




CGI of the Gallions - Phase 3b development. Tensor InterAx geogrid (inset) installed below the piling mat enabled a massive reduction in fill volume

 Roads and Platforms
Nº 468

Gallions Phase 3b Royal Docks

 London, UK

CONSTRUCTED IN 2022

Benefits

£314,000 estimated savings
in construction cost for the 8,000m²
piling mat

65% thickness reduction,
saving on imported fill and excavation
depth and an estimated 144 tonnes of
carbon emissions

30 day time saving
estimated for excavation and platform
construction

**Estimated 1,700 fewer
truck movements**
through London's congested streets

Tensor improves contractor's bottom line by more than £0.3 million

Gallions Phase 3b development will provide 238 homes, of which 76% will be affordable. Located alongside the Thames, the foundations are piled. Tensor value engineered a piling mat solution that greatly minimised the cost and disruption from importing expensive fill material.

CLIENT'S CHALLENGE

With prices for recycled aggregate in London climbing, contractor Lovell was keen to minimise the volume of imported fill for the 8,000m² piling mat. With the initial design requiring over 1.2m of fill, construction cost and disruption from delivery movements were going to be high.

TENSOR SOLUTION

Tensor were asked to come up with a lower cost piling mat design. Tensor's initial assessment proposed a mechanically stabilised platform with two layers of Tensor geogrid. However, further review using Tensor's T-Value method resulted in a platform design with a single layer of Tensor geogrid, enabling a total fill thickness reduction of 65%. The design was validated on site by plate load testing.