



## TerraStop Wire Mattresses

This project involves the duplication of the bridge over Maria River to ease congestion on the existing 2 lane bridge and the approaches.

The channel geometry comprises of three parts, the left slope, the base and the right slope. In this project, the left slope is the eastern slope and is also the earth embankment of the bridge. The base is on a gradient and the flow is north to south, flowing into Maria River. The right slope on the western side completes the channel and is the least critical of all three parts mentioned.

Erosion of the earth embankments (bridge and approaches) must be avoided to maintain the structural integrity of the bridge. Therefore, the implementation of PFA's extensive range of erosion control products was used in this project. PFA supplied mattress for the critical hydraulic loading part of the channel base and TerraMat 3D for the less critical on the left and right slopes.

### Installation:

- Mattresses are supplied folded and compressed. UNFOLD the units. Internal diaphragm panels are also nominally attached to the base. Lids are sometimes supplied separate.
- Connect the corners first and then the edges to achieve a square finish. Lace each aperture independently, alternating single loop, double loop tying method is adopted for every edge aperture. Internal diaphragms must also be laced together to the external frame. A pneumatic lacing tool is also available for hire, used in conjunction with lacing rings.
- Each unit is separately assembled, then laced again to adjacent units to form a monolithic structure. Don't forget to place a non-woven geotextile (e.g. TSA1 to TSC1) between the soil-mesh interface for separation & filtration and to prevent scour problems.
- All internal diaphragms must be laced completely to the base, sides, and lid for stability.
- Complete the installation by tying the lid to the sides and internal diaphragms. The structure is now completed