Paddington Central

FIVE KINGDOM STREET

FIRE STATEMENT

JULY 2020

British Land

Fire Statement

Project	5 Kingdom Street
Subject	Fire Strategy
Topic	Planning Application
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Author	Alastair Crossley, Senior Fire Engineer (BSc., MSc.)
Reviewer	Yen Luong, Director (CPhys, MIPhys, MIFireE)
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THE FIRE SURGERY

Introduction

This Fire Statement has been prepared in support of the Planning Application for the 5 Kingdom Street.

This statement describes the principles that will inform the detailed fire strategy, which will be prepared in accordance with Building Regulations 2010 for Part B - Fire Safety.

The statement has been prepared to address the requirements of policy D12(B1-6) and D5(B2).

The design is at concept level and the detail has not been developed. The following information provides the design principles for fire safety.

Fire Strategy Objectives

The primary objective of the fire strategy for the project is to meet the functional requirements of the Building Regulations 2010 for Part B - Fire Safety. The fire strategy will show that all people can escape to a place of relative safety at all times, and then to a place of ultimate safety outside the building. The fire strategy will ensure that fire and smoke spread will be controlled both internally and externally. There will be suitable provisions for the fire service to undertake search and rescue and firefighting operations.

The Building Regulations approvals process will progress with regular and ongoing interactions with the appointed Building Control and London Fire Brigade to provide them with the confidence that the finished scheme will be acceptable. As such what is being proposed for planning will, subject to the ongoing development of the internal elements, provide a building that meets the required standards for fire and life safety.

Approach and Guidance Documents

BS 9999: 2017 will be applied as the principle design guidance with the aim of showing that the building satisfies the functional requirements of the Building Regulations 2010 for part B Fire Safety.

The fire strategy is based on fire risk, the likelihood of fire within the space, and the consequence on the occupants. The likely fire scenarios within the building are considered and agreed with the stakeholders. Active and passive systems are used to mitigate the risk of fire and provide a solution that allows for safe egress and firefighting. Fire and smoke modelling may be undertaken to show that the proposed solutions will work. Non-fire threats are addressed in the security strategy.

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Fire Strategy Principles

The following bullet points outline the primary aspects of the fire strategy for 5 Kingdom Street that will be addressed during the design.

- The building will be designed using the recommendations of BS 9999. Where these recommendations are unsuitable for the design or use of the building, additional engineering justifications will be provided to describe how the required level of safety is achieved.
- Means of escape will be designed so that travel distances are within the limits prescribed by BS 9999, and the stairs and doors have sufficient capacity for the maximum number of occupants expected to use them.
- Emergency lighting and signage will be provided in escape routes to facilitate the egress strategy.
- The building will be provided with an automatic sprinkler system to BS EN 12845.
- Exit routes will discharge to the outside of the building through protected routes.
- A strategy will be developed so that mobility impaired occupants can be safely evacuated from all parts of the building. This will be coordinated with the building management.
- An automatic fire detection and alarm system will be provided throughout the building to give early warning of a fire and facilitate evacuations.
- The building will be provided with compartmentation that separates high risk areas from the surroundings, protects escape routes and prevents rapid or unseen fire spread within the building.
- The building will be designed such that void spaces that link floors will not have an adverse effect on occupants egressing. This includes positioning of additional exit routes, and active and passive fire separation.
- The building will be designed such that the fire spread to adjacent buildings is considered, and mitigation is provided using fire rated façade elements if required.
- Facades will be designed to meet the recommendations of BS 9999 for use of combustible materials, firestopping, and cavity barriers.
- The site is provided with vehicle access for fire appliances. The building will be designed so that suitable access can be provided to all parts of the building for firefighting.
- The overall strategy will have a reliance on sound management of the building, so specific management requirements will be highlighted to the client as they are developed.

Policy D5 (B5)

This policy states:

> *Development proposals should be designed to incorporate safe and dignified emergency evacuation for all building users. In all developments where lifts are installed, as a minimum at least one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building.*

The Fire Surgery can confirm that evacuation lifts will be provided with at least one per core.

