

Thames Tideway Tunnel Central Kirtling Street

John F Hunt



Thames Tideway Tunnel /
FLO (Ferrovia Laing O'Rourke) JV



£140k



5 months

Project Overview

The Ferrovial Agroman and Laing O'Rourke joint venture involved building the central section of the Thames Tideway Tunnel, as part of London's new sewer system, for a value of £746m.

Located on the southern bank of the River Thames and measuring 12.7 kilometres in length, it is the largest of the tunnel's three sections. This site comprises four areas of land as well as extending into the Thames and will be used to drive the main tunnel to Canvath Road Riverside in the west and Chambers Wharf in the east.



Challenges

Ferro scan each area marking the de-bonded rebar within the concrete to avoid clashes with the following chasing, drilling and bursting procedures.



Cutting the score line using dustless chasing systems to a maximum depth of 40mm, avoiding the rebar needing to be retained and giving an indicative line of break out.

Diamond drilled 112mm diameter x 800mm deep holes ensuring no clash with the de-bonded rebar and no penetration of the sheet piles beyond the diaphragm wall. All cores were extracted enabling the bursting process which was applied to release the upper 1.2m of concrete for removal.

With dust suppression systems in place, Brokk 400 and 330's were used to break out the released concrete followed by the concrete retaining the rebar.

The breaking of the Diaphragm wall achieved a finish as near to the tolerances of between 0-20mm as possible. The works will be carried out so as to maintain the integrity of the sheet piles, D. Wall reinforcement bar and inclinometers.

Arisings were taken from the D-wall reinforcement and removed from site.

Achievements

Use of the Ferrous scanner to pinpoint concrete clad rebar, enabling precision cutting.

A dustless chasing system was used to successfully reduce air pollution and quiet techniques decreased noise pollution significantly.

