



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.

fireweed (*Senecio madagascariensis*)

Fireweed is a toxic annual that invades pastures, and is not yet present in South Australia. It is one of the thirty-two Weeds of National Significance.

Management Plan for Fireweed

Outcomes

- No establishment of fireweed in South Australia.
- Prevention of national trade in Weeds of National Significance.

Objectives

- Prevent the establishment of fireweed as a naturalised species in South Australia.
- Prevent any movement of fireweed as a produce contaminant via South Australia to other States or Territories where it is an invasive weed.

Best Practice Implementation

- Surveillance for infestations as part of routine inspection by regional landscape boards and Green Adelaide.
- Any infestations found to be delimited, contained and destroyed.
- Compliance action in the event of material contaminated with fireweed being detected entering South Australia or sold in this State.

Regional Implementation

Refer to regional management plans for further details.

fireweed policy

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

Declaration

To implement this policy, fireweed is declared under the *Landscape South Australia Act 2019* throughout the whole of the State of South Australia so that movement of contaminated fodder or machinery can be prevented. Its entry to South Australia, movement or transport on a public road by itself or as a contaminant, or sale by itself or as a contaminant are prohibited.

The Eyre Peninsula, Hills and Fleurieu, Kangaroo Island, Limestone Coast, Murraylands and Riverland, and Northern and Yorke Landscape Boards, and Green Adelaide, may require land owners to destroy fireweed plants growing on their properties. These authorities are required to destroy plants on road reserves in their regions and may recover costs from the adjoining land owners.

Fireweed is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its entry, 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 fireweed on public roads, or bring them into the State. 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 fireweed. 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 fireweed 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	X	X	X	X	X	X	X	X	X
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) Landowners to destroy the plant on their properties		X	X	X	X	X	X	X	
192(2) Landowners to control the plant on their properties									
194 Recovery of control costs on adjoining road reserves		X	X	X	X	X	X	X	

Review

This policy is to be reviewed by 2025, or in the event of fireweed becoming established in South Australia or a change in its status as a Weed of National Significance.

Weed Risk

Invasiveness

Fireweed can invade a range of pasture types, including those growing on highly fertile soils, but is rarely a weed in irrigated pastures or crops, probably due to competition from more intensively managed vegetation. It is not a strong competitor, and gains entry to pasture through patches with poor density and vigour due to drought, stock camps or heavy grazing.

Individual plants start to produce bear seeds at 6-10 weeks, and may produce up to 18,000 seeds in a season. Seed is dispersed over medium distances by wind, and can be carried by road in hay and other goods.

Most of the seed is ready to germinate immediately in autumn, and there may be several flushes of germination during the winter.

Impacts

Fireweed is a short-lived perennial that would grow as a winter annual in South Australia. Even in the existing under climates with higher summer rainfall, most plants die off in late spring and summer.

Its major impact has been on pastures dominated by summer-growing grasses such as kikuyu and paspalum, as it competes effectively when their productivity and growth rate are low. This type of pasture is not widespread in South Australia.

Fireweed contains pyrolizidine alkaloids, which make it toxic to most livestock and especially to horses, although it can be tolerated by goats. Sheep will only eat it if there is no better fodder. Its presence makes paddocks unsuitable for cattle production.

Potential distribution

Fireweed is adapted to summer-rainfall subtropical conditions. In South Australia, it is most likely to occupy permanent pastures in the high-rainfall areas of the Kangaroo Island, Hills and Fleurieu and Limestone Coast regions.

Feasibility of Containment

Control costs

Control by herbicides and improved pasture management may take several years to clear paddocks of fireweed. Grazing by goats or sheep is an effective means of reducing infestations.

The potential for biological control has been investigated, but problems of host specificity are a barrier since it is very closely related to some native *Senecio* species.

Persistence

Although most seed germinates rapidly, a small proportion have inherent dormancy and form a seed bank in the soil for several years.

Fireweed is difficult to detect as it looks very similar to the common native *Senecio lautus* and may hybridise with this and other native species.

Current distribution

Fireweed is not known to be present in South Australia. It is most abundant in New South Wales where it is distributed in suitable habitats along the whole coast. Other infestations occur inland including the Riverina, in south-east Queensland and eastern Victoria.

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:

Land use	Weed Risk	Feasibility of control	Response at State Level
Grazing - southern	medium 42	very high 0	contain spread alert

Considerations

This strain of *Senecio madagascariensis* in Australia originated from the KwaZulu-Natal region of South Africa, and was first detected in the Hunter Valley region of NSW around 1918. By 1990 it had slowly spread along coastal New South Wales and southern Queensland.

Risk assessment indicates containment as a management action; since the species is absent from South Australia, containment is best implemented by preventing its entry to the State or establishment. Due to its medium weed risk and absence from the State, fireweed is a State Alert Weed and a high priority surveillance target to increase the likelihood of early the detection of any incursion.

Fireweed is one of the Weeds of National Significance, which are subject to prohibition on sale in all jurisdictions. In line with the draft national strategy on fireweed, sale of the plant and contaminated produce is prohibited in South Australia as in other jurisdictions.

Synonymy

Senecio madagascariensis Poir., Encycl. Suppl. 5. 130 (1817).

Taxonomic synonyms

Senecio bakeri Scott-Elliot, J. Linn. Soc. Bot. 29: 39 (1891).

Senecio junodianus O.Hoffm., Mem. Herb. Boiss. 10: 74 (1900).

Senecio ruderalis Harv., Fl. Cap. (Harvey) 3: 355 (1864).

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In South Australia, the common name fireweed is also applied to several *Senecio* species and other native annuals that are conspicuous in the first stages of regeneration after a bushfire. One of these, *Senecio lautus*, is very closely related to *Senecio madagascariensis*.

References

Sindel, B. & Coleman, M. (2012) *Fireweed: A Best Practice Management Guide for Australian Landholders*. (University of New England: Armidale).

Hon David Speirs MP

Minister for Environment and Water

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