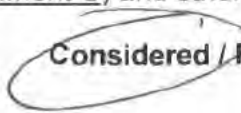


To: Gregory Manning, Assistant Secretary, Assessments (WA, SA, NT) and Post Approvals Branch (for decision)

**Referral Decision Brief – Twin Creek Wind Farm, 80km north-east of Adelaide, South Australia (EPBC 2018/8208)**

Timing: ASAP statutory deadline was 30 July 2018.

<b>Recommended Decision</b>	NCA <input type="checkbox"/> NCA(pm) <input type="checkbox"/> CA <input checked="" type="checkbox"/>												
<b>Designated Proponent</b>	RES Australia Pty Ltd ACN: 106 637 754												
<b>Controlling Provisions triggered or matters protected by particular manner</b>	<table border="0"> <tr> <td>World Heritage (s12 &amp; s15A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>National Heritage (s15B &amp; s15C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Ramsar wetland (s16 &amp; s17B) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>Threatened Species &amp; Communities (s18 &amp; s18A) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Migratory Species (s20 &amp; s20A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth marine (s23 &amp; 24A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Nuclear actions (s21 &amp; 22A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth land (s26 &amp; s27A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>C'wealth actions (s28) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>GBRMP (s24B &amp; s24C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>A water resource – large coal mines and CSG (s24D &amp; s24E) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth heritage o/s (s27B &amp; 27C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> </table>	World Heritage (s12 & s15A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	National Heritage (s15B & s15C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Ramsar wetland (s16 & s17B) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Threatened Species & Communities (s18 & s18A) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No if PM <input type="checkbox"/>	Migratory Species (s20 & s20A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth marine (s23 & 24A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Nuclear actions (s21 & 22A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth land (s26 & s27A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth actions (s28) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	GBRMP (s24B & s24C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	A water resource – large coal mines and CSG (s24D & s24E) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth heritage o/s (s27B & 27C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>
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<b>Public Comments</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Number: 17 See <u>Attachment E</u>												
<b>Ministerial Comments</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>												
<b>Assessment Approach Decision</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> What: Preliminary Documentation Bilateral Applies <input type="checkbox"/>												
<b>Recommendation/s:</b>													
1. Consider the information in this brief, the referral ( <u>Attachment C</u> ) and other attachments.													
 <b>Considered / Please discuss</b>													

2. Agree with the recommended decision.

Agreed / Not agreed

3. Agree to the designated proponent.

Agreed / Not agreed

4. Agree the action be assessed on preliminary documentation.

Agreed / Not agreed

5. If you agree to 2 and 4, indicate that you accept the reasoning in the departmental briefing package as the basis for your decision.

Accepted / Please discuss

6. Agree to the fee schedule and justification table (Attachment F) and that the fee schedule be sent to the proponent.

7. An invoice will be provided in the letter to the person proposing to take the action for Stage 1 of the assessment, for the preparation of the preliminary documentation information required. A separate letter requiring further information will be prepared for your signature within 10 business days of payment.

Noted / Discuss

8. Sign the notice at Attachment A (which will be published if you make the recommended decision).

Signed / Not signed

9. Sign the letter at Attachment B.

Signed / Not signed



Date:

9/11/18

**Gregory Manning, Assistant Secretary, Assessments  
(WA, SA, NT) and Post Approvals Branch:**

Comments:

## **BACKGROUND:**

### **Description of the referral**

A referral was received on 2 July 2018 ([Attachment C](#)). The action was referred by RES Australia Pty Ltd (the proponent), which has stated its belief that the proposal is not<sup>1</sup> a controlled action for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

### **Description of the proposal (including location)**

The proponent proposes to develop the Twin Creek Wind Farm within the Mid North area of South Australia. The project site is located approximately 90 km north east of Adelaide and approximately 10 km north east of Kapunda, on the tablelands that form the wide ridgeline associated with Bald Hill and Long Hill within the northern Mount Lofty Ranges. It is located between the townships of Kapunda, Eudunda and Truro and occurs within the Light Regional Council, Goyder District Council and Mid Murray District Council boundaries (see [Attachment C22](#)).

The proposed wind farm will consist of the following:

- Up to 51 wind turbines with associated hardstand areas and access roads. Each turbine will have a maximum height of up to 180 m (at the blade tip) and will be rated at approximately 3.6 MW each, meaning a total installed wind capacity up to 185 MW. Each turbine will have a foundation that is approximately 5 m in diameter at the surface, 20 m diameter below the surface and up to 3.5 m deep. The average total clearance and impact area required for each turbine is estimated at 90 m long and 45 m wide (4050 m<sup>2</sup>) to accommodate for the foundation, laydown (temporary storage), crane hardstand area and two smaller (15 m x 15 m) crane hardstand areas (to erect the main crane jib), to enable assembly and erection of the turbine components.
- Internal access tracks which will be used both during construction and for operational and maintenance activities. Existing established tracks on the properties will be used where possible and will be upgraded to accommodate for the weight and size of turbine transport and construction vehicles, including the crane used to erect the turbines. However, construction of new access tracks will be required where there are no existing tracks. The internal access track network will be approximately 40 km long and approximately 6 m wide, apart from some wider sections to accommodate overtaking areas and turning circles. In addition, drainage swales up to 3 m in width are likely to be required on one side or both sides of the access track, which will increase the width of the access track to up to about 12 m in some areas.
- A site access route via public roads. Two access routes from Truro Rd to the site entrance on the south eastern side of the project site are being considered to access the project site. These roads will be upgraded where necessary, to cater for the additional weight of the turbine transport and construction vehicles, including the crane used to erect the turbines, as well as the additional width required to accommodate for oversize loads, passing/overtaking and turning.

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<sup>1</sup> The proponent has ticked that there is likely to be a significant impact to listed threatened species and communities in section 2 of the referral form, however, has justified why they think the project will not have a significant impact in section 5. The Department considers that the selection of the significant impact box in section 2 is likely to be an error given the general tone of the referral and that the proponent's intention was that they considered the action to not have a significant impact.

- Underground electrical cable reticulation with cables installed via open trenching works to connect each turbine to the on-site substation. Trenches will be located adjacent to the access tracks where possible, within approximately 5 m of the shoulder of the track. The cables will be installed at a depth of approximately 1 m (a minimum of 1 m coverage over the top of the cables is required) and the trench impact area will be 5 m wide for a single cable alignment plus 0.5 m for each additional cable (some trenches will contain multiple cables). The exact trench dimensions will depend on the installation method used by the contractor. The total length of the proposed underground electrical cabling is approximately 50 km.
- Approximately 15 km of 275 kV overhead electrical cabling to connect the onsite substation to the terminal substation located approximately 5 km east of Truro. The transmission line will require a clearance area of up to 50 m wide (25 m radius from the cables), which may result in removal or trimming of vegetation depending on the proximity of the vegetation to the overhead cables at each location.
- A terminal substation on the southern side of Sturt Highway, approximately 5 km east of Truro with associated access tracks. The impact area is estimated to be approximately 2 ha for the substation compound and 1.5 ha for a temporary construction compound. The footprint required for the access tracks is unclear from the referral.
- Two meteorological masts to measure wind speed with an approximate impact area of 28 m<sup>2</sup> in total.
- Construction compounds, an on-site substation, battery storage, and an operation and maintenance facility. The main construction compound will be situated in the south eastern corner of the site and will include a site office and staff facilities, amenities, car park, workshop, skip bins, concrete batching plant, equipment laydown area and material storage areas. The substation, battery storage and operation and maintenance facility will be collocated with this compound. The other three compounds will be located in the northern, western and central areas of the site and will include equipment laydown and material storage areas. The total combined impact area of this component will be approximately 12.1 ha.

In total the project area is approximately 5,600 ha with a disturbance footprint of 90 ha.

### **Description of the environment**

Landform in the area is defined by numerous ridgelines that run north-south through the site creating a series of parallel ridges, wide open valleys, tablelands and isolated topographic features. The landscape surrounding the proposed action area is dominated by grazing with open paddocks defined by fenced boundaries and occasional trees along fence lines and creek lines. The land use that occurs in the open valley floor is more diverse with areas of arable cropping and grazing.

Surveys undertaken from 2015 to 2017 recorded 168 flora species, including 76 exotic species. Eleven vegetation associations are located within the project site including:

- *Lomandra effusa* and *Austrostipa* sp. grasslands (196.2 ha)
- *Austrostipa* sp. grassland (1751.7 ha)
- Planted species (21.8 ha)
- South Australian Blue-gum (*Eucalyptus leucoxydon*), Water Mallee (*Eucalyptus porosa*) and Murray Cypress Pine (*Callitris gracilis*) open woodland (64.7 ha)
- *Juncus* spp. (Rush) and Pale Rush (*Juncus pallidus*) sedgeland with Common Reed (*Phragmites australis*) (52.1 ha)
- Cropping (1388.8 ha)

- Water Mallee, Peppermint Box (*Eucalyptus odorata*) and Kong Mallee (*Eucalyptus gracilis*) open woodland (2.4 ha)
- Pasture grassland/exotic grassland (868.2 ha)
- Peppermint Box and Water Mallee closed woodland over grassy understorey (6.8 ha)
- River Red Gum (*Eucalyptus camaldulensis* ssp. *camaldulensis*) and South Australian Blue-gum closed tall shrubland over Spear-grass (*Austrostipa* sp.) near creeklines (2.3 ha)
- South Australian Blue-gum tall open woodland over shrubby understorey (3.6 ha)

The most widespread native species include Spear-grasses, Brush-wire Grass (*Aristida behriana*), Scented Mat-rush (*Lomandra effuse*), Peppermint Box, South Australian Blue-gum and Pussy-tails (*Ptilotus spanthulatus*). All vegetation associations exhibit a degree of weed invasion and damage from stock.

The project site has an average annual rainfall of 425-515 mm, with most falling between June and September, however, total rainfall is highly variable and the area may often receive rainfall in excess of the average. The terrain is predominately deeply dissected low hills with steep slopes which are susceptible to erosion. Watercourses in the area are largely ephemeral and fed by rainfall.

The site is located within the Light River Catchment and the Light River flows along the western boundary of the project site. Freshwater Creek meets the Light River within the project site, while Spring Creek passes through and meets the Light River just outside the south west boundary. A number of other watercourses and farm dams are also located within the project site.

The local geology is within the Adelaide Geosyncline, comprising thick sedimentary and minor igneous rocks. The land is strongly dissected so the rocks are generally near, or at, the surface. Most rocks and sediments are mantled by fine grained carbonates, usually as soft segregations in the weathered zone but harder rubbly and sheet calcrete also occur at shallow depth. Soils are mostly shallow, stony and calcareous with sub-optimal water holding capacity.

Bird surveys in the area recorded 1448 sightings of 48 species including Wedge-tailed Eagles (*Aquila audax*) and Rainbow Bee-eater (*Merops ornatus*) which nest in the area. The state listed Blue-winged Parrot (*Neophema chrysostoma*) was also seen on site. The most common birds were the Common Starling (*Sturnus vulgaris*) (343 individuals), Galah (*Eolophus roseicapilla*) (274 individuals) and Australian Magpie (*Gymnorhina tibicen*) (170 individuals). The Rainbow Bee-eater is EPBC listed marine (not a consideration for this referral decision or any subsequent assessment) but no other birds recorded on site are listed under the EPBC Act. AnaBat surveys confirmed the presence of seven bat species within the project boundary, none of which are EPBC listed.

### **KEY ISSUES:**

- The proposed action will result in the clearance of approximately 30.71 ha of habitat for Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*, endangered), direct impacts to at least 16 individuals and indirect impacts to at least 99 further animals across the project site.
- Iron-grass Natural Temperate Grassland of South Australia Threatened Ecological Community may be present in and around the project site. None of the community will be directly cleared but impact to critical habitat is possible.
- Seventeen public comments were received on the referral many of which oppose the proposed action. A summary of these comments is at [Attachment E1](#).

## **RECOMMENDED DECISION:**

Under section 75 of the EPBC Act you must decide whether the action that is the subject of the proposal referred is a controlled action, and which provisions of Part 3 (if any) are controlling provisions for the action. In making your decision you must consider all adverse impacts the action has, will have, or is likely to have, on the matter protected by each provision of Part 3. You must not consider any beneficial impacts the action has, will have or is likely to have on the matter protected by each provision of Part 3.

The Department recommends that you decide that the proposal is a controlled action, because there are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (section 18 & section 18A);

These impacts are discussed respectively below.

### **Listed threatened species and communities**

The Department's Environment Reporting Tool (ERT report) dated 17 October 2018 ([Attachment D1](#)) indicates that a total of 10 listed threatened species or ecological communities are likely or known to occur within 5 km of the proposed action area. The EPBC Species and Ecological Communities Update (Species Update) dated 12 October 2018 ([Attachment D2](#)) has been consulted and there are no recent or upcoming decisions relating to listing species and communities, approved conservation advices, recovery plans or threat abatement plans that may be of relevance to this proposal.

#### Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) – Endangered

##### *Species information*

The Pygmy Blue-tongue Lizard (PBTL) is known from 31 small, isolated sites located on private agricultural land in the mid-north area of South Australia (the proposed action area is known population number 28). The PBTL had been considered extinct until it was rediscovered near Burra in 1992, the first record for 33 years, and it has been subject to a recovery program since this time. The PBTL is the smallest member of the genus *Tiliqua*. It is a moderate sized skink with short limbs, a relatively heavy body and large head, with a total length of less than 20 cm. Its colour varies from grey brown to orange brown, and may or may not include a series of black flecks along the back and flanks. Unlike other members of the genus, it has a pink tongue.

The PBTL is omnivorous, feeding mainly on medium-sized arthropods which they capture by ambush. PBTL use empty spider burrows, constructed by *mygalomorph* (trapdoor) and *lycosid* (wolf) spiders, as refuges, basking sites and as ambush points. The abundance of the lizards within grasslands is dependent on the availability of deep spider burrows in well-draining soils, although there has been some success with artificial burrows.

Mating occurs in spring, during which time males are more mobile, although the full extent of the adult home range and dispersal is identified as a critical research gap. Births take place between January and late March with the bulk in February. Juveniles remain in the parental burrow for between one and twelve weeks and then move to nearby smaller burrows. All known habitat is considered habitat critical to the survival of the species and all known populations are considered important. The PBTL is considered to be extremely sensitive to both movement and noise and the known and potential threats to the species include:

- changes in land use, including inappropriate grazing regimes (too heavy, or conversely, suddenly ceased);

- urban, industrial and infrastructure development, including windfarms which lead to weed invasion along roads and around infrastructure, habitat fragmentation restricting movement for feeding and dispersal, changes to hydrology, and shadow flickering, vibration and noise;
- weeds;
- pesticides and herbicides;
- inappropriate fire regimes;
- habitat fragmentation;
- planting;
- predators;
- fertilisers;
- poaching; and
- climate change.

Further information about the PBTL is available in the *Recovery Plan for the Pygmy Blue-tongue Lizard* (*Tiliqua adelaidensis*) ([Attachment D3](#)).

#### *Proposed action area*

Six surveys for PBTL were undertaken between February 2016 and January 2017. These surveys found that suitable habitat for PBTL occurred across the entire project site, with the exception of cropping, steep/rocky areas and drainage. The offset calculator provided with the referral ([Attachment C15](#)) estimates that approximately 30.71 ha of habitat will be cleared. During the targeted surveys of summer and autumn 2016 and summer 2017, 115 individual PBTLs were observed within the project area.

