



# MOUNT LOFTY RANGES FOREST RESERVES MANAGEMENT PLAN

December 2014



## FOREWORD

### Mount Lofty Ranges Forest Reserves - Management Plan

The Mount Lofty Ranges Forest Reserves will be managed according to this Management Plan, under the framework of ForestrySA's policies, guidelines and Forest Management System.

The administrative details contained in this document are current as at date of authorisation. The plan will operate for a period of five years, 2014-2019, at which time it will be reviewed. Implementation of the plan will occur so that regulatory and other obligations are met, and so that programs are delivered in line with budgets and operational constraints.

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**CHIEF EXECUTIVE  
FORESTRYSA**

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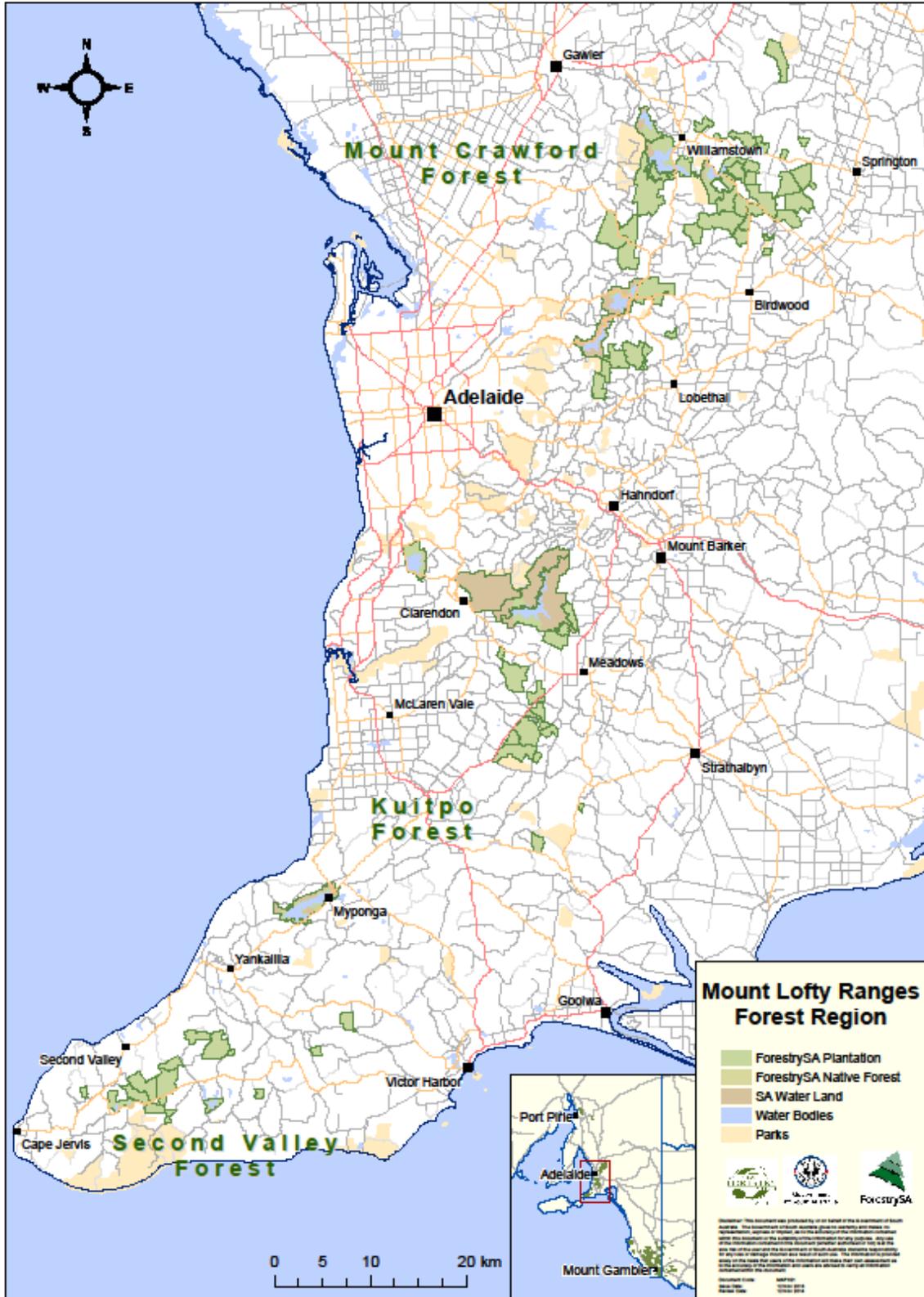
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## LOCATION MAP – Mount Lofty Ranges Forest Reserves



## STATEMENT OF PURPOSE

The Mount Lofty Ranges Forest Reserves are managed by ForestrySA as commercial forests optimising economic value to regional communities through plantation forest operations, while protecting biodiversity and cultural heritage, and providing for a range of recreational activities, community events and educational values.

This Mount Lofty Ranges Forest (MLRF) plan describes the management context and planning framework, summarising the natural, built and heritage values; community use; and other issues that impact on the management of the MLRF. The plan also addresses the management objectives of plantation forestry, including conservation, recreation, historical and heritage aspects of the forest reserves.

## MANAGEMENT OBJECTIVES

The management of the MLRF aligns with the South Australian Forestry Corporation's (trading as ForestrySA) Charter, incorporating the management of commercial plantations, biodiversity conservation and heritage protection, community engagement and regional development to:

- Identify and protect natural values including biodiversity, threatened species, native forest reserves, soil and water.
- Identify and protect Indigenous and non-indigenous cultural heritage values.
- Sustainably manage the plantation estate to maximise the return from wood products.
- Promote the environmentally and culturally sensitive use of the forest estate for a range of recreation activities, community events, educational values and other non-timber forest products.
- Protect and enhance the health of the forests through the management of weeds, pests and diseases, wildfire, rubbish dumping and illegal activities.
- Provide opportunities for stakeholders to provide feedback to ForestrySA.

## COMMUNITY CONSULTATION

ForestrySA has identified relevant stakeholders, who have been provided with opportunity to comment on the draft plan. These stakeholders include agencies, groups and individuals with social, economic, environmental or cultural interests in the MLRF.

## INTRODUCTION

The ForestrySA Mount Lofty Ranges Forest Reserves are located in the Mount Lofty Ranges and Fleurieu Peninsula of South Australia. The Forest Reserves are referred to throughout this document as the MLRF.

The MLRF includes forests at Mount Crawford (MCF), Kuitpo Forest (KF) and Second Valley (SVF) occupying approximately 19,500ha (66% of the ForestrySA Ranges Region). The MLRF headquarters is located at the Mount Crawford Forest Information Centre.

The MLRF forests were established in the late 1800's. Today these forests provide sawlog for four domestic sawmills. In addition, some logs are sold to overseas markets and exported from Port Adelaide. Radiata pine (*Pinus radiata*) is the dominant plantation species in the MLRF, comprising 97% of the plantation area.

The MLRF shares boundaries with Conservation Parks, SA Water Reserves and private farming land. Generally, the landscape of the MLRF is moderately sloping with notable high points at Mount Crawford, Mount Panorama and Mount Hayfield.

The climate of the MLRF is Mediterranean with warm dry summers and cool wet winters. Average annual rainfall varies from 750mm in the south to 600mm in the north, with a trend of decreasing rainfall from the western side to the eastern side of the Mount Lofty Ranges. The soils in the MLRF are reasonably fertile and provide suitable growing conditions for plantation forestry.

