HSE Response – FSR 001.0

Project: Block B, Agar Grove

Subject: Fire Statement – HSE Responses

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1 Fire Statement – HSE Responses

1.1 Introduction

Further to your Substantive Response sent to the London Borough of Camden on 27 July 2022 regarding planning application 2022/2359/P where concerns were raised about the application, we provide the following response relating to the fire strategy design for the above referenced project.

1.1.1 HSE Concerns

The below table breakdowns our replies to the concerns raised by the HSE in their responses referenced pgo-1614.

Table 1: HSE Reponses

	HSE Query	DFC Response
1.4	Block B1 ground and first floor plan identifies a 'community and flexible workspace' areas connecting with the residential means of escape and fire-fighting lobby (protected corridor). These are considered places of assembly, entertainment or recreation, which is not ancillary to the residential accommodation.	Flexible workspace is contained within Block B2 and is provided with a separate stair. Block B1 does not contain flexible workspace, but is provided with spaces for community use, an estate management office and concierge office. This is considered to be ancillary to the residential accommodation as it is provided for residential use and building management as per Clause 0.15 of Approved Document B (ADB) which states that different purpose groups may be applied if the building or compartment has an area of more than 280m^2 and relates to an area more than one-fifth of the total floor area of the building or compartment. No compartments have a floor area exceeding 280m^2 within these floors. Table 14 of BS 9991 includes 'communal lounges and common amenity areas' within the definition of ancillary accommodation.
1.5	It is noted that final exits are available from the 'community hall', but suitable separation should be provided between the residential and non-residential means	As detailed in our response to item 1.5, the fire strategy considers the community hall as ancillary accommodation.

	HSE Query	DFC Response
	of escape. Fire safety standards state that a separate means of escape should be provided from any storeys or parts of storeys used for the 'residential' or 'assembly and recreation' purpose groups. Additionally, different purpose groups should be separated from one another by compartmentation. Design changes necessary to provide separation between occupancies and their means of escape will affect land use planning considerations where reconfiguration of floor plans, design and layout are proposed.	Compartmentation and a lobby are provided within the community hall and lift lobby.
1.6	Likewise, Block B2 first floor plan shows the secondary residential staircase opening into the commercial/workspace area. It is noted that the fire-fighting lift serves this floor. Fire safety standards state that all stairs and fire-fighting stairs serving dwellings should not communicate with any other occupancy in that building.	The first floor of Block B2 has been updated following the planning application to remove access to the fire-fighting stair at this level. The fire-fighting lift is not intended to serve this floor and will not be accessible by users of the flexible workspace. A secured door is, however, provided to the lifts in order to provide access for maintenance to lifts and risers. Access for fire-fighting on the first floor is provided via a separate stair serving the flexible workspace.
1.7	Any alterations to the provision of the secondary staircase should take into consideration increased occupant travel distances as a result of the staircase not being accessible on that floor. It is likely that design changes necessary to provide suitable means of escape separation will affect land use planning considerations relating to the design and layout of the building.	The flexible workspace stair is accessed on the west side via a door, and access is also provided on the east side via the lift lobby. Travel distances to each door are within the limits for more than one direction of travel, with occupants being able turn their back on a fire in any location within single travel distance limits.
1.8	Block B2 ground floor plans demonstrate that the corridor, forming part of the fire-fighting shaft, is connected with ancillary accommodation consisting of community area, refuse store, cleaner's store and service risers, as well as the secondary staircase that serves all storeys, including the roof plant area. Only services associated with the fire-fighting shaft should pass through or be contained within the fire-fighting shaft. A fire-fighting shaft should not contain any cupboards or provide access to service shafts serving the remainder of the building.	Access to the fire-fighting stair within Block B2 is via a corridor which leads directly to open air and is not connected to any accommodation. Comment 1.8 appears to refer to the corridor between the fire-fighting stair and the lift lobby, which do not form part of the fire-fighting shaft. Clauses 50.3.1 and 50.3.2.1 of BS9991 states that cupboards and service shafts should not be contained within fire-fighting stairs, rather than fire-fighting shafts. This clause is observed in the proposed design. Clause 50.3.2.2 of BS9991 states that the fire-fighting lift may open directly into a protected corridor or lobby, as in the proposed design. Access to residential fire-fighting stairs and lifts

