



Government of **Western Australia**
Department of **Environment and Conservation**

INTERIM RECOVERY PLAN NO. 326

Acacia leptoneura

INTERIM RECOVERY PLAN

2012–2017



July 2012
Department of Environment and Conservation
Kensington

FOREWORD

Interim Recovery Plans (IRPs) are developed within the framework laid down in Department of Conservation and Land Management (CALM) Policy Statements Nos. 44 and 50. Note: CALM formally became the Department of Environment and Conservation (DEC) in July 2006. DEC will continue to adhere to these Policy Statements until they are revised and reissued.

These plans outline the recovery actions that are required to urgently address those threatening processes most affecting the ongoing survival of threatened taxa or ecological communities, and begin the recovery process.

DEC is committed to ensuring that Threatened taxa are conserved through the preparation and implementation of Recovery Plans (RPs) or IRPs, and by ensuring that conservation action commences as soon as possible and, in the case of critically endangered taxa, always within one year of endorsement of that rank by the Minister.

This plan will operate from July 2012 to June 2017 but will remain in force until withdrawn or replaced. It is intended that, if the species is still ranked as Critically Endangered, this plan will be reviewed after five years and the need for further recovery actions assessed.

This plan was given regional approval on 9th August 2012 and was approved by the Director of Nature Conservation on 20th August 2012. The provision of funds identified in this plan is dependent on budgetary and other constraints affecting DEC, as well as the need to address other priorities.

Information in this plan was accurate at July 2012.

PLAN PREPARATION

This plan was prepared by Robyn Luu¹ and Andrew Brown².

¹ Project Officer, DEC Species and Communities Branch, Locked Bag 104, Bentley Delivery Centre, WA 6983.

² Threatened Flora Coordinator, DEC Species and Communities Branch, Locked Bag 104, Bentley Delivery Centre, WA 6983.

ACKNOWLEDGMENTS

The following people provided assistance and advice in the preparation of this plan:

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|-----------------|---|
| Joel Collins | Previous Flora Conservation Officer, DEC Central Wheatbelt District. |
| Andrew Crawford | Principal Technical Officer (Threatened Flora Seed Centre), DEC Science Division. |
| Gemma Grigg | Conservation Officer, DEC Species and Communities Branch. |
| Natasha Moore | Conservation Officer (Flora and Fauna), DEC Central Wheatbelt District. |
| Amanda Shade | Assistant Curator (Nursery), Botanic Gardens and Parks Authority. |

Thanks also to the staff of the W.A. Herbarium for providing access to Herbarium databases and specimen information.

Cover photograph by Joel Collins.

CITATION

This plan should be cited as: Department of Environment and Conservation (2012) *Acacia leptoneura* Interim Recovery Plan 2012–2017. Interim Recovery Plan No. 326. Department of Environment and Conservation, Western Australia.

SUMMARY

| | | | |
|-------------------------|--|--------------------------|-------------------|
| Scientific name: | <i>Acacia leptoneura</i> | Common name: | NA |
| Family: | Fabaceae | Flowering period: | August |
| DEC region: | Wheatbelt | DEC district: | Central Wheatbelt |
| Shire: | Dowerin | NRM region: | Avon |
| Recovery team: | Central Wheatbelt District Threatened Flora and Communities Recovery Team (CWDTFCRT) | IBRA region: | Avon Wheatbelt |

Illustrations and/or further information: Cowan, R.S. and Maslin, B.R. (1999) *Acacia* miscellany 17. Miscellaneous new taxa and lectotypifications in Western Australian *Acacia*, mostly section *Plurinerves* (Leguminosae: Mimosoideae). *Nuytsia* 12(3): 413-452; Western Australian Herbarium (1998–) *FloraBase – The Western Australian Flora*. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/>.

