

# Temporary Works

ABG Geogrids, Working Platform, Wellington College, Berkshire, UK



## Case Study

### Project Description

Approval for a new boarding house, day house (architect's impression shown above) and energy centre have been granted on land surrounding the Old Laundry site within the grounds of Wellington College, Crowthorne, Berkshire.

### The Challenge

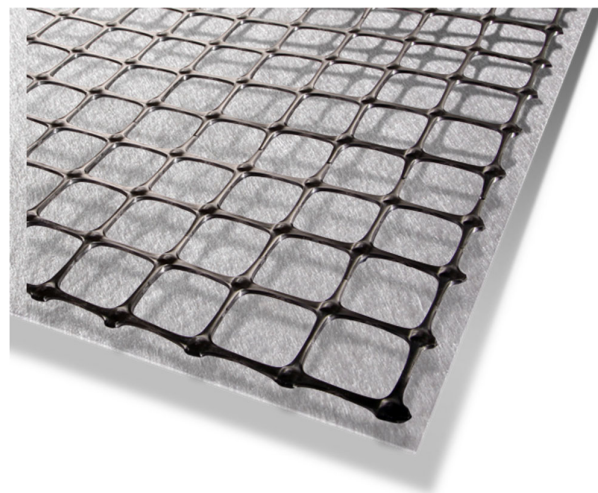
The client required two separate temporary crane platforms over a low strength variable composition of Made Ground and Camberley Sand. Soft spots and zones of poor clayey subgrade were observed within the platform area, which would have a significant influence on the instability of the crane operation. The ground water table was observed at 1.0m depth below formation level.

### The Solution

The design was carried out by following the BR470 guidelines, where alternative design methodologies can be used with the incorporation of 'structural geosynthetic reinforcement' providing a person competent in both geotechnical engineering and geosynthetics is made responsible for the design. Load distribution through the ABG stabilised platform was established as an acceptable method of assessment, so in this case, analysis was carried out to ensure the platform was able to provide adequate factors of safety for the Hitachi-Sumitomo SCX700 crane. A 550 mm thick platform, with two layers of ABG Geogrids was proposed and constructed using Class 6F2/6F5 aggregates. The site conditions dictated that a layer of ABG's Terrex geotextile is required to provide the additional function of separation to control any upward migration of fines.

### Project Information

<b>Client</b>	Wellington College
<b>Contractor</b>	Feltham Construction
<b>Products</b>	<ul style="list-style-type: none"><li>• ABG Geogrids</li><li>• ABG Terrex Geotextile</li></ul>
<b>Benefits</b>	<ul style="list-style-type: none"><li>• An alternative safe working platform solution which saved approximately 57% on the quantity of imported fill</li><li>• Reduced construction time and carbon and cost savings</li></ul>



**ABG Geogrid & Geotextile**



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**abg** creative  
geosynthetic  
engineering



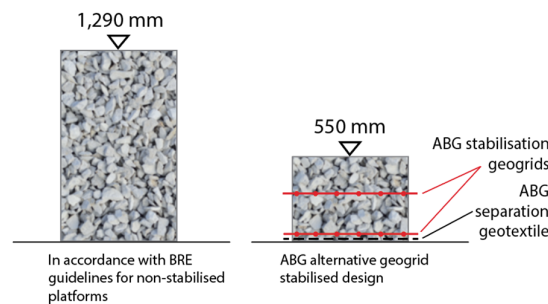
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ABG were approached for a safe and economical crane platform proposal over foundation shear strength properties with an  $S_u$  value of 23kPa and  $\phi'$  value of 27°. The scope provided in BR470 for alternative methods of platform assessment allowed the adoption of ABG's solution, incorporating geogrids to provide a safe working platform design.

### The ABG Service

Site support and a platform thickness design from ABG's technical team to enable construction works to progress safely and a carbon saving solution to be achieved.

Working platform for a safe crane operation using ABG stabilised layers



**ABG stabilised design significantly reduces the volume of aggregates required for the crane platform**



Geotextile & geogrid working platform installation



SCX700 crawler crane in operation

Contact ABG today to discuss your project specific requirements and discover how our past experience and innovative products can help.