

Design Note – DN 003.3

Project: Blenheim, Penge, London
Subject: Response to London Fire Brigade
Date: 4 March 2024
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1 Introduction

Following issue of the relevant Fire Statements¹ & ² for Blenheim Shopping Centre - Residential development, the London Fire Brigade (LFB) have provided comments on the fire safety design.

There has been a previous round of comment and response:

- Town and Country Planning Consultation Response 2327338 Blenheim Shopping Centre, Penge, SE20 8RW 92-002791, date response sent 13 October 2023
- 1771_DN003.1_Blenheim Shopping Centre_Response to LFB Comments_231025

In response to the previous round of comments, and Government statements regarding future intent, the design was altered significantly. To support the revised design the fire statements were updated and resubmitted.

The HSE have provided a substantive response to the revised design:

- pgo-4629 (HSE Substantive Response) LPA 23-00178-FULL1

The HSE response confirms that the HSE is content with the fire safety design as set out in the project description, to the extent it affects land use planning considerations.

The LFB have provided a separate response³ to the revised design. These comments highlights areas where they consider further information to be required, or areas of the design which vary from the relevant design standards and as such could impact on planned requirements if not demonstrated to meet Building Regulations as the design develops.

The comments raised by LFB have been reviewed by DFC.

This design note documents the response and actions taken to address each of these comments.

¹ DFC, Blenheim Shopping Centre, Penge, London, SW20 ERW, Fire Statement, London Plan, Revision 06, 29 November 2023

² DFC, Blenheim Shopping Centre, Penge, London, SW20 ERW, Fire Statement, Town and Country Planning, Revision 06, 29 November 2023

³ Town and Country Planning Consultation Response 2327338 Blenheim Shopping Centre, Penge, SE20 8RW 92-002791, date response sent 29 February 2024

2 Response to LFB Comments

2.1 LFB Comment (1):

Fundamental concerns relating to single stair for Block A.

We note that the updated design for the height of Block A has been reduced to below 18m however it is noted that the height of the building is identified at 17.7m and is reliant on a single staircase. We draw your attention to the announcements from government stating their expectation that multiple staircases will be required in residential buildings above 18m. Whilst we note that transitional arrangements will apply, it is the National Fire Chiefs Council (NFCC)'s position, as stated in the December 2022 NFCC 'Single Staircases Policy Position Statement' that all residential buildings over 18m or seven storeys in height should be provided with multiple staircases. We therefore do not see this as deferring to the spirit of the guidance used and doesn't ethically justify this decision.

Design teams and developers should also be planning for the new requirements under the Building Safety Act for in scope buildings once occupied, including the need to provide a safety case review. The design as currently proposed may have implications on those responsible for demonstrating the ongoing safety in the building.

2.1.1 DFC Response:

As noted in the LFB response, the recent policy issued by the National Fire Chiefs Council and the recent announcement from Government, there is a call for two stairs to be provided in buildings over 18m / seven storeys or more.

Block A is a six storey (L00-L05) building, which measures 17.7m in height. As such it does not fall within the requirements for building over 18m to have a secondary escape stair. The building is designed with a single escape stair, as permitted by current guidance (ADB Vol.1 and/or BS9991).

It is the design teams' opinion that this approach of compliance, fits with the intent of the current and future Government guidance.

The design team are aware of the requirements under the Building Safety Act on occupation for the responsible person, and consider a building constructed in accordance with current guidance to be demonstratable safe.

2.2 LFB Comment (2):

Fundamental concerns relating to single stair for Blocks B, D & E.

We note the addition of a secondary stair for Blocks B & D. It is noted that the design for two staircases serving all floors in these blocks is not satisfactory in relation to the relevant guidance used. It is noted that the proximity of all staircases do not provide a suitable secondary means of escape, as in all buildings escape to a second stair is either past an un-lobbied stair or through the lobby of the stair that is not being used. Whilst we appreciate the proposals include the provision of a second stair, we are of the opinion that occupants should be provided with an appropriate route to either escape stair without having to move through a lobby associated with one stairway to get to a lobby associated with another stairway. We note the clarification of the amenity areas in Blocks B, D E, and expect this to be included in subsequent building control consultations.

2.2.1 DFC Response:

The building design has been developed in accordance with the recommendations of ADB Vol.1 and BS 9991. These documents represent the relevant guidance used.