Current status: *Acacia leptoneura* is declared as rare flora (DRF) under the Western Australian *Wildlife Conservation Act 1950* and is ranked as Critically Endangered (CR) in WA under International Union for Conservation of Nature (IUCN 2001) criteria B1ab(iii)+B2ab(iii);D due to the extent of occurrence being less than 100km²; severely fragmented populations and it being known to exist at no more than one location; a continuing decline in area, extent and/or quality of habitat; and area of occupancy less than 10km²; and population size estimated to be less than 50 mature individuals. The extent of occurrence is 1.2km² and the area of occupancy is 0.0008km². The species is not listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999). The main threats to the species are road maintenance, poor recruitment, grazing, small population size, weed invasion and inappropriate fire regimes.

Description: *Acacia leptoneura* is a semi-prostrate shrub 0.6m high and 2.2m wide. Branchlets are terete, strigose with straight closely appressed hairs, glabrescent. Phyllodes are shallowly to strongly incurved or sigmoid, terete to subterete, 3 to 7.5cm long, acute with shallowly recurved to uncinately apex, coriaceous, glabrous except appressed-puberulous at base, and striate by 16 slightly raised close nerves. Inflorescences are simple, 1 or 2 per axil; peduncles 4 to 6mm long, sparingly appressed-puberulous; heads globular, c. 5mm diam., 20 to 30-flowered. Flowers are 5-merous; sepals free, linear-spathulate.

Habitat requirements: *Acacia leptoneura* is endemic to Western Australia where it is currently known from a single area northeast of Dowerin. Population 1 is situated on a low rise on grey/white sandy loam over laterite in mostly cleared, degraded shrubland of *Hakea scoparia* and *Santalum acuminatum*. Population 2 is situated on a low lateritic ridge on brown sandy loam over laterite in open mallee over open *Allocasuarina acutivalvis*, *A. campestris* and *Melaleuca coronocarpa* shrubland.

Habitat critical to the survival of the species, and important populations: *Acacia leptoneura* is ranked in WA as CR, and as such it is considered that all known habitat for wild populations is critical to their survival, and that all wild populations are important populations. Habitat critical to the survival of *A. leptoneura* includes the area of occupancy of populations, areas of similar habitat surrounding and linking populations (these providing potential habitat for population expansion and for pollinators), additional occurrences of similar habitat that may contain undiscovered populations of the species or be suitable for future translocations, and the local catchment for the surface and/or groundwater that maintains the habitat of the species.

Benefits to other species or ecological communities: Recovery actions implemented to improve the quality or security of the habitat of *Acacia leptoneura* will also improve the status of associated native vegetation, including one priority flora taxon.

International obligations: This plan is fully consistent with the aims and recommendations of the Convention on Biological Diversity, ratified by Australia in June 1993, and will assist in implementing Australia's responsibilities under that Convention. The species is not listed under Appendix II in the United Nations Environment Program World Conservation Monitoring Centre (UNEP-WCMC) Convention on International Trade in Endangered Species (CITES), and this Interim Recovery Plan (IRP) does not affect Australia's obligations under any other international agreements.

Indigenous consultation: A search of the Department of Indigenous Affairs Aboriginal Heritage Sites Register revealed no sites of Aboriginal significance adjacent to populations of *Acacia leptoneura*. Input and involvement has however been sought through the South West Aboriginal Land and Sea Council (SWALSC) and Department of Indigenous Affairs to determine if there are any issues or interests. Indigenous opportunity for future involvement in the implementation of the Recovery plan is included as an action in the plan.

Social and economic impacts: The implementation of this recovery plan may potentially cause some social and economic impact. For the population occurring on private property (Population 2) this may be through the loss of land available for development, as well as the cost of implementing recovery actions such as fencing and weed control. For the population on land vested with the Shire of Dowerin (Population 1) social and economic impact may be through the implementation of recovery actions (controlling weeds) and restrictions on road management practices.

Affected interests: Private landholders and the Shire of Dowerin.

Evaluation of the plan's performance: DEC, in conjunction with the Central Wheatbelt District Threatened Flora and Communities Recovery Team (CWDTFCRT), will evaluate the performance of this plan. In addition to annual reporting on progress and evaluation against the criteria for success and failure, the plan will be reviewed following five years of implementation.