The transmission corridor was surveyed in summer 2016/2017. Surveys within corridors were not as extensive as within infrastructure zones due to the large area that needed to be covered and the lower impact of the overhead line compared to the infrastructure zone. Targeted surveys were carried out in likely PBTL habitat and less time was spent in areas that consisted of possible PBTL habitat. All areas within the transmission corridors were, at a minimum, assessed for their likelihood of having PBTL occupants and potential density of lizards.

The surveys found that the southern property within the project site has optimal habitat for the species, gentle sloping rolling hills with numerous spider holes. The northern section, where the bulk of the infrastructure will be located, also has PBTL present, but in lower densities.

Surveys were not undertaken along access routes outside of the development site. The Flora and Fauna Report ([Attachments C4 to C7](#)) states that surveys were not undertaken in these areas as the footprint is small and will be subject to on ground surveys just prior to clearance.

The proposed action area sits within the southernmost extent of the species range and may constitute refuge areas if the species distribution contracts due to climate change.

#### *Potential impacts*

The proponent has estimated that approximately 16 PBTL individuals will be directly impacted by new infrastructure on the site with potential indirect impacts to at least 99 more individuals. This is based on survey data and the proposed location of turbines and other infrastructure including internal access tracks, but not the transmission line and external access routes which were not comprehensively surveyed.

The referral ([Attachment C](#)) identifies the following short and long term potential impacts to the PBTL:

##### Short term

- Direct loss of individuals through habitat clearance during construction
- Sedimentation of burrows from construction run-off

- Noise and vibration disturbance during construction

#### Long term

- Loss of habitat
- Division and isolation of sub-populations by vehicular access tracks
- Sedimentation of burrows from run-off from access tracks
- Potential disturbance to populations in close proximity to turbines from blade shadow flicker

In addition the public comments received on the referral (summarised at [Attachment E1](#)) also identified potential impacts including disturbance from vibration and noise from the turbines; disturbance from movement on site during both construction and ongoing maintenance activities; impacts from trenching activities including pitfall; potential for vehicle strike; and long term impacts for the species as the project area is at the southern extent of the PBTL distribution and may provide refuge if the species range contracts due to climate change.

Figure 58 on page 131 of [Attachment C7](#) maps the known PBTL records and the proposed new infrastructure. It shows that in addition to the 16 individuals which may be directly impacted there are a number of additional animals (at least 99) in close proximity to infrastructure which may be indirectly impacted by the proposed action.

#### *Avoidance and mitigation measures*

The referral ([Attachment C](#)) notes that where possible, turbines and associated infrastructure have been located within cropping areas, which are unsuitable habitat for PBTL. Infrastructure has also been located primarily within the north of the project area where PBTL occur in lower densities. Turbines have been sited with a minimum 20 m setback from observed PBTL and 26 turbines have been removed from the proposal to avoid and minimise impacts to PBTL habitat.

The proposed micro-siting of 22 turbines will allow for additional surveying to determine which spider holes are occupied by PBTL and minimise impacts to these holes/burrows. The proponent also states that five impacted sites may be suitable as receiving sites for translocation of PBTL, with the species moved to the 'nearest suitable translocation area' following advice from the Pygmy Bluetongue Lizard Recovery Team, South Australian Museum and Flinders University researchers (see figure 58 at page 131 of [Attachment C7](#)). However, the suitable translocation areas remain in close proximity to turbines and other infrastructure and may also be impacted by elements such as shadow flicker or sedimentation of burrows.

Existing tracks within the project area will be utilised where possible and proposed new tracks have been located to minimise length and avoid sensitive areas where possible, as well as to minimise the potential fragmentation of PBTL habitat. The southern area will be accessed via the northern area to avoid additional infrastructure requirements in more densely populated areas. As with the turbines Micro-siting prior to construction will also be undertaken where existing access tracks need to be widened or new access tracks need to be constructed, to avoid or minimise the impact to PBTL and their habitat as much as possible.

Poles for the overhead transmission lines will also be micro-sited so that the impact of their installation is kept to the minimum possible, particularly for the area of uncropped habitat along Flagstaff Hill Road, which has PBTL on both sides of the road, to avoid or minimise the potential impact to the species.

A draft Construction Environmental Management Plan (CEMP) has been provided with the referral ([Attachment C19](#)). This document aims to manage air quality and dust; cultural heritage and archaeology; water quality, erosion and sediment; storage, hazardous substances and materials; noise; traffic; weeds and pests; fire; and flora and fauna by providing guidance in relation to minimising environmental impacts during site works and identification and



implementation of measures to minimise potential impacts to offsite receptors during construction as well as by establishing and implementing practices to inform site workers regarding potential environmental impacts and agreed procedures to mitigate impacts.

The proponent also plans to maintain a controlled grazing regime which will reduce impacts from overgrazing, such as trampling and prey loss while still maintaining some more sparsely vegetated areas which allow for basking.

The proponent has also calculated a proposed offset area in the southern extent of the project area, based on total maximum clearing, which they propose to manage via a management plan established in consultation with the PBTB Recovery Team, the South Australian Museum and Flinders University researchers. The referral (Attachment C1) notes that the offset may be required in a worst case situation where no translocated PBTB survive. The proponent also proposes to protect the offset area under a Heritage Agreement under the *Native Vegetation Act 1991* (SA). It is unclear whether this proposed offset would be additional to any requirements the South Australian Government may have in granting approval of this project and indeed whether the offset is guaranteed regardless of your decision. Regardless, you must not consider any beneficial impacts of the proposed action at the referral stage. For this reason the proposed offset should not be taken into consideration when deciding whether or not this project constitutes a controlled action.

### *Conclusion*

The proposed action will directly impact at least 16 PBTB individuals and potentially indirectly impact a significant amount of the resident population (at least 99 further individuals). While a number of avoidance and mitigation measures are proposed, the Department has some concerns as to their effectiveness. Furthermore, a number of other impacts, such as those resulting from shadow flicker are not adequately addressed in the referral and may extend the area of impact. The Department considers that the proposed action could fragment a known existing population, reduce the area of occupancy of the species and adversely affect habitat critical to the survival of the species. For these reasons a significant impact to the Pygmy Blue-tongue Lizard is considered **likely**.

### Iron-grass Natural Temperate Grassland of South Australia – Critically Endangered

#### *Species information*

The Iron-grass Natural Temperate Grassland of South Australia (INTG) Threatened Ecological Community (TEC) is a natural temperate grassland where trees and tall shrubs are absent to sparse (cover less than 10%) and tussock-forming perennial grasses and iron-grasses (*Lomandra multiflora* spp. *dura* and *Lomandra effusa*) dominate the ground layer. A range of herbaceous plant species occur in the inter-tussock spaces. *Lomandra* may be absent in small areas (less than 1 ha) of the listed ecological community, however, if these patches sit within the context of other areas containing *Lomandra* then these small patches are still considered to be part of the listed ecological community.

The INTG generally occurs on slopes of low hills above 80 m above sea level, extending from the western bank of the Murray River, through the Mount Lofty Ranges and north to Mount Brown Conservation Park, west of Carrieton. The INTG occurs over a range of, at most, 5000 ha or less than 5% of the pre-European settlement distribution. Historically the INTG largely occurred on good agricultural soils in areas of reliable rainfall. This has resulted in this ecological community being greatly reduced by land clearing with remaining areas being fragmented and subject to various agricultural activities such as grazing and pasture improvement. As a result existing remnants are susceptible to the main threats of weed invasion, land clearing and grazing and the potential threats of infestation by feral animals, notably agricultural snails, inappropriate tree planting, road and rail maintenance activities and

the effects of fragmentation. *The Recovery Plan for Iron-grass Natural Temperate Grassland of South Australia* (Recovery Plan, [Attachment D4](#)) also recognises the key threats of altered grazing regimes, cultivation or fertiliser application; clearance associated with new developments such as urban expansion, windfarms and mining; degradation associated with weeds, fragmentation of remnants and small patch size; inappropriate or altered fire management; and climate change.

There are two condition classes recognised as part of the listed ecological community.

- Condition Class A represents areas in the best condition. It covers areas that are at least 0.1 ha and have greater than 30 native species and at least 10 native broad-leaved herbaceous species not on the disturbance resistant list and have greater than or equal to five native perennial grass species and at least one native perennial tussock per metre.
- Condition Class B covers areas that are at least 0.25 ha in size, and have greater than 15 native species and at least three native broad-leaved herbaceous species not on disturbance resistant list and have greater than or equal to four native perennial grass species and at least one native perennial tussock per metre.
- Condition Class C is not considered part of the listed community but is amenable to rehabilitation.

All sites that meet the Class A and B criteria for the listed community are considered habitat critical to the survival of the ecological community. From an ecological perspective, remnants of lower condition (Condition Class C) may also be habitat critical to survival of the ecological community, if they adjoin, buffer or connect high integrity remnants, provide habitat critical for functionally important or threatened species, expand the potential habitat available to some species, or have good potential for restoration.

Further information about the INTG is available in the Recovery Plan ([Attachment D4](#)); the *Approved Conservation Advice on Iron-grass Natural Temperate Grassland of South Australia* (Conservation Advice, [Attachment D5](#)) and *EPBC Act Policy Statement 3.7 - Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia* ([Attachment D6](#)).

#### *Proposed action area*

Iron-grass dominated vegetation occurs in patches across the project site. Across the project area there are a total of 196.2 ha of the vegetation association *Lomandra effusa* and *Austrostipa sp.* grasslands. Twenty-three sites within the project area were assessed and, of these, Site 18 (at the terminal substation) qualified as the INTG EPBC listed community, rated as Class B. Of the other sites, 1-16 did not qualify and were surveyed in spring which is the optimal time. These included seven sites rated as condition class C and nine sites with no rating. Site 17 was surveyed in summer, but had low diversity and was considered unlikely to qualify (Class C). Sites 19-21 were surveyed in early autumn when dry and all rated as Class C. Sites 17, 22 and 23 (within the proposed transmission line) were surveyed again in October 2017 (spring) to determine if they qualified as EPBC sites. Sites 17 and 23 did not qualify but Site 22, which is north of the proposed transmission line did qualify. The extent of *Lomandra* grasslands is mapped at Figures 36 and 37 of [Attachment C6](#) (pages 83-84) and Figure 3 of [Attachment C10](#) (page 5). The referral ([Attachment C1](#)) does not make clear the size of each patch.

#### *Potential impacts*

In total 3.17 ha of *Lomandra* grassland will be cleared across the project site, none of which meets the criteria for EPBC listing. The referral ([Attachment C1](#)) notes that the project has been

designed so no infrastructure will be located in areas which meet the requirements for INTG and none of the TEC will be cleared, however, there is little comment on the possibility of indirect impacts from erosion, runoff, or spread of weeds. There are also a few areas of *Lomandra* grassland vegetation which appear not to have been assessed including in the north of the project area, in a site bounded by turbines 43, 47, 48 and 49, and in the central area, bounded by turbines 11, 12, 13 and 53 (see Figure 36 on page 83 of [Attachment C6](#)). It is unclear whether these areas meet the condition requirements for the TEC and whether they would be impacted by the proposed action.

Areas outside the project area have also not been considered by the referral and could potentially be affected by indirect impacts, particularly runoff or increased erosion causing sedimentation in low lying areas (the Department's mapping of the community shows several additional locations where the community is likely to occur). The Conservation Advice ([Attachment D5](#)) notes that remnants of Class C vegetation may also be habitat critical to survival of the ecological community, if they adjoin, buffer or connect high integrity remnants or have good potential for restoration. The presence of quality TEC outside the project area could increase the value of the Class C vegetation on site.

Furthermore, the patch of TEC near the terminal substation (site 18) is contiguous with sites 19, 20 and 21 and close to site 17 which are Class C. The proximity of these sites to the known TEC potentially make them suitable for restoration or rehabilitation and therefore critical habitat. Further information is required about the potential for indirect impacts to sites 18 to 20 and about the size and potential for rehabilitation of site 17 which will require some clearance for the transmission line.

Site 22 (see figure 3, page 5 of [Attachment C10](#)) is located within the transmission line area and qualifies as TEC. The patch is surrounded by more degraded areas of *Lomandra* grassland (not qualifying) and areas dominated by *Austrostipa* grassland (rather than *Lomandra effusa*) on top of the hill, south east of the confirmed INTG TEC. The proposed route is positioned south of the listed area and the impact is restricted to two 1.2 m diameter poles, plus access and storage during the construction phase. The *Lomandra* and Peppermint Box addendum to the referral ([Attachment C10](#)) notes that an existing access track passes through the listed area. It is not clear if this track is intended to be used during construction and if so whether it will require any upgrading for heavy machinery use which may impact the INTG. The potential for INTG to occur along the external access roads which will require upgrading has also not been considered in the referral and it is not clear who will be responsible for this work and whether it constitutes a component of this action.

#### *Avoidance and mitigation measures*

The proponent has designed infrastructure to avoid as much *Lomandra* grassland as possible, with only 3.17 ha of vegetation, none of which qualifies as the TEC, to be cleared. The terminal substation in particular has been moved into cropping and *Austrostipa sp.* grassland to avoid *Lomandra* sites 18, 19 and 21 which are, or are likely to be, INTG TEC, although it remains close to these patches.

As noted above, the proponent also proposes to implement a CEMP ([Attachment C19](#)) to manage air quality and dust; water quality, erosion and sediment; storage, hazardous substances and materials; noise; traffic; weeds and pests; fire; and flora and fauna.

#### *Conclusion*

While no INTG TEC will be directly cleared as a result of the proposed action several areas which qualify as Condition Class C, and may be amenable to rehabilitation, will be both directly and potentially indirectly impacted, while one patch of TEC might be subject to indirect impacts. The Department considers that additional information is required in regards to vegetation in

areas surrounding the proposed action to determine whether further indirect impacts to currently unknown areas of INTG are possible and to establish whether the areas of Class C vegetation may be habitat critical to the survival of the community by virtue of their proximity to, or connectivity with, areas of listed vegetation, their ability to expand the potential habitat available to some species, or their potential for restoration. Given this the Department recommends the use of the precautionary principle as significant impacts, such as the project adversely impacting habitat critical to the survival of the community or fragmenting or increasing fragmentation of the community, are **possible**.

### Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia – Critically Endangered

#### *Species information*

The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia (PBGW) TEC has the woodland form of *Eucalyptus odorata* as the characteristic and dominant tree species. PBGW is endemic to South Australia where it occurs in areas of winter-dominant rainfall, with the main distribution in the Flinders-Lofty Block Bioregion and smaller occurrences in the Kanmantoo, Eyre-York Block, Murray Darling Depression and Gawler Bioregions. One small occurrence is also found in Victoria, near Bordertown.

PBGW has a tree canopy cover varying from sparse to dense (5-70%), over an open understorey dominated by native grasses and herbs, with scattered shrubs. Mosses, lichens, leaf litter and bare ground are common and important features of the ground layer. The community once extended over an estimated 900,000 ha of which less than 15,000 ha likely remains, most of which is found on privately owned and managed land.

