# CASE STUDY

Double Twist Mesh

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| Project: | Mill Stream SH50 - Green Terramesh |
| Date: | May 2012 |
| Client: | NZTA |
| Location: | Hastings |

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## Green Terramesh

This site was part of the Hawkes Bay Routine Bridge Contract 2011 - 2012, in which there were various sites requiring civil work. Mill Stream was a culvert which passed under SH50, the wingwall of the culvert was prone to scouring in heavy rain events. The approach to the culvert was a right hand sweeping curve, the bank on the left hand side (private property) was also in need of protection to prevent any further undermining.

As this was a narrow and deep channel (approx. 5-10 metres in width), it carried a lot of water when in flood. A permanent but green solution was required to match in with the surroundings. **Nonwoven geotextile** was placed in the base, then two layers of **gabions** (2x1x1 Galmac PVC) were placed on top. This was then the founding layer for the subsequent 4 layers of **Green Terramesh**. This was used due to its 70 degree facing achieved through the two set angled brackets located behind the facing of each of the **Green Terramesh** units. The face and lid are then able to be used as a barrier during construction. As the repair was a curve, **Green Terramesh** can be angled and joined during construction to create either a concave or convex shape, in this instance a concave shape to fit the contour of the river. The maximum recovery of land above the structure was an additional bonus for the owner. The fence line did not need to be moved, as the maximum amount of land had also been recovered. The use of **Green Terramesh** means ease of construction, less variability, and quick compared to traditional methods of construction to a 70 degree slope. The structure has since been hydro-seeded, and in time will only be visible as a steeply grassed slope, fitting in with the rest of the environment. Shortly, after the completion of the work, the Contractor was awarded the Hawkes Bay Constructors for the Mill Creek Project.

Initial eroding bank site

Green Terramesh structure under construction

Green Terramesh with vegetation growing through