Existing recovery Actions: The following recovery actions have been or are currently being implemented:

1. The Botanic Gardens and Parks Authority (BGPA) have two plants of *Acacia leptoneura* in their gardens.
2. DEC has conducted surveys for *Acacia leptoneura*.
3. Declared Rare Flora (DRF) markers have been installed at Population 1.
4. DEC with assistance from the CWDTFCRT is overseeing the implementation of this plan and will include information on progress in its annual report to DEC's Corporate Executive and funding bodies.

Plan objective: The objective of this plan is to abate identified threats and maintain or enhance *in situ* populations to ensure the long-term preservation of the species in the wild.

Recovery criteria

Criteria for success: The number of populations has increased and/or the number of mature individuals has increased over the term of the plan.

Criteria for failure: The number of populations has decreased and/or the number of mature individuals has decreased over the term of the plan.

Recovery actions

1. Formally notify land managers.
2. Control grazing.
3. Undertake regeneration trials.
4. Collect and store seed.
5. Develop a translocation proposal and select suitable translocation sites.
6. Monitor populations.
7. Undertake surveys.
8. Undertake weed control.
9. Develop and implement a fire management strategy
10. Obtain biological and ecological information.
11. Ensure long-term protection of habitat.
12. Liaise with land managers and indigenous communities
13. Map habitat critical to the survival of *Acacia leptoneura*.
14. Promote awareness
15. Nominate *Acacia leptoneura* for listing under the Commonwealth EPBC Act
16. Review this plan and assess the need for further recovery actions

1. BACKGROUND

History

Acacia leptoneura was first collected by James Drummond from an undesignated locality in southwest Western Australia and was described by G. Bentham in 1842. The name *A. leptoneura* was widely misapplied until correctly described in *Flora of Australia* in 2001 as being known only from Drummond's type collection. The species was considered extinct for around 160 years until rediscovered in 2008 as a single plant on a roadside north of Dowerin. Further surveys in 2010 located another plant on adjoining private property.

Currently, *Acacia leptoneura* is known from two populations, comprising two plants.

Description

Acacia leptoneura is a semi-prostrate shrub 0.6m high and 2.2m wide. Branchlets are terete, strigose with straight closely appressed hairs, glabrescent. Phyllodes are shallowly to strongly incurved or sigmoid, terete to subterete, 3 to 7.5cm long, acute with shallowly recurved to uncinat apex, coriaceous, glabrous except appressed-puberulous at base, and striate by 16 slightly raised close nerves. Inflorescences are simple, 1 or 2 per axil; peduncles 4 to 6mm long, sparingly appressed-puberulous; heads globular, c. 5mm diam., 20 to 30-flowered. Flowers are 5-merous; sepals free, linear-spathulate (from *Flora of Australia* Volume 11B, 'Mimosaceae, Acacia Part 1', ABRIS/CSIRO Publishing, Melbourne (2001)).

Acacia leptoneura is similar to *A. subflexuosa* but differs in having 16-nerved phyllodes and a glabrous ovary, compared to the phyllodes being 8-nerved and the ovary appressed-puberulous in *A. subflexuosa* (Rowan and Maslin 1999).

Distribution and habitat

Acacia leptoneura is endemic to Western Australia where it is confined to a single area approximately 13km northeast of Dowerin. Population 1 is situated on a low rise on grey/white sandy loam over laterite in mostly cleared, degraded shrubland of *Hakea scoparia* and *Santalum acuminatum*. Population 2 is situated on a low lateritic ridge on brown sandy loam over laterite in open *Eucalyptus* mallee over open *Allocasuarina acutivalvis*, *A. campestris* and *Melaleuca coronicarpa* shrubland, also with *Hypocalymma angustifolium* and *Melaleuca sclerophylla*. The remnant containing Population 2 is approximately one hectare in size and has been fenced for some time. Both populations have calcareous white rock present on the soil surface nearby.

