

CASE STUDY

Geogrid

Project: Birkdale Carpark
Date: March - April 2010
Client: Birkdale Anglican Church
Location: Birkdale, Auckland



Tensar TriAx® Geogrids

The site for a new car park at the Anglican Church off Tramway Rd on Auckland's North Shore is typical of what is encountered by designers and contractors throughout the Auckland region. In the summer months the ground conditions are firm however over winter the foundation material weakens which, if left untreated, could result in premature failure of the overlying pavement. The engineer expectation is that the CBR strength of the foundation materials would be < 3 over the pavement design life.

Considering the expected weak ground conditions, the pavement designers incorporated both **bidim® geotextile** to separate the soft clay from the imported granular fill and a layer of **Tensar TriAx®** to improve the overall pavement performance under the design traffic. **Tensar TriAx®** is now established as the leading pavement stabilisation geogrid in New Zealand. **Tensar TriAx®** has undergone extensive full scale pavement trials to support the performance improvements that form part of the design process.

The construction of the pavement was a straight forward process. The initial layer of **bidim® geotextile** is placed directly over the prepared foundation. This was followed by the **Tensar TriAx®** placed directly over the **bidim® geotextile** before the placement and compaction of the granular fill. A minimum overlap of 300mm was required for the materials and although these were exceeded in some instances this extra overlap was not expected to change the overall performance of the **Tensar TriAx®** stabilised pavement.

The added advantage of using bidim geotextile and **Tensar TriAx®** was highlighted during a period of heavy rain which stopped earthworks construction but had very little affect on pavement construction.

The use of **bidim® geotextile** and **Tensar TriAx®** has provided the client with a stable pavement which will service them well with reduced levels of maintenance.

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Completed Car Park

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