



Case Study

Five Mile Creek

Client	County of St. Lucie
Contractor	Murray Logan (Prime), TNT Construction (Sub)
Gripple Terra-Lock™ System	TL-100 3 mm (1/8") Zinc Aluminium Wire TL-A2
Application	Securing HPTRM
No. of Systems	5,000
Start to Completion	Jan 2014 - May 2014

Five Mile Creek is a water management canal which protects local homes by acting as a vital flood defence. Previously the banks had been armoured with HPTRM, however this was secured using only straight pins with a low pullout resistance. Following an intense rainfall event in which 457 mm (18") of rain fell over 12 hours, the river level rose dramatically, broke its banks and flowed into homes. During this event, the armoured slopes had sloughed and lost much of their integrity. Clearly a system with a higher factor of safety was required.



To correct the failed slopes and provide protection into the future, the banks were first re-graded, then armoured with rip rap at the toe and HPTRM up to the head. The high flow velocity of the channel necessitated increased pullout resistance of securing methods. As a result, the Gripple Terra-Lock™ System was chosen to secure the HPTRM and provide an additional factor of safety. This system has subsequently been proven to be effective, holding under a 203 mm (8") rainfall event.



The sandy soil meant that the TLA-2 anchors were easily drivable to a depth of 1.2 - 1.8 m (4 - 6 ft) and comfortably met the required 70 kg (150 lb) pullout resistance. The installation process was eased through use of Gripple installation tools including; GPD, JackJaw®, Drive Rod and Wire Cutters. On this site the JackJaw® was of particular importance, allowing for straightforward extraction of the Drive Rod.