Table 1. Summary of population land vesting, purpose and manager

| Pop. No. & Location | DEC District | Shire | Vesting | Purpose | Manager |
|-------------------------|-------------------|---------|------------------|------------------|------------------|
| 1. Northeast of Dowerin | Central Wheatbelt | Dowerin | Shire of Dowerin | Road Reserve | Shire of Dowerin |
| 2. Northeast of Dowerin | Central Wheatbelt | Dowerin | Freehold | Private Property | Landholders |

Biology and ecology

Acacia leptoneura is believed to be a short to medium lived disturbance opportunist. Adult plants are likely to be killed by fire with recruitment from germination of soil-stored seed.

Threats

Acacia leptoneura is declared as rare flora (DRF) under the Western Australian *Wildlife Conservation Act 1950* and is ranked as Critically Endangered (CR) in WA under International Union for Conservation of Nature (IUCN 2001) criteria B1ab(iii)+B2ab(iii);D due to the extent of occurrence being less than 100km²; severely fragmented populations and being known to exist at no more than one location; a continuing decline in area, extent and/or quality of habitat; and area of occupancy less than 10km²; and population size

estimated to be less than 50 mature individuals. The extent of occurrence is 1.2km² and the area of occupancy is 0.0008km². The species is not listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999). The main threats to the species are:

- **Road maintenance.** Threats include grading, chemical spraying and construction of drainage channels, and the mowing of roadside vegetation.
- **Poor recruitment.** The species is known from just two plants.
- **Grazing** by rabbits (*Oryctolagus cuniculus*). Grazing would have an impact on the establishment of young plants of *Acacia leptoneura* thereby limiting natural recruitment. Rabbits also impact on the habitat through digging and through an increased nutrient level in the soil from droppings.
- **Small population size.** As *Acacia leptoneura* is known from just two plants the likelihood of the species declining due to a chance demographic or environmental event is high.
- Habitat degradation by **weed invasion.** Weeds suppress early plant growth by competing for soil moisture, nutrients and light. They also increase the fire hazard due to the easy ignition of high fuel loads, which are produced annually by many grass weed species.
- **Inappropriate fire regimes** would impact the viability of populations. Seeds of *Acacia leptoneura* are thought to germinate following fire. However, frequent fire would deplete the soil seed store.

The intent of this plan is to provide actions that will deal with immediate threats to *Acacia leptoneura*. Although climate change and drought may have a long-term effect on the species, actions taken directly to prevent their impact are beyond the scope of this plan.

Table 2. Summary of population information and threats

| Pop. No. & Location | Land Status | Year / No. of plants | Current condition | Threats |
|--------------------------------|--------------------|----------------------------|-------------------|--|
| 1. Northeast of Dowerin | Shire road reserve | 2008 1 2009 1 2010 1 | Degraded | Road maintenance, weeds, lack of recruitment, fire |
| 2. Northeast of Dowerin | Private Property | 2010 1 | Degraded | Grazing, fire, lack of recruitment |

Populations in **bold text** are considered to be important populations.

Guide for decision-makers

Section 1 provides details of current and possible future threats. Actions that could result in any of the following may potentially result in a significant impact on the species.

- Damage or destruction of occupied or potential habitat.
- Alteration of the local surface hydrology or drainage.
- Reduction in population size.
- A major increase in disturbance in the vicinity of a population.

Habitat critical to the survival of the species, and important populations

Acacia leptoneura is ranked in WA as CR, and as such it is considered that all known habitat for the species is habitat critical to its survival, and that all wild populations are important populations. Habitat critical to the survival of *A. leptoneura* includes the area of occupancy of populations, areas of similar habitat surrounding and linking populations (these providing potential habitat for population expansion and for pollinators), additional occurrences of similar habitat that may contain undiscovered populations of the species or be suitable for future translocations, and the local catchment for the surface and/or groundwater that maintains the habitat of the species.

