

PALLAMALLAWA, MOREE, NSW

MOREE, NEW SOUTH WALES, AUSTRALIA



Completed project

TYPE OF PROJECT	YEAR OF CONSTRUCTION	CLIENT	CONTRACTOR	DESIGNER
Mass Gravity Retaining Walls	2007	MOREE COUNCIL	MOREE COUNCIL	SMEC

PROD. RELATED
Gabions (Null), Reno Mattress Plus (Null), Nonwoven Geotextiles (Null)

Challenge

An embankment along the Gwydir River in Pallamallawa near Moree, NSW had suffered toe erosion due to fluctuating water levels which ultimately led to a global slip failure. The low strength fully saturated foundation material and high water levels meant that a permeable and flexible type system was required to remediate the unstable embankment. Due to the constant presence of water at the toe, a specialised method of installation was required.



During Installation



During Installation

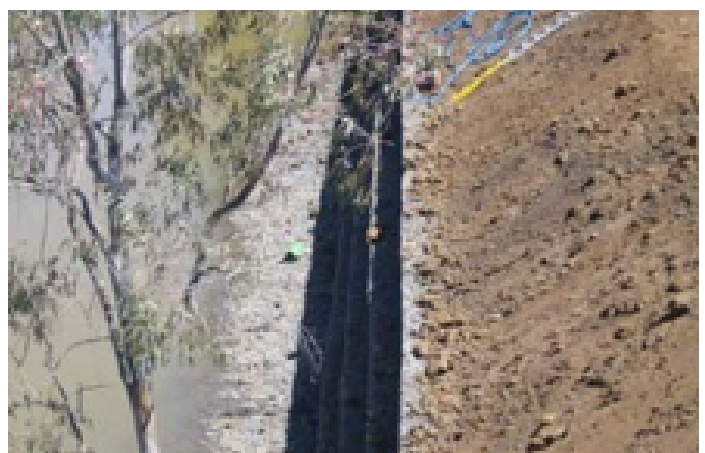
Solution

Maccaferri woven mesh Gabions with a Reno Mattress scour protection were considered to be the only solution applicable to stabilise and protect the 50m long section from further erosion. The woven mesh Gabions demonstrate many advantages over other retaining structures including inherent flexibility which allows the system to accommodate differential settlement; an important feature of this project. One challenging element of the construction was the installation of 6x2x0.30 Galmac+PVC coated Reno Mattresses in the river.

The presence of permanent water at the toe of the structure meant that conventional Gabion and Reno Mattress construction methods could not be adopted. Maccaferri provided technical information on a Mattress lifting frame which would allow for pre-filled Reno Mattresses to be packed "in the dry" and lowered into position with an excavator. The contractor manufactured a steel frame and this procedure proved to be extremely quick and practical. Maccaferri also provided design suggestions, installation specifications and advice for the project, which turned out to be a good example of how Gabions and Reno Mattresses can be installed in challenging conditions.



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