Attn: Libby Gordon
Design and Development,
Parks and Conservation,
Territory and Municipal Services Directorate

12 December 2012

Reference Number: 12CANECO-0004

Dear Ms Gordon

Re: Canberra Centenary Trail Targeted Survey

The ecological assessment report for the Canberra Centenary Trail (CCT) project (Eco Logical 2012) identified the need to undertake further survey for a number of threatened species considered as having potential to occur within the proposed alignment. The species identified as requiring additional survey were:

- Small Purple-Pea (*Swainsona recta*)
- Button Wrinklewort (*Rutidosis leptorrhynchoideos*)
- Austral Toadflax (*Thesium australe*)
- Hoary Sunray (*Leucochrysum albicans var. tricolor*)
- Canberra Spider Orchid (*Arachnorchis actensis*)
- Pink-tailed Worm Lizard (*Aprasia parapulchella*)

The results of the targeted survey are provided in an appendix to this letter. If you wish to discuss any issues regarding this project, please don’t hesitate to give me a call.

Yours sincerely,

Andrew Palmer-Brodie
Environmental Consultant
Eco Logical Australia, Canberra
Appendix A – Targeted Survey

Eco Logical Australia was contracted to undertake targeted surveys of the Canberra Centenary Trail alignment in spring 2012. The species listed below in Table 1 were targeted during these surveys.

Table 1 Optimum survey period for target species

<table>
<thead>
<tr>
<th>Species</th>
<th>Optimum Survey Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Purple-Pea (Swainsona recta)</td>
<td>September - November</td>
</tr>
<tr>
<td>Button Wrinklewort (Rutidosis leptorrhynchoides)</td>
<td>November – December</td>
</tr>
<tr>
<td>Austral Toadflax (Thesium austral)</td>
<td>Spring - Summer</td>
</tr>
<tr>
<td>Hoary Sunray (Leucochrysum albicans var. tricolor)</td>
<td>September – November</td>
</tr>
<tr>
<td>Canberra Spider Orchid (Arachnorchis actensis)</td>
<td>September-October</td>
</tr>
<tr>
<td>Pink-tailed Worm Lizard (Aprasia parapulchella)</td>
<td>Spring-Summer</td>
</tr>
</tbody>
</table>

Methodology and results

Targeted surveys were undertaken by two ecologists for the species listed above in Table 1. Targeted surveys were timed to coincide with the optimum survey period for each species where possible. Surveys were undertaken by walking the proposed alignment and undertaking targeted searches for each species in areas of suitable habitat.

If a species was identified as occurring on site, a GPS point and an estimate of the number of individuals present was taken.

Threatened Flora Surveys

Threatened flora surveys were undertaken between 26th October and the 6th of November 2012 as identified in Table 2. The targeted surveys recorded the presence of the Hoary Sunray within the proposed alignment. No other threatened flora species were recorded.

Table 2 Threatened flora surveys undertaken

<table>
<thead>
<tr>
<th>Target Species</th>
<th>Survey Date</th>
<th>Survey Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Purple-Pea (Swainsona recta)</td>
<td>1st of November 2012</td>
<td>Long Gully Road</td>
</tr>
<tr>
<td>Button Wrinklewort (Rutidosis leptorrhynchoides)</td>
<td>7th December 2012</td>
<td>Red Hill</td>
</tr>
<tr>
<td>Austral Toadflax (Thesium austral)</td>
<td>6th of November 2012</td>
<td>Kambah Pools and Murrumbidgee River Corridor</td>
</tr>
<tr>
<td>Hoary Sunray (Leucochrysum albicans var. tricolor)</td>
<td>1st, 5th &amp; 6th of November 2012</td>
<td>Federal Highway, areas of Box-Gum Woodland</td>
</tr>
<tr>
<td>Canberra Spider Orchid (Arachnorchis actensis)</td>
<td>26th of October, 1st of November 2012</td>
<td>Mt Majura/Mt Ainsle</td>
</tr>
</tbody>
</table>
Small Purple Pea – Endangered (EPBC)

The targeted surveys did not detect the Small Purple Pea either within the proposed alignment or within 10m of the trail alignment. A known reference population for the species was checked prior to completing the surveys to ensure that the species was in flower to ensure the highest chance of the species being detected.

Button Wrinkle-Wort – Endangered (EPBC)

Targeted surveys for this species were conducted at Red Hill Nature Reserve. The CCT utilises existing tracks in this area which require upgrade. The targeted surveys identified the species at a single location along the proposed alignment (Figure 7). Two individuals were observed on the edge of the track (Plate 3). This population has been previously recorded and is mapped in the ACTMAPI database.

Austral Toadflax – Vulnerable (EPBC)

While the species has been previously recorded (ACTMAPI Database) in the local area, the targeted surveys did not detect the Austral Toadflax either within the proposed alignment or in the adjacent area. Areas containing a high proportion of Kangaroo Grass (*Themeda australis*) were targeted as the species is known to preferentially use Kangaroo Grass as a host plant.

Hoary Sunray – Endangered (EPBC)

Targeted surveys for Hoary Sunray were undertaken along the CCT alignment in the area of the Hughie Edwards Rest Area and in areas considered likely to provide potential habitat for the species such as Box-Gum Woodland. The species was recorded in the Ecological Assessment report (Eco Logical Australia, 2012) adjacent to the Hughie Edwards rest area.

