



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.*

### bulbil watsonia (*Watsonia meriana* var. *bulbillifera*)

Bulbil watsonia is a large, winter-growing geophyte that reproduces asexually by cormils, and is established locally on road verges, degraded native vegetation and unmanaged ground in the higher rainfall regions of South Australia.

### Management Plan for Bulbil Watsonia

#### Outcomes

- Maintain the integrity of native vegetation by minimising invasion and impacts of bulbil watsonia.

#### Objectives

- Contain existing infestations to prevent spread into uninvaded areas.
- Remove priority infestations in accordance with regional management plans.

#### Best Practice Implementation

- Landscape boards in the regions where bulbil watsonia is declared under section 192(2) of the Act, and Green Adelaide, to foster control of priority infestations on private and public land.
- These boards to control priority infestations on road reserves.
- Prohibition of the sale of bulbil watsonia or of material contaminated with its propagules, or of its transport on public roads.

#### Regional Implementation

Refer to regional management plans for further details.

bulbil watsonia policy

Region	Actions
Alinytjara Wilurara	Limited action
Eyre Peninsula	Limited action
Green Adelaide	Manage weed
Hills and Fleurieu	Manage weed Targeted control to protect priority sites
Kangaroo Island	Protect sites
Limestone Coast	Monitor, opportunistic control
Murraylands and Riverland	Limited action
Northern and Yorke	Protect sites
South Australian Arid Lands	Limited action

**Declaration**

To implement this policy, bulbil watsonia 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. The Hills and Fleurieu and Kangaroo Island Landscape Boards and Green Adelaide may require land owners to control bulbil watsonia 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.

Bulbil watsonia is declared in category 3 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 regional landscape board 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 bulbil watsonia 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 bulbil watsonia. Note that certain produce or goods may be excluded from these general movement and sale exemptions by Gazettal Notice of the Chief Executive of the Department for Environment and Water.

The following sections of the Act apply to bulbil watsonia throughout each of the regions noted below:

Sections of Act	Region								
	AW	EP	GA	HF	KI	LC	NY	MR	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				
194 Recovery of control costs on adjoining road reserves			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 bulbil watsonia.

## **Weed Risk**

### Invasiveness

Bulbil watsonia is normally a sterile triploid, reproducing by slow multiplication of the underground corms, and cormils that are produced in clusters along the flowering stem. Its distribution is closely correlated with streams, as the cormils fall close to the parent plant but may be transported by flowing water.

Earth-moving machinery and vehicles also disperse the cormils, but spread has been slow and sporadic. Dispersal may also occur in fodder, but in South Australia any vegetation that includes bulbil watsonia is unlikely to be harvested for this purpose.

Although seed-producing diploids are known in some South Australian populations, seedling reproduction depends on favourable seasonal conditions and has made little contribution to the spread of bulbil watsonia. Reproduction by seed is likely to be of little value to the plant in its niche as a weed, as the other naturalised *Watsonia* species that depend on seed instead of cormils are localised garden escapes rather than significant weeds

### Impacts

Bulbil watsonia does not invade arable land or improved pasture, and is essentially a weed of roadsides, unmanaged land and unimproved pasture in high rainfall areas, usually in wet sites subject to winter flooding.

In native sclerophyll forest, woodland and riparian habitats, bulbil watsonia can form continuous, clonal stands. On heavy, winter-waterlogged sites these eventually exclude other ground-layer species, thus making restoration of degraded native vegetation difficult. It is regarded as visual pollution on roadsides because of its size and non-native appearance.

It encroaches into pasture only when a paddock in the southern perennial grazing land use remains neglected over a long period. There are no records of toxicity.

### Potential distribution

Bulbil watsonia originated on the Paal Flats near Cape Town, South Africa in a climate closely matching Adelaide. It grows well on light or heavy, mildly acid to mildly alkaline soils, and tolerates moderate waterlogging in winter. As the corms are dormant from December to the autumn break, climate parameters in summer do not influence its potential range. It is still less widespread in South Australia than in Victoria or Western Australia because there are fewer streams here, and has not reached its ecological limits in the State.

## **Feasibility of Containment**

### Control costs

Dense stands in pasture are most effectively controlled by cultivation and pasture renovation.

Slashing, or spraying with foliar-absorbed herbicides are effective control methods if done in early spring when the previous year's corms are exhausted and new corms have not yet formed. This stage is recognisable above ground when the flower stem begins to develop but has not yet formed corms or flowers. Some soil-active herbicides also give satisfactory control in pasture and may be sprayed earlier in the season.

Small infestations in native vegetation are controlled by spot spraying or wiping foliage with herbicide, which is labour-intensive. When controlling large stands, herbicide damage to natives may be minimised by following up a fuel-reduction burn or an accidental burn with a selective herbicide treatment of bulbil watsonia regrowth in the following growing season.

### Persistence

Individual clumps are long-lived, surviving on heavy soils for decades as a climax society that resists colonisation by other plants. On lighter well-drained soils it is vulnerable to competition from native regrowth or taller woody weeds.

Its rarity in managed pasture is due to the grazing of young leaves by stock; roadside infestations spread slowly by the fall of corms beside the parent but do not cross the fence line.

### Current distribution

Bulbil watsonia is frequent on roadsides and in native vegetation in the Southern Lofty Ranges, especially the Adelaide Hills where grazing stock are absent, and occasional in the Clare area and on Kangaroo Island.

### **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	medium 59	very high 2	contain spread
Native vegetation	low 17	very high 2	monitor

### **Considerations**

Bulbil watsonia is an example of a weed that has evolved by natural selection in new habitats created by human disturbance of vegetation, appearing within the last few centuries in disturbed periurban habitats in South Africa.

It was introduced to South Australia around 1840 and its primary dispersal was due to cultivation in cottage gardens where it probably multiplied unnoticed at the expense of seed-producing *Watsonia meriana* since it reproduced more efficiently by corms. However, it is now regarded as having no value in horticulture; it has not contributed to the breeding of any of the ornamental *Watsonia* cultivars, and is not cross-fertile with them.

## bulbil watsonia policy

Risk assessment indicates management actions at State level of containment to prevent bulbil watsonia from establishing in pasture, and monitoring infestations in native vegetation. Regional management plans vary according to regional habitats and presence of the weed. The weed is managed with targeted control to protect priority sites in the Hills and Fleurieu region. Kangaroo Island protects sites of high ecological and community value. The Northern and Yorke region also protects sites but without enforced control. The Limestone Coast monitors for any incursions of this weeding order to carry out control if necessary. Limited action is taken in the other regions.

### **Synonymy**

*Watsonia meriana* (L.) Miller var. *bulbillifera* (J. Mathews & L. Bolus) D.A. Cooke, *J. Adelaide Bot. Gard.* 18: (1998).

Basionym: *Watsonia bulbillifera* J. Mathews & L. Bolus, *Ann. Bolus Herb.* 3: 140-141 (1922).

Other common names include bugle lily and wild watsonia.

Hon David Speirs MP

**Minister for Environment and Water**

Date: 28 March 2021