Benefits to other species or ecological communities

Recovery actions implemented to improve the quality or security of the habitat of *Acacia leptoneura* will also improve the status of associated native vegetation. One priority flora taxon *Melaleuca sclerophylla* (Priority 3) occurs within 500m of *A. leptoneura*. See Smith (2011) for a description of Priority categories.

Acacia leptoneura does not occur within or adjacent to any Threatened Ecological Communities.

International obligations

This plan is fully consistent with the aims and recommendations of the Convention on Biological Diversity, ratified by Australia in June 1993, and will assist in implementing Australia's responsibilities under that Convention. The species is not listed under Appendix II in the United Nations Environment Program World Conservation Monitoring Centre (UNEP-WCMC) Convention on International Trade in Endangered Species (CITES), and this Interim Recovery Plan (IRP) does not affect Australia's obligations under any other international agreements.

Indigenous consultation

A search of the Department of Indigenous Affairs Aboriginal Heritage Sites Register revealed no sites of Aboriginal significance adjacent to populations of *Acacia leptoneura*. However, input and involvement has been sought through the South West Aboriginal Land and Sea Council (SWALSC) and Department of Indigenous Affairs to determine if there are any issues or interests. Indigenous opportunity for future involvement in the implementation of the Recovery plan is included as an action in the plan.

Social and economic impacts

The implementation of this recovery plan may potentially cause some social and economic impact. For the population occurring on private property (Population 2) this may be through the loss of land available for development, as well as the cost of implementing recovery actions such as fencing and weed control. For the population on land vested with the Shire of Dowerin (Population 1) social and economic impact may be through the implementation of recovery actions (controlling weeds) and restrictions on road management practices.

Affected interests

Private landholders and the Shire of Dowerin.

Evaluation of the Plan's Performance

DEC, in conjunction with the Central Wheatbelt District Threatened Flora and Communities Recovery Team (CWDTFCRT), will evaluate the performance of this plan. In addition to annual reporting on progress and evaluation against the criteria for success and failure, the plan will be reviewed following five years of implementation.

2. RECOVERY OBJECTIVE AND CRITERIA

Objective

The objective of this plan is to abate identified threats and maintain or enhance *in situ* populations to ensure the long-term preservation of the species in the wild.

Criteria for success: The number of populations has increased and/or the number of mature individuals has increased over the term of the plan.

Criteria for failure: The number of populations has decreased and/or the number of mature individuals has decreased over the term of the plan.

3. RECOVERY ACTIONS

Existing recovery actions

The Botanic Gardens and Parks Authority (BGPA) have two plants of *Acacia leptoneura* in their gardens. BGPA also has 8.4g of *A. leptoneura* seed.

Surveys have been conducted by DEC, in particular the Dowerin area.

Declared Rare Flora (DRF) markers have been installed at Population 1. These alert people working in the vicinity to the presence of the species and the need to avoid work that may damage it or its habitat.

Ongoing and future recovery actions

DEC is overseeing the implementation of this plan and, with the assistance of the Central Wheatbelt District Threatened Flora and Communities Recovery Team (CWDTFCRT), will include information on progress in annual reports to DEC's Corporate Executive and funding bodies. Where recovery actions are implemented on lands other than those managed by DEC, permission has been or will be sought from the appropriate land managers prior to actions being undertaken. The following recovery actions are roughly in order of descending priority, influenced by their timing over the term of the plan. However this should not constrain addressing any recovery action if funding is available and other opportunities arise.

1. Coordinate recovery actions

DEC will coordinate recovery actions for *Acacia leptoneura* with assistance from the CWDTFCRT and will include information on progress in annual reports to DEC's Corporate Executive and funding bodies.

Action: Coordinate recovery actions
Responsibility: DEC (Central Wheatbelt District) with assistance from the CWDTFCRT
Cost: \$6,000 per year

2. Formally notify land managers

The Shire of Dowerin and private property owners need to be formally notified of the presence of *Acacia leptoneura*.

