



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.*

### Lincoln weed (*Diplotaxis tenuifolia*)

Lincoln weed is a perennial crucifer native to coastal dunes in Europe and western Asia, introduced to South Australia for fodder and soil stabilisation, and now naturalised. Although of some use in marginal country, it is a competitive weed in cropping and improved pastures.

### Management Plan for Lincoln Weed

#### Outcomes

- Prevent Lincoln weed competing with cereal crops or lucerne on properties where it is not established.

#### Objectives

- Contain high priority infestations in generally uninfested areas.
- Minimise the spread of Lincoln weed from generally infested areas.

#### Best Practice Implementation

- Regional landscape boards in regions with widespread Lincoln weed to ensure fodder and produce leaving the region to uninfested areas is free of weed seed.
- Regional landscape boards and Green Adelaide to ensure high priority infestations on road reserves and properties are controlled.

#### Regional Implementation

Refer to regional management plans for further details.

lincoln weed policy

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

## Declaration

To implement this policy, Lincoln weed 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. An exemption is made for cultivated Lincoln weed sold or transported as the vegetable 'wild rocket'.

Green Adelaide and the Eyre Peninsula, Hills and Fleurieu, Kangaroo Island, Limestone Coast, Murraylands and Riverland, and Northern and Yorke Landscape Boards may require land owners to control Lincoln weed plants growing on their land except as a crop planted for commercial or domestic use. These authorities are required to control plants on road reserves in their regions and may recover costs from adjoining land owners.

Lincoln weed is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its sale or road transport 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 Lincoln weed 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 Lincoln weed. 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 Lincoln weed, unless planted and maintained for commercial or domestic use, 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	
194 Recovery of control costs on adjoining road reserves		X	X	X	X	X	X	X	

No sections of the Act apply to plants grown as a commercial crop or in domestic vegetable gardens, or to leaves and shoots harvested as a vegetable

## **Review**

This policy is to be reviewed by 2025, or in the event of a change in one or more regional management plans for Lincoln weed.

## **Weed Risk**

### Invasiveness

Lincoln weed evolved on coastal dunes, a habitat that is continually disturbed as the sand moves. Although perennial, it needed to regenerate frequently to occupy bare sand patches and consequently it has a deep root system that allows it to grow during summer and persist in sites where lucerne and other pasture plants die out.

It is an outbreeder pollinated by insects, with production of small seeds. Most spread is by seed although cultivation and soil carried on earthmoving equipment may spread root fragments in the soil. Seed is probably spread in soil, fodder and cereal screenings; spread by livestock may also occur.

### Impacts

Lincoln weed reduces the value of fallows by using nutrients and moisture reducing their availability to the crop, even if its density is reduced by herbicides. It can impede cultivation, especially in low trash tillage management.

It competes with more valuable forage in pastures, especially irrigated pasture, and reduces the value of meat by tainting with its strong taste.

### Potential distribution

Lincoln weed is most abundant in shallow skeletal soils over calcrete (limestone) and calcareous sands, and avoids acidic or heavy soils. Its potential range extends across the agricultural zone of South Australia but not beyond the southern edges of the pastoral zone.

## **Feasibility of Containment**

### Control costs

Blade ploughing, or spraying with relatively inexpensive herbicides used for general broadleaf weed control can kill or dramatically reduce established Lincoln weed in arable areas.

Lincoln weed is difficult to control in established lucerne as selective herbicide treatments are not available.

Persistence

As a deep-rooted perennial, Lincoln weed will re-emerge from rhizomes after any single control treatment and also persists as seed in soil. Its root system enables it to grow during summer and persist where lucerne and other pasture plants die off.

Its seed is easily separated from cereal and most pasture seed because of its small size.

Current distribution

Although present in large areas of the state, especially western Eyre Peninsula, southern Yorke Peninsula and the Upper North, it still has the potential to spread to other lucerne and rotational crop/pasture areas.

**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>
Crop/pasture rotation	medium 56	low 85	manage sites
Grazing - southern	medium 57	low 57	manage sites
Irrigated pastures	medium 95	medium 42	manage sites
Grazing - rangeland	low 13	high 24	monitor
Perennial horticulture	negligible 11	high 18	limited action

**Considerations**

Lincoln weed reached South Australia before 1879 as ballast in ships arriving from Europe and was recognised as a hardy perennial forage species that grows on poor limestone soils and manganese-deficient soils, producing reasonable stock feed even though it is unpalatable when fresh. Its root system enabled it to grow during summer and persist where lucerne and other pasture plants died off.

Lincoln weed was also planted for soil stabilisation in South Australia, but its value was limited because it grows densely in gullies but more sparsely on the dry sand ridges. It was still being sown as fodder as recently as 1964 on Eyre Peninsula. More recently, it has come into use as a gourmet salad vegetable and is grown commercially in some other States for this purpose.

Risk assessment at State level indicates site management in southern grazing lands, rotational cropping and irrigated pastures. Regional management plans vary according to regional habitats and presence of the weed. The emphasis of programs is to control isolated patches in generally uninfested areas, and prevent movement of contaminated fodder. In districts where Lincoln weed is common, the focus is on ensuring that fodder offered for sale is free of the weed.

However, Lincoln weed is grown commercially and in home gardens for its leaves, which are eaten in salads as wild rocket or sand rocket. The declaration is worded to allow this use of the plant to continue.

Infestations are monitored in the Hills and Fleurieu, Murraylands and Riverland, Northern and Yorke, and South Australian Arid Lands regions. Limited action is needed in the Eyre Peninsula and Kangaroo Island regions where Lincoln weed is established, and is managed as needed by landowners. The Limestone Coast and Murraylands and Riverland regions aim to protect sites at risk from the impacts of Lincoln weed by controlling as needed to contain spread while integrated weed management is adequate to control it in cropping areas. In the Alinytjara Wilurara region Lincoln weed is not established and containment by destroying any incursions along roads is feasible.

### **Synonymy**

*Diplotaxis tenuifolia* (L.)DC., Syst. Nat. 2: 632 (1821)

Basionym: *Sisymbrium tenuifolium* L., Cent. Pl. 1:18 (1755)

Taxonomic synonyms:

*Diplotaxis fruticulosa* Tod. ex Caruel, Fl. Ital. 9: 962 (1893)

*Diplotaxis ramosissima* Spreng., Neue Entdeck. Pflanzenk. 3: 52 (1822)

*Diplotaxis variabilis* Rochel, Pl. Banat. Rar. Ind. Spec. (1828)

*Eruca perennis* Mill., Gard. Dict. ed 8 n.3. (1768)

*Sisymbrium acre* Lam., Fl. Franç. 2: 520 (1779)

Other common names include arugula sylvetta, Chilpanunda weed, narrow-leaved wall-mustard, perennial rocket, perennial wall-rocket, rucola selvatica, sand rocket, Teetulpa weed, wild arugula, and wild rocket.

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

Date: 28 March 2021