

TAILEM BEND TENNIS COURT TREE REPORT



Coorong District Council
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Background

The proposal for the development at the former Tailem Bend tennis court site, on the corner of Tenth St and Railway Tce. has the potential to impact on mature trees that were planted by the community at this site.

The survey area is the area identified in Figure 1.

This report provides my findings with respect to the species, origin, approximate age and biodiversity value of trees within the survey area.

Introduction

Local Government must lead by example to encourage homeowners to appreciate the benefits that trees bring to all of us. In particular, local government infrastructure projects leading to the removal of many large trees need to be more transparent and include broad public consultation.

Trees play a vital role in reducing urban heat build-up and help protect us from the increasing temperatures that mark our changing climate. Metropolitan landscapes are filled with hard surfaces like roads and buildings that absorb and retain heat. 'Urban heat islands' – areas of our cities and towns where temperatures are at least 2°C above the surrounding average – can be as small as 125 square metres and lead to a disproportionate build-up of urban heat.

Trees are known to be the most effective mitigation strategy for the urban heat island effect, with greater impact than light-coloured roads and pavements, and green roofs and walls.

Tree coverage does not only impact daytime temperatures. During the day, these surfaces absorb and store solar radiation; this energy is released when the sun goes down, thereby maintaining higher ambient temperatures throughout the night. In comparison, non-urban areas (typically with fewer heat absorbing surfaces and more trees and greenery) cool down during the night through trees' evapotranspiration process.

The cooling effects of urban tree canopy are clear.

Trees help people live longer, healthier, happier lives. Urban trees have strong positive impacts on our social, physical and mental health and wellbeing, and help mitigate some of the negative impacts of urbanisation.

Spending time in the green space provided by trees can strongly protect against depression, anxiety and stress-related issues, helping people feel happier and more relaxed.

Trees help to reduce air pollution by releasing oxygen and absorbing CO². A mature tree can absorb up to 150 kg of CO² per year. Large trees also absorb other pollutant gases, such as carbon monoxide, and filter fine particles of dust, dirt and smoke from the air. This has a positive impact on illnesses such as skin cancer and asthma.

Trees provide shade and help mitigate urban heat which improves people's thermal comfort and quality of life. Urban cooling during extreme heat waves prevents heat-related deaths, which are most prevalent among elderly, people with health issues and those with limited mobility.

Trees and green space can also provide relief from urban noises like air conditioners and traffic. The presence of trees in urban environments encourages people to spend time outdoors undertaking physical activities or active travel, such as walking and cycling, all of which are known to have health benefits. Active travel has the added benefit of reducing traffic congestion and fossil fuel-reliant vehicle trips, thus reducing emissions and improving air quality.

Biodiversity Value

The biodiversity value of a tree is assessed as high if it is a locally indigenous species, is remnant or semi-remnant in origin, is reproductively mature, but lacks habitable faunal hollows.

Trees of moderate, low, and negligible biodiversity value were not included in this assessment.

Methodology

The site was inspected to identify individual trees then assessed with regard to their:

Species – Botanical name

Origin – Trees were planted and are not remnant or semi-remnant.

Estimated age - The age of each tree was estimated, based on the known year that the trees were planted.

Biodiversity value - The biodiversity value of a tree is assessed as very high if it is a locally indigenous species, is remnant or semi-remnant in origin, is reproductively mature, and has habitable faunal hollows.

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Recommendation

I identified a total of 81 native tree species within the survey area (see Map 2). Included in this total are 12 trees growing on the verge. A summary of the species, origin, age and biodiversity value is provided below in Table 1.

The recommended practical solution is to support the retention of the tree canopy situated on the Tailem Bend tennis court site. Urban infill is necessary but careful design and 'smart' infill to maximise the retention of existing trees and retain the benefits offered by mature trees rather than the small shrubs or immature trees often favoured in new developments *is* possible.

Trees can sometimes create challenges for homeowners, but the benefits to the householder and the wider community outweigh this, and convoluted regulations and associated processes have perpetuated the myth that trees are too hard to maintain or retain.



Map 1: Tailem Bend tennis court site aerial view.



Map 2: Tree identification aerial view.

TABLE 1: Summary of species, origin, age class and biodiversity value.

Species	Origin	Age class	Biodiversity Value
<i>Eucalyptus citradora</i> *1	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Callistemon sp.</i> *2	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Melaleuca armillaris</i> *3	Planted	10 – 20 years old	No hollows High biodiversity value
<i>Melaleuca nesophilla</i> *9	Planted	10 – 20 years old	No hollows Medium biodiversity value
<i>Eucalyptus torquata</i> *4	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Eucalyptus oleosa</i> *5	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Eucalyptus salubris</i> *6	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Eucalyptus leucoxlyn</i> *7	Planted	20 – 30 years old	No hollows High biodiversity value
<i>Eucalyptus species</i> 8	Planted	20 – 30 years old	No hollows High biodiversity value



Figure 1: *Eucalyptus citradora* (*1)



Figure 2: *Callistemon* species(*2) .on the left and *Melaleuca armillaris* (*3) on the right.



Figure 3: *Eucalyptus salubris* (*6)



Figure 4: *Eucalyptus torquata* (*4).



Figure 5: *Eucalyptus oleosa*.(*5)



Figure 6: *Eucalyptus* sp. (*8)



Figure 7: *Eucalyptus leucoxlyn* sp.