

landscaping with locally native plants

Ian Shears

*Landscape Designer/Horticulturalist,
Melbourne.*

INTRODUCTION

The use of locally native vegetation in designed landscapes is becoming increasingly common with ‘nature-like’ landscapes, gardenesque and massed plantings of a single species being created in domestic and open space areas. This trend reflects a desire to provide the benefits that locally native plants can offer in landscapes where a more ‘pure’ revegetation approach is either impractical or inappropriate. Designing with locally native plants provides many opportunities to create distinctive landscapes that people can admire and enjoy. In addition, the use of locally native plants has ecological and economic benefits.

BENEFITS OF USING LOCALLY NATIVE PLANTS

Landscapes designed using locally native plants are able to provide many benefits. The creation of habitat for fauna and flora, the development of distinctive local character, low cost maintenance levels, and the relationship to local environment and seasonality are all significant benefits.

CREATING SUCCESSFUL LANDSCAPES

Reasons for using locally native plants range from a commitment to ‘green’ ideology, the desire for habitat creation and on through to practical considerations about minimising the resources required to maintain landscapes (see Figure 1). Whatever the motivation is to use locally native plants, to successfully create the desired landscape and fully maximise the inherent qualities of the plants, an approach which combines design, horticultural and ecological considerations is

required. Good design will ensure that the spatial relationship of landscape components creates the atmosphere required and that the functional requirements of the landscape are met. Ecological considerations encompass a range of issues including the habitat value, tolerance levels and the life cycles of species. Horticultural parameters relate to the quality and size of plant materials, weed control issues and long-term management of the landscape.



*Figure 1. Part of a cliff-top garden subjected to strong, salt-laden winds. The garden, never watered or fertilised, includes Tussock Grasses (*Poa species*), Spear Grasses (*Austrostipa species*), Kangaroo Grass (*Themeda triandra*) and White Sallee/Snow Gum (*Eucalyptus pauciflora*).*

DESIGN OF THE LANDSCAPE

The design phase of landscape development is important, whether domestic or open space is being considered. This phase brings together the practical requirements of the space and the aesthetic vision. Deciding on where pathways are to be created, and what materials are to be used, for example, is integral to the development of a balanced landscape which fulfills practical requirements. Traditionally Australian ‘bush’ landscapes have strongly imitated nature: field rocks, informal ponds, recycled railway sleepers and

sliced tree fern trunks used as stepping stones have all been popular. This style of landscape is not the only way in which locally native plants can be used. Landscapes which use a minimal number of locally native plants in a symbolic way create distinctive Australian scenes. Two excellent examples of this style of landscape are the Sculpture Garden at the Australian National Gallery in Canberra and the Grasree Courtyard at Perth Airport. At the Sculpture Garden local species such as Brittle Gum (*Eucalyptus mannifera*) perform well in the harsh soil and climatic conditions. This white trunked species is planted in groves with a gravel surface providing a fluid paving for ease of movement and maintenance. At Perth Airport loose grouping of Grass Trees (*Xanthorrhoea* species) stand in gravel covered beds amongst strong architectural forms. The species chosen for these landscapes are strongly representative of the local area in an aesthetic sense and are ecologically suited to the sites. They require few resources in order to provide a high amenity value. Many opportunities exist to utilise species from locally native plant communities such as heathland, wetland, grassland and open woodland in ways which provide exciting landscapes.

ECOLOGY IN THE LANDSCAPE

Adoption of ecological principles in the design and management of landscapes enables the creation of lower cost plantings. Traditional horticultural practice manipulates the environment to suit the requirements of plants. This approach requires more resources than where plants are used that fit the site. By adopting an ecological approach to plant selection which matches plants, habitats and tolerance levels, a planting scheme that requires a low level of resources can be achieved. By observing the natural habitat of locally native plants, nature is allowed to play a part in teaching us what the most suitable plants are for the site in question. Whatever the existing conditions in respect to soil type, nutrient levels, climatic conditions and future maintenance, there will be plants that suit the site.

HORTICULTURAL CONSIDERATIONS

The ways in which a landscape is developed — from site preparation through planting to post-establishment maintenance — will often determine its success or failure. This is very important where locally native plants are used to create landscapes where minimal resources are available for future maintenance of the site. Critical issues relate to weed control, plant selection, establishment practices and long term maintenance.

WEED CONTROL

Pre-planting weed control is imperative for the rapid growth and successful establishment of vegetation. Weed species with rapid growth rates are highly effective users of resources such as water, nutrients and light. Control of above-ground weeds and the elimination of the weed seed bank before planting, combined with appropriate planting density and soil treatments, will greatly reduce post-planting weed management requirements. The majority of weeds present on site can generally be controlled, with the exception of some perennial weeds, with low toxicity herbicides such as the non-residual Glyphosate-based herbicide. Always adhere to instructions on the label when using herbicides. Elimination of perennial weeds prior to planting is essential, since the removal of stoloniferous or rhizomatous weeds after plantings are established is extremely difficult without severely disturbing the planting. The physical removal of all above and below ground perennial weed material present is very important. Where soils are heavily contaminated with weed seeds the removal of the soil surface to a depth of between 50 –100 mm will remove the majority of weed seeds. Other critical weed control measures include planting density and mulching. High density plantings will enable rapid canopy closure, limiting light levels to weeds.

