

DLR CANNING TOWN FLYOVER, LONDON - BEARING REFURBISHMENT & INSTALLATION



Project Brief

Refurbishment and installation of 32 no. mechanical pot bearings at 11 piers

Project Team

Client: Dragados Sisk JV
Main Contractor: Mabey Hire Services
Sub Contractor: USL Ekspan

Background Information

In 2009/10 the DLR Canning Town Flyover was constructed as part of the 3-Car Capacity Enhancement Project to serve Canning Town high-level DLR station, taking the Beckton line over the City Airport and Canning Town low-level DLR station lines. It is formed from a number of different structures connected by a continuous in-situ reinforced concrete deck measuring a length of 330m. The flyover's location is close to and within the influence zone of Crossrail's construction works being carried out at the Limmo Peninsular site. Here two deep, large diameter shafts provide access to twin bored Eastern Running tunnels that lead towards Victoria Dock Portal. Delays or disruption to the commuting public or to the tunnel construction works beneath. Open collaboration and close communication with contractors was also key to the success of the project.

USL Ekspan's Workscope

As part of Crossrail's C305 Eastern Running Tunnels contract, Canning Town Flyover had to be temporarily supported on hydraulic jacks while the tunnelling operations were completed.

To achieve this the permanent bearings were removed and temporary bearings installed on top of vertical and horizontal jacks, thus allowing structure articulation to be maintained and monitored throughout the tunnelling works.

USL Ekspan were contracted by Mabey Hire Services to design and supply temporary bearings, remove permanent bearings, refurbish the permanent bearings and re-install these following the completion of Crossrail's tunnel boring activities and including the associated settlement period.

The project required working to an engineering hours programme and works sequence to maintain full uninterrupted operation of the DLR, therefore strategic planning coupled with sequential methodology was crucial in successfully achieving this.

USL Ekspan's successful delivery of this challenging and exceptionally complicated project is attributed to completing the works on time and in line with the main contractor's tunnelling programme, without causing delays or disruption to the commuting public or to the tunnel construction works beneath. Open collaboration and close communication with contractors was also key to the success of the project.



Permanent bearing works removal



Bearing installation

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