



# Plains Mallee Box Woodland – Consultation guide for landowners

## Nominated as a National Threatened Ecological Community

The 'Plains Mallee Box Woodland of the Murray Darling Depression and Riverina Bioregions' was nominated (originally under the name 'Ridged Plains Mallee Woodland') as a potential threatened ecological community in 2015 and is currently undergoing an assessment by the independent Threatened Species Scientific Committee to determine if it meets the criteria for listing under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The ecological community described in this conservation advice is a unique type of mallee woodland that is found in south-west New South Wales, north-west Victoria, and south-east South Australia. It is an open mallee eucalypt woodland with a tree canopy typically dominated by 'mallee box' *Eucalyptus* species and an understorey in which tussock grasses are prominent in wet years, low chenopod shrubs occur in variable densities, and taller shrubs are typically sparse. The community is associated with relatively medium-heavy textured soils (i.e. heavier texture than most other mallee vegetation) on near-level sandplains.



Plains Mallee Box Woodland © Ian Sluiter

## Consultation details

Comments are sought on the Committee's **Draft Description and Listing Assessment** of the Plains Mallee Box Woodland as Critically Endangered.

**Comments close 26 August 2020**

## About the assessment

Under the EPBC Act an ecological community is a particular group of plants, animals and other organisms that live together in a particular area of nature or habitat type. Such an ecological community is eligible for listing as threatened if it is facing a risk of extinction in the wild, as determined in accordance with prescribed criteria. The simplest form of extinction is when an ecological community has been totally destroyed and all occurrences have been lost or removed. It is more common, however, for ecological communities to become extinct by transformation rather than complete loss – becoming different communities with different characteristic species.

The criteria used to determine the level of risk for an ecological community are set out in the EPBC Regulations. There are six criteria, each representing a different type of extinction risk. An ecological community is considered threatened if it meets the thresholds under any of the six criteria, it does not need to be threatened under all of them. The overall threat category is determined by the highest threat category met - vulnerable, endangered or critically endangered.

The decision to list an ecological community as nationally threatened is made by the federal environment Minister. It follows a rigorous and transparent assessment by the Threatened Species Scientific Committee. Their assessment process for potential threatened ecological communities culminates in advice on listing and conservation which is provided to the Minister. Once an ecological community is listed, the Committee's advice is then published as an approved Conservation Advice.

## About the Plains Mallee Box Woodland

The Plains Mallee Box Woodland is sparsely distributed within the broad regions shown in Figure 1, on the next page. It is highly fragmented, amongst agricultural land and other vegetation types across these landscapes. 97.2% of remnants are now less than 10 ha and only 0.13% are over 50 ha (totalling 2793 ha). This differs greatly from the pre-European distribution where 64.3% of patches were less than 10 ha and 11% were over 50 ha (totalling 560 444 ha).

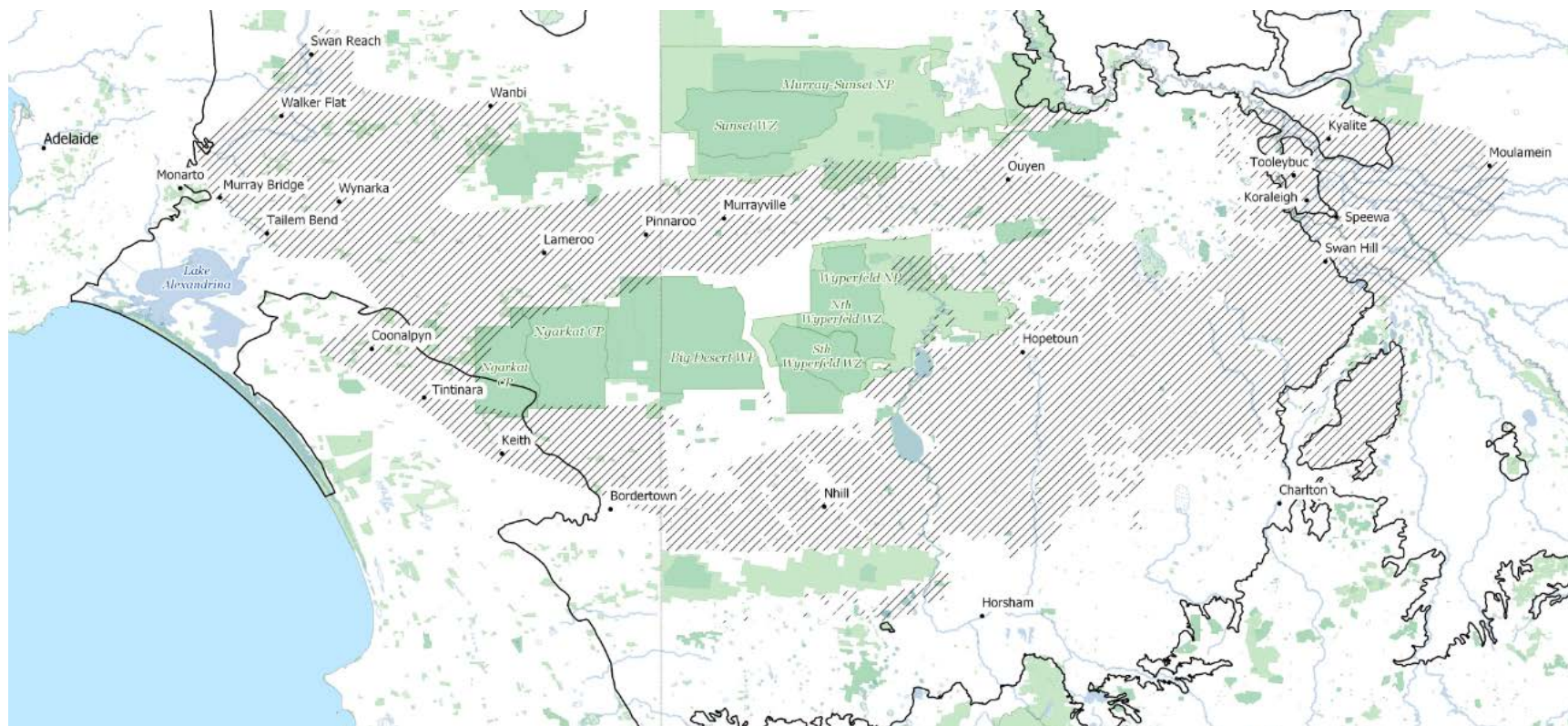
This broad area covers the following administrative regions (at July 2020):

