

**Declared Plant Policy**  
under the Natural Resources Management Act 2004



Government  
of South Australia

*African boxthorn (Lycium ferocissimum)*

African boxthorn is a large spiny shrub, introduced by settlers as a hedge plant and now widespread across SA. It invades unimproved grazing land and native vegetation, particularly on coasts and creeklines where it can form dense thickets.

**Management Plan for African boxthorn**

**Outcomes**

- To protect native vegetation and maintain access to pasture throughout SA.

**Objectives**

- To control and contain African boxthorn infestations to protect key sites in accordance with NRM board Regional Management Plans.
- To prevent the spread of African boxthorn into uninfested areas.
- To prevent the reinfestation of areas cleaned of African boxthorn.

**Implementation**

- NRM authorities to ensure priority regional infestations, as determined by the board, are controlled.
- NRM authorities to develop a plan to contain further regional spread from infestations, and to implement the plan progressively.
- To assist local control programs, the sale and movement of plants on roads is prohibited.

**Regional Implementation**

Refer to regional management plans for further details.

NRM Region	Actions
Adelaide and Mount Lofty Ranges	Targeted control to protect priority sites and reduce density
Alinytjara Wilurara	Manage weed by targeted containment
Eyre Peninsula	Manage sites
Kangaroo Island	Protect sites
Northern and Yorke	Manage weed
South Australian Arid Lands	Protect site/ Manage sites / Manage weed
South Australian Murray Darling Basin	Contain spread/Protect sites
South East	Protect sites

## African boxthorn policy

### Declaration

To implement this policy, African boxthorn is declared under the *Natural Resources Management Act, 2004* throughout the whole of the State of South Australia. The movement or transport of the plant on a public road, by itself or as a contaminant, or the sale by itself or as a contaminant is prohibited. NRM authorities may require land owners to control African boxthorn plants growing on their land. NRM authorities are required to control plants on road reserves, and may recover costs from the adjoining land owners.

African boxthorn is declared in category 2 under the Act for the purpose of setting maximum penalties and for other purposes. Any permit to allow its movement or sale can only be issued by the Chief Officer pursuant to section 188.

The following sections of the Act apply to African boxthorn throughout each of the NRM regions noted below:

Sections of Act	Region							
	AMLR	AW	EP	KI	NY	SAAL	SAMDB	SE
175(1) Prohibiting entry to area								
175(2) Prohibiting movement on public roads	X	X	X	X	X	X	X	X
177(1) Prohibiting sale of the plant	X	X	X	X	X	X	X	X
177(2) Prohibiting sale of contaminated goods	X	X	X	X	X	X	X	X
180 Requiring notification of infestations								
182(1) Landowners to destroy the plant on their properties								
182(2) Landowners to control the plant on their properties	X	X	X	X	X	X	X	X
185 Recovery of control costs on adjoining road reserves	X	X	X	X	X	X	X	X

### Review

This policy is to be reviewed by 2020 or in the event of a change in any regional management plan for African boxthorn.

### Weed Risk

#### Invasiveness

African boxthorn colonises degraded or naturally disturbed landscapes, such as coastal vegetation where density of the native dominants had been reduced by grazing and other disturbances.

It can fruit at any time of the year, peaking in spring to summer, with large plants producing thousands of berries each year and 20-70 seeds in each berry. A wide range of birds including starlings, seagulls, doves and silvereyes eat the fruit and disperse the seed widely. Seedlings can establish among grasses or shrubby vegetation at any time of the year when water is available, and may persist for many years at a small size before getting above the browse line and rapidly forming large shrubs.

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### Impacts

African boxthorn usually grows among other shrubs due to seed voiding by perching birds but can grow as a free standing multistemmed shrub in open paddocks. It reduces the value of pastoral land and replaces native species in vegetation communities, especially on coastal cliffs, back dunes and along creek lines. It is avoided by livestock, and although it is not toxic the spines may cause physical injury to stock as well as limiting their access to water and pasture; the spiny thickets also provide harbour for rabbits and foxes. On the other hand, many small native animals and birds adopt boxthorn as a protective habitat and food source.

In riparian situations where it forms thickets, it can change flow patterns and influence geomorphic processes.

### Potential distribution

African boxthorn normally requires an annual rainfall greater than 200 mm, but may extend into more arid regions along creek lines. It can tolerate poor, shallow or rocky soils, exposed sites and salt-laden winds. There is potential for it to infill large areas of the regions of SA where it already occurs scattered.

### **Feasibility of Containment**

#### Control costs

Spraying with herbicide may be labour intensive due to difficulty of access into thickets, and is only effective in the growing season when boxthorns have significant leaf area. Control can be achieved at some sites by mechanical pulling of the shrubs, or poisoning them with hexazinone through the soil.

#### Persistence

Boxthorns are long-lived shrubs that regenerate after fire. They are also drought tolerant, losing leaves in periods of drought stress or even dying back and later reshooting from the base.

#### Current distribution

African boxthorn is scattered widely across the agricultural zone of South Australia and extends into the southern part of the pastoral zone. It is most abundant in near-coastal areas including the West Coast and offshore islands, and less frequent in central Eyre Peninsula, western Kangaroo Island and the Murray Mallee.

### **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 88	medium 40	manage sites
Grazing - rangeland	low 25	medium 48	limited action

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Forestry	negligible 10	high 16	limited action
Native vegetation	high 168	low 57	manage weed
Urban	negligible 4	very high 1	monitor

### Considerations

Boxthorn was extensively planted as a windbreak and hedge in the 19th century but by the turn of the century was recognised as a weed that spread readily by seed. To reduce this spread it was declared noxious under the *Destruction of African Boxthorn Act, 1925* for the whole State. Hedges already established and maintained were permitted in some areas until the 1950s.

Risk assessment indicates management actions at State level of managing sites in southern grazing lands, and managing the weed in native vegetation.

Regional management plans vary according to regional habitats and presence of the weed. In the SA Arid Lands, control is not enforced but landholders are encouraged to manage the weed. Alinytjara Wilurara manages the weed by targeted containment. On Kangaroo Island, sites are prioritised for management to protect areas of coastal vegetation and sites previously controlled. In the Adelaide and Mount Lofty Ranges, targeted control programs protect priority sites and reduce infestation density. In the SA Murray Darling Basin, key sites of high environmental value are protected by enforcing control where necessary on roadsides and properties close to these sites, aiming for a significant reduction in boxthorn density. In the South East, a regional plan to protect sites is implemented by enforced control outside a designated containment zone within which boxthorn infestations are managed.

African boxthorn has been recognised as a Weed of National Significance and will be the subject of a national control strategy.

### Synonymy

*Lycium ferocissimum* Miers, Ann. & Mag. Nat. Hist. ser.2, 14: 187 (1854)

Taxonomic synonyms:

*Lycium campanulatum* E.Mey. ex C.H.Wright, Fl. Cap. 4(2): 111 (1904)

*Lycium macrocalyx* Domin, Bibliotheca Botanica 89: 1114 (1929)

Other common names include boksdorn or boxthorn.

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Minister for Sustainability, Environment and  
Conservation

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