The MLRF covers a number of water catchment areas including: Gawler River and Torrens Catchment (within MCF), Onkaparinga and Murray-Darling Catchment (within KF), and smaller Fleurieu Peninsula catchments (within SVF).

## MANAGEMENT FRAMEWORK

There are a number of legislative and SA Government policy requirements that are incorporated into ForestrySA's management decisions and operations.

### Legislative Framework

The most significant Acts that affect ForestrySA activities include the *Forestry Act 1950* and *Forestry Regulations 2005*; *Forest Property Act 2000*; *Native Vegetation Act 1991* and the *Natural Resources Management Act 2004*. The ForestrySA legal register lists relevant legislation. Appendix 1 details further information on legislation, policies and codes of practice.

### State and Regional Planning Framework

The management goals for MLRF complement existing state and regional plans, including those relating to the management of commercial forestry, bushfire mitigation, natural resources, biodiversity, conservation, cultural heritage, recreation and tourism.

These plans include:

- SA Strategic Plan - In a Great State.
- Our Place. Our Future, State Natural Resources Management Plan, South Australia 2012-2017.
- The 30-Year Plan for Greater Adelaide.
- South Australian Tourism Plan 2009-2014.

At a regional level, biodiversity conservation priorities are guided by:

- Adelaide and Mount Lofty Ranges Natural Resources Management Plan 2014-15 to 2023-24
- Informing Biodiversity Conservation for the Adelaide and Mount Lofty Ranges Region South Australia.
- Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia.
- NatureLinks, part of the SA Strategic Plan to develop five 'NatureLinks' biodiversity regions across the state with goals of integrated ecosystem management.
- No Species Loss-A Nature Conservation Strategy for South Australia 2007-2017

Commercial forestry in the MLRF is also identified in the following:

- Water Allocation Plan (WAP) Western Mount Lofty Ranges 2013
- Water Allocation Plan (WAP) Eastern Mount Lofty Ranges 2013

At the Local Government level, sections of the MLRF lie within these areas: Barossa Council, Adelaide Hills Council, City of Playford, District Council of Mt Barker, City of Onkaparinga,

Alexandrina Council, District Council of Yankalilla, and City of Victor Harbor. These Local Government bodies have strategic plans and planning schemes that include objectives for increased tourism, heritage and environmental protection, volunteer support and improved recreational opportunities.

### Forest Management Context

The Charter of the South Australian Forestry Corporation was formulated in accordance with Section 12 of the *Public Corporations Act 1993*. The Charter outlines ForestrySA's strategic position and its commercial and non-commercial operations. The ForestrySA Corporate Overview outlines the corporation's vision, mission, roles and values.

The MLRF Management Plan facilitates strategies identified in the ForestrySA Strategic Plan, including the following:

- maintain Australian Forestry Standard (AFS) certification;
- leverage community engagement opportunities; and
- maintain and enhance the reputation of the business.

ForestrySA maintains certification to the AFS (AS 4708) via the Forest Management System, which provides a framework of sustainable forest management practices and processes. These are described below.

A large part of ensuring appropriate management of these forests is to understand, identify, assess and manage environmental aspects and impacts. ForestrySA achieves this through a formal process identified within the FMS and records the details of these in its Aspects & Impacts Register. The controls from this process flow into management procedures and actions on the ground.

### Vegetation Management Zoning

In 1992 the Native Vegetation Council and ForestrySA agreed to a process for the vegetation zoning of Forest Reserves. This resulted in three vegetation management zones across the MLRF:

- *General Forestry Zone*: includes commercial plantations and other plantings and land uses related to commercial timber production. These areas are exempt from the requirements of the *Native Vegetation Act 1991*.
- *Conservation Zone*: contains areas of remnant and regenerating native vegetation managed for conservation purposes. These areas include gazetted Native Forest Reserves as well as small areas of native vegetation scattered throughout the forest reserves. Conservation zones areas are protected under the *Native Vegetation Act 1991* and remain protected for conservation purposes in perpetuity.
- *Transition Zone*: contains commercial and non-commercial plantings, sometimes in significant numbers, as well as native vegetation. These zones are managed to increase their conservation values through the removal of the remaining pines, weed control and sometimes plantings with native species.

### Management Planning and Administration

ForestrySA manages the MLRF according to Operations Plans. These plans include plantation establishment, harvesting, weed control, biodiversity and conservation management, maintenance of visitor facilities and built heritage and community programs. Actions identified in this Management Plan are prioritised in budget, operational and other management processes.

ForestrySA undertakes operational works and coordinates a community engagement program to assist with the management of native forests, recreational facilities and heritage sites. The 'Friends of the Forest' program recruits volunteers, and larger volunteer groups come from youth development, environmental education, and training programs. These

include organisations such as the Department of Correctional Services community service programs.

## RESERVE VALUES

The following sections relate to the reserve values and associated management issues of Plantation Forestry, Biodiversity, Conservation, Cultural Heritage and Community Use.

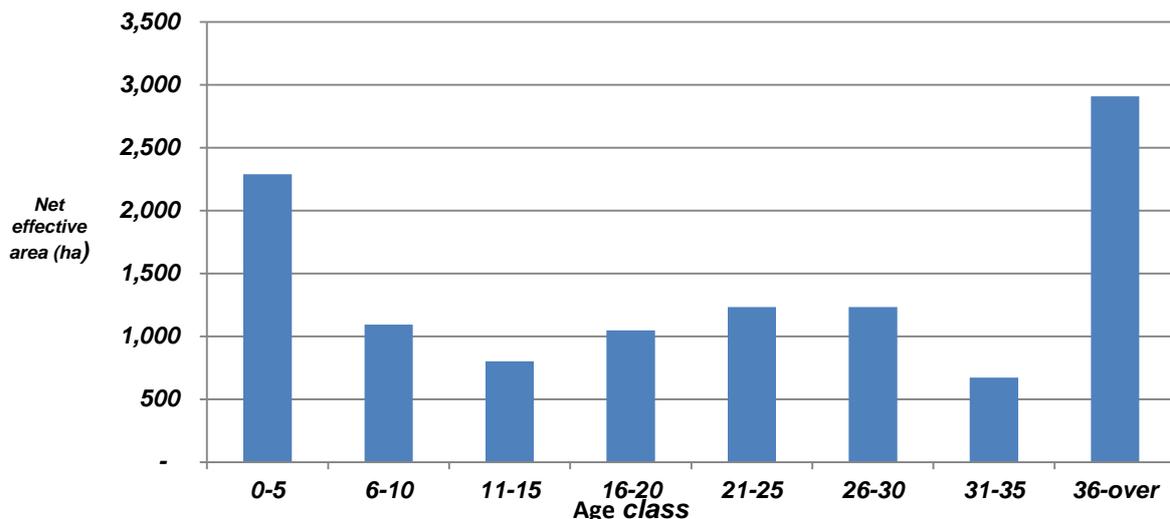
*Management Objectives* are to:

- Manage plantation forests for commercial production.
- Maximise the value of the managed businesses.
- Foster and support competitive domestic processing industries.
- Participate in regional resource protection.
- Manage conservation and cultural values for the community.

### Plantation Forestry

ForestrySA manages approximately 15,200ha of declared Forest Reserve, 4,200ha of declared Native Forest Reserve and 1,100ha of SA Water Land under the *Forestry Act 1950* for the South Australian Government in the Mount Lofty Ranges Region of South Australia.

