

FORM 3-Provisions of an evacuation lift (Policy D5 (B5))

Site Address	Paddington Green Police Station – Blocks I, J and K, 2-4 Harrow Rd, London, W2 1XJ
Description of Development	<p>The Paddington Green Police Station site will be located in Marylebone, London. It is adjacent to the West End Gate development and forms part of the overall masterplan. The design intent for this project is to construct 3 new mixed used blocks, identified as Block I, Block J and Block K.</p> <p>Each block consists of commercial units located on ground floor and residential areas on all other floors. Blocks I, J and K also share 2 common basement levels which contains ancillary and amenity areas.</p> <p>Block I will contain 24 storeys and it will be approximately 78.3 m in height (as measured from the fire service access level to the highest occupied floor level).</p> <p>Block J will approximately be 55.65 m in height which contains 17 storeys.</p> <p>Block K will approximately be 128 m in height with 39 storeys.</p>
Name, qualifications and/or experience of author	<p>Dr Hong Liang (Member of Institute of Fire Engineers, Committee Member of British Standard)</p> <p>Dr. Liang has specialised in fire engineering since 2004. She has a strong background knowledge in fire engineering, in particular thermal dynamics and heat transfer, in which field she successfully obtained her PhD degree. Throughout her career, she has gained extensive experience by working on many challenging national and international projects. She specialises in fire safety strategy development and is skilled in performance-based design using fire dynamics, fire and smoke modelling. She continuously contributes to the fire engineering fraternity. She is a committee member of the British Standards where she regularly reviews and provides comment on draft standards.</p>

Policy considerations Policy D5(B5)

Potential cross reference London Plan Policy D12A (4&5) and Policy D12B (2)

Details of the evacuation lift and shaft

Block	Number of Lifts	Description	Capacity	Speed	Firefighters (FF) and/or Evacuation	Internal Car Size (W x D x H)	Door Size (W x H)	Shaft Width (drawn)	Shaft Depth (drawn)
Block I	2	Residential Passenger Lift 1	1275kg / 17-person	3.0 m/s	Yes - FF/Evac	1200 x 2300 x 2500	1000 x 2300	2195	3040
		Residential Passenger Lift 2	1275kg / 17-person	3.0 m/s	Evac	1200 x 2300 x 2500	1000 x 2300	2195	3040
Block J	2	Residential Passenger Lift 1	1275kg / 17-person	1.6 m/s (or 2.0 m/s - subject to further analysis if tenure changes)	Yes - FF/Evac	1200 x 2300 x 2500	1000 x 2300	2195	2940
		Residential Passenger Lift 2	1275kg / 17-person		Evac	1200 x 2300 x 2500	1000 x 2300	2195	2940
Block K	4	Residential Passenger Lift 1	1275kg / 17-person	4.0m/s	Yes - FF/Evac	1350 x 2100 x 2500	1000 x 2300	2500	2700
		Residential Passenger Lift 2	1275kg / 17-person	4.0m/s	Evac	1350 x 2100 x 2500	1000 x 2300	2500	2700
		Residential Passenger Lift 3	1275kg / 17-person	4.0m/s	Yes - FF/Evac	1350 x 2100 x 2500	1000 x 2300	2500	2700
		Residential Passenger Lift 4	1275kg / 17-person	4.0m/s	Evac	1350 x 2100 x 2500	1000 x 2300	2500	2700

Capacity Assessment

Concept design (RIBA 2) analysis shows that with the current provision of evacuation lifts in each block, this will allow all mobility impaired residents to evacuate within approximately 24 minutes.

This is assuming the following:

- 9% of the residents in each block have mobility impairment (% assumed based on the information provided in Family Resources Survey: financial year 2020 to 2021 – GOV.UK (www.gov.uk))

- All mobility impaired occupants assumed to be wheelchair users (i.e. worst-case scenario). This equates to 2 wheelchair users per floor in Blocks I and K, and 3 in Block J;
- An evacuation of each lift to include maximum 2 wheelchair users and a trained evacuation assistant (based on a 1.2m wide by 2.3m deep lift car);
- All mobility impaired residents arrive at the lift landing and wait for lift service within 5 minutes after the fire alarm has been raised;
- Provision of 1 no. evacuation lift and 1 no. dual purpose firefighters/evacuation lift in Blocks I and J, and 1 no. evacuation lift and 1 no. dual purpose firefighters/evacuation lift in Block K (two in each FF/lift core – total 4). The dual purpose firefighters/evacuation lifts can be used for evacuation until the firefighters arrive and take control of operations.

Evacuation Strategy

All residential areas will be a, defend in place evacuation where only the occupants within the fire compartment will be alerted to an actuation of a detector head. Therefore, sounders elsewhere in the building will not activate. All other areas, such as commercial, ancillary and amenities will be simultaneous evacuation. This means sounders in ancillary and amenities areas will be interlinked. The commercial area will not be interlinked with any other area, upon activation of a detector in the commercial unit, just the commercial area will be alerted.

An evacuation alert system (EAS) will be provided in all blocks in accordance with BS 8629:2019. The Fire and Rescue Service can initiate the evacuation alert system for any single floor, multiple floors, or entire building, according to the circumstances.

In residential areas there will be two means of escape stairs and two evacuation lifts in Blocks I and J. Block K will have two means of escape stairs and four evacuation lifts in residential areas. In the shared basement which consists of ancillary and amenity areas four means of escape stairs will be provided.

Evacuation Lift Management Plan

The design and operation of evacuation lifts should be in accordance with BS EN 81-20:2020. Evacuation lifts should be provided with a protected route from the lift to a final exit at ground floor level. The building management strategy will provide the number of competent and trained staff to operate the lift car at all times. The evacuation lift should be associated with a refuge and should be clearly identified. The refuge area will be located within the lift lobby of each floor.

A refuge should be of sufficient size both to accommodate a wheelchair and to allow the user to manoeuvre into the wheelchair space without undue difficulty. To accommodate the wide variety of wheelchairs in use, including powered wheelchairs, the space provided for a wheelchair in a refuge should be not less than 900 mm × 1400 mm allowing for manoeuvring.

The lift lobby should be provided with an emergency voice communication system in accordance with BS 5839-9. The system should provide a fixed, secure, bidirectional voice communication system to assist people with mobility impairments, building management, firefighters, and other first responders. Communication points should be at least 500 mm from any wall. The building management strategy will provide details of this system in operation.

Evacuation Lift Maintenance

The lifts will be maintained regularly by a competent contractor at regular intervals, as detailed in the Lifting Operations and Lifting Equipment Regulations (LOLER).

As part of the maintenance visit, the contractor will check the function of the firefighters controls, evacuation controls and their associated communications systems.

The Building Management Team should also carry out regular checks of the refuge intercoms, which will be also associated with the lift.

Should any items not be functioning correctly they shall be rectified as a matter of urgency and the Building Management Team informed of any shortfalls, so that this can be noted to the relevant authorities and alternative temporary actions agreed.

The lifts will also be inspected by an independent, competent person at 6 monthly intervals and the functions will also be checked during these inspections.

Declaration of Compliance by a competent person



06/01/2023