



# Hybrid landscapes

**R**iversdale Golf Club is unique among Melbourne's metropolitan golf clubs. It is unique in its mixture of exotic and native tree species, and its myriad gardens, both of which play essential roles in the Riversdale golfing experience.

Riversdale comprises roughly 50 per cent exotic tree species and 50 per cent Australian native tree species, of which around 80 per cent are classified as non-local natives (i.e.; natives that do not grow naturally within Melbourne).

For the purposes of this article, therefore, I will refer to Riversdale as a hybrid landscape; hybrid in that it incorporates both traditional parkland aesthetics and areas recently re-vegetated with local native species. Like many of Melbourne's metropolitan parks and

*Riversdale Golf Club's Dominic Bowd kicks off an ongoing series of articles on the work being achieved by golf club horticultural staff by looking at the ongoing management of Riversdale's hybrid landscape.*

gardens, which display an array of species from around the world, Riversdale Golf Club showcases trees from a variety of places including;

- North America (*Quercus palustris* – pin oak);

- Chile and Argentina (*Araucaria araucana* – monkey puzzle tree);
- Scotland (*Ulmus glabra* 'Camperdownii' – wych elm);
- China (*Metasequoia glyptostroboides* – dawn redwood); and
- Brazil (*Jacaranda mimosifolia* – jacaranda).

It also exhibits many non-local Australian native trees, such as red-flowering ironbark (*Eucalyptus sideroxylon rosea*), spotted gum (*Corymbia maculata*), bull kauri (*Agathis microstachya*), hoop pine (*Araucaria cunninghamii*) and Huon pine (*Lagarostrobos franklinii*), and local natives including yellow box (*Eucalyptus melliodora*), silver-leaf stringybark (*Eucalyptus cephalocarpa*) and the majestic river red gum (*Eucalyptus camaldulensis*).

The gardens at Riversdale are also very diverse, with the clubhouse and immediate surrounds featuring exotics such as purple torch (*Bartlettina sordida*), which hails from the cloud forests of Mexico, and a plethora of colourful camellias (*Camellia sp.*), of east Asian origin, among other species.

With such a diversity of species, the challenge going forward will be to ensure that both maintaining and enhancing this hybrid landscape can be achieved within environmental limits. Due to changes in climate and an increase in the unpredictability of weather systems resulting in excess heat and a decrease in winter rainfall, it is imperative that future environmental conditions be incorporated into landscape planning now to prevent problems arising down the track.

## TRADITION, VISION AND ENVIRONMENTAL LIMITS

Presenting a vision for the future that also honours tradition can be challenging and divisive. As one of Melbourne's oldest golf clubs, Riversdale is a place steeped in tradition. Some members see the re-introduction of locally native species – notably sedges, rushes and grasses – as undermining the traditional parkland idyll of the course.

However, in a future where water use will be more constrained and the weather hotter, more humid and more volatile, strict adherence to that traditional landscape idyll is simply impractical and potentially costly for the golf club. Put bluntly, an agreement between the club management, the club president, board members and the maintenance department with respect to a robust holistic and sustainable landscape plan is necessary.



Proper planning will not only ensure an enduring landscape aesthetic, but also reduce costs associated with the eventual removal and replacement of poorly selected species

For many years, shrubs and tree species had been planted at Riversdale without adherence to a plan. This has resulted in;

- A tree density that was impacting the health of playing surfaces;
- Disorderly and visually confusing vistas throughout the course with no clear themes; and
- Unsuitable species being planted in unsuitable soil and on unsuitable aspects.

In recent times, a landscape enhancement plan has been employed as a guide to assist the club in managing the planting of shrubs and trees. This has been drawn up chiefly by landscape architect Paul Mogford (Crafter + Mogford Golf Strategies) with my assistance and the support of Riversdale course superintendent Travis Scott.

