



Reinforcement of sub-base in plant handling yard, West Midlands

Sub-base Reinforcement

A major civil engineering contractor purchased a piece of land to construct a new storage facility for its own company plant and equipment.

The conditions on site primarily consisted of very soft clay with a measured CBR of less than 2%. It was determined by the project design engineer that before construction of the facility could begin the sub-grade would need a suitable long term reinforcement solution.



Site conditions consisted very soft clay

Whilst considering how the site would be stabilised the project engineer looked at a number of methods including:

1. Punching imported stone into the ground to consolidate the in-situ soils.
2. Removal of 2m depth of clay and importation of clean fill.
3. Engineered Geosynthetic Solution.

Option one was trialled on site but failed to produce the results required by the project engineer and not

Project Information

Client	Bredbury Plant
Products	<ul style="list-style-type: none"> • Abgrid 30/30 • Terrex NW9

pursued any further.

The second option was discounted as it was considered to it being both time consuming and very expensive due to the high disposal costs of the materials excavated from site.

Ultimately the project engineer considered that the engineered geosynthetic solution would allow the conditions required to be met before construction could begin.

The solution involved laying a single layer of Terrex NW9 geotextile to provide a separation layer between the in-situ soils and the new pavement construction.



Site conditions consisted very soft clay

Including a separation layer helps extend the pavement design life by stopping the newly imported fill material disappearing into the existing soft materials on site.

The Terrex NW9 was then overlaid with an ABG Abgrid 30/30 geogrid to reinforce the base of the newly imported material and then backfilled with 400mm depth of 6F2 before being compacted using a vibrating roller.

The result is a durable pavement construction that meets the design requirement of the project engineer and the application requirements of the site owners.

Contact ABG to explore how Terrex and Abgrid could help your client achieve a sustainable, cost-effective and carbon neutral solution.



Terrex overlaid with Abgrid and then hardcore fill to form sub-base

About ABG

ABG are a market leading developer of high performance geosynthetic solutions for use in a wide range of civil, environmental and building applications. Established for 25 years and based in the UK ABG pride themselves of delivering outstanding customer service along with innovative solutions.

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