Natural Management Resource regions:



- Victoria – the 'Murray', 'North Central' and 'Wimmera' Catchment Management Authority regions.
- NSW – the 'Murray' (western edge) and 'Western' (near Balranald) Local Land Services regions.
- South Australia – the 'Murraylands and Riverland' and 'Limestone Coast' landscape management regions.

Local government areas:

- Victoria – Buloke Shire, Gannawarra Shire, Hindmarsh Shire, Horsham Rural City, Loddon Shire, Mildura Rural City, Swan Hill Rural City, West Wimmera Shire, Yarriambiack Shire.
- NSW – Balranald Shire Council, Edward River Council, Murray River Council.
- South Australia – Coorong District Council, Mid Murray Council, Southern Mallee District Council, Tatiara District Council, The District Council of Loxton Waikerie, The District Council of Karoonda East Murray, The Rural City of Murray Bridge.



**Figure 1. Regions where Plains Mallee Box Woodland may occur.** Within these regions only approximately 5% of the original distribution remains. It highly fragmented, mainly occurring as linear strips along roadsides.

-  – Regions where Plains Mallee Box Woodland may occur.
-  – Boundaries of Murray Darling Depression and Riverina Bioregions.



## How is the Plains Mallee Box Woodland identified?

The following are the key diagnostic characteristics for the ecological community. All of these must be met for the ecological community to be present at a particular location:

- Occurs in New South Wales, Victoria and South Australia, within Murray Darling Depression and Riverina Bioregions (Interim Biogeographic Regionalisation of Australia, IBRA V7).
- Within these bioregions, the ecological community typically occurs on near-level plains or occasionally on gently sloping terrain surrounding and within run-on landscape depressions. Soils are variable but are typically duplex, with clay loam or occasionally sandy clay loam topsoil textures mostly of aeolian origin, above deep fine textured clay subsoils.
- The primary diagnostic species particular to this community are the dominance of the box-barked eucalypt species *Eucalyptus porosa* (black mallee box) or *E. behriana* (bull mallee, broad-leaved mallee box). However, *E. calycogona* (square-fruited mallee, gooseberry mallee, red mallee), or *E. dumosa* (Dumosa mallee) may be dominant in some areas where they share understorey and other characteristics that are consistent with the ecological community. Importantly, the ecological community is NOT present just where these trees are, it also needs to contain native understorey and meet the other requirements as elsewhere described in these key diagnostic characteristics.
- The tree canopy is usually 5-10 m tall, occasionally to 15 m, with a very open tree layer. Tree canopy cover is typically 10% or greater. That is, typically open woodland, but the tree canopy cover may vary due to disturbance and in areas of regrowth.
- A small tree and/or tall shrub layer may be present, but is typically sparse with < 5% cover and a height range of 3-5 m. A medium shrub layer 1-3 m tall may also be present, but is normally also sparsely present, with cover < 10%.
- A distinctive low to decumbent chenopod sub-shrub layer can be a key feature in many occurrences.
- The ground layer is dominated by tussock grasses, but may be inconspicuous depending on drought conditions of livestock grazing.
- *Triodia* spp. (spinifex) are typically absent from the ground layer and never dominant.