#### Radiata pine plantation age class distribution for the MLRF as at 30 June 2013.



### Sales

The MLRF contributes to the supply of saw and other log grades to markets within the greater Adelaide area. A variety of log products are also exported; however, this program aims to achieve a management objective of thinning the plantations, and will only operate for a defined period. Before this export program commenced, the total volume harvested from the MLRF had averaged around 130,000 m<sup>3</sup> per year from a mix of clearfall and thinning operations. First thinnings (T1) generally comprise lower grade logs and post material, while later thinnings and clearfelling generate a higher proportion of sawlog.

Proportional outturn of products from the MLRF for the 2012/13 financial year.

Product	Volume (m <sup>3</sup> )	Percent (%)
Sawlog	68,800	64
Lower Grade		
Sawlog	35,200	33
Preservation	3,200	3
Total	107,200	100

## Silviculture

Thinning operations yield saleable products and maintain growth by removing subdominant poorer and/or malformed trees, therefore focusing growth capacity on retained trees. Fertiliser is applied based on growth assessments and a business case.

Other site preparation and tending operations include:

- Managing logging residue in order to provide a suitable planting bed. The intent is to reduce broadcast or windrow burning.
- Cultivating sites to improve seedling survival and growth.
- Controlling weed competition through selective herbicide application and manual treatments. This results in improved tree growth.

These operations, together with improved tree genetics, have ensured an increase in plantation productivity.

## Management Actions

- Continue plantation re-establishment to ensure the ongoing supply of products to local markets.
- Apply improvements in silvicultural and general forestry management treatments and practices as per Operations Plans.

## Biodiversity Conservation - Flora

The MLRF contains approximately 6,200ha of native vegetation in Conservation and Transition Zones. The native vegetation in the MLRF contributes significantly to biodiversity conservation. Larger and more significant areas of native vegetation within forest reserves are generally gazetted as Native Forest Reserves (NFRs) under the *Forestry Act 1950* and managed under the *Forestry Regulations 2005*. The MLRF contains 14 gazetted NFRs covering about 4,200ha.

Much of the native vegetation contained in the MLRF is of moderate to excellent condition, and in 2003 the Commonwealth Government identified the Mount Lofty Ranges as one of the 15 National Biodiversity Hotspots in recognition of its high biodiversity values.

The MLRF includes a number of vegetation associations dominated by eucalypt forest and woodland with a predominately healthy understorey.

Priority vegetation associations in the MLRF include:

- Fleurieu Peninsula Swamps, located in SVF, are rated as a Nationally Threatened Ecological Community, protected under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. There is approximately 162ha of swamp vegetation protected within Conservation Zone in Second Valley.
- *Eucalyptus dalrympleana* Open Forest located in Cudlee Creek (MCF) and in Mount Hayfield (SVF).

- *Leptospermum lanigerum/Leptospermum continentale* Closed Shrubland rated as Endangered, located in freshwater soaks in Scotts (MCF).
- *Eucalyptus camaldulensis* Open Woodland at Meadows Flat (KF).

A list of threatened flora species is included in Appendix 2.

#### Biodiversity Conservation – Fauna

Native fauna species in the MLRF include 17 mammals, including the Southern-brown bandicoot (*Isodon obesulus obesulus*) which is rated as Nationally Endangered and Vulnerable for South Australia.

There are 86 bird species recorded including two species that are Nationally Endangered, the Chestnut-rumped Heathwren (*Hylacola pyrrhopygia parkeri*) and Mount Lofty Ranges Southern Emu-wren (*Stipiturus malachurus intermedius*). The Department of Environment, Water and Natural Resources (DEWNR) Regional Recovery Plan identifies another 17 bird species of regional conservation significance, including the Yellow-tailed Black Cockatoo (*Calyptorhynchus funereus*) which thrives in plantation forests.

There are 28 species of reptiles and amphibians recorded, including three of State conservation significance: Cunningham's Skink (*Egernia cunninghami*), Brown Toadlet (*Pseudophryne bibronii*) and the Heath Goanna (*Varanus rosenbergi*).

Several native fish populations occur within the MLRF. These include Climbing Galaxias (*Galaxias brevipinnis*) recorded in SVF, or smaller Fleurieu Peninsula water catchments; and MCF or Gawler River and Torrens water catchments. The Flathead Gudgeon (*Philypnodon grandiceps*) has also been recorded within MCF.

#### Conservation Programs

Since 1996 ForestrySA has undertaken and been involved in conservation-based programs and/or projects focussed on threatened species recovery, rehabilitation, revegetation and weed control.

The most significant external programs include:

- South Para Natural Resources Management Committee
- Sixth Creek Catchment Group
- Nature Conservation Society of South Australia Mount Lofty Ranges Woodland Bird Survey

ForestrySA is a member of a number of Threatened Species Recovery Programs, including:

- Fleurieu Swamps/Mount Lofty Ranges Southern Emu-wren (*Stipiturus malachurus intermedius*)
- Southern Brown Bandicoot (*Isodon obesulus obesulus*).
- Mount Compass Swamp Gum (*Eucalyptus paludicola*)
- Southern Lofty Block Threatened Orchids

#### Management Actions

- Continue to protect areas of native vegetation as conservation zone.
- Plan and maintain conservation programs for the management of native vegetation including rehabilitation, revegetation and biodiversity corridors.
- Maintain links with other natural resource management programs.
- Continue to develop communication on topical conservation issues and priorities.
- Continue to provide opportunities to develop integrated regional conservation programs and access funds for on-ground works.
- Continue actively encouraging community participation in programs to increase involvement in biodiversity conservation activities.

## PESTS AND DISEASES

The *Natural Resources Management Act 2004* identifies pest plants and animals along with requirements for their limitation, control and prevention.

### Weeds and Other Pest Plants

In addition to weeds, several plant species can become pests in both plantation and native forest. Native plant species like Varnish Wattle (*Acacia verniciflua*) can out-compete young pines. Conversely, pine wildlings can be a problem in native vegetation.

Weeds can impede harvesting, pruning and establishment practices, and they can also be a health and/or fire hazard. Weeds in native vegetation affect biodiversity values by displacing and competing with native species and altering the structure of the vegetation community. Of particular concern in the MLRF are boneseed, broom, blackberry, olives, asparagus weeds and gorse.

Minimising the transfer of weeds from between plantation and conservation areas is critical in protecting biodiversity values.

Effective weed management in young plantations, both prior to establishment and for two years following planting, is critical to reduce competition for nutrients and water, and to ensure the maximum early growth of desirable plants. Depending on the range of target weeds, soil type, topography, environmental and neighbouring land use, chemical weed control is an option.

### Weed Management Strategy

The ForestrySA Weed Management Strategy has been implemented to identify the distribution of significant economic and environmental weeds across ForestrySA land and to capture this information in a single GIS database.

ForestrySA contributed to a state-wide risk assessment for significant economic and environmental weeds, with the results summarised in Anderson, Drew and Virtue (2005). This assessment was useful in identifying weeds and in developing plans and priorities for their control. Weed management is prioritised at a number of levels depending on weed risk and location. Control strategies include consideration of regional priorities, integrated opportunities with other agencies and weed spread into adjoining private or public lands.

### Diseases

*Phytophthora cinnamomi* is a soil-borne water mould that is dispersed by water and other vectors, such as native animals, vehicles and recreational users. It mainly impacts native vegetation but can also affect some exotic tree species.

Phytophthora Management Guidelines are available

at: <http://www.environment.gov.au/resource/management-phytophthora-cinnamomi-biodiversity-conservation-australia>

### Softwood Plantations – Insect Pests and Diseases

ForestrySA uses several strategies to identify the insect pests and diseases that affect the growth, health and survival of plantations. Aerial forest health surveys of the softwood plantation estate are carried out every year. Flights are followed by on-ground inspection of areas to determine/verify the cause of any identified health issues and to allow appropriate management decisions to be made.

