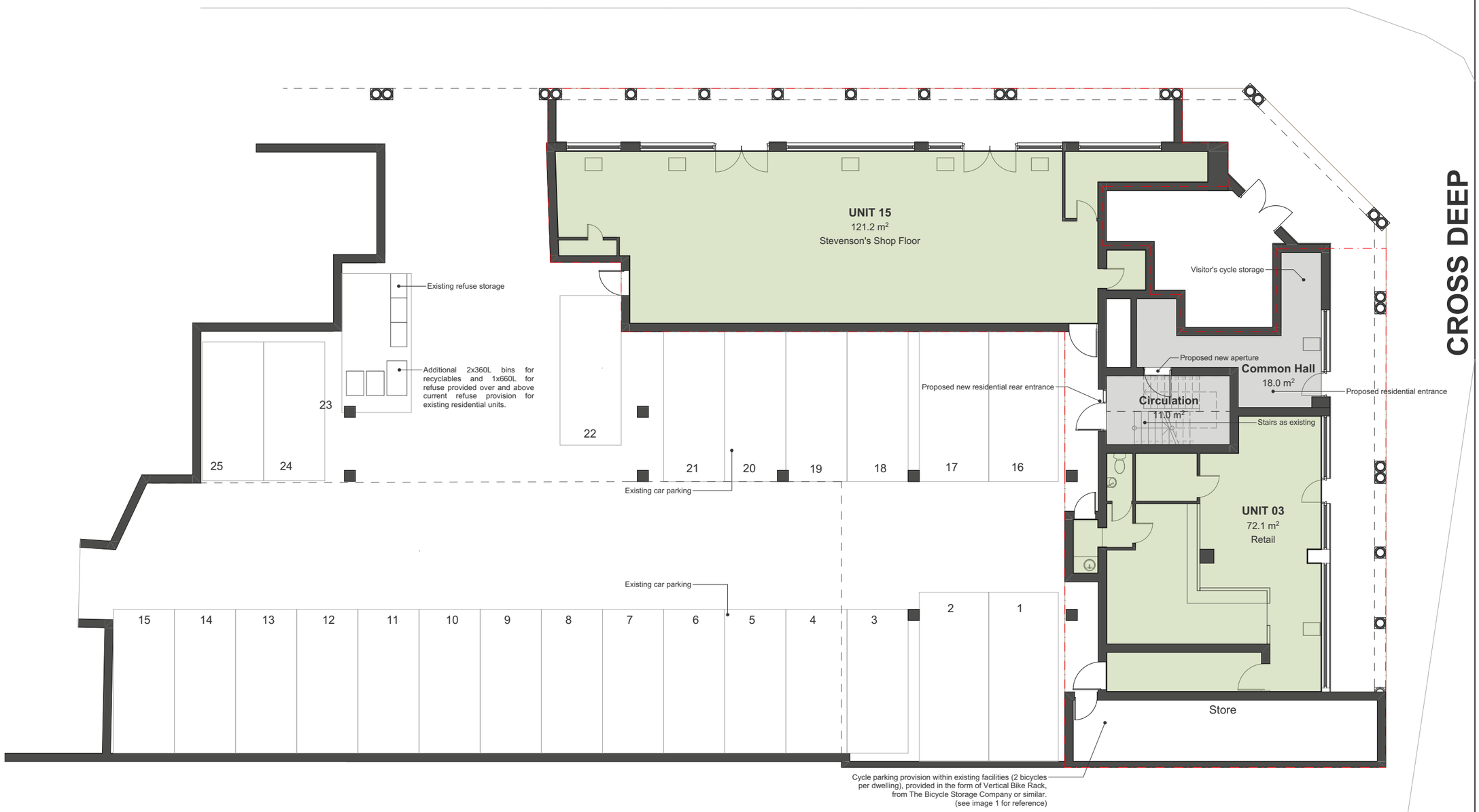
It is considered that suitable access and equipment will be provided to facilitate firefighting, therefore, London Plan (2021) Policy 12(A) Criteria 6 is satisfied.

Appendices

Appendix A

Proposed Site Layouts

HEATH RD



CROSS DEEP

Ownership boundary

Rev	Description	Drawn	Checked	Date
02	For Planning	BC	MW	09/12/2022
01	For Planning	BC	MW	14/10/2022

