REVEGETATION

IMPLEMENTING A BIODIVERSITY REVEGETATION PROJECT

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FROM 2000 – 2003 there were 18 revegetation sites implemented as part of the Biodiversity Revegetation Project or 'Meta Project' in the Wallatin Creek catchment, Doodlakine. These sites were planted on 117ha using 122,000 local provenance seedlings and 12ha of direct seeding. The focus for these revegetation sites was biodiversity with most sites able to implement part of a landscape design that was produced by CSIRO focal species approach. At the same time the sites needed to address land degradation issues like salinity and be workable into the farming system.

Implementing the project involved selecting the sites using aerial photography, combined with the focal species landscape design and the potential recharge maps. A revegetation plan was developed in conjunction with the farmer to ensure that revegetation design fitted into the farming system and met the nature conservation goals. A planting map was developed through this process. These sites included corridors, expanding remnant areas that were under the minimum requirements, reconstructing a Banksia patch, sandalwood plantings and seed production areas. This was followed by negotiating cost sharing arrangements with the farmer.

The focal species approach first developed by Robert Lambeck at CSIRO identifies remnant vegetation patches that failed to meet the spatial requirements that are needed by a focal species. The most sensitive species is the 'focal species', in this case the focal species were birds. Guidelines regarding composition, quality and configuration of patches were used to guide reconstruction of the main habitat type. The focal species analysis defines the features that must be present in a landscape after considering the threats responsible for decline.

Measuring survival in direct seeding area.

The potential recharge map developed by the Dept Agriculture focus catchment process delineates areas

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Breakaway Revegetation planting design (60 seedlings per tray)

Planting Patterns (Seedling Trays)

- Melaleuca coronicarpa 1, M. uncinata 5, E. subangusta 6
- E. loxophelba 3, Acacia acuminata 2, A. hemiteles 1.5, E. capillosa 4, Mel. uncinata 3
- Calothamnus quadrifidus 1, E. sheathiana 5
- E. capillosa 6, E. subangusta 5, Hakea lissocarpha 1, Acacia acuminata 1, M. uncinata 3
- E. subangusta 4, E. capillosa 7, H. lissocarpha 1, Allocasuarina campestris 2

Habitat Patch 10 x 10m (120/patch)

- Acacia acuminata - 3 patches
- Allocasuarina campestris- 2 patches
- Calothamnus quadrifidus - 1 patch
- Hakea lissocarpha - 1 patch
- Melaleuca uncinata - 2 patch
- M. coronicarpa - 2 patch

Direct seeding

- Woodland (North)
- Scrub Heath (South)
- Thicket - Allocasuarina acutivalvis, Melaleuca uncinata

topic in future issues of *Western Wildlife*! Meanwhile if you are lucky

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that are contributing to a rising watertable. High recharge areas are in the upper catchment and commonly form undulating landforms. Low recharge or discharge areas occur in the drainage lines or valley floor. A network of piezometers is located across the catchment and indicates the watertable rise after long term monitoring. This map was used to identify areas of high potential recharge that could be revegetated to prevent the further spread of salinity in the Wallatin Creek catchment.

Local provenance seed was collected each year from Nature Reserves and some private remnants in the catchment. This seed was used for both tube stock and direct seeding. In the second year of the project each farmer who had a revegetation site was invited to come and help collect seed for a couple of hours. This enabled them to understand the techniques in seed collection and appreciate the importance of local provenance seed.

The tube stock was grown in selected nurseries. These nurseries were visited during the growing season to ensure that seedlings were produced to specified standards.

The site preparation included ripping to a suitable depth and controlling weeds by herbicide application. Planting each revegetation site took place in partnership with the farmers, Revegetation Officer, other CALM staff and local volunteers.

A debriefing meeting and dinner was organised after the planting season with the farmers who had revegetation designs implemented. The debriefing questionnaire results were compiled to improve the adoption and implementation of the project and associated revegetation techniques. It was also used to document the decision-making process used by landholders.

These biodiversity revegetation sites have been written up as case studies and can be found on the Nature Base website along with other tools and tips for revegetation. http://www.calm.wa.gov.au/projects/habitat/revegetation.html

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