

**Advice to the Minister for the Environment, Heritage and the Arts  
from the Threatened Species Scientific Committee (the Committee)  
on Amendments to the list of Threatened Species  
under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)**

**1. Scientific name (common name)**

*Grevillea brachystylis* subsp. Busselton (G.J.Keighery s.n. 28/8/1985)  
(Large-flowered Short-styled Grevillea)

**2. Description**

The Large-flowered Short-styled Grevillea is a shrub growing to 1.8 metres tall, with red flowers showing from August to December (WA Herbarium, 2005).

**3. National Context**

The Large-flowered Short-styled Grevillea is endemic to Western Australia and is currently known from six populations in the Blackwood area, approximately 200 km south-south-west of Perth (CALM, 2005).

The species is known from a narrow geographic range of approximately 10 km at the base of the Whicher Scarp, where it grows on brown lateritic clay loam soils in Marri woodland (Stack & English, 2002).

It is listed as rare under the *Western Australian Wildlife Conservation Act 1950*, and is managed as 'critically endangered' (according to IUCN criteria) by the Western Australian Government.

**4. How judged by the Committee in relation to the EPBC Act criteria.**

The Committee judges the species is **eligible** for listing as **critically endangered** under the EPBC Act. The justification against the criteria is as follows:

**Criterion 1 – It has undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe, severe or substantial reduction in numbers.**

The Large-flowered Short-styled Grevillea is currently known from six populations containing a total of approximately 170 mature individuals. All populations occur on shire road verges, with one of these populations on both road verge and adjacent private property. Annual surveys for this species have been undertaken since 2000, but no additional populations have been found (CALM, 2005).

There is little available data to establish a population trend for the species, however, available evidence indicates that the Large-flowered Short-styled Grevillea has undergone a decline in population numbers.

In 2001, the population occurring on the adjacent road verge and private property contained approximately 70 and 25 plants respectively. However, when surveyed in 2002 the combined total of this population had reduced to approximately 50 plants (CALM, 2005; Stack & English, 2002).

When each population was last surveyed, three of the six populations were recorded as being healthy but showing signs of disturbance, one population was disturbed and two populations were in moderately healthy condition.

In the past, land clearing may have been a threat to the Large-flowered Short-styled Grevillea, as the species is located within an area of Western Australia that has been extensively cleared for agriculture.

All six populations are currently threatened from road maintenance, including grading, chemical spraying, drainage channel construction and mowing; and weed competition, especially from Bugle Lily (*Watsonia bulbifera*), Rush (*Juncus microcephalus*), African Lovegrass (*Eragrostis curvula*) and Kikuyu (*Pennisetum clandestinum*) (CALM, 2005; Stack & English, 2002).

The species is also potentially susceptible to inappropriate fire regimes. While the species appears to regenerate from seed after fire, frequent fire is likely to impact on the ability of the species to regenerate or to mature and replenish the soil seed bank (Stack & English, 2002).

Available evidence indicates that the species has undergone a decline in population size during the past three years. Given that five of the six known populations occur entirely on road reserves and all populations are subject to major ongoing threats, it is likely the Large-flowered Short-styled Grevillea will undergo a further reduction in numbers in the immediate future. Therefore the species is **eligible** for listing as **endangered** under this criterion.

**Criterion 2 –Its geographic distribution is precarious for the survival of the species and is very restricted, restricted or limited.**

The Large-flowered Short-styled Grevillea is currently known from six populations with an extent of occurrence of approximately 14 km<sup>2</sup>. The area of occupancy is unknown but is estimated to be small (CALM, 2005).

The species' distribution is severely fragmented, with the known populations being small and isolated, occurring on road side verges, within an area which has been extensively cleared for agriculture (CALM, 2005).

As discussed under criterion 1, with the ongoing threats of road-side maintenance, weed invasion and inappropriate fire regimes to all known populations, it is likely the quality of the species' habitat and species numbers will undergo a decline.

The geographic distribution of this species is very restricted and is precarious for its survival. Therefore, the species is **eligible** for listing as **critically endangered** under this criterion.

**Criterion 3 – The estimated total number of mature individuals is limited to a particular degree and: (a) evidence suggests that the number will continue to decline at a particular rate; or (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival.**

The total number of mature individuals for this species is approximately 170 plants over six populations. As discussed under criterion 1, there appears to have been an overall reduction in numbers of mature individuals since 2002. The largest population contains approximately 60 plants, with the smallest containing one plant (CALM, 2005).

Due to the ongoing threats of road-side maintenance, weed competition and inappropriate fire regimes impacting on the species, and its severely fragmented distribution, it is likely that the area and quality of its habitat will continue to decline, resulting in a further reduction in numbers of mature individuals.

Therefore, the species is **eligible** for listing as **endangered** under this criterion.

**Criterion 4 – The estimated total number of mature individuals is extremely low, very low or low.**

The total population size of this species is very low, with approximately 170 mature individuals remaining (CALM, 2005). With the ongoing threats of road-side maintenance, weed competition and inappropriate fire regimes, the numbers are likely to decline further.

Therefore, the species is **eligible** for listing as **endangered** under this criterion.

**Criterion 5 - Probability of extinction in the wild**

There are insufficient data to assess the species under this criterion.

**5. CONCLUSION**

The Large-flowered Short-styled Grevillea is currently known from six populations and the total population size is approximately 170 mature individuals. The species occurs on road verges and private property in the Blackwood area, approximately 200 km south-south-west of Perth, Western Australia.

Available evidence indicates that the species has undergone a significant decline in population numbers during the past three years, and is likely to undergo a further decline as all six populations are under threat from road-side maintenance, weed competition and inappropriate fire regimes.

The species has a very restricted extent of occurrence (14km<sup>2</sup>), which is precarious for its survival.

The species is eligible for listing as **critically endangered** under criterion 2, and **endangered** under criteria 1, 3 and 4.

**Recovery Plan**

The Committee considers that there should be a recovery plan for this species. The Large-flowered Short-styled Grevillea is only known from six populations and is subject to a number of land use threats, which can be better managed with a recovery plan in place.

**6. Recommendation**

- (i) The Committee recommends that the list referred to in section 178 of the EPBC Act be amended by **including** in the list in the **critically endangered** category:

***Grevillea brachystylis* subsp. Busselton (G.J.Keighery s.n. 28/8/1985)  
(Large-flowered Short-styled Grevillea)**

- (ii) The Committee recommends that there be a recovery plan for this species.

Associate Professor Robert J.S. Beeton

Chair

Threatened Species Scientific Committee

### **Publications used to assess the nomination**

- CALM (2005). Records held in CALM's *Declared Rare Flora Database and rare flora file*. WA Department of Conservation and Land Management.
- IUCN (2001). *IUCN Red List Categories: Version 3.1*. Prepared by the IUCN Species survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
- Stack, G., & English, V. (2002). *Grevillea brachystylis subsp Grandis MS*. Interim Recovery Plan No. 120. Department of Conservation and Land Management, Western Australia.
- Western Australian Herbarium (WA Herbarium) (2005). *FloraBase – The Western Australian Flora*. Department of Conservation and Land Management.  
<<http://florabase.calm.wa.gov.au>>