CREATE
DESIGN + ARCHITECTURE
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CROSS DEEP COURT
TW1 4AG

Client
Philip Mallon - Archway Investments

PROPOSED PLANNING

PROPOSED SITE PLAN

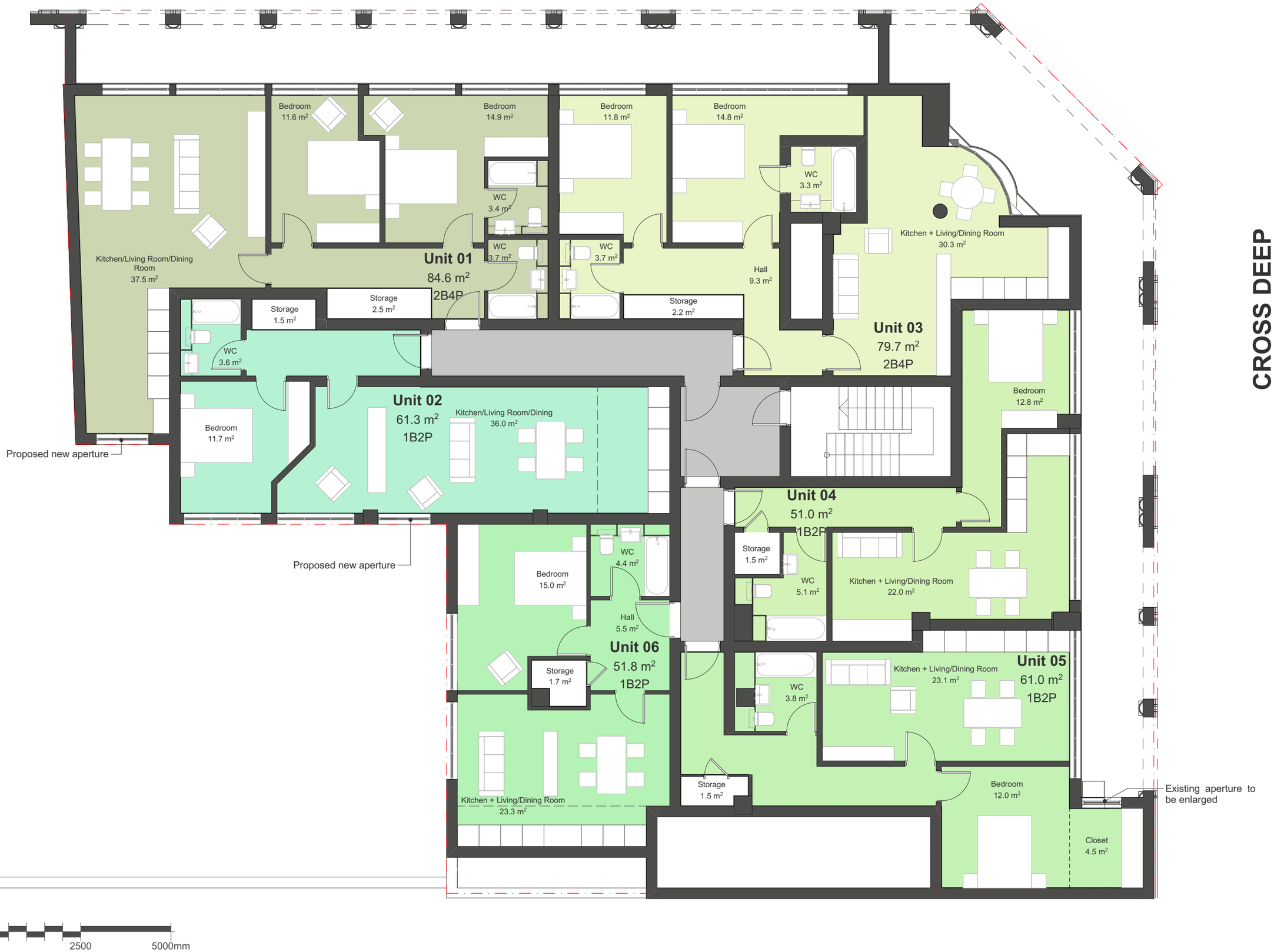
CDA Ref	Scale(s)	Original Paper Size
698	1:150	A3

Drawing Number

Project	Originator	Volume	Level	Type	Role	Class	Number
698	CDA	ZZ	00	DR	A	05	0002

Revision	Revision Description
02	For plannning

HEATH RD



CROSS DEEP

Circulation/Common Spaces

Ownership boundary

Rev	Description	Drawn	Checked	Date
02	For Planning	BC	MW	09/12/2022
01	For Planning	BC	MW	14/10/2022

CREATE
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CROSS DEEP COURT

TW1 4AG

Client

Philip Mallon - Archway Investments

PROPOSED PLANNING

PROPOSED FIRST FLOOR PLAN

CDA Ref	Scale(s)	Original Paper Size
698	1:100	A3

Drawing Number

Project	Originator	Volume	Level	Type	Role	Class	Number
698	CDA	ZZ	01	DR	A	05	0103

Revision	Revision Description
02	For plannning

Appendix B

Residential Evacuation Strategy

Fire Evacuation Strategy

Evacuation Strategy for :	Residential
Premises address and contact number	Units 3 and 15, Cross Deep Court, Heath Road, Twickenham, TW1 1AG Tel: TBC
Plan date	TBC – Document prepared for planning
Review date	Annually

Overview

'Stay in Place' - Provisions are made throughout the development to ensure that a fire is contained within the flat of origin and that common escape routes, safe areas and stairways remain relatively free from smoke and heat in the event of a fire within a dwelling.

Stay in Place Evacuation Strategy

- If a fire occurs within a flat, the occupants should immediately alert others in the flat, make their way out of the building and summon the fire and rescue service;
- If a fire starts in the common parts of the development, anyone in these areas should make their way out of the building and summon the fire and rescue service;
- All other residents not directly affected by the fire would be expected to 'stay in place' and remain in their flat unless directed to leave by the fire and rescue service.

Escape routes

The escape routes from the building are via the main stairway.

Fire assembly point

The assembly point is located within the public footway immediately to the west of the site access on Heath Road.

Fighting fires – Extinguisher use

Fire extinguishers will only be used where:

- Residents have received training and feel confident in their use
- Where it is deemed safe to do so i.e. there is a clear means of escape, fire is small

Personal safety always takes priority and, if in any doubt, residents should not attempt to extinguish a fire

Location of key safety hazards or other fire related equipment

- Gas supply shut off: TBC
- Mains fuse box: TBC

- Mains water inlet: TBC
- Gas/oxygen cylinders: TBC
- Location of fire alarm panel: TBC

Responsibilities	
For ensuring plan is up to date	TBC - Usually the premises manager
For ensuring adequate staff are on duty to carry out the evacuation plan	As above
For training staff on the evacuation plan and in their roles and responsibilities	As above

Attach any Personal Emergency Evacuation and General Emergency Evacuation Plans to this document

APEX STRATEGIES

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