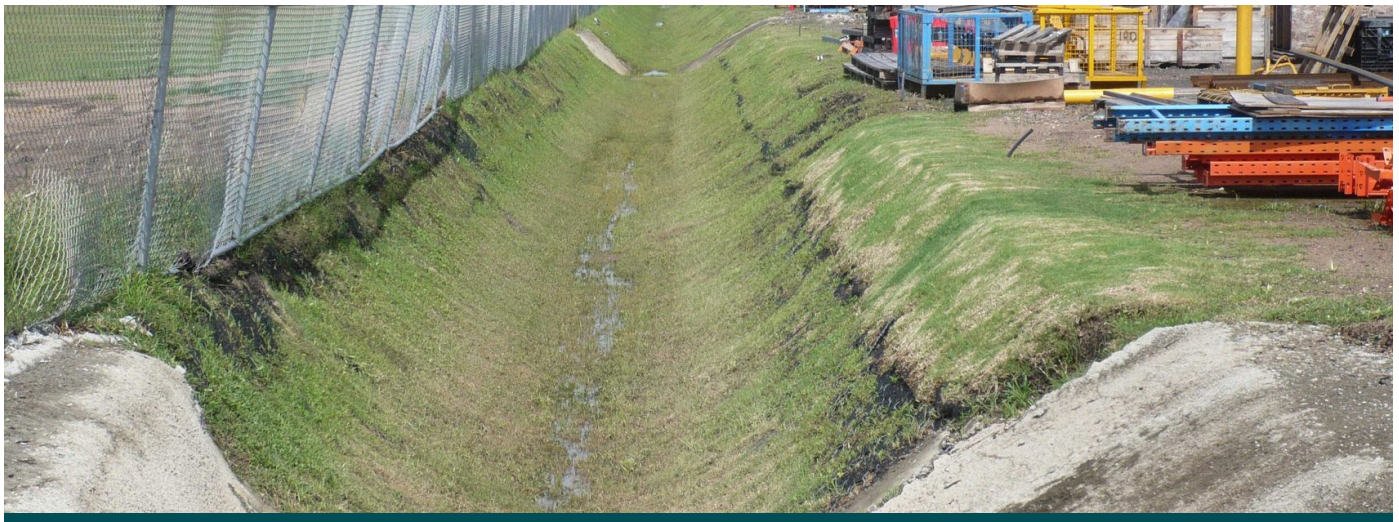
EROSION CONTROL FOR CHANNEL LINING IN MACKAY

PAGET, MACKAY, QUEENSLAND, AUSTRALIA



TYPE OF PROJECT	YEAR OF CONSTRUCTION	CLIENT	CONTRACTOR	DESIGNER
Channelling Works	**2009**	**HASTINGS DEERING**	**RIBLEDONE LANDSCAPING**	**MACCAFERRI**

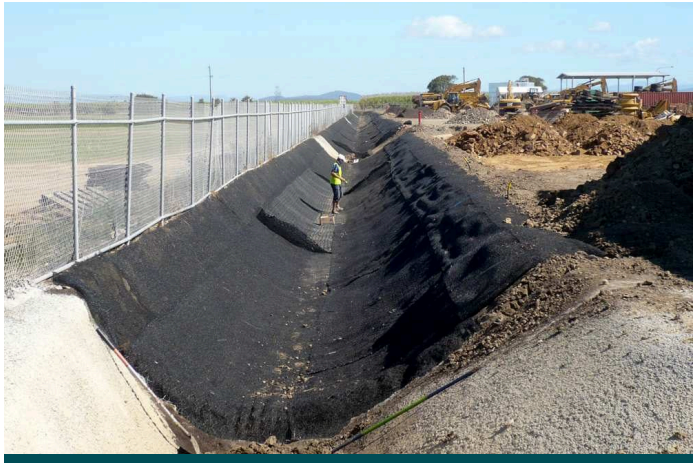
PROD. RELATED
MacMat (MacMat R)

Challenge

Hastings Deering, a distributor of Caterpillar in Australia, was moving into new facilities in Paget, Queensland. Due to the large open areas of impermeable surfaces, the rainwater run-off would be significant.
The new facilities therefore required drainage channels to be constructed around the perimeter of the development to serve as flood protection during high rainfall periods. Flows and therefore hydraulic loads within the channel would be high, and erosion protection was required. A traditional rock lining was rejected as the client wanted to embrace a more environmentally sensitive 'green' solution which could also withstand high flows.

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MacMat-R installed around whole perimeter



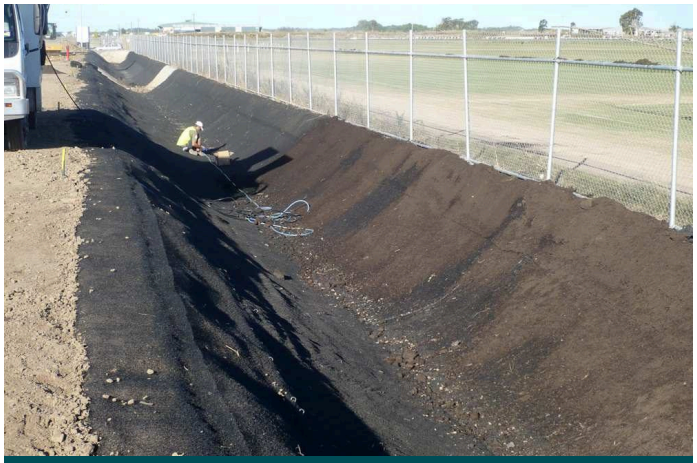
After Construction

Solution

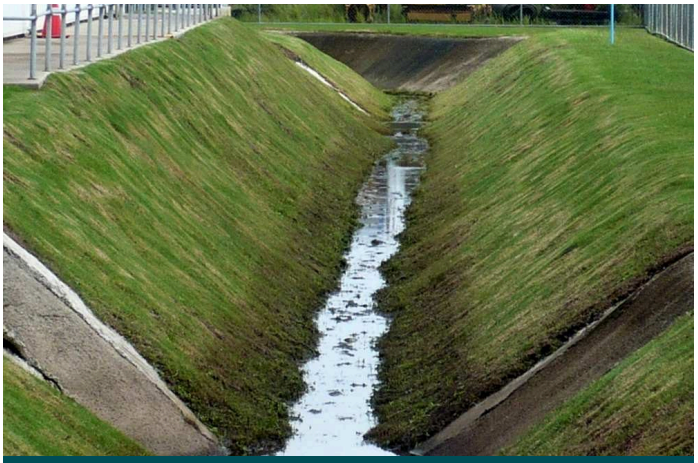
The client required an erosion control blanket which provided maximum erosion protection performance, both vegetated and unvegetated. The turf reinforcement mat, MacMat®R, was proposed. MacMat®R is a unique three-dimensional geomat which incorporates a 3D polymer matrix with an integral double twist hexagonal woven steel mesh reinforcement. This '2-in-1' product provides immediate high-performance erosion protection and when vegetated, withstands water velocities up to 4.5m/sec for 30 hours. MacMat®R reinforces the root zone of the vegetation, and it is this combination that enhances the erosion control.

MacMat®R also provides high-performance erosion protection in its unvegetated state, it gives designers and their clients reassurance that even if there is a loss of vegetation, protection will still be provided.

MacMat®R was installed at the base and on the side slopes of the channel. MacMat®R was anchored along the length of the channel using 300mm long U-shaped steel pins spaced at 2 pins/m2. Transverse anchorage check-slots were also provided along the channel where MacMat®R rolls were joined together.



Installation of MacMat-R and placement of topsoil



MacMat-R starting to vegetate after a couple of months

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