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Policy D12 (B1-6)

This policy states:

> *All major development proposals should be submitted with a Fire Statement, which is an independent fire strategy, produced by a third party, suitably qualified assessor.*
>
> *The statement should detail how the development proposal will function in terms of:*
>
> *1) the building's construction: methods, products and materials used, including manufacturers' details*
>
> *2) the means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach*
>
> *3) features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans*
>
> *4) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these*
>
> *5) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building*
>
> *6) ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.*

B1

The building is currently at concept stage and as such the full construction methods have not been determined and assessed. The elements of structure will either be designed to provide a minimum of 120 minutes fire resistance or designed to provide a minimum of 90 minutes fire resistance if, through a fire engineered approach, a time equivalence assessment determines this to be appropriate. Both approaches are in accordance with BS 9999 guidance for a building of this height and risk profile.

B2

The 5KS development will adopt a phased evacuation regime based on the principles of BS 9999, though tailored to the specifics of the development, with the development divided into two "evacuation zones"; the podium and Crossrail Box as one zone and the Tower as a separate zone.

The travel distances, exit widths and stair widths will be designed in accordance with BS 9999: 2017.

B3

5 Kingdom Street will be protected with an automatic fire detection and alarm system to a Category L2 standard, with voice alarm and PAVA within the Podium and Crossrail Box. The system will be designed to meet the recommendations detailed in BS 5839-1: 2017 and BS 5839-8: 2013. Manual break glass call points will be provided as part of this system.

The building will be provided with a sprinkler system throughout designed in accordance with BS EN 12845.

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Compartmentation, fire stopping, cavity barriers and fire and smoke dampers will be provided in accordance with BS 9999: 2017.

The building management (including tenants) for 5 Kingdom Street is expected to comply with an 'Enhanced' Level 1 management regime from BS 9999: 2017. This is a proactive approach to fire safety management with the main provisions explained. Level 1 demonstrates best practice in which the organization's management system is determined to meet a management system standard such as PAS 7.

B4

The development will be provided with two firefighting shafts which serve the Tower and three firefighting shafts which serve the Crossrail Box. All the firefighting shafts will be accessed from Paddington Central Estate Road. There will also be a fire control centre provided at fire service access level.

The two firefighting shafts serving the Tower be designed and installed fully in accordance with BS9999: 2017. Key facilities they will need to include:

- A firefighting stair and firefighting lobby enclosed to 120 minutes fire resistance.
- Wet rising fire main to BS9990: 2015. The outlets for the wet rising mains will need to be provided within the firefighting lobbies.
- Firefighting lift to BS EN 81-72: 2015 and BS9999: 2017.
- Smoke ventilation measures – a mechanical smoke extract system is proposed in this case.
- Communication facilities – a fire telephone system to BS5839: pt. 9 (2011) will be provided in the firefighting lobbies.

The firefighting shafts provided within the Crossrail Box shall also be designed and installed in accordance with the recommendations of BS9999: 2017. However, since these do not serve a floor more than 7.5m in height they shall include:

- A firefighting stair and firefighting lobby enclosed to 120 minutes fire resistance.
- Wet rising fire main to BS9990: 2015. The outlets for the wet rising mains will need to be provided within the firefighting lobbies.
- Communication facilities – A fire telephone system to BS5839: pt. 9 (2011) will be provided in the firefighting lobbies.
- Smoke ventilation measures – mechanical smoke extract systems are not proposed in these cores, as they are under 7.5m in height.

The building will have a sprinkler system designed and installed to BS EN 12845 provided throughout.

B5

Access to the five firefighting shafts will be provided from Paddington Central Estate Road. The access will be in accordance with BS 9999: 2017.

B6

All incoming tenants will be provided with the fire strategy for the building and will have demonstrate that their fitout proposals comply with the fire strategy.