Key threats to the PBGW include incompatible agricultural practices including cultivation, fertiliser application or detrimental grazing regimes; changes in the use and management of remnants in adjoining areas; clearance associated with new developments such as urban and peri-urban expansion, wind farms, mining, transport and other activities; ongoing decline and degradation due to existing weed infestations, feral predators, past fragmentation and small patch size of remnants; impacts of recreational activities such as 4WD and trail bikes; and ecological impacts of climate change.

As with INTG there are three different condition classes of PBGW defined on the basis of remnant patch size, native species diversity and composition. Condition Classes A and B make up the listed ecological community, with Condition Class A representing the areas of best condition. Condition Class C represents PBGW remnants considered too degraded to be part of the listed community, but of sufficient biodiversity value to target for restoration.

Condition Class A is defined as patches at least 0.1 ha in size with greater than 30 native species, at least 10 native broad-leaved herbaceous species not on the disturbance resistant list and greater than or equal to five native perennial grass species. Condition Class B is patches at least 1 ha in size with greater than 15 native species, at least three native broad-leaved herbaceous species not on the disturbance resistant list and greater than or equal to two native perennial grass species.

Some commonly occurring native forbs and 'grass-like' herbs of the ecological community are annuals or herbaceous perennials which germinate or re-sprout after rain in autumn or early winter, then die off again in late spring to early summer. They are most easily identified when flowering or setting seeds, generally in late winter or spring, but can be difficult to identify or even detect at other times of the year. Many of the characteristic native grass species, particularly Wallaby Grasses (*Rytidosperma* (formerly *Austrodanthonia*) species), Spear-grasses (*Austrostipa* species) and Native Wheat-grass (*Elymus scaber*) are difficult to distinguish in vegetative growth and may only be positively identified by their flowers or mature

seeds, generally in late spring to early summer. In grazed areas, palatable species may need to regrow and flower before they can be identified. Accurate identification of the PBGW may therefore require surveying at multiple times during the year, or at the very least in mid to late spring, at least two months after a disturbance and within two months of effective rain.

Habitat considered critical to the survival of the community includes all sites that meet the criteria for the listed community and provide habitat for component flora and fauna species. From an ecological perspective, remnants of lower condition (Condition Class C) may also be critical to survival of the ecological community because they adjoin, buffer or connect high integrity remnants, provide critical habitat for functionally important or threatened species, are essential habitat for mobile species (e.g. woodland birds), increase the potential habitat for some species, or have good potential for restoration. All remnant patches that meet the criteria for the community are considered important populations.

Further information about the PBGW is available in the *Recovery Plan for the Peppermint Box Grassy Woodland of South Australia* (Recovery Plan, [Attachment D7](#)), the *Approved Conservation Advice for Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia* ([Attachment D8](#)) and *EPBC Act Policy Statement 3.7 - Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia* ([Attachment D6](#)).

#### *Proposed action area*

Six sites containing Peppermint Box occur on the northern and southern side of Biele Road (see Figure 7, page 8 of [Attachment C10](#)) which is to the north and east of the proposed action area (see Figure 6, page 7 of [Attachment C9](#)). Site 6 qualifies for EPBC listing and site 1 is considered likely to also be PBGW. Site 3 is considered unlikely to be the TEC and sites 2, 4 and 5 do not meet condition thresholds according to the referral ([Attachment C1](#)). However, the *Lomandra* and Peppermint Box addendum to the referral ([Attachment C10](#)), states that site 4 failed to qualify because of the reduced overstorey of Peppermint Box trees, with River Red Gum being the more dominant species. However, the Recovery Plan ([Attachment D7](#)) notes that River Red Gums are common canopy trees within the TEC in the Flinders Lofty Block Bioregion. The patch contains large swathes of native grass in the understorey and reduced weed invasion but no non-disturbance resistant herbs which still make it ineligible as the TEC.

Site 6 (Class B) is contiguous with sites 2 and 5 and, as these two sites adjoin an area of PBGW they may be considered habitat critical for the survival of the TEC. As with the INTG the size of each patch of vegetation it is unclear from the referral, although all the Peppermint Box vegetation within the referral area (both TEC and not) equates to 6.8 ha. Satellite imagery shows the patch does form part of a vegetated corridor but connected areas were found not to be Peppermint Box woodland meaning the patch of TEC is relatively isolated.

Following the discovery of these areas of TEC the transmission line route was amended to pass to the south of the vegetated areas before turning sharply north and passing to the west of the areas of PBGW (see Figure 6, page 7 of [Attachment C9](#)). As a result of this the route will now require the clearing of another small area of Peppermint Box woodland. This area does not qualify as TEC based on size (0.8 ha) and diversity.

#### *Potential impacts*

The proposed action will result in the clearing of a small area of Peppermint Box woodland (not TEC) which equals approximately 0.3 ha of vegetation (of the 0.8 ha patch). While no clearance of PBGW will occur a patch which does qualify for listing occurs to the east and north of the project area. There is therefore the potential for indirect impacts to the TEC through weed invasion or through dust produced by the movement of vehicles along access roads or during construction.

### *Avoidance and mitigation measures*

The project has been designed to minimise direct impacts on Peppermint Box woodland and to avoid any clearing of the PBGW TEC. The CEMP ([Attachment C19](#)), if implemented, should contribute to the reduction of indirect impacts to any listed vegetation.

### *Conclusion*

Given the redesign of the project to avoid areas of PBGW TEC there will be no direct impacts to the listed community. While the community does exist within the project and wider area it is in small and relatively isolated patches. There is some potential for indirect impacts to the PBGW or nearby Class C vegetation which may be critical habitat, however, these should be mostly managed through the implementation of the CEMP ([Attachment C19](#)) and any residual impacts are unlikely to be significant or effect a significant amount of TEC. Therefore, the Department considers that the action is unlikely to fragment or reduce the extent of the community or cause substantial reduction in quality or integrity of the TEC or adjoining critical habitat. Significant impacts to the The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia are therefore considered **unlikely**.

### *Other listed species*

The Department has considered the location, size and nature of the proposed action when assessing the potential impacts to the other listed threatened species identified in the ERT report ([Attachment D1](#)). The Department considered the following factors:

- listing status of the species (i.e. vulnerable or endangered)
- whether nearby records of the species exist and species distribution
- whether surveys identified evidence of species use of the project area
- location of identified important populations of the species
- habitat/vegetation typically associated with the species
- species ecology
- soil types
- existing vegetation communities
- landform (topography, hydrology)
- current land use.

On the basis of these considerations and including information from the Department's Species Profile and Threats (SPRAT) Database and the referral documentation, the Department considers it **unlikely** that the other listed threatened species would be significantly impacted by the proposed action.

### **PROTECTED MATTERS THAT ARE NOT CONTROLLING PROVISIONS:**

#### **Listed migratory species**

The Department's ERT report dated 17 October 2018 ([Attachment D1](#)) indicates that two migratory species are known or likely to occur within 5 km of the proposed action area, the Fork-railed Swift (*Apus pacificus*) and Common Greenshank (*Tringa nebularia*). The Species Update dated 12 October 2018 ([Attachment D2](#)) has been consulted and there are no recent or upcoming decisions relating to species, approved conservation advices, recovery plans or threat abatement plans that may be of relevance to this proposal.

The two species do not have important populations associated with the project area and/or do not have threats associated with the proposed action. The species are also widely distributed and would most likely occur as transients throughout the proposed action area (if at all) – they were not recorded in the surveys undertaken within the project area (see [Attachment C6](#)). There is no evidence to suggest that the project area supports an ‘ecologically significant’ proportion of any of the populations of these two species. The Department considers it **unlikely** that migratory species would be significantly impacted by the proposed action.

<b>RAMSAR Wetlands</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any RAMSAR listed wetland of international importance within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>World Heritage properties</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any World Heritage properties located within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>National Heritage places</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any National Heritage places located within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>Commonwealth marine environment</b>	The proposed action does not occur in the vicinity of a Commonwealth marine environment, therefore this controlling provision does not apply.
<b>Commonwealth action</b>	The referring party is not a Commonwealth agency, therefore this controlling provision does not apply.
<b>Commonwealth land</b>	The proposed action is not being undertaken on Commonwealth land, therefore this controlling provision does not apply.
<b>Nuclear action</b>	The proposed action does not meet the definition of a nuclear action as defined in the EPBC Act, therefore this controlling provision does not apply.
<b>Great Barrier Reef Marine Park</b>	The proposed action is located in Western Australia, therefore this controlling provision does not apply.
<b>Commonwealth Heritage places overseas</b>	The proposed action is not located overseas, therefore this controlling provision does not apply.
<b>A water resource, in relation to coal seam gas development and large coal mining development</b>	The proposed action is not a coal seam gas or a large coal mining development, therefore this controlling provision does not apply.

## **SUBMISSIONS:**

### **Public submissions**

The proposal was published on the Department's website on 3 July 2018 and public comments were invited until 18 July 2018. Seventeen public submissions were received on the referral (Attachments E2-E18). The issues raised in the submissions are summarised at Attachment E1.

### **Comments from Commonwealth Ministers**

By letter dated 3 July 2018, the following ministers were invited to comment on the referral:

- The Hon David Littleproud MP, Minister for Agriculture and Water Resources
- Senator the Hon Nigel Scullion, Minister for Indigenous Affairs

No comments were received in response to those invitations.

By letter dated 2 October 2018, the Minister for Energy, the Hon Angus Taylor MP was also invited to comment on the referral. The Department's Renewable Energy Team responded on 4 October 2018 noting that they had no comment.

In addition the National Wind Farm Commissioner, Mr Andrew Dyer, has been informed of the referral.

### **Comments from State Ministers**

By letter dated 3 July 2018, the following State minister was invited to comment on the referral:

- s22 [REDACTED], Senior Policy Officer – Assessments, Department of Environment, Water and Natural Resources, delegated contact for the South Australian Minister for Environment and Water, the Hon David Speirs MP.

No comments were received in response to that invitation.

## **ASSESSMENT APPROACH:**

If you agree that the action is a controlled action, you must decide on the approach for assessment in accordance with section 87 of the EPBC Act. The Department recommends that this proposal be assessed by preliminary documentation.

Given the location of matters of national environmental significance, the number of matters likely to be impacted, the scale of the action, and potential impacts from the proposal, that form of assessment represents an appropriate method that will ensure that impacts on the controlling provisions are appropriately assessed.

Under section 87(3)(b) of the EPBC Act, you must consider any other relevant information available about the relevant impacts of the action, including information in a report on the impacts of actions under a policy, plan or program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments).

Under section 87(5) of the EPBC Act, you may decide on an assessment on preliminary documentation only if you are satisfied that the approach will enable an informed decision to be made about whether or not to approve the taking of the action. In this case, the number and complexity of relevant impacts is low and locally confined. The referral has provided sufficient information regarding the likely sources of impacts and proposed mitigation and management. Assessment on preliminary documentation is therefore considered appropriate for this proposal.



## OTHER MATTERS FOR DECISION-MAKING:

### **Significant impact guidelines**

The Department has reviewed the information in the referral against the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance* (December 2013) and other relevant material. While this material is not binding or exhaustive, the factors identified are considered adequate for decision-making in the circumstances of this referral. Adequate information is available for decision-making for this proposal.

### **Precautionary principle**

In making your decision under section 75, you are required to take account of the precautionary principle (section 391). The precautionary principle is that a lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

### **Cost Recovery**

The fee schedule (with justifications) for your consideration is at Attachment F1. The fee schedule (without justifications) at Attachment F2 will be sent to the person taking the action, including an invoice for Stage 1, seeking fees prior to the commencement of any further activity.

s22

Director  
Project Assessments West Section  
Assessment (WA, SA, NT) and Post Approvals  
Branch

s22

Project Assessments West Section

s22

s22

October 2018

<b>Attachments:</b>	<b>Version</b>
A: <a href="#">Decision Notice</a> FOR SIGNATURE	1.0
B: Letters FOR SIGNATURE	
B1: <a href="#">Letter to proponent</a> (with attachments <a href="#">B</a> and <a href="#">E</a> )	1.0
B2: <a href="#">Letter to DEWNR</a>	1.0
C: Referral Documentation	
C1: <a href="#">Referral form</a>	1.0
C2: <a href="#">Referral attachment 1 - GHD Consultation Report 2017-06-27</a>	1.0
C3: <a href="#">Referral attachment 2 - Community Consultation Report</a>	1.0

C4:	<a href="#"><u>Referral attachment 3 - Flora and Fauna Report Part 1</u></a>	1.0
C5:	<a href="#"><u>Referral attachment 4 - Flora and Fauna Report Part 2</u></a>	1.0
C6:	<a href="#"><u>Referral attachment 5 - Flora and Fauna Report Part 3</u></a>	1.0
C7:	<a href="#"><u>Referral attachment 6 - Flora and Fauna Report Part 4</u></a>	1.0
C8:	<a href="#"><u>Referral attachment 7 - Flora and Fauna Final 2017-06-28 Compressed</u></a>	1.0
C9:	<a href="#"><u>Referral attachment 8 - Addendum Grid Route Update 2018-01-18</u></a>	1.0
C10:	<a href="#"><u>Referral attachment 9 - Addendum Lomandra Peppermint Box 2017-11-13</u></a>	1.0
C11:	<a href="#"><u>Referral attachment 10 - Land Title Information with Proposed Infrastructure</u></a>	1.0
C12:	<a href="#"><u>Referral attachment 11 - Land Ownership No Names</u></a>	1.0
C13:	<a href="#"><u>Referral attachment 12 - NVR 2017 3122 NVAP Reg 51d Advice Notification</u></a>	1.0
C14:	<a href="#"><u>Referral attachment 13 - NVR 2017 3122 NVAP Reg 51d Advice Notification Compressed</u></a>	1.0
C15:	<a href="#"><u>Referral attachment 14 - PBTL EPBC Offset Calculator Summary</u></a>	1.0
C16:	<a href="#"><u>Referral attachment 15 - PBTL Offset Calculator 15 m Wide Tracks</u></a>	1.0
C17:	<a href="#"><u>Referral attachment 16 - Planning Authority and Local Council Contact Details</u></a>	1.0
C18:	<a href="#"><u>Referral attachment 17 - Planning Authority and Local Council Contact Details Word Version</u></a>	1.0
C19:	<a href="#"><u>Referral attachment 18 - RES Draft CEMP</u></a>	1.0
C20:	<a href="#"><u>Referral attachment 19 - RES HSQE Policy Organisational Chart Safety Leadership State</u></a>	1.0
C21:	<a href="#"><u>Referral attachment 20 - RES LTD HSQE Policy Organisational Chart Safety Leadership Statement</u></a>	1.0
C22:	<a href="#"><u>Referral attachment 21 - SEB Council Areas Location</u></a>	1.0
C23:	<a href="#"><u>Referral attachment 22 - SEB Report 14 July 2017 Compressed</u></a>	1.0
C24:	<a href="#"><u>Referral attachment 23 - SEB Substation Infrastructure</u></a>	1.0
C25:	<a href="#"><u>Referral attachment 24 - SEB WF Infrastructure</u></a>	1.0
D:	Other Information Used to Prepare Recommendations	

