

Geogrid

Bi-axial Geogrid (E'GRID®), Nonwoven Geotextile (Syntex®) SH 2 Kaitoke to Te Marua Realignment, Upper Hutt, New Zealand

Client: Transit NZ

Date: March 2003

Transit New Zealand is constructing a new \$ 14.2 million, 5.5 km long section of SH 2 between Kaitoke and Te Marua, just north of Upper Hutt.

Higgins Contractors were the main contractors with Rick Goodman and Sons Ltd the bulk earthworks sub-contractor. The process of clearing and preparing the route of the road is well underway. This includes installing drainage, clearing topsoil and shifting ground material from hilly areas into hollows to provide a consistent new road in the naturally hilly terrain.

In some areas the contractors are excavating down to 25 meters below the existing surface and moving this ground material into low troughs to build up the land. In total there is 500,000 m³ of soil to move.

Permathene supplied approx. 21,000 m² of E'GRID for sub grade improvements works. The geogrids were laid in layers on the weak subgrade and covered with good soil before putting the new road on it.

Permathene also supplied approx. 60,000 m² of Syntex nonwoven geotextile for sub grade improvement and drainage applications.

This successful application of geogrids and geotextiles demonstrates the performance and cost benefits of geosynthetic solutions.

E'GRID Geogrids has been tested by BTTG, the independent textile and nonwovens technology and research laboratory, UK and has recently been awarded a CE Mark.



Geogrid

Bi-axial Geogrid (E'GRID®), Nonwoven Geotextile (Syntex®) Pavement stabilisation

Client: Glen Eden Intermediate School, Auckland, New Zealand

Date: March 2004

Auckland Civil were the main contractors for the new parking lot at Glen Eden Intermediate School located at Kaurilands Rd, Glen Eden.

Permathene supplied Auckland Civil, the head contractor, with bi-axial geogrids. Consultants specified E'GRID 3030 to give support to the parking lot as the sub grade lacked a suitable bearing capacity needed to take the loading from the traffic using the space.

E'GRID 3030 bi-axial geogrids were used as reinforcing for the parking lot. A layer of Syntex GNP A1 (Strength Class A) geotextile was laid directly on the subgrade and E'GRID 3030 laid directly on top of the non-woven. Above this were 200 mm of GAP 65 and 100 mm of GAP 40.



The E'GRID 3030 was added to disperse loads from the vehicle traffic. The grids and geotextile allowed the depth of base course to be reduced without direct strengthening of the subgrade below.

Syntex GNP B1 nonwoven geotextile was used primarily for sub surface drainage but also as a separation and strengthening layer between sub-base and the subgrade. The successful application of geogrids and nonwoven geotextiles demonstrates the performance and cost benefits of geosynthetic solutions.

E'GRID and Syntex are available exclusively from Permathene Ltd.

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