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Kings Cross - Package 3 - OBS Tunnel - Justification

Submission under Conditions 8 and 20A of Listed Building Consent 2006/3394/L

History

The Sub-Platform Tunnel was constructed in 1939, to aid distribution of parcels through the Station. It connected the platforms in the Main Train Shed to a new Parcels Office in the garden of the Great Northern Hotel. Lifts to the platforms were constructed in widenings of the tunnel, and a spiral escape stair at the east end terminated in a pavilion between Platform 1 and the (then) Cab Road under the Eastern Range.

The construction was entirely in concrete, with monolithic roof, walls and floor. The tunnel passed under the Western Range Building at a lower level than the existing basement, separating a small area of basement from the remainder. Because it passed through one structural bay, only a limited new structure was required to support the floor above. However, under the Spine Wall between the two Train Sheds, it passed under one of the piers supporting a double arch, requiring heavy steel beams to transfer the load to either side. This was achieved without obvious structural movement, even to the present day.

The Tunnel is categorised as Low Significance in the Conservation Management Plan (JMP, September 2004).

Existing:

Since the original construction, the tunnel has been used as a convenient route for distribution of services from the Network Rail Plant Room to the Western Range, the platforms in the Main Train Shed and connecting to the Electrical Plant Room in the Eastern Range.

The tunnel is in generally good condition, although there has been some water leakage, and the floor is uneven.

Purpose of the Work:

The current work is to provide new electrical and data distribution to the platforms, to serve the new Comms / PA equipment, as well as the feature lighting to the ribs of the main roof. Additionally, electrical and data distribution is required to serve the new lifts and escalators, plus equipment on the footbridge.

The fire alarm systems in the station are being upgraded; the main distribution is to be routed through the tunnel.

The whole tunnel is to be protected with Sprinklers.

Description of the Work:

In order to create a clear route for the new services, some recent blockwork walls and doors are to be removed.

Two new fire-rated electrical cupboards will be formed, to house emergency electrical equipment. Sprinklers and cable trays will run at high level along the length of the tunnel. Branches pass through new openings in the walls, to feed the runs along the platforms (previously consented under 2010/5302/L). These openings can be infilled, should they not be needed in the future.

Some electrical equipment is to be installed on the walls, protected from light impact by a barrier rail fixed to the floor.

The existing screed will be repaired to restore the falls to the drainage channels along the edges of the floor.

Attached information:

Drawings -

ENG-DWG-COR-MTI-CEL-6226 / B60372-DRG-MEE6226 rev C05
ENG-DWG-COR-MTI-CEF-6802 / B60372-DRG-MEE6802 rev P02
ENG-DWG-COR-MTI-CSG-6481 / B60372-DRG-CIV6481 rev C02
ENG-DWG-COR-MTI-CSG-6561 / B60372-DRG-CIV6561 rev C17
ENG-DWG-COR-MTI-CEL-6745 / B60372-DRG-MEE6745 rev P01
ENG-DWG-COR-MTI-CED-6225 / B60372-DRG-MEE6225 rev C04
ENG-DWG-COR-MTI-CSD-6011 / B60372-DRG-CIV6011 rev C03
ENG-DWG-COR-MTI-CSD-6530 / B60372-DRG-CIV6530 rev P01
ENG-DWG-COR-MTI-CSD-6740 / B60372-DRG-CIV6740 rev C01

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