

Project: Tensar RE Wrap Around Slope
Date: August – September 2014
Client: NZTA
Location: SH2, Te Mahanga, Hawkes Bay



Tensar RE500 Geogrid

A south bound passing lane was constructed along SH2 near Te Mahanga, south of Hastings during February/March 2013. The lane widening was subject to compulsory acquisition of land and only a limited amount of land was able to be purchased. This resulted in steep batter slope which started to erode under the very thick topsoil layer.

A vegetated solution was required to help retain and prevent further erosion back into the owners land. **Tensar RE500** uniaxial geogrid is a commonly used in the construction of wrap around reinforced soil slopes. These slopes can be constructed using formwork or in this instance with topsoil filled hessian bags which are then hydro seeded. After preparing the slope batter **Enkadrain**, a composite sheet drain was placed against the cut slope as a drainage blanket to intercept groundwater, with subsoil collector drains placed along the base. **Tensar RE500** geogrid spacing was set at 500mm centres, with a secondary geogrid (**Tensar SS20**) at midpoint to improve face stability.

On this site there was a need for 3 separate slopes, varying between 70m, 100m and 140m in length, with a height ranging from 0.6m to 3m. **Tensar RE** geogrid length and grade is dependent on the height of the wall and the backfill (in this case AP65). Equipment on the site comprised of two small dump trucks, 1½ tonne and 4 tonne excavators, a small plate compactor and 6 staff for the construction. The project took approximately 6 weeks to construct (mid-August to end of September).

This was the second NZTA site where the contractor had used **Tensar RE** product, the first site was at the Aropoanui Road intersection with SH2 15km south of Lake Tutira. This was also a south bound passing lane construction. The contractor found the product relatively easy to use and would not hesitate to use it again. Vegetation once established on this site will make it blend in with the surrounding area. Both NZTA and the land owner are satisfied with the outcome.



Eroding bank



Hessian bags and Tensar RE geogrid wrap around



Completed project

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