

Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
***Swainsona murrayana* (Slender Darling-pea)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Swainsona murrayana, Family Fabaceae, also known as Slender Darling-pea, Murray Swainson-pea and Slender Swainson, is an ascending to erect perennial forb growing to 25 cm high (Harden, 2002). Leaves are 5–10 cm long and grow on a slender stem with dense hairs. Flowers are pink or purple and appear from spring to early summer (DECC, 2005a). Seed pods are 20–65 mm long and are leathery and elliptical (Harden, 2002).

Conservation Status

Slender Darling-pea is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). Slender Darling-pea is also listed as threatened under the *Flora and Fauna Guarantee Act 1998* (Victoria) and vulnerable under the *Threatened Species Conservation Act 1995* (NSW), the *Nature Conservation Act 1992* (Queensland), and the *National Parks and Wildlife Act 1972* (South Australia).

Distribution and Habitat

Slender Darling-pea occurs from South Australia through south-west Victoria and central NSW to south-east Queensland (DECC, 2005a; CPBR, 2008). In Victoria, records are scattered from the south-west through to the central north of the state, including the Echuca area and most notably in Terrick Terrick National Park (DSE, 2001; DSE, 2004; CPBR, 2008). In NSW, this species occurs in the central western slopes, the Western Division, and the Riverina area (DECC, 2005a; CPBR, 2008). In South Australia, this species has been recorded approximately 200 km north-east of Port Augusta (State Herbarium of South Australia, 2008) and in the state's far-east, near Broken Hill (CPBR, 2008). This species has been recorded in south-east Queensland near Surat (CPBR, 2008; Queensland Herbarium, 2008). Slender Darling-pea occurs within the Border Rivers–Gwydir, Central West, Lachlan, Murray, Murrumbidgee, Namoi, Western (NSW), Glenelg Hopkins, Wimmera, North Central, Goulburn Broken, North East (Victoria), Border Rivers Maranoa–Balonne (Queensland), and South Australian Arid Lands Natural Resource Management Regions.

Slender Darling-pea is found in grassland, herbland, and open Black-box woodland, often in depressions (DSE, 2001; Harden, 2002; DECC, 2005a). This species grows in heavy grey or brown clay, loam, or red cracking clays (DSE, 2001; DECC, 2005a). It is often associated with low chenopod shrubs (*Maireana* spp.), wallaby-grass (*Austrodanthonia* spp), and spear grass (*Austrostipa* spp.) (DSE, 2001; Harden, 2002). The species may require some disturbance and has been known to occur in paddocks that have been moderately grazed or occasionally cultivated (DECC, 2005a).

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The distribution of this species overlaps with the following EPBC Act-listed threatened ecological communities:

- The community of native species dependant on natural discharge of groundwater from the Great Artesian Basin,
- Brigalow (*Acacia harpophylla* dominant and co-dominant),
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derive Native Grassland, and
- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions.

Threats

The main identified threats to Slender Darling-pea include grazing from domestic stock and rabbits (*Oryctolagus cuniculus*); weed invasion; cultivation; and roadside maintenance activities (Ayres et al., 1996; DSE, 2001; DECC, 2005a).

The main potential threats to the species include habitat destruction by goats (*Capra hircus*) and feral pigs (*Sus scrofa*); salinisation of habitat; urban development in grassland habitat; and inappropriate fire regimes (Ayres et al., 1996; DECC, 2005a). This species should not be burnt more frequently than once every ten years (NSW RFS, 2004).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- Experimentally investigate the effects of fire, grazing, flooding and other disturbances (DECC, 2005b).

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Slender Darling-pea.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure road widening and maintenance activities involving substrate or vegetation disturbance in areas where Slender Darling-pea occurs do not adversely impact on known populations.
- Identify populations of high conservation priority.
- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, or salinity levels.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.

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Trampling, Browsing or Grazing

- Develop and implement a stock management plan for roadside verges and travelling stock routes.
- Implement the Threat Abatement Plans for the control and eradication of rabbits, goats and feral pigs in the local region.

Fire

- Develop and implement a suitable fire management strategy for Slender Darling-pea.
- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of Slender Darling-pea within the local community.
- Distribute information to landholders to assist in protecting and managing key populations and locating new occurrences (DSE, 2001; DECC, 2005b).
- Establish formal management arrangements with responsible land managers to protect this species (DSE, 2001).

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of Slender Darling-pea.

Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.
- Minimise adverse impacts from land use at known sites.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to the Slender Darling-pea, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Slender Darling-pea.

Trampling, Browsing or Grazing

- Ensure that livestock grazing, if it occurs in the area, uses an appropriate management regime and density that does not detrimentally affect this species.
- Where appropriate manage total grazing pressure at important/significant sites through exclusion fencing or other barriers.

This list does not necessarily encompass all actions that may be of benefit to Slender Darling-pea, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Threatened species hazard reduction list (NSW RFS, 2004),

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- Threat Abatement Plan for Competition and Land Degradation by Feral Goats (EA, 1999a),
- Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits (EA, 1999b),
- Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs (DEH, 2005),
- Victorian feral pig and feral goat management strategy (DSE, 2002),
- Kirramingly Nature Reserve Plan of Management (NSW NPWS, 2003),
- Terrick Terrick East Nature Conservation Reserve Management Statement (DSE, 2005),
- Terrick Terrick National Park Management Plan (DSE, 2004), and
- Eastern Districts Soil Conservation Board: District Plan (DWLBC, 2002).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

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