

GRAFTON DRY RAINFOREST REMNANT REHABILITATION

overview of the project

This project has restored and extended 8.5ha of dry rainforest on the lower Clarence River near Grafton. The Lowland Rainforest present on the site is listed as an Endangered Ecological Community and is considered to be the best remaining remnant of the dry rainforest that naturally occurred on the lower slopes adjoining the Clarence River floodplain.

Serious infestations of weeds, particularly Cats Claw Creeper (*Macfadyena unguis-cati*), were present at the site, covering almost half of the remnant rainforest when the project commenced. This was seriously affecting a threatened plant species Brush Sauropus (*Phyllanthus microcladus*) and one of the objectives of the project was to assist in the recovery of this species.

Over a three year period the Cats Claw Creeper and a variety of other weed species were controlled. Plantings were carried out around the edges of the rainforest remnant to reduce edge effects on the remnant which has increased in size to almost 10ha.



An area of rainforest cleared of weeds

how the project was carried out

The Grafton Dry Rainforest Rehabilitation project was undertaken by Environmental Training and Employment Inc. (EnviTE) on land managed as part of the Trenayre Agricultural Research Station. Green Corps workers and other community volunteers completed the bush regeneration work under the guidance of two professional bush regenerators.



Propagating plants in the nursery

A management plan for restoration of the rainforest was completed in 1998. The work followed guidelines provided in the management plan to ensure successful weed control,

natural regeneration and minimal disturbance to the site. Around 100 people attended a field day that coincided with flowering of the Cats Claw Creeper to maximise publicity.

All workers and volunteers received a site induction including becoming familiar with the rare and threatened plant species on site. Weeding was carried out using hand tools, powered spray units and back-pack herbicide sprayers. A licence was obtained under the National Parks and Wildlife Act 1974 to allow weed control in the immediate vicinity of the threatened plant population.

Seed was collected from several species and community volunteers helped in the propagation of young rainforest plants. A total of 2305 trees were planted and fenced off around the edges of the community.

Monitoring sites were established before beginning work on the site. The percentage cover of weed species was measured at 0.5m intervals along two 50m transects. For the Cats Claw Creeper a further indication of the infestation was made by monitoring the number of tubers present. This involved digging out all soil to a depth of 30cm within a 1m² area and counting the number of tubers found in the soil. A number of photo monitoring points were also set up and photos were taken before, during and after the rehabilitation work.

outcomes now and in the future

New plantings have resulted in a 17% increase in the area of rainforest remnant. The density of Cats Claw Creeper at the site has reduced from 47% to 2% and tuber density has reduced from 938 tubers/m² to <5 tubers/m². Clearing weeds has allowed for natural regeneration which has continued since completion of the work.

Removing the immediate threat of weeds has resulted in greater protection of the threatened species *Brush Sauropus*. The careful clearing of weeds resulted in the discovery of many more individual plants at the site. The success of the project has encouraged the Research Station to commit funding to continue the ongoing maintenance of the site.

benefits, challenges & lessons learned

Using qualified bush regenerators to guide and oversee the restoration contributed significantly to this project's success. From past experience, EnviTe have found it important to match the skills of workers and volunteers to the difficulty of the task and sensitivity of the site. Using a mix of skilled and unskilled labour helps program participants acquire new skills under supervision, while allowing more sensitive regeneration work to be done by professionals.

The existence of a previously prepared Management Plan for the site also contributed to the success of the project. This ensured that an agreed process for the restoration was in place prior to on-ground work commencing. The project has been very successful in restoring the degraded rainforest area and has provided some useful benchmarks for what can be achieved in other restoration projects. However, the challenge of controlling the aggressive Cats Claw Creeper remains, and continued monitoring and maintenance will be required to ensure that the site remains weed-free.