### Insect Pests

The most important insect pests in softwood plantations are the Sirex Wood Wasp (*Sirex noctilio*) and the Monterey Pine Aphid (*Essigella californica*). The Five-Spined Bark Beetle (*Ips grandicollis*) also causes damage. Other insect pests that may cause damage are

Wingless Grasshoppers (*Phaulacridium vittatum*), the Golden Haired Bark Beetle (*Hylurgus ligniperda*) and the Black Pine Beetle (*Hylastes ater*).

Sirex Wood Wasp, a native wasp of Europe, is a major threat to the softwood forest industry. The National Strategy for Sirex Control (Haugen et al., 1990) is applied across ForestrySA pine plantations. The strategy includes biological control methods, including a nematode (*Beddingia siricidicola*) and several species of parasitic wasps.

Monterey Pine Aphid is found in all age classes and causes mild to severe defoliation, which can cause considerable growth loss. Maintaining plantation hygiene is important to reduce the risk of outbreaks.

#### *Diseases*

Two fungal diseases are common in pine plantations. Diplodia (*Sphaeropsis sapinea*) is an endemic fungal disease that causes wilting, dead tops and branches, and blue stain of the wood. It generally affects drought stressed or damaged trees. Spring Needle Cast (*Cyclaneusma minus*) is also endemic causing premature shedding of one-year old needles, in spring and autumn. There are no practical methods of control for either of these diseases.

### Hardwood Plantations – Insect Pests and Diseases

#### *Insect Pests*

In hardwood plantations, Autumn Gum Moth (*Mnesampela privata*), Sawflies (*Perga sp.*), Eucalyptus Leaf Beetles (*Chrysomelidae sp.*), Chockchafers (*Heteronyx sp.*) and Scarab Beetles (*Cadmus sp.*), and Weevils (*Gonipterus scutellatus*) are the most common pests. Once the trees obtain adult foliage these pests are rarely significant.

#### *Management Actions*

- Continue to implement the Weed Management Strategy in particular with regard to regional weed priorities and prevention of weed spread into adjoining lands.
- Continue health surveillance of all plantations.
- Continue the Sirex control program as per the National Strategy for Sirex Control.
- Continue to develop and adopt practices to minimise the risk of outbreaks and spread of pests and diseases.
- Identify and manage high-risk activities that have the potential to introduce or spread weeds and diseases.
- Address the risk of weed seed transfer and hygiene protocols in operational plans.

#### *Pest Animals*

The *EPBC Act* lists important threats that may impact on forest management, including land degradation and competition by rabbits, and predation by foxes. Several introduced species have been recorded within the MLRF, including Red Fox (*Vulpes vulpes*), Fallow Deer (*Capreolus dama*), Goat (*Capra aegagrus hircus*), Rabbit (*Oryctolagus cuniculus*), Black Rat (*Rattus rattus*) and House Mouse (*Mus musculus*).

Native Forest Reserve fox baiting programs are conducted occasionally in relation to fauna species of high conservation significance. Management of deer, goats and rabbits is undertaken in collaboration with DEWNR, NRM Boards, and the Sporting Shooters Association, Conservation and Wildlife Management Section.

#### *Management Actions*

- Continue existing pest animal control programs, subject to review and evaluation.
- Foster communication regarding the management of pest animals with stakeholders, including neighbours and land management agencies.

- Continue integration of pest animal control programs with regional and/or interagency programs.

### CULTURAL VALUES

The MLRF area has historical associations and significance for both indigenous and European cultures. Many factors contribute to its cultural value, including its importance in the history and traditions of indigenous groups as well as its history of early European settlement.

#### Indigenous Cultural Value

According to Tindale (1974), the northern part of the MCF around Kaiserstuhl is part of land once used by the Peramangk Aboriginal people and is a remnant example of the flora and fauna that provided food and shelter. An alternative name for the Kaiserstuhl peak is “patpoori”, the Aboriginal word meaning “little grass tree”, presumably *Xanthorrhoea quadrangulata*, the Rock Grass-tree, which is found in the reserve.

The Peramangk Aboriginal people also occupied an area near the Little Mount Crawford NFR. In the late 1800’s a large camp was present on the banks of the South Para River, within 2km of the reserve.

Tindale identified other sections of the MCF and KF once occupied by the Peramangk Aboriginal people, and most likely the Kurna Aboriginal people, as the approximate boundary of both these groups is close to the reserves. Tindale also identified that the SVF is part of the land once used by the Kurna and, most likely, the Ngarrindjeri Aboriginal people, as the approximate boundary of both of these groups is close to the reserves.

Many archaeological deposits have cultural significance for Aboriginal people today and many deposits may also have scientific significance. Certain sites are more likely to contain evidence of Aboriginal occupation than others; for example, claypans; rocky outcrops; dunes; and bush or forested areas. A site may also be important for historic events that occurred there. Such places may contain no archaeological evidence, but can have great significance to Aboriginal people.

The South Australian Government is responsible for the protection and preservation of sites, objects and remains of sacred, ceremonial, mythological or historical significance to Aboriginal people. The Register of Aboriginal Sites and Objects (*Aboriginal Heritage Act 1988*) lists known sites of significance to Aboriginal archaeology, anthropology, history and tradition. The Register currently records six sites on or near the MLRF. Included is Mount Hayfield, located 1km south-east of Kalamunda NFR, and which has been reported as a significant mythological site.

#### Management Actions

- Record indigenous cultural sites on the ForestrySA GIS once they become known and notify the relevant State Government department. These sites will be confirmed by Aboriginal Affairs and Reconciliation Division, Premier and Cabinet.
- Report any indigenous sites/objects via the ForestrySA incident reporting system and the significant site record form.
- Consult representatives of local Aboriginal groups on this management plan and encourage contributions on other management issues within the MLRFs.

For general information visit the National Native Title Tribunal, [www.nntt.gov.au](http://www.nntt.gov.au).

#### European Cultural Value

The MLRF contains sites of European Cultural Value in the following areas:

**Mt Crawford Forest**

- The Old School House
- School Masters House Ruin
- Church Ruin and Cemetery located adjacent to the MCF on Mount Road
- London's Ruin
- Herman's Hut Ruin
- Charcoal Pits
- Mount Crawford Arboretum located on Mount Road
- Historic Plantings at the Mount Crawford Information Centre
- Old Ruin – Cudlee Creek Forest

**Kuitpo and Second Valley Forest**

- State Heritage-Listed Plantations of Ironbarks (*Eucalyptus sideroxylon*) planted in 1898, the first forests planted in the Adelaide Hills
- Canary Island Pine (*Pinus canariensis*) and the radiata pine near the Kuitpo Information Centre
- Woodcutter's Cottage
- Rocky Creek Hut
- Ruins in Bells Gully
- Second Valley Forest
- Old Red Gum Slab Shed and Stock Yards
- Remains of Ruins near Ingalalla Falls

ForestrySA is currently using a number of old buildings for visitor accommodation, which supports the protection of these buildings.

*Management Actions*

- Continue to identify and record sites of cultural and historical significance and interest, including artefacts, and where appropriate notifying the relevant State Government department.
- Continue to manage and protect the above sites under the Forest Management System and operational planning processes.
- Consider restoration or conservation programs of some sites of cultural and heritage significance, subject to funding.
- Encourage the ongoing involvement of the local community and community programs in the conservation and management of cultural heritage sites.

