



EarthTEC innovation saves rock costs

EROSION CONTROL

Client: Gloucester Coal
Location: Gloucester, NSW
Project: Gabion cascade and channel

In order to further develop their mine at Duralie, Gloucester Coal needed to re-direct overland flows through the mine site. A lined channel was required to prevent erosion but the steep grades in some sections of the proposed route presented major concerns. The required channel would be approximately 1km long with a design discharge of 26 cumec. Accordingly, a X-Section 6-8m wide by 1.5m deep was designed.

The reno mattress channel was an ideal solution for the main section, providing economic and effective erosion protection. A gabion cascade structure was selected for the steeper grades, which allowed energy to be dissipated at each step, effectively reducing the erosion potential of the flows when they were discharged at the downstream end of the structure.

Gloucester Coal contacted EarthTEC on the recommendation of their earthworks contractor and engaged them to assist with the design and detailing and also to complete the on-site construction.

A smooth transition from a trapezoidal mattress channel to a vertical walled cascade was essential to the structures hydraulic profile. The downstream termination consisted of a gabion stilling basin and mattress apron.

EarthTEC's recommendation of using on-site materials that were a byproduct of the mining operation generated significant savings for the client.

EarthTEC's engineer inspected the site and made a number of recommendations. One such recommendation was to use rock material available on site, blended with imported rock. As the on-site materials were a by-product of the mining operation, the savings generated by this simple concept were significant.

Please contact our Sydney head office to meet with an EarthTEC representative in your state to discuss your project:

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