

Ground Stabilisation & Drainage

Gridtex, Reinforcement & Drainage, Town Lane, Southport UK



CASE STUDY



Project Description

A new affordable housing development scheme has been constructed at Town Lane in Kew. The site is next to the Southport Formby District Hospital and features 99 two-and-a-half storey houses, a block containing eight special care apartments, two wheelchair access bungalows and one five bedroom supported living house.

The Challenge

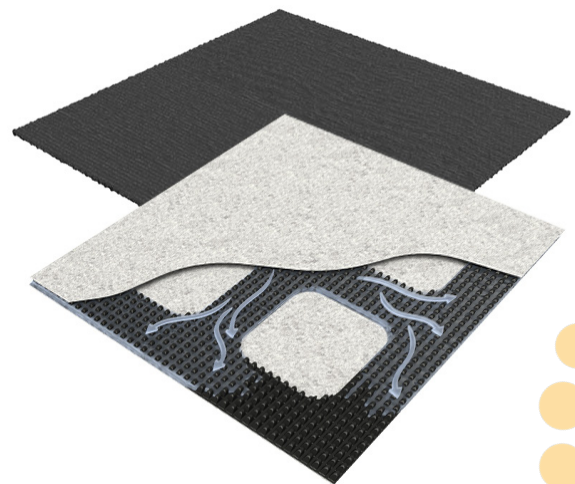
The development encountered difficult ground conditions, including void spaces and contamination from a former Victorian tip, and areas of very weak subformation. ABG were consulted to recommend a geosynthetic solution for ground improvement works to enable site vehicle trafficking and foundation construction to progress.

The Solution

The existing plot was compacted prior to the Gridtex layer being laid directly onto the prepared subgrade. Gridtex is a high performance geotextile engineered for reinforcement and is ideal for strengthening a wide range of soils. It is capable of fulfilling many of the functions of a geogrid, whilst at the same time offering all the benefits of a woven geotextile. Gridtex has an extremely high surface friction that interacts fully with adjacent aggregate materials, without the necessity for the interlock required with a geogrid. Reinforcing the aggregate layers allowed the use of a thinner construction depth to treat the soft ground and provided cost savings on the project, as well as reducing the environmental impact. Gridtex is particularly advantageous in construction over soft or fine grained subsoils where it can provide both reinforcement and separation.

Project Information

Client	Keepmoat Homes
Product	ABG Gridtex & ABG Pozidrain G4SD
Quantity	508,000 m ² Gridtex & 170,000 m ² Pozidrain G4SD
Benefits	<ul style="list-style-type: none">• High strength, low strain geotextile• Reduced stone depth• Pozidrain all in one drainage layer• Large rolls for fast installation



ABG Gridtex & Pozidrain G

ABG LTD

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In total over 500,000 sqm of **Gridtex Type 2** has been supplied to the Town Lane development to provide a cost effective tensile reinforcement for base courses, where the wide roll width is particularly useful for the construction of access roads.

Layers of **Pozidrain** geocomposite were also installed to many areas of the development to speed up the consolidation of cut and fill earthworks around the new estate, with 170,000 sqm of **Pozidrain G4SD** supplied in total. The all in one combined geocomposite layer simplifies installation and reduces the requirement for multiple geosynthetic layers or the additional volume required for thicker aggregate drainage layers.

The ABG Service

ABG provided design advice, calculation support and managed the delivery of materials to site.



Gridtex subgrade reinforcement & separation functions



Plan view of the Town Lane Housing Development



Installation of Gridtex reinforcement layers

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