All stairs are lobby protected as shown on the drawings provided. No accommodation (dwelling, ancillary space etc) is accessible from the stair lobby. The stair lobbies are accessed from the common corridor or adjoining stair lobby. Therefore, there is no escape passed an un-lobbied stair.

Escape passes through the protected lobby of one stair to reach the second stair in a number of instances. This is permitted with ADB Vol.1 under clause 3.33, which states: .

‘An escape route should not pass through one stair enclosure to reach another. It may pass through a protected lobby (minimum REI 30) of one stair to reach another’.

As such, it is the opinion of the design team, that the design has been developed in compliance with the recommendations of ADB Vol.1.

The design will be developed further in the subsequent design stages and will be subject to the Gateway 2 process, where the Building Safety Regulator will review the detailed design for compliance with the function requirements of the Building Regulations. This will include a representative of LFB. This additional consultation will ensure that of any remaining items relating to Building Regulation compliance are resolved prior to construction.

2.3 LFB Comment (3):

Ensuring suitable means of escape for all occupants in open plan apartments

We await further information in subsequent building control consultations.

2.3.1 DFC Response:

The LFB comments are noted, and will be duly considered, as part of the design development of the open plan apartments at the detailed design stage.

The detailed design will progress to Gateway 2 where compliance with the Building Regulations will occur prior to construction.

2.4 LFB Comment (4):

Evacuation lifts for Blocks A, B, C, D & E

Noted. Our original comment regarding the provision for an additional evacuation lift in each core remains to ensure safe evacuation for all persons in the event of a lift failure. We expect this to be clarified in more detail in subsequent building control consultations.

2.4.1 DFC Response:

The LFB comments are noted. Evacuation lift provisions will be designed to ensure compliance with the requirements of the London Plan and integrated into the wider fire strategy. The fire strategy will address maintenance requirements, in so far as they relate the requirements of the Building Regulations.

The detailed design will progress to Gateway 2 where compliance with the Building Regulations will occur prior to construction.

2.5 LFB Comment (5):

Access and facilities for the fire and rescue service for Blocks A, B, C, D & E

Noted. Our original comment regarding the provision for an additional firefighting lift in each core remains to ensure sufficient access for firefighters to all areas of the buildings in the event of a lift failure. We expect this to be clarified in more detail in subsequent building control consultations.

2.5.1 DFC Response:

The LFB comments are noted.

Each storey area within each block is less than 900m². Current guidance permits the use of a single firefighting shaft (with single firefighting lift) to be used in buildings with floor areas less than 900m².

As such, the firefighting lift provisions reflect the recommendations set out in current guidance.

The fire strategy will address maintenance requirements, in so far as they relate the requirements of the Building Regulations.

The detailed design will progress to Gateway 2 where compliance with the Building Regulation will occur prior to construction.

2.6 LFB Comment (6):

Proposed vertical means of escape design in Block C

It is noted that the design for two staircases serving Block C is not satisfactory in relation to the relevant guidance used. It is noted that the proximity of all staircases do not provide a suitable secondary means of escape for any 'Adaptable' flats, as escape to a second stair is either past an un-lobbied stair or through the lobby of the stair that is not being used. Whilst we appreciate the proposals include the provision of a second stair, we are of the opinion that occupants should be provided with an appropriate route to either escape stair without having to move through a lobby associated with one stairway to get to a lobby associated with another stairway.

2.6.1 DFC Response:

The building design has been developed in accordance with the recommendations of ADB Vol.1 and BS 9991. These documents represent the relevant guidance used.

All stairs are lobby protected as shown on the drawings provided. No accommodation (dwelling, ancillary space etc) is accessible from the stair lobby. The stair lobbies are accessed from the common corridor or adjoining stair lobby. Therefore, there is no escape passed an un-lobbied stair.

Escape passes through the protected lobby of one stair to reach the second stair in a number of instances. This is permitted with ADB Vol.1 under clause 3.33, which states: .

'An escape route should not pass through one stair enclosure to reach another. It may pass through a protected lobby (minimum REI 30) of one stair to reach another'.

As such, it is the opinion of the design team, that the design has been developed in compliance with the recommendations of ADB Vol.1.

The design will be developed further in the subsequent design stages and will be subject to the Gateway 2 process, where the Building Safety Regulator will review the detailed design for compliance with the function requirements of the Building Regulations. This will include a representative of LFB. This additional consultation will ensure that of any remaining items relating to Building Regulation compliance are resolved prior to construction.