	HSE Query	DFC Response
		may be accessed via a common corridor containing accommodation as per Figure 35 of BS 9991. We note that the cleaner's cupboard would be typically be accessed by way of a lobby, however, due to the size and low-risk nature of this sprinklered space, we have proposed a fire engineered alternative, increasing the fire resistance of the cleaners store to 120 minutes and to provide a FD120S door to this store.
2.1	Block B1 ground floor plan identifies both staircases opening into the same lobby. An arrangement in which two stairs terminate in the same enclosure at final exit level should not be employed, because an outbreak of fire leading to penetration of the enclosure at that level would render both stairs simultaneously unusable. Design changes necessary to provide suitable separation at ground floor level may affect land use planning consideration where reconfiguration of the staircases is proposed.	The stairs within B1 do not terminate in the same enclosure, as there are doors directly to outside, thus any fire affecting one stair will not affect escape from the other stair. The doors providing access from the stair to the lift lobby could be removed, and a further door added providing direct escape from the lift lobby if deemed necessary by building control.
2.2	It is noted that PV panel installations are proposed on the roof areas of both blocks. All power supplies, electrical wiring and control equipment should be provided with appropriate levels of protection against fire. Fire safety standards require suitable support of cabling to avoid obstruction of escape routes and fire-fighting access due to the failure of fixings.	This is noted.
2.3	Block B2 ground floor plan identifies a bike store. It may be advisable to consider the risk to fire safety by the presence of the electric cycles/scooters within the building because they may contain lithium-ion batteries. Lithium-ion batteries may suffer thermal runaway and cell rupture, releasing large volume of toxic gases, heat and smoke before catching fire as well as afterwards. If handled or stored incorrectly, they can pose a significant safety risk. When they burn, a large amount of water is needed to fight a fire involving lithium-ion batteries. Furthermore, there is a danger of explosion and electrical shock for firefighters when tackling a fire. Any	This is noted and provisions for management of this risk are being considered by the design team. The bike store is separated from the rest of the building by compartmentation.

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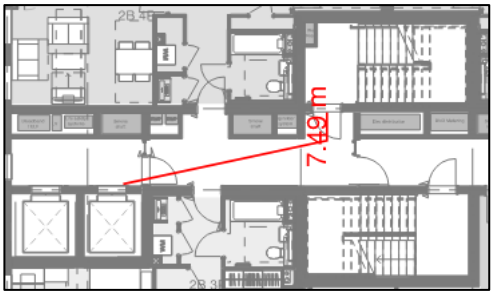
	consequent design changes may affect land use planning considerations such as design, layout and appearance of the development.	
2.4	Block B2 first floor plan identifies that the fire-fighting staircase does not open to enable access to the fire-fighting lift. Fire safety standards state that if a fire-fighting shaft contains a fire-fighting lift, the fire-fighting stair in that shaft should serve every storey served by the fire-fighting lift. Design changes necessary to provide suitable compartmentation are likely to be internal alterations, which are unlikely to affect land use planning considerations in this instance.	Our response to item 1.6 provides commentary on this item.
2.5	Block B2 floor plans demonstrate that the fire-fighting lift is situated approximately 8m from the fire-fighting staircase, which is marginally in excess of the standard. Fire safety standards state that both the fire-fighting lift and staircase are used together during fire-fighting operations. The staircase is the line of retreat if the fire-fighting lift fails, the fire-fighting lift landing doors should not be placed more than 7.5m from the fire-fighting staircase in support of firefighter safety. Design changes necessary to provide the recommended firefighter travel distance may affect land use planning considerations relating to design, layout and appearance of the building where internal layout alterations are proposed.	DFC's measurements estimate that the fire-fighting lift door and fire-fighting stair door are 7.5m apart as shown below. The common corridor providing access to the fire-fighting stair will contain both mechanical smoke extract and sprinklers. It is therefore considered that fire-fighters will be provided with a suitable escape route should this be required. Should a fire affect the lift lobby, the compartmentation provided between the lift lobby and common corridor will protect the common corridor, thus enabling fire-fighters to retreat to the stair. Similarly, the compartmentation provided will protect the lift lobby from a fire within the common corridor. 
2.6-2.10	The HSE recommends that future fire statements provide details of the Qualitative Design Review (QDR) process undertaken.	This is noted. A QDR has been initiated in consultation with Building Control and documentation forming part of the QDR has been issued to the design team as the design has progressed.
2.11	Fire statements must be submitted on a form published by the Secretary of State (or a form to similar effect) and contain the particulars specified or referred to in	This is noted.

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	the form. It is noted that the fire statement details have not been completed on the appropriate form and it appears that some information has not been included. For example, Section 8 should provide an explanation relating to any issues which might affect the fire safety of the development and how these have been addressed. This may include information relating to a deviation from the fire safety standards, i.e., extended corridor travel distances, where a fire engineered solution is proposed, and how this proposal provides an equivalent level of fire safety than that of code compliance. To assist our consultation process it is recommended that future submissions be provided using the Secretary of State pro-forma to ensure all relevant information is provided	