D1:	<a href="#">ERT report (17 October 2018)</a>	1.0
D2:	<a href="#">Species and Communities Update (12 October 2018)</a>	1.0
D3:	Duffy, A., Pound, L. and How, T. (2012) <a href="#">Recovery Plan for the Pygmy Bluetongue Lizard <i>Tiliqua adelaidensis</i></a> . Department of Environment and Natural Resources, South Australia.	1.0
D4:	Turner, J. (2012). <a href="#">National Recovery Plan for the Iron-grass Natural Temperate Grassland of South Australia ecological community 2012</a> . Department of Environment and Natural Resources, South Australia.	1.0
D5:	Department of the Environment, Water, Heritage and the Arts (2008). <a href="#">Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia</a> . Canberra: Department of the Environment, Water, Heritage and the Arts.	1.0
D6:	<a href="#">EPBC Act policy statement 3.7 - Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia</a> (Department of the Environment and Water Resources, 2007)	1.0
D7:	Turner, J. (2012). <a href="#">National Recovery Plan for the Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia ecological community 2012</a> . Department of Environment, Water and Natural Resources, South Australia.	1.0
D8:	Department of the Environment, Water, Heritage and the Arts (2008). <a href="#">Approved Conservation Advice for Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia</a> . Canberra: Department of the Environment, Water, Heritage and the Arts	1.0
E:	Public Comments	
E1:	<a href="#">Summary of public comments</a>	1.0
E2:	s47F [REDACTED] (Att <a href="#">E2.1</a> & <a href="#">E2.2</a> )	1.0
E3:	s47F [REDACTED] (Att <a href="#">E3.1</a> & <a href="#">E3.2</a> )	1.0
E4:	s47F [REDACTED] (Att <a href="#">E4.1</a> & <a href="#">E4.2</a> )	1.0
E5:	s47F [REDACTED] (Att <a href="#">E5</a> )	1.0
E6:	s47F [REDACTED] (Att <a href="#">E6.01</a> ; <a href="#">E6.02</a> ; <a href="#">E6.03</a> ; <a href="#">E6.04</a> ; <a href="#">E6.05</a> ; <a href="#">E6.06</a> ; <a href="#">E6.07</a> ; <a href="#">E6.08</a> ; <a href="#">E6.09</a> ; <a href="#">E6.10</a> ; <a href="#">E6.11</a> & <a href="#">E6.12</a> )	1.0
E7:	s47F [REDACTED] (Att <a href="#">E7</a> )	1.0
E8:	s47F [REDACTED] (Att <a href="#">E8</a> )	1.0
E9:	s47F [REDACTED] (Att <a href="#">E9</a> )	1.0
E10:	s47F [REDACTED] (Att <a href="#">E10</a> )	1.0

E11:	<b>s47F</b> (Att <a href="#">E11</a> )	1.0
E12:	<b>s11C</b> (Att <a href="#">E12.1</a> ; <a href="#">E12.2</a> ; <a href="#">E12.3</a> ; <a href="#">E12.4</a> ; <a href="#">E12.5</a> ; <a href="#">E12.6</a> <a href="#">E12.7</a> & <a href="#">E12.8</a> )	1.0
E13:	<b>s47F</b> (Att <a href="#">E13.1</a> & <a href="#">E13.2</a> )	1.0
E14:	<b>s47F</b> (Att <a href="#">E14</a> )	1.0
E15:	<b>s47F</b> (Att <a href="#">E15.01</a> ; <a href="#">E15.02</a> ; <a href="#">E15.03</a> ; <a href="#">E15.04</a> ; <a href="#">E15.05</a> ; <a href="#">E15.06</a> ; <a href="#">E15.07</a> ; <a href="#">E15.08</a> ; <a href="#">E15.09</a> & <a href="#">E15.10</a> )	1.0
E16:	<b>s47F</b> (Att <a href="#">E16</a> )	1.0
E17:	<b>s47F</b> (Att <a href="#">E17</a> )	1.0
E18:	<b>s47F</b> (Att <a href="#">E18</a> )	1.0
F:	Cost Recovery	
F1:	<a href="#">Fee schedule with justifications</a>	1.0
F2:	<a href="#">Fee schedule without justifications</a>	1.0

To: Gregory Manning, Assistant Secretary, Assessments (WA, SA, NT) and Post Approvals Branch (for decision)

**Referral Decision Brief – Twin Creek Wind Farm, 80km north-east of Adelaide, South Australia (EPBC 2018/8208)**

Timing: ASAP statutory deadline was 30 July 2018.

<b>Recommended Decision</b>	NCA <input type="checkbox"/> NCA(pm) <input type="checkbox"/> CA <input checked="" type="checkbox"/>												
<b>Designated Proponent</b>	RES Australia Pty Ltd ACN: 106 637 754												
<b>Controlling Provisions triggered or matters protected by particular manner</b>	<table border="0"> <tr> <td>World Heritage (s12 &amp; s15A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>National Heritage (s15B &amp; s15C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Ramsar wetland (s16 &amp; s17B) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>Threatened Species &amp; Communities (s18 &amp; s18A) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Migratory Species (s20 &amp; s20A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth marine (s23 &amp; 24A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>Nuclear actions (s21 &amp; 22A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth land (s26 &amp; s27A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>C'wealth actions (s28) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>GBRMP (s24B &amp; s24C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> <tr> <td>A water resource – large coal mines and CSG (s24D &amp; s24E) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> <td>C'wealth heritage o/s (s27B &amp; 27C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/></td> </tr> </table>	World Heritage (s12 & s15A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	National Heritage (s15B & s15C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Ramsar wetland (s16 & s17B) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Threatened Species & Communities (s18 & s18A) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No if PM <input type="checkbox"/>	Migratory Species (s20 & s20A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth marine (s23 & 24A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	Nuclear actions (s21 & 22A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth land (s26 & s27A) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth actions (s28) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	GBRMP (s24B & s24C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	A water resource – large coal mines and CSG (s24D & s24E) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>	C'wealth heritage o/s (s27B & 27C) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No if PM <input type="checkbox"/>
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<b>Public Comments</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Number: 17 See <u>Attachment E</u>												
<b>Ministerial Comments</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>												
<b>Assessment Approach Decision</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> What: Preliminary Documentation Bilateral Applies <input type="checkbox"/>												
<b>Recommendation/s:</b>													
1. Consider the information in this brief, the referral ( <u>Attachment C</u> ) and other attachments.													
<b>Considered / Please discuss</b>													

2. Agree with the recommended decision.

**Agreed / Not agreed**

3. Agree to the designated proponent.

**Agreed / Not agreed**

4. Agree the action be assessed on preliminary documentation.

**Agreed / Not agreed**

5. If you agree to 2 and 4, indicate that you accept the reasoning in the departmental briefing package as the basis for your decision.

**Accepted / Please discuss**

6. Agree to the fee schedule and justification table (Attachment E) and that the fee schedule be sent to the proponent.

7. An invoice will be provided in the letter to the person proposing to take the action for Stage 1 of the assessment, for the preparation of the preliminary documentation information required. A separate letter requiring further information will be prepared for your signature within 10 business days of payment.

**Noted / Discuss**

8. Sign the notice at Attachment A (which will be published if you make the recommended decision).

**Signed / Not signed**

9. Sign the letter at Attachment B.

**Signed / Not signed**

Date:

**Gregory Manning, Assistant Secretary, Assessments  
(WA, SA, NT) and Post Approvals Branch:**

**Comments:**

## **BACKGROUND:**

### **Description of the referral**

A referral was received on 2 July 2018 ([Attachment C](#)). The action was referred by RES Australia Pty Ltd (the proponent), which has stated its belief that the proposal is not<sup>1</sup> a controlled action for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

### **Description of the proposal (including location)**

The proponent proposes to develop the Twin Creek Wind Farm within the Mid North area of South Australia. The project site is located approximately 90 km north east of Adelaide and approximately 10 km north east of Kapunda, on the tablelands that form the wide ridgeline associated with Bald Hill and Long Hill within the northern Mount Lofty Ranges. It is located between the townships of Kapunda, Eudunda and Truro and occurs within the Light Regional Council, Goyder District Council and Mid Murray District Council boundaries (see [Attachment C22](#)).

The proposed wind farm will consist of the following:

- Up to 51 wind turbines with associated hardstand areas and access roads. Each turbine will have a maximum height of up to 180 m (at the blade tip) and will be rated at approximately 3.6 MW each, meaning a total installed wind capacity up to 185 MW. Each turbine will have a foundation that is approximately 5 m in diameter at the surface, 20 m diameter below the surface and up to 3.5 m deep. The average total clearance and impact area required for each turbine is estimated at 90 m long and 45 m wide (4050 m<sup>2</sup>) to accommodate for the foundation, laydown (temporary storage), crane hardstand area and two smaller (15 m x 15 m) crane hardstand areas (to erect the main crane jib), to enable assembly and erection of the turbine components.
- Internal access tracks which will be used both during construction and for operational and maintenance activities. Existing established tracks on the properties will be used where possible and will be upgraded to accommodate for the weight and size of turbine transport and construction vehicles, including the crane used to erect the turbines. However, construction of new access tracks will be required where there are no existing tracks. The internal access track network will be approximately 40 km long and approximately 6 m wide, apart from some wider sections to accommodate overtaking areas and turning circles. In addition, drainage swales up to 3 m in width are likely to be required on one side or both sides of the access track, which will increase the width of the access track to up to about 12 m in some areas.
- A site access route via public roads. Two access routes from Truro Rd to the site entrance on the south eastern side of the project site are being considered to access the project site. These roads will be upgraded where necessary, to cater for the additional weight of the turbine transport and construction vehicles, including the crane used to erect the turbines, as well as the additional width required to accommodate for oversize loads, passing/overtaking and turning.

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<sup>1</sup> The proponent has ticked that there is likely to be a significant impact to listed threatened species and communities in section 2 of the referral form, however, has justified why they think the project will not have a significant impact in section 5. The Department considers that the selection of the significant impact box in section 2 is likely to be an error given the general tone of the referral and that the proponent's intention was that they considered the action to not have a significant impact.

- Underground electrical cable reticulation with cables installed via open trenching works to connect each turbine to the on-site substation. Trenches will be located adjacent to the access tracks where possible, within approximately 5 m of the shoulder of the track. The cables will be installed at a depth of approximately 1 m (a minimum of 1 m coverage over the top of the cables is required) and the trench impact area will be 5 m wide for a single cable alignment plus 0.5 m for each additional cable (some trenches will contain multiple cables). The exact trench dimensions will depend on the installation method used by the contractor. The total length of the proposed underground electrical cabling is approximately 50 km.
- Approximately 15 km of 275 kV overhead electrical cabling to connect the onsite substation to the terminal substation located approximately 5 km east of Truro. The transmission line will require a clearance area of up to 50 m wide (25 m radius from the cables), which may result in removal or trimming of vegetation depending on the proximity of the vegetation to the overhead cables at each location.
- A terminal substation on the southern side of Sturt Highway, approximately 5 km east of Truro with associated access tracks. The impact area is estimated to be approximately 2 ha for the substation compound and 1.5 ha for a temporary construction compound. The footprint required for the access tracks is unclear from the referral.
- Two meteorological masts to measure wind speed with an approximate impact area of 28 m<sup>2</sup> in total.
- Construction compounds, an on-site substation, battery storage, and an operation and maintenance facility. The main construction compound will be situated in the south eastern corner of the site and will include a site office and staff facilities, amenities, car park, workshop, skip bins, concrete batching plant, equipment laydown area and material storage areas. The substation, battery storage and operation and maintenance facility will be collocated with this compound. The other three compounds will be located in the northern, western and central areas of the site and will include equipment laydown and material storage areas. The total combined impact area of this component will be approximately 12.1 ha.

In total the project area is approximately 5,600 ha with a disturbance footprint of 90 ha.

### **Description of the environment**

Landform in the area is defined by numerous ridgelines that run north-south through the site creating a series of parallel ridges, wide open valleys, tablelands and isolated topographic features. The landscape surrounding the proposed action area is dominated by grazing with open paddocks defined by fenced boundaries and occasional trees along fence lines and creek lines. The land use that occurs in the open valley floor is more diverse with areas of arable cropping and grazing.

Surveys undertaken from 2015 to 2017 recorded 168 flora species, including 76 exotic species. Eleven vegetation associations are located within the project site including:

- *Lomandra effusa* and *Austrostipa* sp. grasslands (196.2 ha)
- *Austrostipa* sp. grassland (1751.7 ha)
- Planted species (21.8 ha)
- South Australian Blue-gum (*Eucalyptus leucoxydon*), Water Mallee (*Eucalyptus porosa*) and Murray Cypress Pine (*Callitris gracilis*) open woodland (64.7 ha)
- *Juncus* spp. (Rush) and Pale Rush (*Juncus pallidus*) sedgeland with Common Reed (*Phragmites australis*) (52.1 ha)
- Cropping (1388.8 ha)



- Water Mallee, Peppermint Box (*Eucalyptus odorata*) and Kong Mallee (*Eucalyptus gracilis*) open woodland (2.4 ha)
- Pasture grassland/exotic grassland (868.2 ha)
- Peppermint Box and Water Mallee closed woodland over grassy understorey (6.8 ha)
- River Red Gum (*Eucalyptus camaldulensis* ssp. *camaldulensis*) and South Australian Blue-gum closed tall shrubland over Spear-grass (*Austrostipa* sp.) near creeklines (2.3 ha)
- South Australian Blue-gum tall open woodland over shrubby understorey (3.6 ha)

The most widespread native species include Spear-grasses, Brush-wire Grass (*Aristida behriana*), Scented Mat-rush (*Lomandra effuse*), Peppermint Box, South Australian Blue-gum and Pussy-tails (*Ptilotus spanthulatus*). All vegetation associations exhibit a degree of weed invasion and damage from stock.

The project site has an average annual rainfall of 425-515 mm, with most falling between June and September, however, total rainfall is highly variable and the area may often receive rainfall in excess of the average. The terrain is predominately deeply dissected low hills with steep slopes which are susceptible to erosion. Watercourses in the area are largely ephemeral and fed by rainfall.

The site is located within the Light River Catchment and the Light River flows along the western boundary of the project site. Freshwater Creek meets the Light River within the project site, while Spring Creek passes through and meets the Light River just outside the south west boundary. A number of other watercourses and farm dams are also located within the project site.

The local geology is within the Adelaide Geosyncline, comprising thick sedimentary and minor igneous rocks. The land is strongly dissected so the rocks are generally near, or at, the surface. Most rocks and sediments are mantled by fine grained carbonates, usually as soft segregations in the weathered zone but harder rubble and sheet calcrete also occur at shallow depth. Soils are mostly shallow, stony and calcareous with sub-optimal water holding capacity.

Bird surveys in the area recorded 1448 sightings of 48 species including Wedge-tailed Eagles (*Aquila audax*) and Rainbow Bee-eater (*Merops ornatus*) which nest in the area. The state listed Blue-winged Parrot (*Neophema chrysostoma*) was also seen on site. The most common birds were the Common Starling (*Sturnus vulgaris*) (343 individuals), Galah (*Eolophus roseicapilla*) (274 individuals) and Australian Magpie (*Gymnorhina tibicen*) (170 individuals). The Rainbow Bee-eater is EPBC listed marine (not a consideration for this referral decision or any subsequent assessment) but no other birds recorded on site are listed under the EPBC Act. AnaBat surveys confirmed the presence of seven bat species within the project boundary, none of which are EPBC listed.