MULCHING

Mulching is vital to the successful management of the plants on site. The mulches provide increased growth of preferred species while significantly reducing the germination of weed seed, either from the weed seed bank or from airborne sources. Mulching provides modification of soil temperatures and aids in the retention of soil moisture. Generally a plant debris surface would be used. However, this is not practical for pedestrian traffic. Gravel or sand allows greater all-weather use of landscapes, creates a fluid paving surface, and allows ease of movement of pedestrians. For effective weed suppression, mulches should be applied to a depth of at least 70 mm.

PLANT MATERIAL

All plant material should be growing actively at the time of planting. Ideally tube stock size is appropriate, since small plants will grow into the environment better than larger ones. Plants which are pot bound or have a low root–shoot ratio tend to struggle and produce poor growth in the long term.

TIMING OF PLANTING

Where irrigation is absent in the landscape, planting is ideally undertaken in autumn so that plants will be established before the dry summer period. Watering at planting is often sufficient to enable successful establishment.

POST-ESTABLISHMENT MAINTENANCE

In the past, native gardens were often thought to require no maintenance. Clearly, this is a fallacy. All landscapes require maintenance. While a well designed and established landscape will require only low levels of maintenance, some ongoing weed control, supplementary plantings, maintenance of mulch levels and canopy modification is inevitable. Landscapes are constantly undergoing changes, and

careful intervention will help to maintain a high quality landscape. Many native plants will benefit from pruning to maintain dynamic growth and continued display.

OPPORTUNITIES FOR LANDSCAPING WITH LOCALLY NATIVE PLANTS

As previously mentioned, locally native plants can be used in many ways in the landscape. The range of species from grassland communities for example, is being used more often to create exciting plantings. Tussock grasses have strong architectural qualities in form and beautiful inflorescences which move about in light breezes, remaining attractive long after emerging. Tussock Grasses (*Poa* species), Spear Grasses (*Austrostipa* species), Wallaby Grasses (*Danthonia* species), and Windmill Grass (*Chloris truncata*) have very attractive inflorescences, which when combined with massed groupings of herbs and wildflowers, makes a stimulating planting. The bronze tones of Kangaroo Grass (*Themeda triandra*) and the silver foliage and yellow flowers of Common Everlasting (*Chrysocephalum apiculatum*) will add distinctive Australian qualities to any landscape. Flowering grasslands using a mosaic pattern of grasses and wildflowers is a delightful landscape treatment (see Figure 2).



Figure 2. A 5-month-old flowering grassland containing flowering species Hoary Sunray (*Leucochrysum albicans*), Common Everlasting (*Chrysocephalum apiculatum*) and Chocolate Lily (*Dichopogon strictus*).

Weeping Grass (*Microlaena stipoides*) is one of the few species which tolerates mowing and can be used for lawns. It provides a soft textured surface which will grow in shade or full sun. By planting Weeping Grass with robust herbs such as Chocolate Lily (*Dichopogon strictus*) and Bulbine Lily (*Bulbine bulbosa*) a colourful sward that tolerates recreational activity can be created. The sward can be readily maintained by one or two 'high' mowings per year, before herb emergence and after flowering and seed set. Most native grasses, however, have a tussock habit which makes them unsuitable for mowing and active recreation activities, although they still provide an attractive setting for passive recreation.

Flowering grasslands create habitat for a wide range of birds, reptiles, butterflies and other insects. Other plants worthy of inclusion in garden landscapes are Mat-rushes (*Lomandra* species), Flax-lilies (*Dianella* species), and sedges (*Carex* species), which have strong upright strap-like foliage, and are very hardy once established, particularly in the presence of children. Given thought, creativity and a little research, locally native plants can be incorporated into existing landscapes or used to create distinctive new ones.



REFERENCES AND FURTHER READING

Elliot, G. 1996, *Australian Garden. The Essential Gardener's Guide*, Hyland House, Melbourne.

Gould League of Victoria & Royal Botanic Gardens, Cranbourne. *Going Bush - Understanding, Restoring and Recreating Indigenous Bushland*, Gould League of Victoria inc. & Royal Botanic Gardens, Melbourne.

Hitchmough, J.D., Berley, S. & Cross, R. 1989, 'Flowering Grasslands in the Australian Landscape', *Landscape Australia* vol.11, pp. 394-403.

Shears, I.G. 1996 'Creating a Grasslands Garden', in *Australian Plants in the Rural and Urban Environment*, 3rd Biennial Seminar, Karwarra Australian Plant Garden, Shire of Yarra Ranges.

Snape, D. 1992, *Australian Native Gardens. Putting Visions into Practice*, Lothian Books, Port Melbourne.

Society for Growing Australian Plants 1995, *Plants of Melbourne's Western Plains. A Gardener's Guide to the Original Flora*, Society for Growing Australian Plants, Keilor Plains Group.

Stones, E. 1971, *Australian Garden Design*, MacMillan, Melbourne.

Wettenhall, 1995, *The Bush Garden*, Hyland House, Melbourne.

Wilson, G. 1976, *Landscaping with Australian Plants*, Thomas Nelson, Sydney.