**Cultural Value and Heritage Artefacts**

ForestrySA has a collection of heritage artefacts dating back to the early 1900's that have significant cultural, historic and educational value. Some artefacts have been donated or loaned to local museums, including artefacts from the SVF now displayed in the Yankalilla Museum.

The History Trust of South Australia (HTSA) also has a legislative requirement to protect heritage artefacts located by Government agencies, providing advice to ForestrySA regarding artefact protection and management. This has involved the cataloguing of heritage artefacts in line with guidelines provided by the HTSA.

Among other points, the guidelines recommend:

- Artefacts should only be loaned to HTSA-accredited organisations such as museums and heritage societies;
- Artefacts should only be displayed in a secure facility where the artefacts are safe, protected from the weather, and displayed and interpreted correctly.

## *Management Actions*

- Continue to manage and protect heritage artefacts under the Forest Management System and Operational Planning process.
- Catalogue and register heritage artefacts as a collection for use at educational and interpretive display at forest information centres and community events.
- Restore heritage artefacts for conservation and protection, subject to funding.
- Consider the loan of heritage artefacts to HTSA-accredited organisations with the expertise to protect, manage, display and securely store the artefacts.
- Encourage the ongoing involvement of the local community and other community programs in the conservation and management of heritage artefacts.

## COMMUNITY USE

The MLRF is a significant recreation and tourism resource containing diverse landscape types such as plantation, native forest, open-space and heritage sites.

During 2012/13, ForestrySA Forest Information Centres received over 14,000 enquiries, while approximately 43,000 people participated in 352 events held in ForestrySA managed forest areas.

The MLRF recorded more than 145,000 forest visitors. Over the last five years there have been 150,000 to 200,000 recorded visitors annually. However, due to recording limitations it is believed that actual visitation may be much greater.

The people of Adelaide value the Mount Lofty Ranges for its environmental and recreational opportunities including wildlife studies, camping, picnicking, bushwalking, mountain bike and horse riding. Shooting, trapping and other forms of hunting are not permitted in forest reserves.

ForestrySA is responsible for many aspects of community use, including public access and visitor management. Some activities require a permit, which can be obtained from the Mt Crawford or Kuitpo Offices. These activities are as follows:

- Camping
- Horse riding
- Fossicking
- Firewood collection

ForestrySA provides and maintains facilities including houses, cottages, huts and shelters, campgrounds, picnic grounds, recreation trails, boardwalks and bird hides, heritage sites, signage, and venues and information relating to special events. Examples of special events include the annual Bicycle SA, Dirty Weekend Mountain Bike Endurance Ride, Operation Flinders Trailblazer Challenge and Heysen 105 Trail Run.

More information on visitor management is provided in the following sections

### Visitor Facilities

The MLRF has visitor facilities in both native and plantation forests. People use both forest types extensively and often make little distinction between the two in terms of recreational pursuits. Although some activities, such as horse riding, are not permitted in Native Forest Reserves, this mosaic of forests generally supports a broader set of activities than other public land.

Camping is currently not permitted in the SVF; however, ForestrySA provides a picnic area and car park, from which visitors can access Ingalalla Waterfalls.

ForestrySA visitor facilities currently include the following:

- Forest Information Centres
- Visitor Accommodation: houses, cottages, huts and shelters
- Campgrounds and Picnic Grounds
- Multi-use Recreation Trails
- Heritage Buildings and Sites
- Purpose-built Infrastructure e.g. mountain bike tracks, boardwalks and horse yards

Demand for the amount and diversity of outdoor recreational experiences has increased as the Hills, Barossa and Adelaide populations grow and the city expands.

ForestrySA has been successful in obtaining external funding for conservation and recreation projects and leverages capital projects by:

- Using volunteer labour;
- Participating in programs such as the community service program of the Department of Correctional Services;
- Sourcing or recycling material such as plantation-grown hardwoods and recycled stone, from ForestrySA land.

Further information on forest recreation is available on the ForestrySA website <https://www.forestrysa.com.au>.

### *Management Actions*

- Continue to consider and develop community use capacity as appropriate.
- Develop and prioritise a program for the maintenance of recreational facilities, structures, signs and sites as funds permit.

### *Recreation Trails*

The MLRF provides an extensive network of trails for forest visitors. State and ForestrySA trails cater for walkers, mountain bike riders and horse riders.

The following State-based trails traverse MLR Forests including the Heysen Trail, Mt Lofty Walking Trails, Mawson Trails, Mawson Network Trails (Cudlee Creek Forest) and the Kidman Trail. These State based trails and a network of ForestrySA trails link visitor facilities and provide a range of recreational opportunities for forest visitors.

For more information visit <http://www.southaustraliantrails.com/>.

The MCF contains three walking trails and four multi-use trails, including the Kersbrook Horse Trail managed by Horse SA. KF has one short walking trail and four multi-use trails. There are no marked trails in the SVF; however, a short walk from a ForestrySA car park located on Hay Flat Road provides access to the Ingalalla Falls.

ForestrySA is a member of the South Australian Trails Coordinating Committee (SATCC). In line with ForestrySA policies and guidelines, walking and cycling is allowed on the significant network of established fire tracks throughout the forest. While these tracks are not specifically designed for walking and cycling, the majority are available for these activities. Horse riding with a permit is allowed on established fire tracks in areas zoned for General Forestry in the MLRF. However, horse riding is excluded from gazetted NFR and Conservation Zones due to the significant areas of native vegetation with high conservation value.

Regional maps and information brochures providing information on the MLRF trails are available on the ForestrySA website at <https://www.forestrysa.com.au/>.

### Mountain Bike Trails

As well as the Mawson Network Trails in Cudlee Creek Forest, a number of unmarked single-track mountain bike trails are located in the MCF and KF. These bike trails are generally in plantation compartments and may be temporary due to intermittent harvesting and plantation operations.

ForestrySA's focus on single-track mountain bike trails will continue in the Cudlee Creek Forest. Mountain bike riding in other locations will still be available on designated multi-use trails or the existing fire-track network. Single-track trails already established in plantation areas will be allowed to remain on the understanding that they will be significantly impacted or lost during harvesting and plantation establishment operations. New single-track trails in plantation areas will not be encouraged and are not permitted in conservation zone.

A network of unmarked single-track mountain bike trails is located predominately in plantation areas in the Bells Gully locality of the KF. These trails are popular for both recreational and competitive use in organized events. There is demand from the mountain biking community to establish more formally marked single-track trails in the KF. However, the ability to achieve this is limited for the following reasons:

- restrictions on access to Native Forest Reserves,
- presence of threatened species in areas that appear otherwise suitable, and
- likely impacts on trails by forestry operations in plantation areas.

### Orienteering Courses

MCF and KF provide the venue for orienteering courses that have been developed with support from the Orienteering Association of South Australia. School groups, special events and the general public use these courses. Maps are available at Forest Information Centres.

#### *Management Actions*

- Develop a regular service and maintenance program for ForestrySA trails.
- Continue to work with trail managers and other stakeholders for trail planning and maintenance. Permanent orienteering courses will not be developed in conservation zone.

### Tourism and Events

Events held in the MLRF include car and motorcycle rallies, walking, mountain biking, horse riding and orienteering. These events are coordinated through an event application process.

On average, over 35 different groups use the forest reserves annually.

Currently a number of tourism, education, recreation and fitness training operators utilising the MLRF are commercial operations. These operators are managed through the event application process. Increased commercial activity has the potential to provide social and economic benefits to the local community, and ForestrySA will consider partnerships with tourism and recreational bodies.