### **KEY ISSUES:**

- The proposed action will result in the clearance of approximately 30.71 ha of habitat for Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*, endangered), direct impacts to at least 16 individuals and indirect impacts to at least 99 further animals across the project site.
- Iron-grass Natural Temperate Grassland of South Australia Threatened Ecological Community may be present in and around the project site. None of the community will be directly cleared but impact to critical habitat is possible.
- Seventeen public comments were received on the referral many of which oppose the proposed action. A summary of these comments is at [Attachment E1](#).

## **RECOMMENDED DECISION:**

Under section 75 of the EPBC Act you must decide whether the action that is the subject of the proposal referred is a controlled action, and which provisions of Part 3 (if any) are controlling provisions for the action. In making your decision you must consider all adverse impacts the action has, will have, or is likely to have, on the matter protected by each provision of Part 3. You must not consider any beneficial impacts the action has, will have or is likely to have on the matter protected by each provision of Part 3.

The Department recommends that you decide that the proposal is a controlled action, because there are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (section 18 & section 18A);

These impacts are discussed respectively below.

### **Listed threatened species and communities**

The Department's Environment Reporting Tool (ERT report) dated 17 October 2018 ([Attachment D1](#)) indicates that a total of 10 listed threatened species or ecological communities are likely or known to occur within 5 km of the proposed action area. The EPBC Species and Ecological Communities Update (Species Update) dated 12 October 2018 ([Attachment D2](#)) has been consulted and there are no recent or upcoming decisions relating to listing species and communities, approved conservation advices, recovery plans or threat abatement plans that may be of relevance to this proposal.

#### **Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) – Endangered**

##### *Species information*

The Pygmy Blue-tongue Lizard (PBTL) is known from 31 small, isolated sites located on private agricultural land in the mid-north area of South Australia (the proposed action area is known population number 28). The PBTL had been considered extinct until it was rediscovered near Burra in 1992, the first record for 33 years, and it has been subject to a recovery program since this time. The PBTL is the smallest member of the genus *Tiliqua*. It is a moderate sized skink with short limbs, a relatively heavy body and large head, with a total length of less than 20 cm. Its colour varies from grey brown to orange brown, and may or may not include a series of black flecks along the back and flanks. Unlike other members of the genus, it has a pink tongue.

The PBTL is omnivorous, feeding mainly on medium-sized arthropods which they capture by ambush. PBTL use empty spider burrows, constructed by *mygalomorph* (trapdoor) and *lycosid* (wolf) spiders, as refuges, basking sites and as ambush points. The abundance of the lizards within grasslands is dependent on the availability of deep spider burrows in well-draining soils, although there has been some success with artificial burrows.

Mating occurs in spring, during which time males are more mobile, although the full extent of the adult home range and dispersal is identified as a critical research gap. Births take place between January and late March with the bulk in February. Juveniles remain in the parental burrow for between one and twelve weeks and then move to nearby smaller burrows. All known habitat is considered habitat critical to the survival of the species and all known populations are considered important. The PBTL is considered to be extremely sensitive to both movement and noise and the known and potential threats to the species include:

- changes in land use, including inappropriate grazing regimes (too heavy, or conversely, suddenly ceased);

- urban, industrial and infrastructure development, including windfarms which lead to weed invasion along roads and around infrastructure, habitat fragmentation restricting movement for feeding and dispersal, changes to hydrology, and shadow flickering, vibration and noise;
- weeds;
- pesticides and herbicides;
- inappropriate fire regimes;
- habitat fragmentation;
- planting;
- predators;
- fertilisers;
- poaching; and
- climate change.

Further information about the PBTL is available in the *Recovery Plan for the Pygmy Blue-tongue Lizard* (*Tiliqua adelaidensis*) ([Attachment D3](#)).

#### *Proposed action area*

Six surveys for PBTL were undertaken between February 2016 and January 2017. These surveys found that suitable habitat for PBTL occurred across the entire project site, with the exception of cropping, steep/rocky areas and drainage. The offset calculator provided with the referral ([Attachment C15](#)) estimates that approximately 30.71 ha of habitat will be cleared. During the targeted surveys of summer and autumn 2016 and summer 2017, 115 individual PBTLs were observed within the project area.

The transmission corridor was surveyed in summer 2016/2017. Surveys within corridors were not as extensive as within infrastructure zones due to the large area that needed to be covered and the lower impact of the overhead line compared to the infrastructure zone. Targeted surveys were carried out in likely PBTL habitat and less time was spent in areas that consisted of possible PBTL habitat. All areas within the transmission corridors were, at a minimum, assessed for their likelihood of having PBTL occupants and potential density of lizards.

The surveys found that the southern property within the project site has optimal habitat for the species, gentle sloping rolling hills with numerous spider holes. The northern section, where the bulk of the infrastructure will be located, also has PBTL present, but in lower densities.

Surveys were not undertaken along access routes outside of the development site. The Flora and Fauna Report ([Attachments C4 to C7](#)) states that surveys were not undertaken in these areas as the footprint is small and will be subject to on ground surveys just prior to clearance.

The proposed action area sits within the southernmost extent of the species range and may constitute refuge areas if the species distribution contracts due to climate change.

#### *Potential impacts*

The proponent has estimated that approximately 16 PBTL individuals will be directly impacted by new infrastructure on the site with potential indirect impacts to at least 99 more individuals. This is based on survey data and the proposed location of turbines and other infrastructure including internal access tracks, but not the transmission line and external access routes which were not comprehensively surveyed.

The referral ([Attachment C](#)) identifies the following short and long term potential impacts to the PBTL:

##### Short term

- Direct loss of individuals through habitat clearance during construction
- Sedimentation of burrows from construction run-off

- Noise and vibration disturbance during construction

#### Long term

- Loss of habitat
- Division and isolation of sub-populations by vehicular access tracks
- Sedimentation of burrows from run-off from access tracks
- Potential disturbance to populations in close proximity to turbines from blade shadow flicker

In addition the public comments received on the referral (summarised at [Attachment E1](#)) also identified potential impacts including disturbance from vibration and noise from the turbines; disturbance from movement on site during both construction and ongoing maintenance activities; impacts from trenching activities including pitfall; potential for vehicle strike; and long term impacts for the species as the project area is at the southern extent of the PBTL distribution and may provide refuge if the species range contracts due to climate change.

Figure 58 on page 131 of [Attachment C7](#) maps the known PBTL records and the proposed new infrastructure. It shows that in addition to the 16 individuals which may be directly impacted there are a number of additional animals (at least 99) in close proximity to infrastructure which may be indirectly impacted by the proposed action.

#### *Avoidance and mitigation measures*

The referral ([Attachment C](#)) notes that where possible, turbines and associated infrastructure have been located within cropping areas, which are unsuitable habitat for PBTL. Infrastructure has also been located primarily within the north of the project area where PBTL occur in lower densities. Turbines have been sited with a minimum 20 m setback from observed PBTL and 26 turbines have been removed from the proposal to avoid and minimise impacts to PBTL habitat.

The proposed micro-siting of 22 turbines will allow for additional surveying to determine which spider holes are occupied by PBTL and minimise impacts to these holes/burrows. The proponent also states that five impacted sites may be suitable as receiving sites for translocation of PBTL, with the species moved to the 'nearest suitable translocation area' following advice from the Pygmy Bluetongue Lizard Recovery Team, South Australian Museum and Flinders University researchers (see figure 58 at page 131 of [Attachment C7](#)). However, the suitable translocation areas remain in close proximity to turbines and other infrastructure and may also be impacted by elements such as shadow flicker or sedimentation of burrows.

Existing tracks within the project area will be utilised where possible and proposed new tracks have been located to minimise length and avoid sensitive areas where possible, as well as to minimise the potential fragmentation of PBTL habitat. The southern area will be accessed via the northern area to avoid additional infrastructure requirements in more densely populated areas. As with the turbines Micro-siting prior to construction will also be undertaken where existing access tracks need to be widened or new access tracks need to be constructed, to avoid or minimise the impact to PBTL and their habitat as much as possible.

Poles for the overhead transmission lines will also be micro-sited so that the impact of their installation is kept to the minimum possible, particularly for the area of uncropped habitat along Flagstaff Hill Road, which has PBTL on both sides of the road, to avoid or minimise the potential impact to the species.

A draft Construction Environmental Management Plan (CEMP) has been provided with the referral ([Attachment C19](#)). This document aims to manage air quality and dust; cultural heritage and archaeology; water quality, erosion and sediment; storage, hazardous substances and materials; noise; traffic; weeds and pests; fire; and flora and fauna by providing guidance in relation to minimising environmental impacts during site works and identification and

implementation of measures to minimise potential impacts to offsite receptors during construction as well as by establishing and implementing practices to inform site workers regarding potential environmental impacts and agreed procedures to mitigate impacts.

The proponent also plans to maintain a controlled grazing regime which will reduce impacts from overgrazing, such as trampling and prey loss while still maintaining some more sparsely vegetated areas which allow for basking.

The proponent has also calculated a proposed offset area in the southern extent of the project area, based on total maximum clearing, which they propose to manage via a management plan established in consultation with the PBTTL Recovery Team, the South Australian Museum and Flinders University researchers. The referral ([Attachment C1](#)) notes that the offset may be required in a worst case situation where no translocated PBTTL survive. The proponent also proposes to protect the offset area under a Heritage Agreement under the *Native Vegetation Act 1991* (SA). It is unclear whether this proposed offset would be additional to any requirements the South Australian Government may have in granting approval of this project and indeed whether the offset is guaranteed regardless of your decision. Regardless, you must not consider any beneficial impacts of the proposed action at the referral stage. For this reason the proposed offset should not be taken into consideration when deciding whether or not this project constitutes a controlled action.

### *Conclusion*

The proposed action will directly impact at least 16 PBTTL individuals and potentially indirectly impact a significant amount of the resident population (at least 99 further individuals). While a number of avoidance and mitigation measures are proposed, the Department has some concerns as to their effectiveness. Furthermore, a number of other impacts, such as those resulting from shadow flicker are not adequately addressed in the referral and may extend the area of impact. The Department considers that the proposed action could fragment a known existing population, reduce the area of occupancy of the species and adversely affect habitat critical to the survival of the species. For these reasons a significant impact to the Pygmy Blue-tongue Lizard is considered **likely**.

## Iron-grass Natural Temperate Grassland of South Australia – Critically Endangered

### *Species information*

The Iron-grass Natural Temperate Grassland of South Australia (INTG) Threatened Ecological Community (TEC) is a natural temperate grassland where trees and tall shrubs are absent to sparse (cover less than 10%) and tussock-forming perennial grasses and iron-grasses (*Lomandra multiflora* spp. *dura* and *Lomandra effusa*) dominate the ground layer. A range of herbaceous plant species occur in the inter-tussock spaces. *Lomandra* may be absent in small areas (less than 1 ha) of the listed ecological community, however, if these patches sit within the context of other areas containing *Lomandra* then these small patches are still considered to be part of the listed ecological community.

The INTG generally occurs on slopes of low hills above 80 m above sea level, extending from the western bank of the Murray River, through the Mount Lofty Ranges and north to Mount Brown Conservation Park, west of Carrieton. The INTG occurs over a range of, at most, 5000 ha or less than 5% of the pre-European settlement distribution. Historically the INTG largely occurred on good agricultural soils in areas of reliable rainfall. This has resulted in this ecological community being greatly reduced by land clearing with remaining areas being fragmented and subject to various agricultural activities such as grazing and pasture improvement. As a result existing remnants are susceptible to the main threats of weed invasion, land clearing and grazing and the potential threats of infestation by feral animals, notably agricultural snails, inappropriate tree planting, road and rail maintenance activities and

the effects of fragmentation. *The Recovery Plan for Iron-grass Natural Temperate Grassland of South Australia* (Recovery Plan, [Attachment D4](#)) also recognises the key threats of altered grazing regimes, cultivation or fertiliser application; clearance associated with new developments such as urban expansion, windfarms and mining; degradation associated with weeds, fragmentation of remnants and small patch size; inappropriate or altered fire management; and climate change.

There are two condition classes recognised as part of the listed ecological community.

- Condition Class A represents areas in the best condition. It covers areas that are at least 0.1 ha and have greater than 30 native species and at least 10 native broad-leaved herbaceous species not on the disturbance resistant list and have greater than or equal to five native perennial grass species and at least one native perennial tussock per metre.
- Condition Class B covers areas that are at least 0.25 ha in size, and have greater than 15 native species and at least three native broad-leaved herbaceous species not on disturbance resistant list and have greater than or equal to four native perennial grass species and at least one native perennial tussock per metre.
- Condition Class C is not considered part of the listed community but is amenable to rehabilitation.

All sites that meet the Class A and B criteria for the listed community are considered habitat critical to the survival of the ecological community. From an ecological perspective, remnants of lower condition (Condition Class C) may also be habitat critical to survival of the ecological community, if they adjoin, buffer or connect high integrity remnants, provide habitat critical for functionally important or threatened species, expand the potential habitat available to some species, or have good potential for restoration.

Further information about the INTG is available in the Recovery Plan ([Attachment D4](#)); the *Approved Conservation Advice on Iron-grass Natural Temperate Grassland of South Australia* (Conservation Advice, [Attachment D5](#)) and *EPBC Act Policy Statement 3.7 - Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia* ([Attachment D6](#)).

#### *Proposed action area*

Iron-grass dominated vegetation occurs in patches across the project site. Across the project area there are a total of 196.2 ha of the vegetation association *Lomandra effusa* and *Austrostipa sp.* grasslands. Twenty-three sites within the project area were assessed and, of these, Site 18 (at the terminal substation) qualified as the INTG EPBC listed community, rated as Class B. Of the other sites, 1-16 did not qualify and were surveyed in spring which is the optimal time. These included seven sites rated as condition class C and nine sites with no rating. Site 17 was surveyed in summer, but had low diversity and was considered unlikely to qualify (Class C). Sites 19-21 were surveyed in early autumn when dry and all rated as Class C. Sites 17, 22 and 23 (within the proposed transmission line) were surveyed again in October 2017 (spring) to determine if they qualified as EPBC sites. Sites 17 and 23 did not qualify but Site 22, which is north of the proposed transmission line did qualify. The extent of *Lomandra* grasslands is mapped at Figures 36 and 37 of [Attachment C6](#) (pages 83-84) and Figure 3 of [Attachment C10](#) (page 5). The referral ([Attachment C1](#)) does not make clear the size of each patch.

#### *Potential impacts*

In total 3.17 ha of *Lomandra* grassland will be cleared across the project site, none of which meets the criteria for EPBC listing. The referral ([Attachment C1](#)) notes that the project has been

designed so no infrastructure will be located in areas which meet the requirements for INTG and none of the TEC will be cleared, however, there is little comment on the possibility of indirect impacts from erosion, runoff, or spread of weeds. There are also a few areas of *Lomandra* grassland vegetation which appear not to have been assessed including in the north of the project area, in a site bounded by turbines 43, 47, 48 and 49, and in the central area, bounded by turbines 11, 12, 13 and 53 (see Figure 36 on page 83 of [Attachment C6](#)). It is unclear whether these areas meet the condition requirements for the TEC and whether they would be impacted by the proposed action.

Areas outside the project area have also not been considered by the referral and could potentially be affected by indirect impacts, particularly runoff or increased erosion causing sedimentation in low lying areas (the Department's mapping of the community shows several additional locations where the community is likely to occur). The Conservation Advice ([Attachment D5](#)) notes that remnants of Class C vegetation may also be habitat critical to survival of the ecological community, if they adjoin, buffer or connect high integrity remnants or have good potential for restoration. The presence of quality TEC outside the project area could increase the value of the Class C vegetation on site.