Action: Formally notify land managers
Responsibility: DEC (Species and Communities Branch (SCB))
Cost: \$2,000 in year 1

3. Control grazing

Grazing by rabbits will be monitored and managed at both populations. If necessary, grazing will be controlled through baiting and/or installation of rabbit proof fencing. Agreement will be sought to install fencing and funding assistance may be obtained through the DEC.

Action: Control grazing
Responsibility: DEC (Central Wheatbelt District) and Shire of Dowerin
Cost: \$10,000 in year 1; \$2,000 per year thereafter

4. Undertake regeneration trials

Natural disturbance events (physical or fire) may be the most effective means of germinating *Acacia leptoneura* seed in the wild. Different disturbance techniques should be investigated (i.e. soil disturbance and fire), to determine the most successful and appropriate method. Records will need to be maintained for future research. Any disturbance trials will need to be undertaken in conjunction with weed control.

Action: Undertake regeneration trials
Responsibility: DEC (Science Division and Central Wheatbelt District)
Cost: \$7,000 in years 1 and 3, \$2,000 in years 2, 4 and 5

5. Collect and store seed

Preservation of genetic material is essential to guard against extinction of the species if the wild populations are lost. It is recommended that seed be collected and stored in the TFSC as well as BGPA.

Action: Collect and store seed
Responsibility: DEC (Central Wheatbelt District and TFSC) and BGPA
Cost: \$5,000 per year

6. Develop a translocation proposal, select suitable translocation sites and implement translocation

Translocation may be deemed desirable for the conservation of this species if surveys fail to locate new populations. A translocation proposal will be developed and suitable translocation sites selected. Information on the translocation of threatened plants and animals in the wild is provided in DEC's Policy Statement No. 29 *Translocation of Threatened Flora and Fauna* (CALM 1995), and the Australian Network for Plant Conservation translocation guidelines (Vallee *et al.* 2004). All translocation proposals require endorsement by DEC's Director of Nature Conservation. Monitoring of translocations is essential and will be included in the timetable developed for the Translocation Proposal.

Action: Develop a translocation proposal, select suitable translocation sites and implement translocation
Responsibility: DEC (Science Division and Central Wheatbelt District) and BGPA
Cost: \$10,000 in years 1 and 2; and \$5,000 in subsequent years

7. Monitor populations

Monitoring of factors such as grazing, weed invasion, habitat degradation, hydrology (including salinity), population stability (expansion or decline), pollinator activity, seed production, recruitment, and longevity is essential. The populations will be inspected and an accurate location recorded.

Action: Monitor populations
Responsibility: DEC (Central Wheatbelt District)
Cost: \$5,000 per year

8. Undertake surveys

It is recommended that areas of potential suitable habitat be surveyed for the presence of *Acacia leptoneura* during its flowering period. All surveyed areas will be recorded and the presence or absence of the species documented to increase survey efficiency and reduce unnecessary duplicate surveys. Where possible, volunteers from the local community, Landcare groups, wildflower societies and naturalists clubs will be encouraged to become involved.

Action: Undertake surveys
Responsibility: DEC (Central Wheatbelt District) with assistance from the CWDTFCRT and volunteers
Cost: \$5,000 per year

9. Undertake weed control

Weeds are a threat to Population 1 and control is required. The following actions will be implemented:

1. Determine which weeds are present and map them.

2. Select appropriate technique; herbicide, mowing or hand weeding.
3. Control invasive weeds by hand removal and/or spot spraying around the *Acacia leptoneura* plants when weeds first emerge.
4. Revegetation with site specific species is required (in Autumn) to maintain low weed levels.
5. Monitor the success of the treatment on weed death, and the tolerance of *Acacia leptoneura* and associated native plant species to the treatment.
6. Report on the method and success of the treatment, and effect on *Acacia leptoneura* plants and associated species.

Action: Undertake weed control
Responsibility: DEC (Central Wheatbelt District) and Shire of Dowerin
Cost: \$6,000 per year, as required

10. Develop and implement a fire management strategy

Fire will be prevented from occurring in the habitat of populations, except where it is being used experimentally as a recovery tool. A fire management strategy will be developed that recommends fire frequency, intensity, season, and control measures.