Plains Mallee Box Woodland with a canopy tree layer dominated by *Eucalyptus porosa* and a grassy groundlayer © Ian Sluiter

## Why is the Plains Mallee Box Woodland considered threatened?

The draft listing assessment demonstrates that the Plains Mallee Box Woodland may be eligible for listing as **Critically Endangered**.

Available estimates from most of the ecological community's potential range indicate a very severe decline of at least 90–95% since 1750.

*Reductions in geographic distribution are one of the key symptoms of extinction risk for ecological communities. A significant reduction in geographic distribution almost certainly comes with a significant loss of diversity in the community. As the area an ecological community occupies declines, so do carrying capacities for component species, niche diversity and opportunities for species to access resources or avoid competitors, predators and pathogens. If the areas lost have fragmented or isolated the remaining occurrences, these may not retain sufficient species or genetic diversity for the ecological community to survive in the future. These changes will increase risks for individual species and reduce an ecological community's ability to sustain its characteristic biota, even if the distribution is not continuing to decline.*

The ecological integrity of the remaining patches is also very severely compromised. Remaining patches are mostly very small remnants, infested by weeds and under threat from surrounding land use due to their fragmentation and isolation. All these stresses reduce the ecological function of the remaining patches.

*Reductions in ecological function are one of the key symptoms of extinction risk for ecological communities. Ecological function refers to the ability of communities to support their full diversity of species and to sustain their functional roles, such as nutrient cycling, provision of food or shelter, predation, decomposition, pollination etc. Environmental degradation may diminish the ability of an ecological community to sustain its characteristic native biota by changing the variety and quality of environmental niche space available to individual species. These changes will increase risks for individual species and reduce an ecological community's ability to sustain its characteristic biota, even if the actions that caused the threat are no longer continuing.*

## **Why is it important to protect this woodland?**

Threatened ecological communities are part of Australia's rich and diverse natural heritage. Their occurrence in the landscape enriches the environment in which we live, and provide many important biodiversity, social and economic functions. There are therefore many reasons why it's important to keep what's left of the Plains Mallee Box Woodland, and to recover or expand remnants. The ecological community and other native vegetation can deliver ecosystem services and other values, including:

- Nutrient and carbon cycling and storage. Keeping intact native vegetation helps to minimise serious erosion problems and reducing soil salinity. It helps prevent the loss of valuable topsoil from farmlands and associated dust storms;
- Aesthetic values and recreational opportunities;
- Cultural and spiritual values;
- Human health benefits;
- Research and educational opportunities;
- Habitat for many native plants and animals, including threatened species;
- Habitat for natural predators of many farming pests;
- Habitat for pollinators;
- Landscape barrier for disease control;
- Wind breaks, dust/sand barriers and providing shelter from temperature extremes for stock and crops;
- Keeping the local environment cooler and retaining moisture.





Plains Mallee Box Woodland with a canopy tree layer dominated by *Eucalyptus dumosa*  
© Ian Sluiter

### **How will the Plains Mallee Box Woodland be protected?**

Together with threatened species, threatened ecological communities are protected under the EPBC Act as a matter of national environmental significance. The aim of listing is to prevent further decline and promote and help recovery through landholder and community efforts. Once listed under the EPBC Act, conservation for threatened ecological communities comes down to three main things:

- Better understanding of which biodiversity and associated ecosystem functions and services we are at the greatest risk of losing across the Australian landscape and what are the key research and conservation actions needed to maintain and improve them.
- Increased opportunities for funding and programs of activities that improve or protect threatened ecological communities, particularly allowing for restoration of bushland in and around threatened ecological communities and management of threats to both the environment and production.
- Regulation of new activities that may significantly impact the threatened ecological communities.

## **How will national protection affect farmers, land managers and developers?**

How you may be affected if the ecological community is listed depends on:

- whether you have a patch of good quality Plains Mallee Box Woodland on your land; and
- what you intend to do with any such patches.

**Listing is intended to further support land managers who want to continue managing patches of mallee woodlands that still remain in good quality, for future benefits.**

Supportive practices have helped to retain many woodland remnants. For instance, some remnants are intentionally set aside because they serve as shelter for stock and windbreaks for croplands and pastures.

If there are no new actions, then the listing won't affect you. Land managers who want to retain good quality woodland, or intend to restore any woodland on their properties are more likely to be able to apply for funding to help with environment conservation on their property.

Landholders who have the threatened ecological community on their property may be able to access opportunities to manage threats that impact both the woodland and agricultural productivity (e.g. invasive plants and pest animals) and restore remnants through current or future Australian Government natural resource management programs, such as National Landcare. Talk with your local NRM agency or Landcare group for more advice on any opportunities.