Furthermore, the patch of TEC near the terminal substation (site 18) is contiguous with sites 19, 20 and 21 and close to site 17 which are Class C. The proximity of these sites to the known TEC potentially make them suitable for restoration or rehabilitation and therefore critical habitat. Further information is required about the potential for indirect impacts to sites 18 to 20 and about the size and potential for rehabilitation of site 17 which will require some clearance for the transmission line.

Site 22 (see figure 3, page 5 of [Attachment C10](#)) is located within the transmission line area and qualifies as TEC. The patch is surrounded by more degraded areas of *Lomandra* grassland (not qualifying) and areas dominated by *Austrostipa* grassland (rather than *Lomandra effusa*) on top of the hill, south east of the confirmed INTG TEC. The proposed route is positioned south of the listed area and the impact is restricted to two 1.2 m diameter poles, plus access and storage during the construction phase. The *Lomandra* and Peppermint Box addendum to the referral ([Attachment C10](#)) notes that an existing access track passes through the listed area. It is not clear if this track is intended to be used during construction and if so whether it will require any upgrading for heavy machinery use which may impact the INTG. The potential for INTG to occur along the external access roads which will require upgrading has also not been considered in the referral and it is not clear who will be responsible for this work and whether it constitutes a component of this action.

#### *Avoidance and mitigation measures*

The proponent has designed infrastructure to avoid as much *Lomandra* grassland as possible, with only 3.17 ha of vegetation, none of which qualifies as the TEC, to be cleared. The terminal substation in particular has been moved into cropping and *Austrostipa sp.* grassland to avoid *Lomandra* sites 18, 19 and 21 which are, or are likely to be, INTG TEC, although it remains close to these patches.

As noted above, the proponent also proposes to implement a CEMP ([Attachment C19](#)) to manage air quality and dust; water quality, erosion and sediment; storage, hazardous substances and materials; noise; traffic; weeds and pests; fire; and flora and fauna.

#### *Conclusion*

While no INTG TEC will be directly cleared as a result of the proposed action several areas which qualify as Condition Class C, and may be amenable to rehabilitation, will be both directly and potentially indirectly impacted, while one patch of TEC might be subject to indirect impacts. The Department considers that additional information is required in regards to vegetation in

areas surrounding the proposed action to determine whether further indirect impacts to currently unknown areas of INTG are possible and to establish whether the areas of Class C vegetation may be habitat critical to the survival of the community by virtue of their proximity to, or connectivity with, areas of listed vegetation, their ability to expand the potential habitat available to some species, or their potential for restoration. Given this the Department recommends the use of the precautionary principle as significant impacts, such as the project adversely impacting habitat critical to the survival of the community or fragmenting or increasing fragmentation of the community, are **possible**.

### Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia – Critically Endangered

#### *Species information*

The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia (PBGW) TEC has the woodland form of *Eucalyptus odorata* as the characteristic and dominant tree species. PBGW is endemic to South Australia where it occurs in areas of winter-dominant rainfall, with the main distribution in the Flinders-Lofty Block Bioregion and smaller occurrences in the Kanmantoo, Eyre-York Block, Murray Darling Depression and Gawler Bioregions. One small occurrence is also found in Victoria, near Bordertown.

PBGW has a tree canopy cover varying from sparse to dense (5-70%), over an open understorey dominated by native grasses and herbs, with scattered shrubs. Mosses, lichens, leaf litter and bare ground are common and important features of the ground layer. The community once extended over an estimated 900,000 ha of which less than 15,000 ha likely remains, most of which is found on privately owned and managed land.

Key threats to the PBGW include incompatible agricultural practices including cultivation, fertiliser application or detrimental grazing regimes; changes in the use and management of remnants in adjoining areas; clearance associated with new developments such as urban and peri-urban expansion, wind farms, mining, transport and other activities; ongoing decline and degradation due to existing weed infestations, feral predators, past fragmentation and small patch size of remnants; impacts of recreational activities such as 4WD and trail bikes; and ecological impacts of climate change.

As with INTG there are three different condition classes of PBGW defined on the basis of remnant patch size, native species diversity and composition. Condition Classes A and B make up the listed ecological community, with Condition Class A representing the areas of best condition. Condition Class C represents PBGW remnants considered too degraded to be part of the listed community, but of sufficient biodiversity value to target for restoration.

Condition Class A is defined as patches at least 0.1 ha in size with greater than 30 native species, at least 10 native broad-leaved herbaceous species not on the disturbance resistant list and greater than or equal to five native perennial grass species. Condition Class B is patches at least 1 ha in size with greater than 15 native species, at least three native broad-leaved herbaceous species not on the disturbance resistant list and greater than or equal to two native perennial grass species.

Some commonly occurring native forbs and 'grass-like' herbs of the ecological community are annuals or herbaceous perennials which germinate or re-sprout after rain in autumn or early winter, then die off again in late spring to early summer. They are most easily identified when flowering or setting seeds, generally in late winter or spring, but can be difficult to identify or even detect at other times of the year. Many of the characteristic native grass species, particularly Wallaby Grasses (*Rytidosperma* (formerly *Austrodanthonia*) species), Spear-grasses (*Austrostipa* species) and Native Wheat-grass (*Elymus scaber*) are difficult to distinguish in vegetative growth and may only be positively identified by their flowers or mature



seeds, generally in late spring to early summer. In grazed areas, palatable species may need to regrow and flower before they can be identified. Accurate identification of the PBGW may therefore require surveying at multiple times during the year, or at the very least in mid to late spring, at least two months after a disturbance and within two months of effective rain.

Habitat considered critical to the survival of the community includes all sites that meet the criteria for the listed community and provide habitat for component flora and fauna species. From an ecological perspective, remnants of lower condition (Condition Class C) may also be critical to survival of the ecological community because they adjoin, buffer or connect high integrity remnants, provide critical habitat for functionally important or threatened species, are essential habitat for mobile species (e.g. woodland birds), increase the potential habitat for some species, or have good potential for restoration. All remnant patches that meet the criteria for the community are considered important populations.

Further information about the PBGW is available in the *Recovery Plan for the Peppermint Box Grassy Woodland of South Australia* (Recovery Plan, [Attachment D7](#)), the *Approved Conservation Advice for Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia* ([Attachment D8](#)) and *EPBC Act Policy Statement 3.7 - Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia* ([Attachment D6](#)).

#### *Proposed action area*

Six sites containing Peppermint Box occur on the northern and southern side of Biele Road (see Figure 7, page 8 of [Attachment C10](#)) which is to the north and east of the proposed action area (see Figure 6, page 7 of [Attachment C9](#)). Site 6 qualifies for EPBC listing and site 1 is considered likely to also be PBGW. Site 3 is considered unlikely to be the TEC and sites 2, 4 and 5 do not meet condition thresholds according to the referral ([Attachment C1](#)). However, the *Lomandra* and Peppermint Box addendum to the referral ([Attachment C10](#)), states that site 4 failed to qualify because of the reduced overstorey of Peppermint Box trees, with River Red Gum being the more dominant species. However, the Recovery Plan ([Attachment D7](#)) notes that River Red Gums are common canopy trees within the TEC in the Flinders Lofty Block Bioregion. The patch contains large swathes of native grass in the understorey and reduced weed invasion but no non-disturbance resistant herbs which still make it ineligible as the TEC.

Site 6 (Class B) is contiguous with sites 2 and 5 and, as these two sites adjoin an area of PBGW they may be considered habitat critical for the survival of the TEC. As with the INTG the size of each patch of vegetation it is unclear from the referral, although all the Peppermint Box vegetation within the referral area (both TEC and not) equates to 6.8 ha. Satellite imagery shows the patch does form part of a vegetated corridor but connected areas were found not to be Peppermint Box woodland meaning the patch of TEC is relatively isolated.

Following the discovery of these areas of TEC the transmission line route was amended to pass to the south of the vegetated areas before turning sharply north and passing to the west of the areas of PBGW (see Figure 6, page 7 of [Attachment C9](#)). As a result of this the route will now require the clearing of another small area of Peppermint Box woodland. This area does not qualify as TEC based on size (0.8 ha) and diversity.

#### *Potential impacts*

The proposed action will result in the clearing of a small area of Peppermint Box woodland (not TEC) which equals approximately 0.3 ha of vegetation (of the 0.8 ha patch). While no clearance of PBGW will occur a patch which does qualify for listing occurs to the east and north of the project area. There is therefore the potential for indirect impacts to the TEC through weed invasion or through dust produced by the movement of vehicles along access roads or during construction.

### *Avoidance and mitigation measures*

The project has been designed to minimise direct impacts on Peppermint Box woodland and to avoid any clearing of the PBGW TEC. The CEMP ([Attachment C19](#)), if implemented, should contribute to the reduction of indirect impacts to any listed vegetation.

### *Conclusion*

Given the redesign of the project to avoid areas of PBGW TEC there will be no direct impacts to the listed community. While the community does exist within the project and wider area it is in small and relatively isolated patches. There is some potential for indirect impacts to the PBGW or nearby Class C vegetation which may be critical habitat, however, these should be mostly managed through the implementation of the CEMP ([Attachment C19](#)) and any residual impacts are unlikely to be significant or effect a significant amount of TEC. Therefore, the Department considers that the action is unlikely to fragment or reduce the extent of the community or cause substantial reduction in quality or integrity of the TEC or adjoining critical habitat. Significant impacts to the The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia are therefore considered **unlikely**.

### *Other listed species*

The Department has considered the location, size and nature of the proposed action when assessing the potential impacts to the other listed threatened species identified in the ERT report ([Attachment D1](#)). The Department considered the following factors:

- listing status of the species (i.e. vulnerable or endangered)
- whether nearby records of the species exist and species distribution
- whether surveys identified evidence of species use of the project area
- location of identified important populations of the species
- habitat/vegetation typically associated with the species
- species ecology
- soil types
- existing vegetation communities
- landform (topography, hydrology)
- current land use.

On the basis of these considerations and including information from the Department's Species Profile and Threats (SPRAT) Database and the referral documentation, the Department considers it **unlikely** that the other listed threatened species would be significantly impacted by the proposed action.

### **PROTECTED MATTERS THAT ARE NOT CONTROLLING PROVISIONS:**

#### **Listed migratory species**

The Department's ERT report dated 17 October 2018 ([Attachment D1](#)) indicates that two migratory species are known or likely to occur within 5 km of the proposed action area, the Fork-railed Swift (*Apus pacificus*) and Common Greenshank (*Tringa nebularia*). The Species Update dated 12 October 2018 ([Attachment D2](#)) has been consulted and there are no recent or upcoming decisions relating to species, approved conservation advices, recovery plans or threat abatement plans that may be of relevance to this proposal.

The two species do not have important populations associated with the project area and/or do not have threats associated with the proposed action. The species are also widely distributed and would most likely occur as transients throughout the proposed action area (if at all) – they were not recorded in the surveys undertaken within the project area (see [Attachment C6](#)). There is no evidence to suggest that the project area supports an ‘ecologically significant’ proportion of any of the populations of these two species. The Department considers it **unlikely** that migratory species would be significantly impacted by the proposed action.

<b>RAMSAR Wetlands</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any RAMSAR listed wetland of international importance within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>World Heritage properties</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any World Heritage properties located within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>National Heritage places</b>	The ERT report ( <a href="#">Attachment D1</a> ) did not identify any National Heritage places located within or adjacent to the proposed action area, therefore this controlling provision does not apply.
<b>Commonwealth marine environment</b>	The proposed action does not occur in the vicinity of a Commonwealth marine environment, therefore this controlling provision does not apply.
<b>Commonwealth action</b>	The referring party is not a Commonwealth agency, therefore this controlling provision does not apply.
<b>Commonwealth land</b>	The proposed action is not being undertaken on Commonwealth land, therefore this controlling provision does not apply.
<b>Nuclear action</b>	The proposed action does not meet the definition of a nuclear action as defined in the EPBC Act, therefore this controlling provision does not apply.
<b>Great Barrier Reef Marine Park</b>	The proposed action is located in Western Australia, therefore this controlling provision does not apply.
<b>Commonwealth Heritage places overseas</b>	The proposed action is not located overseas, therefore this controlling provision does not apply.
<b>A water resource, in relation to coal seam gas development and large coal mining development</b>	The proposed action is not a coal seam gas or a large coal mining development, therefore this controlling provision does not apply.

## **SUBMISSIONS:**

### **Public submissions**

The proposal was published on the Department's website on 3 July 2018 and public comments were invited until 18 July 2018. Seventeen public submissions were received on the referral ([Attachments E2-E18](#)). The issues raised in the submissions are summarised at [Attachment E1](#).

### **Comments from Commonwealth Ministers**

By letter dated 3 July 2018, the following ministers were invited to comment on the referral:

- The Hon David Littleproud MP, Minister for Agriculture and Water Resources
- Senator the Hon Nigel Scullion, Minister for Indigenous Affairs

No comments were received in response to those invitations.

By letter dated 2 October 2018, the Minister for Energy, the Hon Angus Taylor MP was also invited to comment on the referral. The Department's Renewable Energy Team responded on 4 October 2018 noting that they had no comment.

In addition the National Wind Farm Commissioner, Mr Andrew Dyer, has been informed of the referral.

### **Comments from State Ministers**

By letter dated 3 July 2018, the following State minister was invited to comment on the referral:

- s22 Senior Policy Officer – Assessments, Department of Environment, Water and Natural Resources, delegated contact for the South Australian Minister for Environment and Water, the Hon David Speirs MP.

No comments were received in response to that invitation.

## **ASSESSMENT APPROACH:**

If you agree that the action is a controlled action, you must decide on the approach for assessment in accordance with section 87 of the EPBC Act. The Department recommends that this proposal be assessed by preliminary documentation.

Given the location of matters of national environmental significance, the number of matters likely to be impacted, the scale of the action, and potential impacts from the proposal, that form of assessment represents an appropriate method that will ensure that impacts on the controlling provisions are appropriately assessed.

Under section 87(3)(b) of the EPBC Act, you must consider any other relevant information available about the relevant impacts of the action, including information in a report on the impacts of actions under a policy, plan or program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments).

Under section 87(5) of the EPBC Act, you may decide on an assessment on preliminary documentation only if you are satisfied that the approach will enable an informed decision to be made about whether or not to approve the taking of the action. In this case, the number and complexity of relevant impacts is low and locally confined. The referral has provided sufficient information regarding the likely sources of impacts and proposed mitigation and management. Assessment on preliminary documentation is therefore considered appropriate for this proposal.

**OTHER MATTERS FOR DECISION-MAKING:**

**Significant impact guidelines**

The Department has reviewed the information in the referral against the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance* (December 2013) and other relevant material. While this material is not binding or exhaustive, the factors identified are considered adequate for decision-making in the circumstances of this referral. Adequate information is available for decision-making for this proposal.

