



Government  
of South Australia

## Declared Plant Policy

*This policy relates to natural resources management under section 9(1)(d) of the Landscape South Australia Act 2019 (the Act), enabling co-ordinated implementation and promotion of sound management programs and practices for the use, development or protection of natural resources of the State. Specifically, this policy provides guidance on the use and management of natural resources relating to the prevention or control of impacts caused by pest species of plants that may have an adverse effect on the environment, primary production or the community, as per object s7(1)(f) of the Act.*

### one-leaf Cape tulip (*Moraea flaccida*)

One-leaf Cape tulip is a winter-growing geophyte, introduced as ornamental bulb, and now locally important as a toxic pasture weed in higher rainfall regions of South Australia.

#### Management Plan for One-leaf Cape tulip

##### Outcomes

- Losses to grazing industry from one-leaf Cape tulip minimised.

##### Objectives

- Prevent spread of one-leaf Cape tulip to uninfested pastures.
- Eradicate high priority outbreaks in generally uninfested areas.
- Contain large infestations and reduce their density.

##### Best Practice Implementation

- Regional landscape boards and Green Adelaide to ensure that priority infestations on private or public land are controlled.
- Regional landscape boards and Green Adelaide to control priority infestations on road reserves.
- Promote techniques including rotations and herbicides for the reduction of large one-leaf Cape tulip infestations.
- To assist local control programs, the sale and movement of one-leaf Cape tulip is prohibited.

##### Regional Implementation

Refer to regional management plans for further details.

one-leaf Cape tulip policy

Region	Actions
Alinytjara Wilurara	Limited action
Eyre Peninsula	Monitor
Green Adelaide	Protect Sites
Hills and Fleurieu	Protect sites
Kangaroo Island	Protect sites
Limestone Coast	Contain spread
Murraylands and Riverland	Protect sites
Northern and Yorke	Manage weed
South Australian Arid Lands	Limited action

**Declaration**

To implement this policy, one-leaf Cape tulip is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia. Its movement or transport on a public road, by itself or as a contaminant, or sale by itself or as a contaminant are prohibited. Green Adelaide and all regional landscape boards except the SA Arid Lands may require land owners to control one-leaf Cape tulip plants growing on their land. These authorities are required to control plants on road reserves in their regions and may recover costs from the adjoining land owners.

One-leaf Cape tulip is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its road transport or sale can only be issued by the Chief Executive of the Department for Environment and Water or their delegate pursuant to section 197.

Under the *Landscape South Australia (General) Regulations 2020*, Regulation 27 specifies the conditions under which a person is exempt from the operation of section 186 and may transport wool, grain or other produce or goods carrying one-leaf Cape tulip on public roads. Regulation 28 specifies conditions under which a person is exempt from the operation of section 188(2) and may sell wool, grain or other produce or goods carrying one-leaf Cape tulip. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive, DEW.

The following sections of the Act apply to one-leaf Cape tulip throughout each of the regions noted below:

Sections of Act	Region								
	AW	EP	GA	HF	KI	LC	MR	NY	SAAL
186(1) Prohibiting entry to area									
186(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X	X
188(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X	X
188(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X	X
190 Requiring notification of presence									
192(1) Land owners to destroy the plant on their properties									
192(2) Land owners to control the plant on their properties	X	X	X	X	X	X	X	X	
194 Recovery of control costs on adjoining road reserves	X	X	X	X	X	X	X	X	

## **Review**

This policy is to be reviewed by 2025, or in the event of a change in one or more regional management plans for one-leaf Cape tulip.

## **Rationale**

The discontinuous and scattered distribution within the potential habitat probably reflects its initial dispersal as a garden plant. Cape tulips invade cleared land on soils ranging from sands to heavy waterlogged clays but cannot compete under dense tree or shrub cover, and are poorly adapted to lower rainfall areas.