#### *Management Actions*

- Continue to support community events in the MLRF.
- Review current tourism, education, and fitness training operators; develop licence agreements where required.

## Community and Stakeholder Engagement

ForestrySA encourages the participation and involvement of individuals, community groups and other stakeholders in the management of forest reserves. A Friends of the Forest program allows individuals or groups to become involved in a variety of volunteer activities.

ForestrySA regularly engages youth development, community service, and environmental training programs to assist with non-commercial activities. These activities include aspects of native forest, recreational and heritage management.

ForestrySA continues to target education and training institutions for involvement in its Community Programs. In the MLRF this includes an ongoing relationship with Urrbrae TAFE involving activities which link modules from the Conservation and Land Management course with on-ground works located on forest reserves. Activities include planning and implementation of conservation-based rehabilitation and revegetation projects as well as biological and native fauna surveys. The University of Adelaide and the University of South Australia are also involved in scientific monitoring project on ForestrySA land.

In 2012-2013, community groups contributed more than 32,000 hours to various projects on land managed by ForestrySA across the State. Increased participation rates for the year reflect the engagement of more volunteer groups as opposed to individual volunteers. Over 200 individuals in associated groups participated in Community Engagement Programs projects in the MLRF during 2012-2013.

ForestrySA has developed a strong working relationship with volunteers from the Sporting Shooters Association, Conservation and Wildlife section. This section is involved in pest animal control programs, with a focus on a deer control program operating in the SVF. The program has made a significant impact on the deer population in that area. This program is integrated with a similar program undertaken by DEWNR in the Deep Creek Conservation Park.

ForestrySA is also working with the mountain biking community through organisations including the International Mountain Bike Association – Australia, Bicycle SA and the recently formed South Australian Mountain Bike Association. This work has mainly focused on volunteers working in the Cudlee Creek Forest on trail development and maintenance projects.

### *Management Actions*

- Continue to support community engagement in the MLRF.
- Use the MLRF Management Plan as a means for advancing community input and stakeholder engagement.

## Rubbish Management

Illegal rubbish dumping and its removal remains a significant management problem for ForestrySA. Garden waste creates pest plant issues, whilst general household rubbish creates an eyesore and may impact on water quality. The dumping of cars, household rubbish, and hydroponic waste in or adjacent to plantation areas and NFR's is common.

ForestrySA staff have organised numerous clean-ups of refuse with the help of volunteers and contractors.

### *Management Actions*

- Implement rubbish removal as Community Programs when volunteer groups become available.

- Continue to work with regional stakeholders to develop strategies to combat rubbish dumping.

### FIRE MANAGEMENT

The plantation forest estate is a high-value asset, and ForestrySA has developed a Fire Management Plan (FMP) with strategies for its protection. The MLRF lies within Country Fire Service (CFS) Regions 1 and 2, and ForestrySA works in cooperation with the CFS and adjacent landholders.

ForestrySA is a member of the Government Agency Fire Liaison Committee. All bushfire mitigation works are carried out according to guidelines specified in the Fire Management Plan.

In addition, ForestrySA is a member of the Mt Lofty Ranges Fire Cooperative, which includes the DEWNR, SA Water, and the CFS. This cooperative seeks to integrate prescribed burning programs and to coordinate bushfire responses in the region. The following section provides detailed information about prescribed burning programs.

Regional bushfire information is available online at: [http://www.environment.sa.gov.au/firemanagement/Fire\\_Management\\_Maps](http://www.environment.sa.gov.au/firemanagement/Fire_Management_Maps)

#### Prescribed Burning

Prescribed burning is utilised as a part of ForestrySA's fire prevention strategy. In addition to the management of fuel hazards, prescribed burning is used to achieve ecological and research objectives.

The Native Vegetation Council (NVC) has delegated to ForestrySA authority to undertake prescribed burns provided relevant environmental considerations are taken into account. ForestrySA and the NVC have agreed management processes, which have been in place since 2008.

The ForestrySA Manual for Prescribed Burning sets out prescribed burn procedures. Prescribed burns are undertaken in accordance with the Code of Practice for Fire Management on Public Land in South Australia.

#### *Management Actions*

- Manage bushfire protection in the MLRF in line with the ForestrySA Fire Management Plan.
- Continue prescribed burning programs undertaken in line with delegated authority granted under the Native Vegetation Council, referring to the Code of Practice for Fire Management on Public Land in South Australia, the ForestrySA - Fire Management Plan and other ForestrySA guidelines and procedures, as well as the requirements of the MLR Fire Cooperative.
- Record all ForestrySA signposts on the GIS to assist with a sign inspection, maintenance and replacement program.
- Communicate with adjoining public land managers and the CFS on wildfire management issues.

### RESOURCE USE

The MLRF areas are subject to commercial uses not related to forest growing and harvesting. These uses will be managed appropriately to minimise any negative impacts on the commercial, conservation and recreational forest uses.

### Exploration and Mining

Currently there are no Petroleum Exploration Licences covering the MLRF. However, there is one current Mineral Exploration Licence. This license permits the licensees to prospect, explore or recover a resource. The *Mining Act 1971* and the *Petroleum Act 2000* prescribe matters to be considered before granting a licence.

### Quarries

ForestrySA currently operates three quarries located in the MLRF. These quarries supply roading materials required for forest operations and stone for building and restoration projects.

### Leases, Licences and Agreements

There are currently thirteen agreements, deeds, licences or leases in place with individuals, groups, corporations and agencies across the MLRF.

#### *Management Actions*

- Continue to ensure, where appropriate, that leases and licences are commercial.
- Undertake periodic reviews of lease conditions and fees.
- Undertake appropriate reviews for compliance.
- Ensure all occupation and commercial or organised use is undertaken according to formal agreement or equivalent.

## WORK HEALTH AND SAFETY

ForestrySA is committed to ensuring that employees, contractors and the general public are safe when on the forests it manages. ForestrySA has a comprehensive safety management system that underpins its management of work, health and safety across the business. The safety management system ensures that hazards and risks are identified, assessed and managed, legal requirements are complied with and incidents are reported, investigated and corrective and preventative actions developed.

#### *Management Actions*

- Continue to promote safe work practices and the safe use of the forests.

### Plan Implementation

This Plan will be implemented through a number of mechanisms within ForestrySA's FMS. Staff and contractors will be made aware of the Forest Management Plan and its contents through training and induction.

The larger implementation tasks will be incorporated into the appropriate FMS policies, procedures, plans, standard operating procedures, manuals and guidelines. Through these documents, the on-ground implementation tasks to achieve Management Actions will be incorporated. Implementation will be monitored and audited to ensure compliance with the management objectives and actions.

### Performance Monitoring and Auditing

ForestrySA's FMS has a program of performance monitoring and auditing the effectiveness and implementation of systems and operations. Monitoring and auditing can be used to:

- Improve and demonstrate performance
- Assess compliance and effectiveness of compliance mechanisms
- Assess progress toward goals, objectives or targets
- Manage and evaluate impacts and risks and effectiveness and implementation of controls.



## Mount Lofty Ranges Forest Reserves Management Plan

ForestrySA will annually assess monitor its performance against this Forest Management Plan and incorporate these results into its annual Management Review.

### Review and Assessment

ForestrySA will review and assess implementation of the Forest Management Plan annually. This will involve reviewing the currency and content of the information within the Plan and the relevance of the Management Actions. If information, Management Actions or business objectives change, then ForestrySA will update/adjust the Plan.

