A3.2 Form 1 – Planning Fire Safety Strategy (London Plan Policy)

Form 1 – Planning Fire Safety Strategy (London Plan Policy D12A) for major development	
Site address	Unit 4, Silverdale Industrial Estate, Silverdale Road, Hayes UB3 3BL
Description of development	The development is to consist of the demolition of the existing building and structures on site, and all other associated site clearance works. Construction of a data centre building (Class B8) with plant at roof level with an emergency generator (1no.) and associated flue (provided within an external compound adjoining the data centre building), sprinkler tank and pumphouse, security guard house, and provision of one kiosk substation and MV Building. The development also comprises the construction of a new access and internal road and circulation areas, footpaths, provision of car and bicycle parking, hard and soft landscaping and other associated works and ancillary site infrastructure
Name, qualifications, professional memberships and experience of author	**Terry Marsh**, *BEng (Hons), MIFireE* Terry is a former London Fire Brigade (LFB) Operational Fire Officer / Senior Fire Safety Officer with over 30 years' operational service Terry also worked in the LFB Fire Safety Regulation department for more than 15 years, and the LFB Fire Engineering Group for 4 years Terry has been a member of the Institution of Fire Engineers since 1987, He passed his GIFireE examinations in 1991 and his MIFireE examinations in 1994 (Membership No. 00014826) Terry has been a member of the Fire Protection Association since 2019 (Membership No. A-121546) Terry has worked continuously as a fire safety consultant / fire engineer since leaving the fire service in September 2016

	Terry was awarded a first-class Bachelor of Engineering (Honours) degree in Fire Engineering from the University of Central Lancashire (UCLan) in June 2016 Terry is not a Chartered Engineer but has over 15 years of experience working on complex, and fire engineered commercial and residential use buildings together with over 30 years practical fire firefighting experience in the Greater London area
Has a Gateway One Statement been submitted?	The proposed development works to create the LHR 600 site do not meet the definition of a 'Higher Risk Building' as defined within the Building Safety Act 2022, and therefore a Gateway One Fire Statement is not absolutely considered necessary. However, in this instance one is provided as part of the planning application.
Policy considerations	How the considerations are met
The buildings construction: methods, products and materials used	The structural frame of the buildings will be constructed to achieve a minimum of 60 minutes fire resistance for loadbearing capacity when tested in accordance with BS EN 13501-1:2018. The external walls of the buildings will be constructed to align with Regulation 7(2) requirements and primarily consist of non-combustible materials that will achieve a minimum of classification A2-s1, d0, in accordance with London Plan Policy D12B(1), and a minimum of 60 minutes fire resistance for loadbearing capacity, insulation and integrity where they are within 1m of the relevant boundary (reduced to 15 minutes for integrity when more than 1m from a relevant boundary) when tested in accordance with BS EN 13501-1:2018.
Means of escape for all building users and the evacuation strategy	The data centre will adopt a simultaneous evacuation strategy with the inclusion of a 5-minute investigation period whereby upon initial smoke detection a coded alert will inform management of a possible fire. A 5-minute investigation period will then start. Upon management confirming a fire, a second smoke detector activation or the 5-minute investigation period lapsing a fire alarm signal would then activate, and the building will evacuate simultaneously. Should a single heat detector activate, manual call point activate, or sprinkler head activate this would be considered confirmation of a fire and the building will evacuate simultaneously.