**National protection only applies to new actions likely to cause significant damage to patches of this woodland that remains in good condition.**

### ***Business as usual for many routine activities***

The listing of a threatened ecological community under the EPBC Act will not prevent land managers from continuing to use land in the same way they were previously, providing they do not significantly change or intensify their activities.

It is important to note that the EPBC Act only regulates activities that have, or may have, a significant impact on a matter of national environmental significance, including threatened ecological communities. Whether or not an action is likely to have a significant impact depends on the sensitivity, value and quality of the environment which it impacts, and on the intensity, duration, magnitude and geographic extent of the impacts.

The normal activities of individual landholders, residents and councils will typically not be affected by a listing. Routine property maintenance, land management and other established activities, such as most farming activities or ongoing road maintenance, are unlikely to have a significant impact so do not require consideration under the EPBC Act.

For instance, the following actions are unlikely to require approval under the EPBC Act:

- continuation of existing grazing, cropping or horticultural activities
- maintenance of existing roads, fences, access tracks or firebreaks
- maintenance of existing farm gardens or orchards,
- maintenance of existing farm dams or water storages



- maintenance of existing pumps and clearing drainage lines
- replacement and maintenance of sheds, buildings, yards and fences
- control of weeds and management of pest animals on individual properties or roadsides
- emergency grading, slashing or clearing during a bushfire emergency

In all these activities, landholders are encouraged to avoid any impacts to patches of ecological communities, and to help restore remnants. For example, landholders should try to avoid native vegetation clearance in or adjacent to a patch of an ecological community, and protect patches from nearby activities, such as spray drift from fertiliser, pesticide or herbicide sprayed in adjacent land.

Note that human settlements and infrastructure where an ecological community formerly occurred do not form part of the natural environment and are therefore not considered to be a part of an ecological community. This also applies to sites that have been replaced by crops, gardens or exotic pastures, or where the ecological community occurs in a highly-degraded or unnatural state.

### ***Referral of actions with significant impacts***

The main consideration would be to refer for approval any new activity that could significantly impact upon larger, good quality patches of the woodland. Activities likely to require referral include, but are not restricted to, clearing native vegetation, development on or close to a patch of the woodland, fragmentation through construction of roads and tracks through a patch of the woodland, changing drainage and local water patterns or broad-scale applications of herbicides or fertilisers to the woodland.

Referrals usually apply to major projects, for instance new mines or mine expansions, major new road works, major energy projects (windfarms, transmission lines etc), new housing and industrial developments, or proposals to convert large areas of intact woodland for plantations or cropping.

Given there is so little of this woodland remaining (approximately 5% of the original distribution), especially in good condition, it is not expected that many activities would significantly impact it and trigger national environmental protections. Those that do are likely to be infrastructure projects, such as new mining, roads, pipelines or powerlines.

Some agriculture development activities may need approval, but only if you have relatively good condition Plains Mallee Box Woodland on your property and want to substantially change the way you use your land— for example, develop or clear large areas - that will have a significant impact on the woodland.

In some cases, approval may require using alternative ways to carry out the proposed activity to reduce impacts on the ecological community. Before you make any changes to the way you use your land that could result in irreversible or long-term significant loss of the protected ecological community, it is best that you first check to see whether approval is needed.

If you think you might have a significant impact:

- Check you have the right type of woodland present and if it's in good enough condition to be referred.
- Plan to avoid or minimise impacts to woodland patches, especially the best quality patches.
- Talk with the Australian Government Department of Agriculture, Water and the Environment.

## Where can I find more information?

The Draft Description and Listing Assessment document and other information about how to make a submission, including questions to guide your responses, are on the website of the Department of Agriculture, Water and the Environment:

[www.environment.gov.au/biodiversity/threatened/nominations/comment/plains-mallee-box-woodland-murray-darling-depression-riverina-bioregions](http://www.environment.gov.au/biodiversity/threatened/nominations/comment/plains-mallee-box-woodland-murray-darling-depression-riverina-bioregions)

Advice about Australian Government environmental funding programmes (e.g. National Landcare or the Environment Restoration Fund) can be found online at:

<http://www.environment.gov.au/about-us/grants-funding>

Australian Government natural resource management initiatives are located at:

[www.nrm.gov.au](http://www.nrm.gov.au)

Information about the EPBC Act referral and assessment process is available on:

<http://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process>

Further information for farmers on the national environment law and agricultural development is available at:

<http://www.environment.gov.au/land/farmers>

If you need further information, contact the Department's Community Information Unit by:

- phone on 1800 803 772 (freecall); or
- email [ciu@environment.gov.au](mailto:ciu@environment.gov.au)