

Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
***Allocasuarina robusta* (Mount Compass Oak-bush)**

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Allocasuarina robusta, Family Casuarinaceae, also known as Mount Compass Oak-bush or Mount Compass Sheoak, is a rigid, erect shrub that grows to 3 m. Branchlets are reddish-brown to grey coloured and grow to 20 cm long. Branchlet segments are 7–12 mm long and have rings of 5–7 teeth. Cones grow on short stalks or are stalkless (Wilson & Johnson, 1989).

Conservation Status

Mount Compass Oak-bush is listed as **endangered**. This species is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, in 2006, the Minister considered the Threatened Species Scientific Committee's (TSSC) advice under section 189 of the EPBC Act and amended the list under section 184 to include Mount Compass Oak-bush. The TSSC determined that this species met Criterion 2 of their eligibility criteria (TSSC, 2006b). The species is also listed as endangered under Schedule 7 of the *National Parks and Wildlife Act 1972* (South Australia).

Distribution and Habitat

Mount Compass Oak-bush is known from 16 populations on the Fleurieu Peninsula, in the Mount Compass and Hindmarsh Valley area, South Australia. Three populations occur in reserves—Hindmarsh Falls Recreation Reserve, Glenshera Conservation Park and a Heritage Agreement near the Myponga township—and the other populations are on roadsides or private property (ADHERB, 2005).

The species occurs in upland heath or open woodland with heath understorey. It has been recorded from sandy soils, typically in low-lying, poorly drained areas or areas bordering swamps or drains (ADHERB, 2005). These areas may be waterlogged for part of the year (TSSC, 2006b). Associated vegetation includes *Leptospermum continentale*, *Leptocarpus tenax* and *Leucopogon hirsutus* in upland heath and *Eucalyptus* spp. and *Acacia* spp. in open woodland (ADHERB, 2005). This species occurs within the Adelaide and Mount Lofty (South Australia) Natural Resource Management Regions.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological communities.

Threats

The main identified threats to Mount Compass Oak-bush are increasing fragmentation; vegetation clearing; grazing pressure; road maintenance activities (spraying and vehicle damage); weed invasion; fertiliser or pesticide drift; recreational use of reserves; and hydrological changes (TSSC, 2006a; ANRA, 2007).

The main potential threat to Mount Compass Oak-bush is inappropriate fire regimes.

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants (TSSC, 2006a).
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of Mount Compass Oak-bush.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats (TSSC, 2006a).
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary (TSSC, 2006a).
- Identify populations of high conservation priority.
- Control access routes to suitably constrain public access to known sites on public land (TSSC, 2006a).
- Suitably control and manage access on private land.
- Ensure changes to agricultural activities do not impact on known sites (TSSC, 2006a).
- Ensure road widening and maintenance activities in areas where the species occurs do not adversely impact on known populations (TSSC, 2006a).
- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution (TSSC, 2006a).
- Manage any disruptions to water flows.
- Investigate further formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure (TSSC, 2006a).

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to Mount Compass Oak-bush, using appropriate methods (TSSC, 2006a).
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Mount Compass Oak-bush (TSSC, 2006a).

Trampling, Browsing or Grazing

- Ensure that livestock grazing, if it occurs in the area, uses an appropriate management regime and density that does not detrimentally affect this species.

Conservation Information

- Raise awareness of Mount Compass Oak-bush within the local community.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This Conservation Advice was approved by the Minister / Delegate of the Minister on: 1/10/2008

This list does not necessarily encompass all actions that may be of benefit to Mount Compass Oak-bush, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Recovery Plan for the Mount Lofty Ranges Southern Emu-wren *Stipiturus malachurus intermedius*: 1999–2003 (MLR SEWRT, 1998) has habitat recovery objectives for the region, and
- Site Action Plan: Recovery actions for threatened species population *Correa calycina* (TPAG, 2004), has recovery actions for the Hindmarsh Falls area.

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

ADHERB 2005, *ADHERB Database*, State Herbarium of South Australia, Adelaide. Records extracted 31 May 2005.

Australian Natural Resource Atlas (ANRA) 2007, *Biodiversity Assessment - Kanmantoo*, Department of Environment, Water, Heritage and the Arts, viewed 10 April 2008, <<http://www.anra.gov.au/topics/vegetation/assessment/sa/ibra-kan-species-threats.html>>.

MLR Southern Emu-wren Recovery Team (MLR SEWRT) 1998, *Recovery Plan for the Mount Lofty Ranges Southern Emu-wren Stipiturus malachurus intermedius: 1999–2003*, Report to the Regional Wildlife Programs Section, Wildlife Australia.

Threatened Plant Action Group (TPAG) 2004, *Site Action Plan: Recovery actions for threatened species population Correa calycina*, Adelaide.

Threatened Species Scientific Committee (TSSC) 2006a, *Commonwealth Conservation Advice on Allocasuarina robusta*, Department of Environment, Water, Heritage and the Arts.

Threatened Species Scientific Committee (TSSC) 2006b, *Commonwealth Listing Advice on Allocasuarina robusta*, Department of Environment, Water, Heritage, and the Arts, viewed 10 April 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/allocasuarina-robusta-advice.pdf>>.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2nd ed), Australian Network for Plant Conservation, Canberra.

Wilson, KL & Johnson LAS 1989, 'Casuarinaceae', *Flora of Australia*, vol. 3, p. 65.