	Horizontal escape is achieved via the implementation of acceptable travel distances and escape route widths in accordance with BS 9999. In this instance, door widths within the escape routes achieve a minimum of 1050mm, and all corridors achieve a minimum width of 1200mm. The site is considered to have an A2 risk profile, with a 15% increase in travel distances being permitted due to the inclusion of an automatic smoke detection system. Therefore, in accordance with guidance travel distances have been restricted to a maximum of 25.3m when travelling in a single direction and 63.25m when more than one direction of escape is available. Vertical escape is achieved via the implementation of two staircases both serving a floor of less than 18m in height, meaning they meet the minimum width requirements of 1000mm. The first floor data hall is provided with an external escape stair. The building construction adjacent to the stair is to be provided with a minimum of 30 minutes fire resistant protection, extending 1100mm above the uppermost landing of the stair and 1800mm beyond the stair to each side. All escape route widths meet the minimum requirements for the expected maximum occupancy within the building.
Passive and active fire safety measures	The data centre is to be provided throughout with a category L2 fire detection and fire alarm system in accordance with BS 5839-1 to support the simultaneous fire evacuation strategy. An automatic water fire suppression system is not a requirement for life safety purposes. However, one is being provided as part of the owners requirements. A wet pipe system is to be deployed in the office area and a double interlock pre-action system is to be deployed in the remaining zones. The system is to be designed and installed in accordance with NFPA 13 guidance. Wall and ceiling linings requirements are to be implemented in accordance with BS 9999, including all rooms with an area below 30m^2 meeting a minimum classification of D-s3, d2, all areas exceeding 30m^2 meeting a minimum classification of C-s3, d2 and all circulation spaces achieving a minimum classification of B-s3, d2. Compartmentation is to be implemented in accordance with Table 22 of BS 9999 as follows: - Load bearing wall, structural frame, beam, or column supporting upper storey – R 60 - Load bearing wall, structural frame, beam, or column supporting roof only – R 30

	- Compartment floors – REI 60 - Any part of roof forming a means of escape – REI 30 - Protected staircase – REI 60 - Compartment wall separating office area from data halls – REI 60 - Service risers – REI 30 The minimum compartmentation requirements for the ancillary accommodation areas are achieved or exceeded, including battery storage rooms to be enclosed in REI 120 rated construction, general storage rooms are to be enclosed in REI 30 rated construction and electrical plant rooms to be enclosed in REI 60 rated construction (minimum requirement is REI 30). Discussions are ongoing to confirm the protection to be used to the transformer and generator. Roof coverings are 6m or more from the relevant boundary, therefore they are to be designated as AA, AB or AC. Cavity barriers are to be provided as required in accordance with BS 9999 guidance.
Access and facilities for the Fire and Rescue Service	The data centre has an uppermost floor level of 5.40m and has a floor area less than 2000m^2 therefore 15% perimeter access is required to the building for a pumping appliance. Access is available to three of the four elevations via the proposed new roads being constructed as part of the development. Due to the size of the building dry risers are not considered to be a requirement within the building as attending crews will be able to gain access to the entirety of the floor space within the building.

Site access for the Fire and Rescue Service	Site access is gained via a 5.7m wide access gate (guidance stipulates 3.1m minimum width), and then along designated routes which have a minimum width of 4.5m (guidance stipulates a 3.7m minimum width).The access route is to be

	formed of existing routes or a similar build up to the exisitng routes, meaning the required 14 tonnes carrying capacity can be assumed to be met. Emergency road vehicle access to the site entrance is via an existing road network which currently provides public and appliance access to the nearby Silverdale Industrial Estate. Access to the site is gained from the north of the site via Silverdale Road, an existing access route. This forms part of an unobstructed route from the A312, using Bilton Way to access Pump Lane, before gaining access to Silverdale Road and then to site.
Modifications to the development and the 'golden thread' of information	A 'Detailed Design' Fire Safety Strategy Report is to be provided for the development and will be continuously updated as the design of the development progresses. An 'as-built' Fire Safety Strategy Report is to be retained and included in the Regulation 38 package of fire safety information to be handed over at the conclusion of the construction phase of the project.
Where a lift core is provided, at least one lift is an evacuation lift	Evacuation lifts are provided within the office area of the building and can provide dignified escape for persons of reduced mobility. The lift is to be designed and installed in accordance with Annex G of BS 9999 and the relevant parts of BS EN 81-20 and BS EN 81-70. Suitable management arrangements for the use of the evacuation lift will be agreed with the end user before the design process is finalised.
Declaration of compliance by a competent person	To the best of my knowledge this GLA Fire Statement and the technical information within it complies with the relevant legislation and requirements of the London Plan Policy D12(B) – Fire Statements together with Policy D5(B5) – Evacuation Lifts. Terry Marsh, BEng (Hons), MIFireE Associate Fire Engineer, Cahill Design Consultants