2.7 LFB Comment (7):

We note the decision to use mechanical ventilation as a justification the enclosed horizontal means of escape. We expect this to be justified by provided suitable CFD modelling documentation and a relevant 3rd party analysis in subsequent building control consultations.

2.7.1 DFC Response:

CFD modelling of the mechanical ventilation system shall be completed during the detailed design stage.

The detailed design will progress to Gateway 2 where compliance with the Building Regulation will occur prior to construction.

2.8 LFB Comment (8):

We note that the proposals include enclosed car parking areas and recommend that consideration is given in relation to electric vehicle (EV) charging units, together with the potential fire risk posed by their battery systems. The following should be considered, preferably as part of a Qualitative Design Review (QDR) and, following the recommendations given in BS 7974. This is not intended to be an exhaustive list of considerations:

- Whether the smoke ventilation provisions for car parks are sufficient to manage the products of combustion from a fire involving one or more EVs
- Whether AWFSS require enhancements beyond the minimum recommendations of the relevant standards
- Whether the fire resistance of elements of structure should be increased beyond the minimum recommendations of this code of practice
- Whether car parking spaces served by EVCUs should be located closer to the access points to the car park for the fire and rescue services and to any fire main outlets in order to assist firefighters in applying extinguishing media to the fire
- Whether there should be provision for the safe removal of any EV car that has been involved in a fire and may still pose a risk of reignition. If access to the space is only via a car lift, for example, this may not provide such suitable provision
- Whether the water supplies provided for the fire and rescue services should be enhanced beyond the minimum requirements of BS 9990 and other relevant standards, in particular with regard to the duration of water supply available
- Suitable protection to car park internal surfaces and drainage systems to facilitate post-fire clean-up and environmental protection

A means of isolating the power supply to EVCUs should be provided for the fire and rescue services in a suitable location associated with, but outside of, the fire resisting enclosure to any car park containing EVCUs. This should be at the main designated access point to the building or car park for the fire and rescue services. Signage should be provided to identify the power supply isolation controls, and this should state:

“FIREFIGHTERS ELECTRICAL ISOLATION SWITCH FOR CAR PARK ELECTRIC VEHICLE CHARGING UNITS”

The signage should conform to BS 5499-1.

The location(s) of power supply isolation controls serving EVCUs should be indicated on premises information provided for firefighters. The power supply to all EVCUs should also be automatically isolated upon actuation of the fire warning and detection system or sprinkler system serving the car park in which they are located. EVCUs should be provided with a suitable level of water resistance to ensure that they do not pose a hazard to firefighters should they become immersed in water, either as a result of the activation of the sprinkler system or firefighting operations. It is our strong recommendation that car parks containing EVCUs should be provided with sprinkler coverage in

accordance with BS 9251:2021 or BS EN 12845:2015+A1, irrespective of whether a building is otherwise provided with a sprinkler system.

2.8.1 DFC Response:

The LFB comments are noted, and will be duly considered, as part of the design development of the enclosed car park in relation to the risks posed by EV's.

It is noted that there is a lack of formal Government guidance in regard to EV car parks, such that input from the LFB is welcome.

The design will be developed further in the subsequent design stages and will be subject to the Gateway 2 process, where the Building Safety Regulator will review the detailed design for compliance with the function requirements of the Building Regulations. This will include a representative of LFB. This additional consultation will ensure that of any remaining items relating to Building Regulation compliance are resolved prior to construction.

2.9 LFB Comment (9):

The proposals include a cycle storage area. It is our opinion that consideration is given to the storage (and potential charging) of electric bikes and electric scooters and the potential fire risk posed by these electric powered personal vehicles (EPPV)s which may be located within these areas. There is increasing evidence showing that EPPVs can spontaneously ignite and burn for long periods so there is an increased potential for toxic gases/smoke/fire spread. It is therefore our recommendation that adequate automatic fire suppression and smoke control systems for the area are necessary. As such storage would be deemed an ancillary area, we are of the view that it should be provided with a ventilated lobby in accordance with the recommendations given in clause 32 of BS 9991:2015.

2.9.1 DFC Response:

DFC recognise that electric bikes can pose a fire safety risk. The cycle stores are to be enclosed in fire resisting construction and provided with sprinkler protection, therefore reducing the fire intensity and the risk of fire spread.

The cycle stores are not directly connected to the residential buildings to minimise the risk of a fire in the cycle store impacting on the means of escape from residential units.

The cycle stores accessed externally, such that smoke can be ventilated directly to outside.