## **Weed Risk**

### Invasiveness

The weedy populations of one-leaf Cape tulip in Australia are all fertile hexaploids that produce large amounts of seed, apparently by self-pollination or apomixis. Hexaploid forms have also become weedy in its native range in South Africa. The seed can remain viable for several years but normally germinates at the first autumn break after shedding. It has no effective strategy of long-range dispersal, which depends on movement with fodder, soil or machinery.

### Impacts

One-leaf Cape tulip contains toxic cardiac glycosides; however, poisoning of stock is rare, occurring mainly in hungry cattle lacking experience of the plant. The unpalatability leads to increased abundance under grazing with a corresponding decline in carrying capacity.

### Potential distribution

Its potential distribution extends across the agricultural zone from the west side of Eyre Peninsula to the Limestone Coast including the southern end of the Flinders. The main sites open to infestation are pasture paddocks on heavy soils.

Because of its slow rate of spread, one-leaf Cape tulip has not reached its ecological limits in this State. It invades cleared land on soils ranging from sands to heavy waterlogged clays but cannot compete under dense tree or shrub cover. It requires winter rainfall, and is poorly adapted to lower rainfall areas. However, as the corms are dormant from December to the autumn break, climate parameters in summer do not influence its potential range.

## **Feasibility of Containment**

### Control costs

Cape tulips are not easily killed by herbicides. Their corms may remain dormant through a whole year, enabling a population to persist even if it were possible to kill all growing plants. A planned program over several years is therefore needed to destroy an infestation.

### Persistence

The proportion of corms remaining dormant is higher in years when the autumn break arrives late, but can be reduced by burning at this time.

### Current distribution

The distribution of one-leaf Cape tulip is disjunct due to its dependence on accidental transport between properties. It is scattered on southern Eyre Peninsula, Yorke Peninsula and the Murray Mallee, with the main infestations in the Hills and Fleurieu and Kangaroo Island extending along the coast to the Limestone Coast.

### **State Level Risk Assessment**

Assessment using the Biosecurity SA Weed Risk Management System gave the following comparative weed risk and feasibility of containment scores by land use:

<b>Land use</b>	<b>Weed Risk</b>	<b>Feasibility of control</b>	<b>Response at State Level</b>
Grazing - southern	high 152	medium 32	protect sites
Grazing - rangeland	negligible 3	very high 2	monitor
Native vegetation	low 25	very high 3	monitor

### **Considerations**

Risk assessment indicates protect sites as the action in southern permanent pastures, and monitoring in other land uses. While sale and movement are prohibited uniformly across the State, regional actions vary according to the land uses in each region.

In the Green Adelaide and Hills and Fleurieu regions, sites are protected by targeted control to prevent spread. On Kangaroo Island sites are protected by targeted management of the weed and extension advice to land owners throughout the region. In the Murraylands and Riverland region, it is managed on non-arable grazing lands and spread is contained in native vegetation; control is carried out on all roadsides close to identified key sites and assets. In the Limestone Coast region spread is contained by control of infestations. On Eyre Peninsula, infestations are monitored.

### **Synonymy**

*Moraea flaccida* (Sweet) Steud., Nomencl. Bot. ed. 2, 2: 160 (1841)

Basionym: *Homeria flaccida* Sweet, Hort. Brit. ed. 1: 395 (1826)

Nomenclatural synonym:

*Homeria collina* var. *flaccida* (Sweet) Klatt, Linnaea 34: 629 (1865)

Taxonomic synonyms:

*Homeria bicolor* (Baker) Klatt, Consp. Fl. Afr. 5: 157 (1894)

*Homeria collina* var. *bicolor* Baker, Handb. Irid. 75 (1892)

one-leaf Cape tulip policy

*Homeria collina* var. *miniata minor* Ker Gawl., Bot. Mag. 39: t.1612 (1814)  
*Homeria breyniana* (L.)G.J.Lewis, J. S. African Bot. 7: 59 (1941)  
*Tulipa breyniana* L., Sp. Pl. 1: 306 (1753)

Hon David Speirs MP  
**Minister for Environment and Water**

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