ForestrySA will take advantage of updates/adjustments of the Plan to incorporate changes to management as a result of monitoring or new scientific and technical information with may alter silvicultural, environmental, social and/or economic conditions.

## REFERENCES AND LINKS

### Commonwealth Legislation

[Copyright Act 1968](#)

[Environment Protection and Biodiversity Conservation Act 1999](#)

### South Australian Legislation

[Aboriginal Heritage Act 1988](#)

[Forestry Regulations 2005](#)

[Forest Property Act 2000](#)

[Native Vegetation Act 1991](#)

[Natural Resources Management Act 2004](#)

[Native Vegetation Act 1991](#)

[Mining Act 1971](#)

[Petroleum Act 2000](#)

### Links

[Australian Forestry Standard \(AS4708\)](#)

[Code of Practice for Fire Management on Public Land in South Australia](#)

[Department of Environment, Water and Natural Resources Regional Recovery Plan  
Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide  
and the Mount Lofty Ranges, South Australia](#)

[ForestrySA - Fire Management Plan](#)

[NatureLinks](#)

[No Species Loss](#)

[Our region's plan - Natural Resources Adelaide and Mount Lofty Ranges](#)

[Our Place Our Future, State Natural Resources Management Plan, South Australia 2012-2017.](#)

[SA Strategic Plan – In a Great State](#)

[South Australia Tourism Plan 2009-2014](#)

[The 30-Year Plan for Greater Adelaide](#)

[Water Allocation Plan \(WAP\) Eastern Mount Lofty Ranges 2013](#)



**For more information please contact ForestrySA**

Anderson N. Drew J. and Virtue J. (2005) South East Weed risk Assessment, Primary Industries and Resources, South Australia, Adelaide.

ForestrySA (2008) Forestry Connections Strategy, ForestrySA, Mount Gambier.

ForestrySA (2013) Manual For Prescribed Burning, ForestrySA, Mount Gambier.

ForestrySA (2014) Plantation Forestry Manual, ForestrySA, Mount Gambier.

ForestrySA Weed Management Strategy 2014-2016, ForestrySA, Mount Gambier.

Informing Biodiversity Conservation for the Adelaide and Mount Lofty Ranges Region South Australia (2010) Department for Environment and Heritage, Adelaide.

Tindale, NB. (1974) Aboriginal Tribes of Australia: Their Terrain, Environmental Controls, Distribution, Limits & Proper Names', Australian National Press, Canberra.

## APPENDIX 1: MAIN LEGISLATION, POLICIES AND CODES OF PRACTICE

### Commonwealth Legislation and Policies

Main legislation	Agency	Purpose
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	Department of the Environment, Water, Heritage and the Arts	It provides a framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places.
<i>National Forest Policy Statement 1992</i>	Australian, State and Territory Governments	This is the blue print for the future of public and private forests. It outlines agreed objectives and policies for the future of Australia's public and private forests.
<i>Native Title Act 1993 (Commonwealth)</i>	National Native Title Tribunal	Acknowledges native title and provides mechanisms to protect native title interests.
<i>National Strategy for the Conservation of Australia's Biological Diversity 1996</i>	Department of Sustainability, Environment, Water, Population and Communities	It deals at a global level with the full range of biological diversity conservation, its sustainable use and the fair and equitable sharing of benefits arising from this use.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Department of Sustainability, Environment, Water, Population and Communities	Preserve and protect places, areas and objects of particular significance to Indigenous people in accordance with their tradition

### State Legislation, Policies and Codes

Main legislation	Agency	Purpose
<i>Aboriginal Heritage Act 1988 (SA)</i>	Aboriginal Affairs & Reconciliation Division	Act provides for the protection and preservation of the Aboriginal sites, objects and remains.
<i>Agricultural and Veterinary Products (Control of Use) Act 2002 (SA)</i>	Primary Industries and Resources South Australia	Act regulates the use of agricultural and veterinary chemicals in SA.
<i>Charter of the South Australian Forestry Corporation (SA)</i>	Minister for Forests, Treasurer	The Charter sets out the Board's responsibilities; the strategic direction of ForestrySA; and the SA Government requirements.
<i>Code of Practice for Fire Management on Public Land in South Australia 2012-2016 (SA)</i>	Government Agencies Fire Liaison Committee	Code applies to all public lands under the care and control of DEWNR, ForestrySA and SA Water. Staff, contractors and volunteers undertaking fire activities on public lands will comply with it. Any document developed for fire management activities on public lands will be consistent with it.
<i>Environment Protection Act 1993 (SA)</i>	Environmental Protection Authority	Act promotes the principles of ecologically sustainable development based on sound environmental practices and policies that restore and enhance the quality of the environment.
<i>Fire and Emergency Services Act 2005 (SA)</i>	Country Fire Service	Act provides for a country fire service to provide for the prevention, control and suppression of fires.
<i>Forestry Act 1950 (SA)</i>	Department of Primary Industries and Resources	Act provides for the creation, management and protection of state forest reserves.
<i>Heritage Places Act 1993 (SA)</i>	South Australian Heritage Council	Act provides for the protection and preservation of non-Aboriginal heritage.
<i>Native Vegetation Act 1991 (SA)</i>	Department of Environment, Water and Natural Resources	Act provides for the preservation of native vegetation and includes legislative controls for native vegetation clearance.
<i>Natural Resources Management Act 2004 (SA)</i>	Department of Environment, Water and Natural Resources	Act promotes sustainable and integrated management of SA's natural resources and makes provision for the protection of SA's natural resources.
<i>Public Corporations Act 1993 (SA)</i>	Treasurer	An Act to provide for the control of public corporations.
<i>South Australian Forestry Corporation Act 2000 (SA)</i>	Minister for Forests	Act establishes a statutory corporation as a business enterprise with the principal responsibility of managing plantation forests for the benefit of the people and economy of SA.
<i>Work Health and Safety Act 2012 (SA)</i>	Work Cover SA	An Act to provide for the health, safety and welfare of persons at work.

This list covers the most relevant Australian Government and State legislation and policies that apply to forest management or activities. Other State legislation can indirectly apply and is not specifically addressed in the Plan. Other legislation and policies of relevance are referred to as necessary throughout the Plan.

Any reference in the Plan to an agency, Act, Regulation, State policy or other statutory document is intended to refer to any subsequent renaming, revision or replacement of that agency, Act, Regulation, policy or document.

