

Pushing the boundaries with Tensar MSL



Lomeshaye Industrial Estate - New Construction

Nelson - Lancashire, UK

When the original proposed chemical stabilisation on the project site failed, Tensar provided a solution which allowed the contractor to continue building without further delay and achieve the required levels of support for the concrete slab construction to follow.

CLIENT'S CHALLENGE

The original commissioned chemical stabilisation proposal proved to be unsuitable due to the actual site conditions being different to those anticipated, when the pre-construction laboratory testing took place. The construction plant used during early attempts at chemical treatment had essentially liquefied the existing soils making installation impossible or very difficult. A workable alternative that would be successful first time was required to prevent costly delays.

TENSAR SOLUTION

After receiving information on the site conditions, Tensar drew up a proposal to install a Tensar Mechanically Stabilised Layer (MSL) on the existing wet and low strength soils encountered on site. Testing on top of the resulting MSL demonstrated performance targets had been achieved.

B E N E F I T S

Tensar's proposals could be developed based on:

- **Straightforward assessment** of existing site conditions
- **Project specific proposals submitted** without any additional site specific testing of subgrade conditions
- **Simple and efficient installation** despite difficult site conditions

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PROJECT DETAILS

Constructed in
2023

Client & Contractor
Barnfield Construction



Tensar InterAx geogrid placed directly on saturated subgrade allowed initial site access and then mechanically stabilised the platform construction

Subgrade Stabilisation | No. 502

PROJECT BACKGROUND

When Barnfield Construction decided to use chemical stabilisation for their site at Lomeshaye Industrial Estate they were not expecting problems with construction.

The pre-construction site testing required for this technology suggested a solution was possible by adding a percentage of cement to the existing soils to increase soil strengths. However, once on site they found that the conditions encountered had changed significantly due to heavy rain. This meant that the required chemical reaction could not take place as required and the target strengths could not be achieved.

It was even difficult for the chemical stabilisation plant to access the site due to the wet conditions.

Needing a solution that would work in these wet conditions, Barnfield approached Tensar to provide a workable solution based on the difficult conditions encountered on site.

After assessing the existing conditions and the performance required to allow construction access and to achieve a target CBR value to allow a concrete floor slab to be constructed, Tensar proposed a Tensar Mechanically Stabilised Layer or MSL, incorporating two layers of Tensar InterAx geogrid.

Tensar geogrids can be installed over any prevailing ground conditions and so there were no further delays encountered once the geogrid was delivered to site. Construction of the Tensar MSL was successfully completed with subsequent testing on top of the finished granular layer demonstrating the required level of support for the concrete slab.

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