

Case study: Improving riparian vegetation and biodiversity in a public space

Somerset Park, Orange, Orange City Council

(Source: NSW DPI on behalf of CW CMA and the State of NSW (2008), *Management and rehabilitation of riparian lands, a best management practice guide for the Central West Catchment, Wellington*)

Project Site

Located to the north west of the city of Orange, Somerset Park is a linear parkland approximately 1.3 kilometres in length with a varying width of between 75 and 150 metres. The park provides a much needed passive open space for a range of recreational pursuits in an expanding urban landscape. The park also protects an un-named water course that collects urban stormwater runoff from the north western parts of the city and drains to Ploughman's Creek, a tributary of the Bell River.

The park was originally farmland, however as the City's urban residential needs increased the land was subdivided and developed. At that time, Orange City Council's Local Environment Plan and Development Control Plan set aside land along drainage lines to create public open space and recreational land – Somerset Park was one such area which resulted from this planning approach.

Previous agricultural activities such as grazing on the site resulted in poor water quality and destabilisation of the banks of the un-named watercourse. Following development in the area, an increase in urban storm water run-off further destabilised the bed and banks. These issues coupled with an infestation of crack willows which impeded flows and caused siltation of the creek and lack of vegetation cover resulted in a reduction in biodiversity at the site and further impacts downstream into the Bell River catchment.

The project

Recognising the poor health of Somerset Park and the impact willows were having in conjunction with the loss of valuable public land as a result of bank collapse, the Council initiated a riparian rehabilitation and revegetation project at the park which also complied with the Council's Greenways policy

Over an 18 month period and with financial support from the Central West Catchment Management Authority, Council implemented a rehabilitation project in a 1.3 kilometre length of the watercourse which included:

- Removal of crack willows via best practice methods, Work for the Dole workers were engaged for willow poisoning and contractors for willow removal.
- Construction of in-stream structures; a rock chute and bank protection to create a chain of ponds system. Specialised contractors were engaged to undertake earthworks and rock placement.
- Revegetation of the site for biodiversity, bank stabilisation and aesthetic purposes. The Orange community were engaged to assist Council with planting native trees and shrubs throughout the park in biodiversity islands (small stands of trees and shrubs in mulched beds of up to 300 metres square).



A 'chain of ponds' was created in the creek to slow water and aid sediment deposition.



A rock chute was also installed to prevent bed erosion.

The benefits

The project at Somerset Park which involved many members of the Orange community has vastly improved a public amenity and enhanced the local environment. The quality of run-off and stormwater leaving the park has improved and biodiversity has been enhanced.

Quote Nigel Hobden, Orange City Council:

'As a passive open space area Somerset Park provides an avenue for a range of recreational pursuits. The installation of children's playground and dual use pathways providing improved access to the park increased the parks' passive use. The project has been important as it has resulted in the stabilisation of the waterway, created greater biodiversity through revegetation, retention of remnant trees and improved the water quality by reducing sedimentation and creating ponds of slow moving water.'



Extensive replanting was conducted by Conservation Volunteers Australia.



26 months on, the revegetation and natural regeneration have been highly successful.