## APPENDIX 2: THREATENED FLORA SPECIES

SPECIES	COMMON NAME	AUS	SA
<i>Adiantum capillus-veneris</i>	Dainty maiden-hair		V
<i>Amphibromus archeri</i>	Pointed swamp wallaby-grass		R
<i>Amphibromus macrorhinus</i>	Long-nosed swamp wallaby-grass		R
<i>Anogramma leptophylla</i>	Annual fern		R
<i>Austrostipa densiflora</i>	Fox-tail spear grass		R
<i>Austrostipa pilata</i>	Prickly spear-grass		V
<i>Baumea acuta</i>	Pale twig-rush		R
<i>Baumea laxa</i>	Lax twig-rush		R
<i>Blechnum nudum</i>	Fishbone-water-fern		R
<i>Blechnum watsii</i>	Hard water-fern		R
<i>Boronia parviflora</i>	Swamp boronia		R
<i>Brachyscome parvula</i>	Coast daisy		R
<i>Caladenia argocalla</i>	White-beauty spider-orchid	E	E
<i>Caladenia behrii</i>	Pink-lip spider-orchid	E	E
<i>Caladenia rigida</i>	Stiff white spider-orchid	E	E
<i>Caladenia vulgaris</i>	Plain caladenia		R
<i>Caleana major</i>	Large duck-orchid		V
<i>Calotis lappulacea</i>	Burr-daisy		R
<i>Cardamine tenuifolia</i>	Slender bitter-cress		R
<i>Carex fascicularis</i>	Tassel sedge		U
<i>Carex gaudichaudiana</i>	Fen sedge		U
<i>Carex gunniana</i>	Mountain sedge		R
<i>Centrolepis cephalophormis ssp.cephalophormis</i>	Cushion centrolepis		R
<i>Coronidium gunnianum</i>	Pale everlasting		E
<i>Correa aemula</i>	Hairy correa		R
<i>Correa calycina var. calycina</i>	Hindmarsh correa	V	V
<i>Correa eburnea</i>	Deep Creek correa		V
<i>Corybas unguiculatus</i>	Small helmet-orchid		R
<i>Crassula peduncularis</i>	Purple crassula		R
<i>Deyeuxia densa</i>	Heath bent-grass		R
<i>Deyeuxia minor</i>	Small bent-grass		V
<i>Dianella longifolia var. grandis</i>	Pale flax-lily		R
<i>Dipodium pardalinum</i>	Leopard hyacinth-orchid		V
<i>Diuris behrii</i>	Behr's cowslip orchid		V
<i>Diuris brevifolia</i>	Short-leaf donkey orchid		E
<i>Drosera binata</i>	Forked sundew		R
<i>Elatine gratioloides</i>	Waterwort		R
<i>Eryngium vesiculosum</i>	Prostrate blue-devil		R
<i>Eucalyptus dalrympleana</i>	Candlebark gum		R
<i>Eucalyptus fasciculosa</i>	Pink gum		R
<i>Eucalyptus paludicola</i>	Mount Compass swamp gum	CE	E
<i>Eucalyptus viminalis ssp. viminalis</i>	Manna gum		R
<i>Gastrodia sesamoides</i>	Potato orchid		R
<i>Gleichenia microphylla</i>	Coral fern		R
<i>Glycine latrobeana</i>	Clover glycine	V	V
<i>Glycine tabacina</i>	Variable glycine		V
<i>Gonocarpus micranthus ssp. micranthus</i>	Creeping raspwort		R
<i>Haloragis brownii</i>	Swamp raspwort		R
<i>Histiopteris incisa</i>	Bats-wing fern		E
<i>Hypericum japonicum</i>	Matted St. John's wort		R
<i>Hypolepis rugosula</i>	Ruddy ground-fern		R
<i>Indigofera australis var. australis</i>	Austral indigo		U
<i>Isoetes drummondii ssp. drummondii</i>	Plain quillwort		R

SPECIES	COMMON NAME	AUS	SA
<i>Juncus amabilis</i>	Rush		V
<i>Juncus australis</i>	Austral rush		R
<i>Lagenophora gracilis</i>	Slender bottle-daisy		V
<i>Leucopogon hirsutus</i>	Hairy beard-heath		R
<i>Logania saxatilis</i>	Rock logania		R
<i>Luzula flaccida</i>	Pale wood-rush		V
<i>Luzula ovata</i>	Clustered wood-rush		R
<i>Mentha diemenica</i>	Slender mint		R
<i>Mentha saturoioides</i>	Native pennyroyal		R
<i>Microtis atrata</i>	Yellow onion-orchid		R
<i>Microtis orbicularis</i>	Swamp onion-orchid		V
<i>Microtis rara</i>	Sweet onion-orchid		R
<i>Montia australasica</i>	White purslane		R
<i>Montia fontana ssp. chondrosperma</i>	Waterblinks		V
<i>Myriophyllum amphibium</i>	Broad milfoil		R
<i>Myriophyllum integrifolium</i>	Tiny milfoil		R
<i>Ottelia ovalifolia ssp. ovalifolia</i>	Swamp lily		R
<i>Paracaleana minor</i>	Small duck-orchid		V
<i>Pentapogon quadrifidus var. quadrifidus</i>	Five-awn spear-grass		R
<i>Philothea angustifolia ssp. angustifolia</i>	Narrow-leaf wax-flower		R
<i>Phyllangium distylis</i>	Tiny mitrewort		R
<i>Phylloglossum drummondii</i>	Pigmy clubmoss		R
<i>Pilularia novae-hollandiae</i>	Austral pillwort		R
<i>Poa umbricola</i>	Shady tussock-grass		R
<i>Potamogeton ochreateus</i>	Blunt pondweed		R
<i>Prasophyllum australe</i>	Austral leek-orchid		R
<i>Prasophyllum murfetii</i>	Fleurieu leek-orchid	E	E
<i>Prasophyllum pallidum</i>	Pale leek-orchid	V	V
<i>Pratia concolor</i>	Poison pratia		R
<i>Prostanthera chlorantha</i>	Green mintbush		R
<i>Pteris tremula</i>	Tender brake		R
<i>Pterostylis curta</i>	Blunt greenhood		R
<i>Pterostylis foliata</i>	Slender greenhood		R
<i>Ptilotus erubescens</i>	Hairy-tail's		R
<i>Ranunculus inundatus</i>	River buttercup		R
<i>Ranunculus pumilio var. politus</i>	Smooth-fruit ferny-buttercup		V
<i>Rorippa laciniata</i>	Jagged bitter-cress		R
<i>Rytidosperma laeve</i>	Smooth wallaby-grass		R
<i>Rytidosperma tenuius</i>	Short-awn wallaby-grass		R
<i>Schoenus laevigatus</i>			R
<i>Schoenus latelaminatus</i>	Medusa bog-rush		V
<i>Scutellaria humilis</i>	Dwarf skullcap		R
<i>Sphaerobolium minus</i>	Leafless globe-pea		R
<i>Sprengelia incarnata</i>	Pink swamp-heath		R
<i>Thelymitra carnea</i>	Small pink sun-orchid		R
<i>Thelymitra cyanapicata</i>	Dark-tipped sun-orchid	CE	E
<i>Thelymitra flexuosa</i>	Twisted sun-orchid		R
<i>Thelymitra holmesii</i>	Blue star sun-orchid		V
<i>Thelymitra inflata</i>	Plum sun-orchid		V
<i>Thelymitra mucida</i>	Plum sun-orchid		R
<i>Thelymitra peniculata</i>	Peniculate sun-orchid		V
<i>Thysanotus tenellus</i>	Fringe-lily		R
<i>Triglochin alcockiae</i>	Water ribbons		R
<i>Veronica derwentiana ssp. anisodonta</i>	Speedwell		R
<i>Veronica derwentiana ssp. homalodonta</i>	Mount Lofty speedwell	CE	E

SPECIES	COMMON NAME	AUS	SA
<i>Veronica gracilis</i>	Slender speedwell		V
<i>Viminaria juncea</i>	Native broom		R
<i>Xanthorrhoea semiplana ssp. tateana</i>	Tate's grass tree		R
<i>Xanthosia tasmanica</i>	Southern xanthosia		R
<i>Xyris operculata</i>	Tall yellow-eye		R
<i>Zieria veronicea</i>	Pink zieria		R

**Source:**

Environment Protection and Biodiversity Conservation Act 1999

National Parks and Wildlife Act (SA) 1972 Schedules 7,8,9 (2000 update)

**Category Definitions:**

EPBC Act 1999	NPWS Act (SA) 1972
Critically Endangered (CE)	Endangered (E)
Endangered (E)	Vulnerable (V)
Vulnerable (V)	Rare (R)