**Precautionary principle**

In making your decision under section 75, you are required to take account of the precautionary principle (section 391). The precautionary principle is that a lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

**Cost Recovery**

The fee schedule (with justifications) for your consideration is at Attachment F1. The fee schedule (without justifications) at Attachment F2 will be sent to the person taking the action, including an invoice for Stage 1, seeking fees prior to the commencement of any further activity.

s22

Director  
Project Assessments West Section  
Assessment (WA, SA, NT) and Post Approvals  
Branch

s22

October 2018

s22

Project Assessments West Section

s22

<b>Attachments:</b>	<b>Version</b>
A: <a href="#">Decision Notice</a> FOR SIGNATURE	1.0
B: Letters FOR SIGNATURE	
B1: <a href="#">Letter to proponent</a> (with attachments <a href="#">B</a> and <a href="#">E</a> )	1.0
B2: <a href="#">Letter to DEWNR</a>	1.0
C: Referral Documentation	
C1: <a href="#">Referral form</a>	1.0
C2: <a href="#">Referral attachment 1 - GHD Consultation Report 2017-06-27</a>	1.0
C3: <a href="#">Referral attachment 2 - Community Consultation Report</a>	1.0

C4:	<a href="#">Referral attachment 3 - Flora and Fauna Report Part 1</a>	1.0
C5:	<a href="#">Referral attachment 4 - Flora and Fauna Report Part 2</a>	1.0
C6:	<a href="#">Referral attachment 5 - Flora and Fauna Report Part 3</a>	1.0
C7:	<a href="#">Referral attachment 6 - Flora and Fauna Report Part 4</a>	1.0
C8:	<a href="#">Referral attachment 7 - Flora and Fauna Final 2017-06-28 Compressed</a>	1.0
C9:	<a href="#">Referral attachment 8 - Addendum Grid Route Update 2018-01-18</a>	1.0
C10:	<a href="#">Referral attachment 9 - Addendum Lomandra Peppermint Box 2017-11-13</a>	1.0
C11:	<a href="#">Referral attachment 10 - Land Title Information with Proposed Infrastructure</a>	1.0
C12:	<a href="#">Referral attachment 11 - Land Ownership No Names</a>	1.0
C13:	<a href="#">Referral attachment 12 - NVR 2017 3122 NVAP Reg 51d Advice Notification</a>	1.0
C14:	<a href="#">Referral attachment 13 - NVR 2017 3122 NVAP Reg 51d Advice Notification Compressed</a>	1.0
C15:	<a href="#">Referral attachment 14 - PBTL EPBC Offset Calculator Summary</a>	1.0
C16:	<a href="#">Referral attachment 15 - PBTL Offset Calculator 15 m Wide Tracks</a>	1.0
C17:	<a href="#">Referral attachment 16 - Planning Authority and Local Council Contact Details</a>	1.0
C18:	<a href="#">Referral attachment 17 - Planning Authority and Local Council Contact Details Word Version</a>	1.0
C19:	<a href="#">Referral attachment 18 - RES Draft CEMP</a>	1.0
C20:	<a href="#">Referral attachment 19 - RES HSQE Policy Organisational Chart Safety Leadership State</a>	1.0
C21:	<a href="#">Referral attachment 20 - RES LTD HSQE Policy Organisational Chart Safety Leadership Statement</a>	1.0
C22:	<a href="#">Referral attachment 21 - SEB Council Areas Location</a>	1.0
C23:	<a href="#">Referral attachment 22 - SEB Report 14 July 2017 Compressed</a>	1.0
C24:	<a href="#">Referral attachment 23 - SEB Substation Infrastructure</a>	1.0
C25:	<a href="#">Referral attachment 24 - SEB WF Infrastructure</a>	1.0
D:	Other Information Used to Prepare Recommendations	

D1:	<a href="#">ERT report (17 October 2018)</a>	1.0
D2:	<a href="#">Species and Communities Update (12 October 2018)</a>	1.0
D3:	Duffy, A., Pound, L. and How, T. (2012) <a href="#">Recovery Plan for the Pygmy Bluetongue Lizard <i>Tiliqua adelaidensis</i></a> . Department of Environment and Natural Resources, South Australia.	1.0
D4:	Turner, J. (2012). <a href="#">National Recovery Plan for the Iron-grass Natural Temperate Grassland of South Australia ecological community 2012</a> . Department of Environment and Natural Resources, South Australia.	1.0
D5:	Department of the Environment, Water, Heritage and the Arts (2008). <a href="#">Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia</a> . Canberra: Department of the Environment, Water, Heritage and the Arts.	1.0
D6:	<a href="#">EPBC Act policy statement 3.7 - Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia</a> (Department of the Environment and Water Resources, 2007)	1.0
D7:	Turner, J. (2012). <a href="#">National Recovery Plan for the Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia ecological community 2012</a> . Department of Environment, Water and Natural Resources, South Australia.	1.0
D8:	Department of the Environment, Water, Heritage and the Arts (2008). <a href="#">Approved Conservation Advice for Peppermint Box (<i>Eucalyptus odorata</i>) Grassy Woodland of South Australia</a> . Canberra: Department of the Environment, Water, Heritage and the Arts	1.0
E:	Public Comments	
E1:	<a href="#">Summary of public comments</a>	1.0
E2:	s47F [REDACTED] (Att <a href="#">E2.1</a> & <a href="#">E2.2</a> )	1.0
E3:	s47F [REDACTED] (Att <a href="#">E3.1</a> & <a href="#">E3.2</a> )	1.0
E4:	s47F [REDACTED] (Att <a href="#">E4.1</a> & <a href="#">E4.2</a> )	1.0
E5:	s47F [REDACTED] (Att <a href="#">E5</a> )	1.0
E6:	s47F [REDACTED] (Att <a href="#">E6.01</a> ; <a href="#">E6.02</a> ; <a href="#">E6.03</a> ; <a href="#">E6.04</a> ; <a href="#">E6.05</a> ; <a href="#">E6.06</a> ; <a href="#">E6.07</a> ; <a href="#">E6.08</a> ; <a href="#">E6.09</a> ; <a href="#">E6.10</a> ; <a href="#">E6.11</a> & <a href="#">E6.12</a> )	1.0
E7:	s47F [REDACTED] (Att <a href="#">E7</a> )	1.0
E8:	s47F [REDACTED] (Att <a href="#">E8</a> )	1.0
E9:	s47F [REDACTED] (Att <a href="#">E9</a> )	1.0
E10:	s47F [REDACTED] (Att <a href="#">E10</a> )	1.0

E11:	s47F [REDACTED] (Att <a href="#">E11</a> )	1.0
E12:	s11C [REDACTED] (Att <a href="#">E12.1</a> ; <a href="#">E12.2</a> ; <a href="#">E12.3</a> ; <a href="#">E12.4</a> ; <a href="#">E12.5</a> ; <a href="#">E12.6</a> <a href="#">E12.7</a> & <a href="#">E12.8</a> )	1.0
E13:	s47F [REDACTED] (Att <a href="#">E13.1</a> & <a href="#">E13.2</a> )	1.0
E14:	s47F [REDACTED] (Att <a href="#">E14</a> )	1.0
E15:	s47F [REDACTED] (Att <a href="#">E15.01</a> ; <a href="#">E15.02</a> ; <a href="#">E15.03</a> ; <a href="#">E15.04</a> ; <a href="#">E15.05</a> ; <a href="#">E15.06</a> ; <a href="#">E15.07</a> ; <a href="#">E15.08</a> ; <a href="#">E15.09</a> & <a href="#">E15.10</a> )	1.0
E16:	s47F [REDACTED] (Att <a href="#">E16</a> )	1.0
E17:	s47F [REDACTED] (Att <a href="#">E17</a> )	1.0
E18:	s47F [REDACTED] (Att <a href="#">E18</a> )	1.0
F:	Cost Recovery	
F1:	<a href="#">Fee schedule with justifications</a>	1.0
F2:	<a href="#">Fee schedule without justifications</a>	1.0





**Notification of  
REFERRAL DECISION AND DESIGNATED PROPONENT – controlled action  
DECISION ON ASSESSMENT APPROACH – preliminary documentation**

**Twin Creek Wind Farm, 80km north-east of Adelaide, South Australia (EPBC 2018/8208)**

This decision is made under section 75 and section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

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<b>proposed action</b>	To develop the Twin Creek Wind Farm within the Mid-north area of South Australia, including the construction of up to 51 wind turbines, access tracks and other associated infrastructure (see EPBC Act referral 2018/8208).
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<b>decision on proposed action</b>	The proposed action is a controlled action.  The project will require assessment and approval under the EPBC Act before it can proceed.
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<b>relevant controlling provisions</b>	<ul style="list-style-type: none"><li>Listed threatened species and communities (sections 18 &amp; 18A)</li></ul>
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<b>designated proponent</b>	RES Australia Pty Ltd  ACN: 106 637 754
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<b>assessment approach</b>	The project will be assessed by preliminary documentation.
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**Decision-maker**

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<b>Name and position</b>	Gregory Manning Assistant Secretary Assessments (WA, SA, NT) and Post Approvals Branch
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<b>Signature</b>	
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<b>date of decision</b>	9 November 2018
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EPBC Ref: 2018/8208

Mr Daniel Leahy  
Development Project Manager  
Suite 4, Level 1  
760 Pacific Highway  
CHATSWOOD NSW 2067

Dear Mr Leahy

**Decision on referral**

**Twin Creek Wind Farm, 80 km north-east of Adelaide, South Australia**

Thank you for submitting a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This letter is to advise you of my decision on the referral of the proposed action, to develop the Twin Creek Wind Farm within the Mid-north area of South Australia, including the construction of up to 51 wind turbines, access tracks and other associated infrastructure.

**As a delegate of the Minister for the Environment and Energy, I have decided under section 75 of the EPBC Act that the proposed action is a controlled action and, as such, it requires assessment and a decision about whether approval for it should be given under the EPBC Act.**

The information that I have considered indicates that the proposed action is likely to have a significant impact on the following matters protected by the EPBC Act:

- Threatened Species and Communities (section 18 and section 18A)

Based on the information available in the referral, the proposed action is likely to have a significant impact on the following matters of national environmental significance, including but not limited to:

- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) – Endangered

The proposed action involves direct impacts to at least 16 individuals and the clearance of known habitat across the project site.

- Iron-grass Natural Temperate Grassland of South Australia – Critically Endangered

The proposed action may impact on habitat considered critical to the survival of the ecological community and therefore the precautionary principal has been applied.

A copy of the document recording this decision is enclosed.

Please note that this decision only relates to the potential for significant impacts on matters protected by the Australian Government under Chapter 2 of the EPBC Act.

I have also decided that the project will need to be assessed by preliminary documentation.

Each assessment approach requires different levels of information and involves different steps. All levels of assessment include a public consultation phase, *in which any third parties can comment on the proposed action*.

Indigenous communities may also need to be consulted during the assessment process. For more information on how and when indigenous engagement should occur during environmental assessments, please refer to the indigenous engagement guidelines at <http://www.environment.gov.au/epbc/publications/engage-early>.

Please note, under subsection 520(4A) of the EPBC Act and the *Environment Protection and Biodiversity Conservation Regulations 2000* your assessment is subject to cost recovery. Please find attached a copy of the fee schedule for your proposal and an invoice for Stage 1. Fees will be payable prior to each stage of the assessment proceeding. Further details on cost recovery are available on the Department's website at: <http://www.environment.gov.au/epbc/cost-recovery>.

If you disagree with the fee schedule provided, you may apply under section 514Y of the EPBC Act for reconsideration of the method used to work out the fee. The application for reconsideration must be made within 30 business days of the date of this letter and can only be made once for a fee. Further details regarding the reconsideration process can be found on the Department's website at: <http://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process/refer-proposed-action>.

Details on the assessment process for the project and the responsibilities of the proponent are set out in the enclosed fact sheet. Further information is available from the Department's website at <http://www.environment.gov.au/topics/environment-protection/environment-assessments>.

A copy of the document recording these decisions is enclosed.

While I have determined that your project will be assessed by preliminary documentation, some further information will be required to be able to assess the relevant impacts of the action. You should expect to receive a letter from the Department within 10 business days of the payment of Stage 1 fees, outlining the information required.

The project manager will contact you shortly to discuss the assessment process.

I have also written to the South Australian Department of Environment, Water and Natural Resources to advise them of this decision.

You may elect under section 132B of the EPBC Act to submit a management plan for approval at any time before the Minister makes an approval decision of the proposed action under section 133 of the EPBC Act.

If an election is made under section 132B of the EPBC Act, cost recovery will apply to the approval of any action management plans you submit.

Cost recovery does not apply to the approval of action management plans where you do not elect to submit an action management plan for approval under section 132B of the EPBC Act and the approval of the action management plan does not arise from a variation to the approval conditions that you have requested.

Where you vary an approval condition and it results in you being required to submit an action management plan for approval, cost recovery will apply to the approval of the action management plan. Please refer to [Attachment E](#) for more details.

Please also note that once a proposal to take an action has been referred under the EPBC Act, it is an offence under section 74AA to take the action while the decision making process is on-going (unless that action is specifically excluded from the referral or other exemptions apply). Persons convicted of an offence under this provision of the EPBC Act may be liable for a penalty of up to 500 penalty units. The EPBC Act is available on line at: <http://www.environment.gov.au/epbc/about/index.html>

The Department has recently published an *Environmental Impact Assessment Client Service Charter* (the Charter) which outlines the Department's commitments when undertaking environmental impact assessments under the EPBC Act. A copy of the Charter can be found at: <http://www.environment.gov.au/epbc/publications/index.html>.

If you have any questions about the referral process or this decision, please contact the project manager, s22 [redacted] by email to s22 [redacted]@environment.gov.au, or telephone s22 [redacted] and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Gregory Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch

9 November 2018

Attachments:

- A. The instrument recording the decision
- B. A fact sheet on the assessment process
- C. The fee schedule
- D. The invoice for Stage 1
- E. Action Management Plan fee election form



**Australian Government**  
**Department of the Environment and Energy**

**EPBC Act Cost Recovery - Fee Schedule**

EPBC No: EPBC 2018/8208

Date of Fee Schedule: Oct. 17, 2018

Project title: Twin Creek Wind Farm, 80km north-east of Adelaide, South Australia

Assessment method: Preliminary Documentation

**Fee Schedule**

STAGE FEES	Base fee	PART A Complexity costs (A-L, P)	PART B Complexity costs (MNO)	Total
Stage 1	\$2,074	\$809	\$0	\$2,883
Stage 2	\$2,289	\$1,280	\$0	\$3,569
Stage 3	\$852	\$1,348	\$10,982 (Estimate)	\$13,182 (Estimate)
Stage 4	\$2,795	\$3,303	\$10,982 (Estimate)	\$17,080 (Estimate)
<b>TOTAL PROJECT COST</b>	<b>\$8,010</b>	<b>\$6,742</b>	<b>\$21,964 (Estimate)</b>	<b>\$36,716 (Estimate)</b>

**Notes:**

- For assessments by environmental impact statement - If standard guidelines are used under Section 101A(2)(a) of the EPBC Act, the Stage 1 fee will not be applicable.
- For assessments by public environmental report - If standard guidelines are used under Section 96B of the EPBC Act, the Stage 1 fee will not be applicable.
- If no further information is requested under section 95A of the EPBC Act, the Stage 1 and 2 fees will not be applicable.
- The Department advises applicants of the maximum liability for Part B complexity fees at the time of the assessment approach decision, based on the information provided in the referral documentation. Applicants have the opportunity to reduce the Part B complexity fees during the assessment process by improving the quality of information provided to the Department during Stage 2 of the assessment. These Part B complexity fees are confirmed when all the assessment documentation is provided in Stage 2, and are not payable until Stages 3 and 4 of the assessment.