The targeted surveys confirmed the presence of the species at the Hughie Edwards rest area where approximately 70 individuals occur along the current alignment of the CCT (Figure 1). In addition, two other populations were observed within or adjacent to the Hughie Edwards rest area (>200 individuals in total). Neither of these populations is located close to the proposed alignment, and as such will not be impacted by the development of the CCT.

In addition, two isolated individuals were recorded along the proposed alignment at Long Gully Road (Figure 2) and Black Mountain (Figure 3). It is understood that the CCT will be micro-aligned to avoid any impact to this species. The location of each individual will be marked prior to construction to ensure that impacts to the species are avoided.

Canberra Spider Orchid – Critically Endangered (EPBC)

Targeted surveys for Canberra Spider Orchid were undertaken along the CCT alignment in the areas of Mount Majura and Mount Ainsle considered likely to provide potential habitat for the species. A known reference population for the species was checked prior to completing the surveys to determine if the species was in flower to ensure the highest chance of the species being detected. At the time of survey, the flower heads were still conspicuous and easily identifiable, even though the species had recently finished flowering.

The targeted surveys did not record the species within or adjacent to the proposed alignment.

Threatened Fauna Surveys

Threatened flora surveys were undertaken between 26th October and the 6th of November 2012 as identified in Table 2. The targeted surveys recorded the presence of both the Pink-tailed Worm Lizard and the Golden Sun Moth within the proposed alignment. No other threatened flora species were recorded.

Table 3 Threatened fauna surveys undertaken

<table>
<thead>
<tr>
<th>Target Species</th>
<th>Survey Date</th>
<th>Survey Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink-tailed Worm Lizard</td>
<td>1st &amp; 6th November</td>
<td>Isaac's Ridge, Murrumbidgee River Corridor</td>
</tr>
<tr>
<td><em>(Aprasia parapulchella)</em></td>
<td>November 2012</td>
<td></td>
</tr>
<tr>
<td>Golden Sun Moth</td>
<td>15th November</td>
<td>Gungahlin alignment (unleased territory land, Pattinsons property, Carmody’s Property and Bolton’s Property)</td>
</tr>
<tr>
<td><em>(Synemon Plana)</em></td>
<td>2012</td>
<td></td>
</tr>
</tbody>
</table>
Pink-tailed Worm Lizard – Vulnerable (EPBC)

Targeted surveys consisting of rock rolling for the Pink Tailed Worm Lizard (PTWL) were undertaken along the CCT alignment in areas previously identified as likely to provide potential habitat (Eco Logical, 2012), see Figure 4, Figure 5. Surveys were undertaken in accordance with the Commonwealth Survey Guidelines for Threatened Reptiles.

The targeted surveys identified the species within the proposed alignment at Isaacs Ridge where a single individual was recorded (Plate 4). The individual was recorded in a large patch of contiguous habitat comprising a mix of shallow as well as deeply embedded rocks on a grassy hill slope. The proposed alignment traverses the patch and will result in an impact to 0.1ha of known habitat for the species (Figure 5).

Golden Sun Moth – Critically Endangered (EPBC)

Targeted surveys were not undertaken for the Golden Sun Moth; however, the species was recorded in Gungahlin in the rural leases along the northern border (Figure 6). The species was recorded in an area of derived Red Stringybark – Scribbly Gum Tablelands Forest with a native grass understory comprised predominantly of Austrodanthonia carphoides. The species was recorded over an area approximately 1.5km in length. It is estimated that approximately 13ha of habitat is present on the ACT side of the border. Habitat for the species continues across the border but was not able to be mapped or quantified. The CCT will result in an impact to 0.18 ha of known habitat for this species.

Summary and Recommendations

Following the completion of the targeted surveys, two threatened flora species (Hoary Sunray and Button Wrinkle-Wort) and two threatened fauna species (Pink-Tailed Worm Lizard & Golden Sun Moth) were identified as occurring within the proposed alignment.

The EPBC referral for the project (2012/6645) was submitted to the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) in November 2012. The referral includes commitments to avoid impacts to the Hoary Sunray and Button Wrinkle-Wort through micro-alignment of the trail. It is recommended that these commitments be re-iterated and suitable micro-alignment options be chosen in co-ordination with a suitably qualified ecologist and the track construction contractor.
Appendix B – list of Figures

Plate 1 – Hoary Sunray (*Leucochrysum albicans* var. *tricolor*) recorded at Black Mountain – Endangered (EPBC)

Plate 2 – Golden Sun Moth (*Synemon plana*) – recorded in Gungahlin, ACT - Critically Endangered (EPBC)

Plate 3 – Button Wrinkle-Wort (*Rutidosis leptorrhynchoides*) – recorded at Red Hill Nature Reserve, ACT – Endangered (EPBC)

Plate 4 – Pink-tailed Worm Lizard (*Aprasia parapulchella*) – recorded at Isaacs Ridge, ACT – Vulnerable (EPBC)
Figure 1 Hoary Sunray - Hughie Edwards rest area, Federal Highway
Figure 2 Hoary Sunray - Long Gully Road
Figure 3 Hoary Sunray - Black Mountain Nature Reserve
Figure 4 Potential Pink Tailed Worm Lizard Habitat - Murrumbidgee River Corridor
Figure 5 Pink Tailed Worm Lizard - Issacs Ridge Nature Reserve
Figure 6 Golden Sun Moth Habitat - Gungahlin
Figure 7 Button Wrinkle-Wort record, Red Hill Nature Reserve