This plan has introduced thematic continuity into the course, whereby the dominant theme on a hole/in a non-play area is further enhanced by selecting visually and/or taxonomically compatible species that will be able to withstand current and future environmental limits. Some of the recent

plantings have adhered to this plan and include;

- The right hand side of the 18th fairway where we have planted pin oak (*Quercus palustris*) and hoop pine (*Araucaria cunninghamii*), species which enhance a pre-existing theme, are very hardy and well suited to current and projected conditions.
- A non-play area between the 12th fairway and 16th green which has been turned into an exotic conifer grove. We removed all other species (mainly straggly acacias and weedy pittosporums) and enhanced the conifer theme by planting Albertiana spruce (*Picea glauca*), Himalayan cedar (*Cedrus deodara*), Italian stone pine (*Pinus pinea*) and Atlantic cedar (*Cedrus atlantica*) among others.
- Local indigenous plants such as common tussock (*Poa labillardieri*) and yellow buttons (*Chrysocephalum apiculatum*) which feature as an attractive mass-planting adjacent to the 14th green (see photo above).



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- A non-play area, between the 11th and 17th tee complexes (see main photo page 68), previously dominated by dwarf peppermint (*Agonis flexuosa* 'Nana'), diosma (*Coleonema pulchellum*) and woody and herbaceous weeds, that now features an array of native grasses and small shrubs. We did this to enhance both thematic continuity – creating a native understorey beneath the existing yellow box (*Eucalyptus melliodora*) – and to improve the local ecology by providing habitat for lizards, insects and birds.

In addition to the plantings, I have also been propagating locally indigenous species from seed and cuttings in a greenhouse in order to restore the native ecology in dilapidated non-play areas of the course. These include wallaby grasses, tall sedge, knobby club-rush, silver banksia, yellow buttons, common tussock and gold dust wattle.

### KNOW YOUR LANDSCAPE

Incorporating future environmental limits into golf course landscape planning is now an essential component of landscape design. Proper planning will not only ensure an enduring landscape aesthetic, but also reduce costs associated with the eventual removal and replacement of poorly selected species.

While the landscape enhancement plan conceived by Paul Mogford and I is an important over-arching guide, it is not exhaustive and does not cover all non-play areas of the course. Visionary and creative thinking combined with an aesthetic and scientific understanding of the landscape by course staff is also integral to any successful long-term plan.



Choosing and planting species adapted to shifting environmental limits is crucial

**Topography and aspect:** Lack of access to groundwater significantly limits the ability of many plants to flourish, particularly when the soil lacks the capacity to retain water. The undulating nature of the landscape and often poor soil conditions at Riversdale make choosing suitable sites for planting crucial.

Currently, I am manually watering a host of trees throughout summer – including dogwoods, crepe myrtles, ornamental pears, birches and ginkgoes – that were planted in hydrophobic soils at drought-prone elevated points in the landscape. Ideally, these trees should be replaced by species more suited to the conditions.

Aspect is also critical when choosing species for specific locations, with the exposure of north and west-facing slopes to the aggressive summer sun acting as a significant limiting factor for many species.

**Soil:** The soil at Riversdale is mostly comprised of grey sand on a medium-to-heavy mottled clay, with alluvial silts, sands and gravels present along the creek line. The grey sand is typically nutrient-poor and hydrophobic, while the clay layer is somewhat more fertile and water retentive. However, roots can find it difficult to penetrate the clay, meaning that employing an excavator to break apart the clay prior to planting is a must. Also, because much of the natural soil profile has been altered, analysing it and improving it with additives such as compost and gypsum is crucial.

In the past, many of the trees have been planted in unimproved nutrient-poor hydrophobic grey sand or heavy clay predisposed to waterlogging. This has resulted in poor drought resilience and leaf desiccation, leaf chlorosis, restricted growth and ultimately death. The importance of soil when planting cannot be understated.

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**Future conditions:** Evidence from peer-reviewed climatology data strongly suggests a warming of south-eastern Australia with an associated reduction in winter rainfall events, with effects to be acutely felt in urban environments. Therefore, choosing species adapted to these shifting environmental limits is crucial.

What surprised me last summer was observing both juvenile and mature maples struggling in the heat. With days exceeding 40 degrees set to increase, maples may not be a viable option, particularly in drier locations.

To ensure juvenile and mature trees and shrubs do not perish en-masse in the future, topography and aspect, soil and planning for future conditions must be considered when choosing species. An awareness of future environmental limits is critical. 🌱



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