

NEW PROJECT:

PINES RIVER PARK

**STRATHPINE, QUEENSLAND
NOVEMBER 2018**

MACCAFERRI® RENO MATTRESSES®

Maccaferri Reno Mattresses, also known as rock mattresses, are thin, flexible rectangular mesh cages made from double twisted woven wire mesh.

The cages are divided into cells and filled with rock to limit movement during high-flow conditions. Because of their flexibility, Maccaferri Reno Mattresses are used mainly for hydraulic applications such as weirs, and for scour protection along riverbanks and embankment stability in channel linings. Mattresses can handle water velocities in excess of 6m/sec for long durations.

Reno Mattresses are filled with stones on site to create a flexible, permeable and monolithic structure for use in river and canal bank protection works as well as erosion control and scour protection of slopes.

At the Pine Rivers Park site there was a concrete pipe which allowed the stormwater overflow to steadily stream down towards holding ponds in Strathpine. Unfortunately, in heavy rain events both sides of the embankment were continually eroded and needed to be addressed before more land was lost.

The river flow levels could reach and exceed five metres per second, therefore the solution chosen were Maccaferri Gabions and Reno Mattresses. A Geofabrics sales engineer provided design advice as well as assisted the installer to prevent any of the gabions and reno-mattresses moving.

The gabions were installed either side of the concrete flume just on the other side of the concrete culvert outlet pipe to prevent any scour of the riverbed. The reno mattresses were installed on both sides of the embankment to prevent any scour of the slopes to ensure water travelled downstream.

SEQ Water were very satisfied with the completion and how neat Christopher Contracting and Caged Rock left the site. Even after heavy rain events, the water flows effectively downstream and with no sign of any scour on the base or slopes.

The gabions and reno-mattresses with on-site assistance ensured the contractor and client had a cost-effective, long-term solution.