VETIVER SYSTEM
FOR
BRIDGE ABUTMENT STABILISATION

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COLUMBOOLA CREEK
Stabilisation of creek bank
using Vetiver Grass

Main Roads
Severe erosion on the abutment of the Coolumboola Creek bridge near Miles.
Erosion was caused by the change in flow direction
Vetiver was planted in contour rows to stabilise the batter and cross rows to reduce flow velocity
Cross rows are most effective when planted right angle to flow direction
One month after planting
Six month after planting
18 months after planting, note the bare area between rows (brown off during winter)
There were several big flows during the first summer and no damages were noted. This abutment is now well protected by these mature vetiver.
Five years after planting (Summer)
NEW GATTON BYPASS

SANDY CREEK BRIDGE ABUTMENT
(Under Old Bridge)
Flash flood undercut abutment
Planting on 3 Dec 2002
One week after planting
One month after planting
Seven weeks after planting, more than 30cm growth
Three months after planting
One year after planting and through several flash floods
NEW GATTON BYPASS

SANDY CREEK BRIDGE ABUTMENT
(Under New New Bridge)
Undercut shotcrete and unprotected batter
New abutment under new bridge built parallel to the old bridge
Planting on 24 November 2003
Four months after planting
Four months after planting
One year after planting
Bridge Abutment Coomera Creek,
Brisbane – Robina Rail line
Five months after planting
Mangrove seedlings
One year after planting
Opposite side
Five months after planting
Bridge abutment of a tidal creek in north Queensland
Vetiver was planted in both directions between the rocks to stop them moving.
Tingalpa creek, Brisbane

Bridge

Vetiver