



Tensar®

**ROADS AND
PLATFORMS**

The temporary working platforms were thinner and used fewer materials than conventional designs but still provided sufficient support to piling equipment.

Working platforms without compromise

A mechanically stabilised layer incorporating Tensar TriAx® geogrids construction of thinner working platforms on three sites in the Midlands and north West England for Seddon Construction, reducing the amount of granular material used, without compromising on performance.

CLIENT'S CHALLENGE

Seddon Construction required temporary working platforms on three sites, one for a new industrial unit in Haydock and two for new care homes in Coventry and Cheshire. Design proposals proved to be expensive, so they approached Tensar to see if they could be 'value engineered'.

TENSAR SOLUTION

All three working platforms comprised granular fill, mechanically stabilised with TriAx geogrids. The efficient load-spread designs, validated by performance testing, shortened construction times and reduced materials use, compared with conventional designs. Tensar's solution also significantly reduced the amount of contaminated material that had to be excavated, and the volume of imported fill required on the Haydock project conventional working platforms.

Seddon Construction

Subgrade stabilisation

📍 Midlands and
North West England,
UK

BENEFITS

14,000m²

of working platforms on
three sites

£126,000

Estimated contaminated
soil disposal cost savings

REF TEN380



Tensor TriAx® geogrids were placed in the platforms' granular fill to form mechanically stabilised layers

PROJECT BACKGROUND

Tensor worked with Seddon Construction on three sites across the West Midlands and North West England, designing working platforms for construction of a care home at Ballsall Common in Coventry and Tattenall Care Village in Cheshire and for construction of a new industrial unit at Withins Road in Haydock, Merseyside.

In each case, Tensor determined the thickness of the mechanically stabilised layer required to meet the BR470 load cases from the piling rigs and considering the ground conditions. These were thinner than the original designs, so Seddon Construction could reduce the amount of granular fill used, saving time and money.

Extensive and large scale research has demonstrated mechanically stabilised layers are an effective alternative approach to designing and building working platforms, as confirmed by the Building Research Establishment's review of BR470 in 2011. Consultant Bridges Pound reviewed and approved the design of the platforms.

A total of 14,000m² of working platforms were built across the three sites, reducing platform thickness by between 200mm and 400mm and saving 4,200m³ in materials.

An additional challenge at Withins Road was areas of contaminated soil that, if a conventional working platform design had been adopted, would have needed to be excavated and replaced with imported fill.

Tensor's approach cut the depth of contaminated material that had to be excavated over the 2,000m² site by 350mm, saving an estimated £126,000 in disposal costs (based on disposal costs of £180/m³). And, because it also delivered a thinner platform, there was enough fill on site to build it, delivering further savings by reducing the volume of imported fill required.

Contractor:

Seddon Construction

Temporary works
designer:

Bridges Pound

“These projects demonstrate the savings in time and materials that can be achieved by incorporating TriAx into working platforms, resulting in cost savings for a range of different projects.”

Peter Matthias

Area Civil Engineer

Tensor

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