

Project: Kent Terrace MSE Wall
Date: 25 March - 25 April 2014
Client: Napier City Council
Location: Napier



Tensar RE

Kent Terrace is a newer subdivision located near Taradale Napier. The Napier City Council owns the reserve bordering the back of some of the properties along a stream, with an access way to the road. One area of this reserve had drainage issues, causing part of the bank to subside. A solution was required to prevent further erosion and slipping of the slope, a foundation trench with **bidim**[®] geotextile and **Tensar SS20** geogrid was used, then additional lifts were created at a 56 degree slope using Hessian bags with soil and seed mix and wrapped in 0.5m lifts with **Tensar RE520**. On this site, hydro seeding was also done at the end of the construction.

Tensar RE is commonly used in MSE Reinforced Soil Walls, it is resistant to UV, acid and alkaline and is cost effective in wall construction. The use of **Hessian soil filled bags** enables the slope to be grassed after construction, this can be achieved through incorporating the seed into the bag or hydro seeding at the completion of the work. There are 5 common grades of **Tensar RE**, in this instance one of the lighter grades was used due to the height of the wall. If the wall is higher and loading is more critical at the top of the slope, the higher strength **Tensar RE** geogrids can be used. Sheet drainage product **Techdrain T5** and **bidim**[®] geotextile was installed on the prepared slope prior to the **Tensar RE** construction. Construction of MSE walls can be done either with **Hessian soil filled bags**, or through the use of formwork. As this was a smaller site, **Hessian bags** were the most appropriate. Construction angles can vary from 45-70 degrees, any steeper and there can be issues with sustaining vegetation long term (light and moisture).

The environmental advantage of this system, once vegetation is established, is there is no evidence of construction having been done as it blends into the rest of the surrounding. Geofabrics New Zealand Ltd can do designs for any of these walls provided the correct information is supplied, a standard design form is used to obtain this information.

Designs were completed on this project by Opus Napier Design using MACSTARS W and GeoStudio Slope/W.



Slip area



Constructed of MSE wall



Hydro seeded wall

The information contained herein is general in nature. In particular, the content herein does not take account of specific conditions that may be present at your site. Site conditions may alter the performance and longevity of the product. Actual dimensions and performance may vary. This document should not be used for construction purposes and in all cases, we recommend that advice be obtained from a suitably qualified consulting engineer or industry specialist before proceeding with installation. © Copyright held by Geofabrics New Zealand Ltd. All rights are reserved and no part of this publication may be copied without prior permission.