Action: Develop and implement a fire management strategy
Responsibility: DEC (Central Wheatbelt District)
Cost: \$10,000 in first year and \$2,000 in subsequent years

11. Obtain biological and ecological information

Additional knowledge of the biology and ecology of the species will provide a scientific basis for management of *Acacia leptoneura* in the wild. Overall investigations will ideally include:

1. Study of the soil seed bank dynamics and the role of various factors including disturbance, competition, drought, inundation and grazing in recruitment and seedling survival.
2. Determination of reproductive strategies, phenology and seasonal growth.
3. Investigation of reproductive success and pollination biology.
4. Investigation of minimum viable population size.
5. The impact of changes in hydrology in the habitat.

Action: Obtain biological and ecological information
Responsibility: DEC (Science Division and Central Wheatbelt District)
Cost: \$10,000 per year

12. Ensure long-term protection of habitat

DEC will investigate, with consent from the land owners, having either a conservation covenant placed on land containing Population 2 of *Acacia leptoneura*, or declaring the land as a reserve for conservation under the Conservation Commission.

Action: Ensure long-term protection of habitat
Responsibility: DEC (Central Wheatbelt District, SCB Nature Conservation Covenant Program and Land Unit), DPI and Department of Mines and Petroleum (DOMP)
Cost: \$3,000 per year

13. Liaise with land managers and indigenous communities

Staff from DEC Central Wheatbelt District will liaise with land managers to ensure that populations of *Acacia leptoneura* are not accidentally damaged or destroyed. Indigenous consultation will take place to determine if there are any issues or interests in areas that are habitat for *A. leptoneura*.

Action: Liaise with land managers and indigenous communities
Responsibility: DEC (Central Wheatbelt District)
Cost: \$2,000 per year

14. Map habitat critical to the survival of *Acacia leptoneura*

Although habitat critical to the survival of the species is alluded to in Section 1, it has not yet been mapped and will be addressed under this action. If additional populations are located, habitat critical to their survival will be determined and mapped.

Action: Map habitat critical to the survival of *Acacia leptoneura*
Responsibility: DEC (SCB and Central Wheatbelt District)
Cost: \$6,000 in year 2

15. Promote awareness

The importance of biodiversity conservation and the protection of *Acacia leptoneura* will be promoted to the public. This will be achieved through an information campaign using local print and electronic media and by setting up poster displays. An information sheet, which includes a description of the plant, its habitat type, threats, management actions and photos will be produced. Formal links with local naturalist groups and interested individuals will also be encouraged.

Action: Promote awareness
Responsibility: DEC (Central Wheatbelt District, SCB and Corporate Relations) and with assistance from the CWDTFCRT
Cost: \$4,000 in year 1 and \$2,000 in years 2-5

16. Nominate *Acacia leptoneura* for listing under the Commonwealth EPBC Act

Staff from DEC's SCB will develop a Species Profile and Threats (SPRAT) and/or EPBC Act nomination for this species. The nomination will be forwarded to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities for referral to the Commonwealth Threatened Species Scientific Committee (TSSC) for listing under the EPBC Act.

Action: Nominate *Acacia leptoneura* for listing under the Commonwealth EPBC Act
Responsibility: DEC (SCB)
Cost: \$3,000 in year 1

17. Review this plan and assess the need for further recovery actions

If *Acacia leptoneura* is still ranked as Critically Endangered at the end of the five-year term of this plan, the need for further recovery actions, or a review of this plan will be assessed and a revised plan prepared if necessary.

