



The temporary working platforms were capable of supporting piling rigs and crawler cranes and met Network Rail's approval.

Supporting role

Tensor-designed working platforms incorporating TriAx were key to the success of foundation works alongside a railway viaduct in south east London.

CLIENT'S CHALLENGE

Main contractor Skanska required a temporary working platform to support piling equipment capable of passing Network Rail's rigorous approvals process and enabling construction of foundations for a major new rail junction in Bermondsey.

TENSAR SOLUTION

The working platform comprised layers of site-won granular fill, mechanically stabilised with TriAx® geogrids. The efficient load spread design, validated by Tensor's 35 years' experience and extensive full-scale performance testing, shortened the piling platform construction programme, reduced costs and lowered the project's carbon footprint, compared with conventional working platforms.

Bermondsey Dive Under

Subgrade stabilisation

📍 Southwark Borough
London, UK

BENEFITS

£40,000
estimated saving based on reduced excavation and material costs

20
days cut from the construction programme

400mm
reduction in working platform thickness



Network Rail-compliant alternative design



TriAx geogrids were laid with a simple overlap to mechanically stabilise the site-won granular fill.

PROJECT BACKGROUND

The Bermondsey Dive Under forms a key part of the final stage of Network Rail's £6.5bn Thameslink Programme. The upgrading of lines and stations will increase the capacity of this important north-south link running through central London, from Bedford to Brighton.

The Dive Under is a new grade-separated junction that will minimise the number of train crossings, reducing congestion on the eastern approach to London Bridge Station and increasing passenger capacity. It comprises a series of new structures (some built using TensarTech® modular block-faced reinforced soil wall systems) constructed along the line of railway viaducts and founded on piles.

Tensar was approached by main contractor Skanska to design and supply a solution for five interconnected temporary working platforms, covering a total area of 9,000m². These platforms were to use crushed site-won recycled granular fill and had to be thinner than more conventional designs. Ground conditions varied from loose granular made ground to soft alluvium.

Tensar's solution was to use layers of its TriAx geogrid placed in the granular fill to form a mechanically stabilised layer. This provided sufficient support to the piling rigs and cranes, with design in line with 'BR470: Use of 'structural geosynthetic reinforcement' – A BRE review seven years on'. Network Rail reviewed and approved the design, following an independent Category 3 check by project consultant Ramboll.

Contractor:

Skanska

Client:

Network Rail

Consultant:

Ramboll

“The Tensar stabilised platform delivered significant cost and programme savings compared with a more conventional approach and has proved to be stable and robust, with negligible deformation during piling”.

Julian See

Engineering Manager

Skanska

Tensar International Limited

Units 2-4 Cunningham Court Shadsworth Business Park
Blackburn. United Kingdom BB1 2QX

T. +44(0)1254 262431 | Visit: [tensarinternational.com](https://www.tensarinternational.com)

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