Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on Amendment to the list of Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

1. Reason for Conservation Assessment by the Committee

This advice follows assessment of new information provided by the Western Australian Government on:

***Leioproctus douglasiellus* (a short-tongued bee)**

2. Summary of Species Details

Taxonomy	Conventionally accepted as *Leioproctus douglasiellus* (Michener, 1965)
State Listing Status	Listed as Schedule 1 (fauna that is rare or likely to become extinct) under the Western Australian *Wildlife Conservation Act 1950*. Managed as endangered by the Western Australian Government.
Description	*Leioproctus douglasiellus* is a small black bee which belongs to a group of species characterised by short tongues. Female specimens are 8 mm in length, with a wing length of almost 5 mm (DEC, 2009).
Distribution	The species is now thought to occur in three locations within the Perth metropolitan area ranging from Cannington to Forrestdale, as reported in the 2006-2008 Rare Native Bee Survey results conducted by Department of Environment and Conservation Swan Region (DEC, 2009).
Relevant Biology/Ecology	The bees are not well-studied but it is assumed that the species is solitary, ground-nesting and produces a single generation per year, with emergence of adults timed to coincide with flowering of the food-plants. Adults probably live for no more than a few weeks. The population is probably carried over most of the year in the pre-pupal stage. There are closely related species (in the subgenus *Andrenopsis)*, and while hybridization between *L. douglasiellus* and *Andrenopsis* species is not known, it may be possible. Hybrids of other solitary bees have been known or suspected (Houston, pers. comm., 2009). Specimens of *L. douglasiellus* have been collected on two plant species, both of which are on the DEC Priority Flora list: *Goodenia filiformis* (Priority 3) and *Anthotium junciforme* (Priority 4) (DEC, 2009).
Threats	
Known	In the past, land clearance in the areas where the species occurred is likely to have destroyed suitable habitat. Current disturbance, such as mowing, may be degrading areas of suitable habitat (DEC, 2009). Inappropriate fire regimes are a threat to the species as they can change or disturb its habitat, resulting in the replacement of native vegetation with weeds (CALM, 2005).
Potential	Competition with introduced honeybees is a potential threat to this species (Houston, 2000).

3. Public Consultation

Notice of the proposed amendment was made available for public comment for 30 business days. No comments were received.

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

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

Not eligible

Criterion element	Evidence
Reduction in numbers	Insufficient data – While surveys between 1954 and 2006 indicate there may have been a decline in the species numbers and habitat due to land clearance, there are insufficient data to determine whether this decline has been substantial (DEC, 2009).

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

Eligible for listing as critically endangered

Criterion element	Evidence
Geographic distribution AND	Very restricted – Extent of occurrence is 24.3 km^2 and area of occupancy is 0.2 km^2 (DEC, 2009).
Geographic distribution precarious	Yes – the species is known to exist at only three locations and its geographic distribution is thought to be severely fragmented. There is a range of threats operating within the species' known habitat which are likely to cause continued decline in area of occupancy.

Criterion 3: The estimated total number of mature individuals is very low, low or limited; **and either**
(a) evidence suggests that the number will continue to decline at a very high, high or substantial rate; **or**
(b) the number is likely to continue to decline **and** its geographic distribution is precarious for its survival

Not eligible

Criterion element	Evidence
Total no. of mature individuals AND	No data
Continued rate of decline	No data
OR	

Total no. of mature individuals	No data
AND	
Continued decline likely	Yes – see Criterion 2.
AND	
Geographic distribution precarious	Yes – see Criterion 2.

Criterion 4: The estimated total number of mature individuals is extremely low, very low or low

Not eligible

Criterion element	**Evidence**
Total no. of mature individuals	No data

Criterion 5: Probability of extinction in the wild that is at least
(a) 50% in the immediate future; or
(b) 20% in the near future; or
(c) 10% in the medium-term future

Not eligible

Criterion element	**Evidence**
Probability of extinction in the wild	No data

5. Recovery Plan

There should not be a recovery plan for *Leioproctus douglasiellus* as the approved conservation advice for the species provides sufficient direction to implement priority actions and mitigate against key threats.

6. Recommendations

(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:

Leioproctus douglasiellus

(ii) The Committee recommends that there should not be a recovery plan for this species.

Threatened Species Scientific Committee

24 August 2010

References cited in the advice

Department of Conservation and Land Management (CALM) (2005). Forrestdale Lake Nature Reserve Management Plan 2005. Conservation Commission of Western Australia and Department of Conservation and Land Management, Perth.

Department of Environment and Conservation (DEC) (2009). Threatened and priority fauna database and fauna species files. WA Department of Environment and Conservation, Kensington, Perth.

Houston TF (2000). Native bees on wildflowers in Western Australia. Special Publication No. 2 of the Western Australian Insect Study Society Inc. WA Museum: Perth.

Houston TF (2009). Personal communication between Dr Terry Houston, Senior Curator (Entomology), Dept. of Terrestrial Zoology, Western Australian Museum, and Amy Mutton, DEC, via email 15 December 2009, copy on DEC file 2001F000679V01.