Action: Review this plan and assess the need for further recovery actions
Responsibility: DEC (SCB and Central Wheatbelt District)
Cost: \$3,000 in year 5

Table 3. Summary of recovery actions

| Recovery action | Priority | Responsibility | Completion date |
|-------------------------------|----------|--|-----------------|
| Coordinate recovery actions | High | DEC (Central Wheatbelt District) with assistance from the CWDTFCRT | Ongoing |
| Formally notify land managers | High | DEC (SCB) | Ongoing |
| Control grazing | High | DEC (Central Wheatbelt District) and Shire of Dowerin | Ongoing |
| Undertake regeneration trials | High | DEC (Science Division and Central Wheatbelt | 2016 |

| | | District) | |
|---|--------|--|---|
| Collect and store seed | High | DEC (Central Wheatbelt District and TFSC) and BGPA | 2016 |
| Develop a translocation proposal, select suitable translocation sites and implement translocation | High | DEC (Science Division and Central Wheatbelt District) and BGPA | 2016 |
| Monitor populations | High | DEC (Central Wheatbelt District) | Ongoing |
| Undertake surveys | High | DEC (Central Wheatbelt District) with assistance from the CWDTCRT and volunteers | Ongoing |
| Conduct weed control | High | DEC (Central Wheatbelt District) and Shire of Dowerin | Ongoing |
| Develop and implement a fire management strategy | High | DEC (Central Wheatbelt District) | Developed by 2012 with implementation ongoing |
| Obtain biological and ecological information | High | DEC (Science Division and Central Wheatbelt District) | 2016 |
| Ensure long-term protection of habitat | Medium | DEC (Geraldton District and Land Unit), DPI and Department of Mines and Petroleum (DOMP) | Ongoing |
| Undertake liaison with land managers and indigenous communities | Medium | DEC (Central Wheatbelt District) | Ongoing |
| Map habitat critical to the survival of <i>Acacia leptoneura</i> | Medium | DEC (SCB and Central Wheatbelt District) | 2013 |
| Promote awareness | Medium | DEC (Central Wheatbelt District, SCB and Corporate Relations) and with assistance from the CWDTCRT | Ongoing |
| Nominate <i>Acacia leptoneura</i> for listing under the Commonwealth EPBC Act | Medium | DEC (SCB) | 2012 |
| Review this plan and assess the need for further recovery actions | Medium | DEC (SCB and Central Wheatbelt District) | 2016 |

4. TERM OF PLAN

This plan will operate from July 2012 to June 2017 but will remain in force until withdrawn or replaced. If the species is still ranked CR after five years, the need for further recovery actions will be determined.

5. REFERENCES

- Cowan, R.S. and Maslin, B.R. (1999) *Acacia* miscellany 17. Miscellaneous new taxa and lectotypifications in Western Australian *Acacia*, mostly section *Plurinerves* (Leguminosae: Mimosoideae). *Nuytsia* 12(3): 413-452.
- Department of Conservation and Land Management (1992) Policy Statement No. 44 *Wildlife Management Programs*. Department of Conservation and Land Management, Western Australia.
- Department of Conservation and Land Management (1994) Policy Statement No. 50 *Setting Priorities for the Conservation of Western Australia's Threatened Flora and Fauna*. Department of Conservation and Land Management, Western Australia.
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6. TAXONOMIC DESCRIPTION

Acacia leptoneura

Flora of Australia Volume 11B, 'Mimosaceae, Acacia Part 1', ABRIS/CSIRO Publishing, Melbourne (2001).

Shrub (?). Branchlets terete, strigose with straight closely appressed hairs, glabrescent. Stipules subpersistent. Phyllodes shallowly to strongly incurved or sigmoid, terete to subterete, 3–7.5cm long, c. 1mm diam., acute with shallowly recurved to uncinata apex, coriaceous, glabrous except appressed-puberulous at base, striate by 16 slightly raised close nerves; gland c. 4mm above pulvinus; pulvinus smooth, flared at base. Inflorescences simple, 1 or 2 per axil; peduncles 4–6mm long, sparingly appressed-puberulous; heads globular, c. 5mm diam., 20–30-flowered; bracteoles linear to fusiform. Flowers 5-numerous; sepals free, linear-spathulate. Pods and seeds not seen.