

**PLANT CONSERVATION IN AN URBAN AREA  
– BIODIVERSITY WORK IN THE CITY OF BURNSIDE.**  
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The City of Burnside is a municipality to the east of the City of Adelaide. It consists largely of suburban residential development but includes some steep and degraded land with larger allotments in the foothills of the Mount Lofty Ranges. Most of the native vegetation in the municipality had been cleared by 1860 for agriculture and mining. Soils are generally heavy with relatively high nutrient status. Plant conservation work in the older urbanised areas of the municipality presents a particular set of problems.

In 1997, in response to concern about loss of trees and vegetation in the district, Council commissioned a study of the significant trees and vegetation of Burnside. Amongst other things, the study documented native flora on public and private land and provided an action plan for biodiversity conservation and enhancement in the municipality. The Biodiversity Action Plan aimed to conserve all remnant native vegetation on public land, to encourage the conservation of native vegetation on private land and to propose urban sites that could be developed as habitat. In urbanised areas where land values are high and residents have little connection with the natural environment, it is a challenge to identify areas where people will accept local flora.

Implementation of the Biodiversity Action Plan began in 1998 at the relict Grey Box (*Eucalyptus microcarpa*) woodland at Beaumont Common, with work beginning on the protection and restoration of the most diverse patches of native grassland flora and the stabilisation and revegetation of the creek.

Work at many other sites began in 1999, when Council formed a small biodiversity field team based at the Council nursery. Work sites were identified in the Biodiversity Action Plan as having the highest priority for conservation or revegetation. Work at these sites also had to be acceptable to nearby residents.

Two areas of private land identified in the study as containing native vegetation have now become council reserve land through negotiation with the owners and land purchase. Most undeveloped urban native flora sites have, however, now been cleared for development. Prior to development, field staff rescue whatever flora can be salvaged and allow it to recover in the nursery before subsequently returning it to a safe location. This is no substitute for in-situ conservation but it does enable populations of some species to survive and has provided material for propagation.

Work sites in established urban areas present particular difficulties, such as the restoration of very degraded native vegetation in which 95% of the biomass consists of weeds, and the revegetation of creek-lines which are subject to massive urban stormwater runoff. Vegetation work is based on the following principles:

- All naturally occurring indigenous flora is recognised and conserved
- All weed species are removed
- All plantings are to be local provenance and appropriate to site
- Natural regeneration is recognised and fostered
- Records are kept of species present and the provenance of plantings
- Work starts in areas of best condition and moves outwards
- Un-worked areas are managed with a brushcutter and major weeds are controlled
- Vegetation is cut, pruned and edited to satisfy urban aesthetic requirements

These principles are consistent with the Bradley Method (J. Bradley 1988) developed in Sydney and now used throughout the world. We modify the Bradley method to take account of the degraded nature of our sites and to satisfy the aesthetic requirements of our residents.

The biggest problems for plant conservation in urban areas are social rather than technical. We have had to learn to manage the public dislike of the seasonality and the perceived lack

of colour and diversity in local native flora. We also have to work with residents who love all trees and value a fast growing invasive Aleppo Pine, (*Pinus halepensis*) more highly than a small slow growing native pine (*Callitris gracilis*). Urban sites are managed so that the aesthetic taste of urban residents is not severely challenged and so that vegetation change is gradual. It is a rare site in an urban area that can be managed purely for conservation and habitat. Management for aesthetic and recreational outcomes can still be consistent with plant conservation and the maintenance of ecological function.

As well as a gradual approach to vegetation change, we recognise the importance of education. Whilst urban biodiversity sites cannot be compared in diversity and habitat value to major conservation parks, their value in exposing and eventually connecting urban people to the natural heritage of their area is inestimable. As resources become available, we install interpretive signage, produce brochures and invite councillors, staff and residents on inspections of biodiversity sites in the municipality.

One day we may have areas of restored woodlands with viable populations of the original native flora, linked by vegetated corridors along creek-lines. This vision can only become reality with the support of a knowledgeable and aware population.

The following are some suggested tasks for a successful local government biodiversity program in an urban area:

- Do an inventory and set site priorities
- Get commitment from Council
- Set good policies covering public and private land
- Allocate resources
- Keep Council, staff and community informed – do presentations, provide written material, and run site visits
- Make plant conservation an integral part of council operations and development control
- Employ people with demonstrated knowledge and skills and retain them
- Recognise need for adaptive management
- Gradually change urban landscapes – take the people with you
- Install associated infrastructure; signs, barriers, seats, paths
- Choose locations wisely for long term plant survival
- Include biodiversity value as an integral part of reserve acquisition strategy
- Recognise that vegetation work is a process rather than a project
- Avoid chronic weed infestations by having a site well under control before starting another area
- Monitor species populations, vegetation condition and keep records

With all the conflicting demands of a modern urban population and the realities of local politics, it is unlikely that any local authority will ever have enough resources to achieve a perfect local plant conservation program. The key is to know what is the most important and where not to compromise.

Bradley, Joan (2002) *Bringing Back the Bush*, Reed New Holland, first published 1988.



Beaumont Common – a place for local flora area in an urban park