**Fee Breakdown**

		COMPLEXITY FEE	
<b>CONTROLLING PROVISIONS</b>			
	A Listed threatened species and ecological communities	Moderate	\$6,742
	B Listed migratory species	None	\$0
	C Wetlands of international importance	None	\$0
	D Environment of the Commonwealth marine area	None	\$0
	E World heritage properties	None	\$0
	F National heritage places	None	\$0
	G Nuclear actions	None	\$0
<b>Part A Fees</b>	H Great Barrier Reef Marine Park	None	\$0
	I Water Resources	None	\$0
	J Commonwealth Land/Commonwealth Agency/Commonwealth Heritage Places Overseas	None	\$0
<b>NUMBER OF PROJECT COMPONENTS</b>			
	K Number of project components	Low	\$0
<b>COORDINATION WITH OTHER LEGISLATION</b>			
	L Coordination with other legislation	Low	\$0
<b>ADEQUACY OF INFORMATION AND CLARITY OF PROJECT SCOPE</b>			
<b>Part B Fees: estimate</b>	M Site surveys/Knowledge of environment	Moderate	\$10,982
<b>(to be confirmed prior to Stage 3)</b>	N Management measures (including mitigation and offsets)	Moderate	\$10,982
	O Project scope	Low	\$0
<b>EXCEPTIONAL CIRCUMSTANCES</b>			
<b>Exceptional circumstances</b>	P Exceptional circumstances	False	\$0
<b>TOTAL COMPLEXITY FEES (Estimate)</b>			<b>\$28,706</b>
<b>BASE FEE</b>			<b>\$8,010</b>
<b>TOTAL FEE (Estimate)</b>			<b>\$36,716</b>

**Potential fees for contingent and post-approval activities (if required)**

The Department will notify you if a contingent activity fee is applicable due to an additional statutory step being required under the *Environment Protection and Biodiversity Conservation Act 1999*.

**Post-approval fees**

Evaluation of new Action Management Plan (per management plan) (\$2,690)

**Contingent Fees**

Request additional information for referral or assessment approach decision (\$1,701)

Variation to the proposed action (\$1,353)

Reconsideration of the controlled action or assessment approach decision at the applicant's request (\$6,577)

Request additional information for approval decision (assessment on referral information, preliminary documentation or bilateral/accredited assessment) (\$1,701)

Request additional information for approval decision (assessment by environmental impact statement or public environment report) (\$7,476)

Variation of conditions (\$2,690)

Variation of an action management plan under conditions of approval (\$2,690)

Administrative variation of an action management plan under conditions of approval (\$710)

Transfer of approval to new approval holder (\$1,967)

Extension to approval expiry date (\$2,690)



**Australian Government**  
**Department of the Environment and Energy**

**Tax Invoice**

Page: 1 of 1

Invoice Date : 13 November 2018  
 Invoice No. : s47G(1)(a)  
 Your Account No. : s47G(1)(a)  
 Our ABN : 34190894983  
 Date Printed : 13 November 2018

RES AUSTRALIA PTY LTD  
 Suite 4, Level 1 760 Pacific Highway  
 CHATSWOOD NSW 2067

For enquiries please contact: Accounts on (02) 6274 2930,  
 or via email: [accountshelpdesk@environment.gov.au](mailto:accountshelpdesk@environment.gov.au)

Item Description	Qty	Unit	Unit Price	Line Total
Stage 1 Fee EPBC 2018/8208	1	EA	\$0.00	\$2,883.00
<b>Total Out of Scope Supplies</b>				<b>\$2,883.00</b>

**Total Amount Owning:** **\$2,883.00**

\*\*\* Total Amount Owning Includes GST of: **\$0.00**

Attn: Daniel Leahy  
 Stage 1 Fee  
 EPBC 2018/8208  
 Project Name: Twin Creek Wind Farm, 80km north-east of Adelaide, SA

**PAYMENT ADVICE**

**TOTAL AMOUNT \$2,883.00**

**PAYMENT DUE WITHIN 30 DAYS**

RES AUSTRALIA PTY LTD  
 (ABN 55106637754)

Invoice Date : 13 November 2018  
 Invoice No : s47G(1)(a)  
 Company Code :  
 Account No. :

**Credit Card** Visit [www.environment.gov.au/payments](http://www.environment.gov.au/payments) to make a secure credit card payment  
 A surcharge fee applies to credit card payments

**BPAY** Biller Code: 980318  
 Ref: s47G(1)(a)

**Telephone & Internet Banking – BPAY®**  
 Contact your bank or financial institution to make this payment from your cheque, savings, debit or transaction account.  
 More info: [www.bpay.com.au](http://www.bpay.com.au)

**Direct Deposit** Payment details: BSB: 092009  
 Account: 115859  
 Reference: s47G(1)(a)

**Cheque** Forward this payment advice and cheque to:  
**The Collector of Public Monies**  
 Department of the Environment and Energy  
 GPO Box 787  
 Canberra ACT 2601  
 AUSTRALIA

## ELECTION TO HAVE AN ACTION MANAGEMENT PLAN APPROVED

Note: Pursuant to section 132B of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), this election must be given to the Minister before the Minister grants an approval of the proposed action under section 133 of the EPBC Act.

### PERSON PROPOSING TO TAKE ACTION

1. Name and Title:
  2. Organisation (if applicable):
  3. EPBC Referral Number (if known):
  4. ACN/ABN (if applicable):
  5. Postal Address:
  6. Telephone:
  7. Email:
  8. Name of designated proponent (if not the same person named at item 1 above and if applicable):
  9. ACN/ABN of designated proponent (if not the same person named at item 1 above):
- I elect to submit an action management plan(s) for approval in accordance with section 132B of the *Environment Protection and Biodiversity Conservation Act 1999*. I understand that a fee of \$2,690 may apply under the cost recovery arrangements.

#### Declaration:

- I declare that to the best of my knowledge the information I have given on this form is complete, current and correct.
- I understand that giving false or misleading information is a serious offence.

Signature \_\_\_\_\_ Date: \_\_\_\_\_



Commenter	Attachment No	Summary of Comments	Commenter type
s47F	Att <a href="#">E2.1</a> & <a href="#">E2.2</a>	<ul style="list-style-type: none"> <li>• Grassland communities known to DEWNR are missing from survey results</li> <li>• The claims that the Lomandra grasslands occur in patches is misleading as the project area contains the largest contiguous patch of native grassland in the Adelaide and Mount Lofty Ranges NRM region</li> <li>• The vegetation condition ratings are not correct and simply reflect the survey timing rather than degraded patches</li> <li>• Tree 1 which was assessed as having no hollows actually has at least five</li> <li>• Project does not comply with the Department's policy statement (2.3 Wind Farm Guidelines) that all infrastructure should avoid impacts to significant areas of natural habitat</li> <li>• Referral does not adequately consider impacts to PBTL from noise and movement and the proposed buffer zone is inconsistent with other projects such as the Hornsdale Windfarm (EPBC 2012/6573)</li> <li>• PBTL surveying on roadsides was insufficient</li> <li>• The population in the project area is the most significant population of PBTL</li> <li>• Translocation would not be effective as there is no suitable unoccupied habitat to move the animals into</li> <li>• Despite claims in the referral that engagement with the Ngadjuri Nation Aboriginal Community has occurred and field survey work is underway the Chairperson of the Ngadjuri Nation Aboriginal Corporation has no knowledge of this</li> </ul>	Researcher/expert

		<ul style="list-style-type: none"> <li>• The search for registered Aboriginal sites was insufficient and a site does in fact exist in the area</li> </ul>	
<b>s47F</b>	Att <a href="#">E3.1</a> & <a href="#">E3.2</a>	<ul style="list-style-type: none"> <li>• Southern property is unsuitable for a wind farm</li> <li>• Site is in too close proximity to dwellings and vineyards and will impact the Barossa Valley heritage area</li> <li>• The project area contains the largest contiguous patch of native grassland in the Adelaide and Mt Lofty Ranges NRM region and while some areas may be degraded they are still important</li> <li>• The referral did not make it clear that a number of sites of Lomandra vegetation may qualify as TEC if surveys were undertaken at the correct time</li> <li>• DEWNR has previously sought to acquire the southern property for conservation but were unsuccessful in raising funds</li> <li>• The project area contains the most significant population of PBTL at the southern end of their known range and in the area which the range is likely to contract to if climate change impacts northern habitat</li> <li>• There is likely no suitable unoccupied habitat into which PBTL could be translocated</li> <li>• Surveys of roadside areas need to occur</li> <li>• The impacts of fragmentation of PBTL by roads are not well considered</li> <li>• Effects of shadow flickering, noise and vibration as well as impacts on movement, dispersal and survival of PBTL have not been well considered in the referral</li> </ul>	Unclear

		<ul style="list-style-type: none"> <li>• Buffer zones for PBTL are inconsistent with other EPBC decisions on windfarms with lizard populations (Mt Bryan 2009/5025 and Hornsdale 2012/6573)</li> <li>• Windfarms change local climate and increase frost risk</li> <li>• Disturbance and track creation in the area will contribute to further erosion and silting up of the Light River</li> <li>• How offsets were calculated is not clear</li> </ul>	
s47F	Att <a href="#">E4.1</a> & <a href="#">E4.2</a>	<ul style="list-style-type: none"> <li>• Support for windfarms provided impacts on ecosystems are adequately assessed and minimised</li> <li>• Coordinated a survey on native grassland ecosystems in South Australia from 2012 to 2015 which resulted in a publicly available report which was not referenced in the referral</li> <li>• Grazing has significantly reduced floral diversity in the area, however, with the discontinuation or reduction of grazing many perennial herbaceous species with roots or rhizomes persisting underground as well as bulb species would recover.</li> <li>• The Pinery Fire has also shown that fire produces germination responses in species in degraded areas.</li> <li>• Surveys for TECs should be undertaken over two or more year periods in order to capture smaller and seasonally observable species.</li> <li>• Criteria developed for EPBC categories for irongrass grassland are dependent on data which is substantially out of date and from the wrong region, more recent data may result in different criteria and more areas being identified as the TEC</li> <li>• Ground layer vegetation removal may not need to occur to enable installation of overhead transmission lines</li> </ul>	Researcher/expert

		<ul style="list-style-type: none"> <li>• The referral contains insufficient information about impacts to roadside vegetation from heavy machinery and vehicle traffic</li> <li>• The referral has a lack of consideration with the problems of managing contractors and collateral damage from machinery movement, material storage and water and impacts on the PBTL</li> <li>• There is no evidence that searching for the Flinders Rangers Worm-lizard has occurred</li> <li>• The referral does not adequately consider the rehabilitation requirements on site (required due to machinery movement, excavation and stockpiling, weeds and increased erosion)</li> <li>• The proposal of a Heritage Agreement does not make it clear if this area would offset for just the EPBC impacts or whether it would also cover state requirements. It also does not adequately take into account monitoring or maintenance requirements for an offset area</li> <li>• Monitoring and reporting efforts for PBTL relocation have not been adequately considered</li> <li>• The presence of PBTL should make the area unsuitable for a major windfarm</li> </ul>	
s47F	Att <a href="#">E5</a>	<ul style="list-style-type: none"> <li>• Visual impact of the wind farm will affect the Barossa Heritage Area including the s47F</li> <li>• Local area will also be impacted by noise, dust, erosion and vehicle movement during construction</li> <li>• Potential impacts to bird habitat and nests along the St Kitts Creek</li> </ul>	Neighbour/local

s47F	<p>Att <a href="#">E6.01</a>; <a href="#">E6.02</a>; <a href="#">E6.03</a>; <a href="#">E6.04</a>; <a href="#">E6.05</a>; <a href="#">E6.06</a>; <a href="#">E6.07</a>; <a href="#">E6.08</a>; <a href="#">E6.09</a>; <a href="#">E6.10</a>; <a href="#">E6.11</a> &amp; <a href="#">E6.12</a></p>	<ul style="list-style-type: none"> <li>• Witnessed increased erosion in the area since the 1990s due to grazing and earthworks are likely to increase the erosion problem</li> <li>• Wombat population on the site has not been mapped and the numbers have been misrepresented in the referral</li> <li>• Soil disturbance will have significant effect on the PBTL. Silt which runs off the site during rain will block spider and PBTL holes</li> <li>• Proposed buffers are inconsistent with other windfarms such as Hornsdale</li> <li>• Long term effects of translocation of PBTL are unknown</li> <li>• Rainbow bee-eaters breed in the area and have collision risk with turbines</li> <li>• There are few areas of the IGNTG TEC remaining and the project area contains a large patch</li> <li>• There are potential indirect impacts to the PBGW TEC despite avoidance measures</li> <li>• There are likely to be impacts to the Southern Hairy Nosed Wombat, Australian Bustard, and Elegant Parrot</li> <li>• Noise impacts are not adequately addressed</li> <li>• Wildlife movement corridors have not been fully considered</li> <li>• Offsite and downstream impacts have not been considered</li> <li>• The referral does not provide a true indication of the steepness of the site and the existing erosion problems which may be exacerbated by the project</li> <li>• The extent and presence of PBGW TEC has been misrepresented</li> </ul>	Neighbour/local
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		<ul style="list-style-type: none"> <li>• No shadow flicker or noise reports have been provided with the referral despite the PBTTL Recovery Plan noting that the species is impacted by flicker, noise and vibration</li> <li>• There has been a lack of consideration of ongoing impacts from trenching activities and access to underground cables for repair and maintenance</li> <li>• Telecommunication towers will be impacted by scattering of signals</li> <li>• Windfarms lead to increased frost in the local area which will impact grain and vine growers</li> <li>• There is no social licence to undertake the project and the neighbours are all opposed.</li> <li>• Viability of the project is threatened as transmission line routes are not secure.</li> <li>• There are Wedge Tailed Eagle breeding sites in the area.</li> <li>• The site is unsuitable for a wind farm</li> </ul>	
<p><b>s47F</b></p>	<p>Att <a href="#">E7</a></p>	<ul style="list-style-type: none"> <li>• The proponent did not establish a professional, well managed consultation process and did not provide comprehensive information to the community</li> <li>• Information about turbine height may be misleading as it does not take into account their position on the hill</li> <li>• Turbines present a risk of low cloud to small aircraft which do not operate with radar</li> <li>• Worn turbines have noise impacts</li> <li>• Large turbines should not be considered so close to a populated area</li> </ul>	<p>Neighbour/local</p>

		<ul style="list-style-type: none"> <li>• There will be visual impacts ton the Barossa Valley tourist area</li> <li>• There could be interference with communication services (phone, mobiles, internet and CFS communications via radio).</li> </ul>	
s47F	Att <a href="#">E8</a>	<ul style="list-style-type: none"> <li>• The PBTL is highly sensitive to light, movement and habitat fragmentation and no shadow flicker, noise or geological/hydrological reports were provided as part of the referral</li> <li>• Impacts will be ongoing as lines will need to be dug back up for maintenance</li> <li>• The site is also home to native grasses, migratory birds and wombats and the proposal will impact the PBTL, IGNTG TEC, PBGW TEC and the Rainbow Bee-eater</li> <li>• The referral is false and misleading</li> <li>• A panel member of the Native Vegetation Assessment Panel is a landowner of the Keyneton Wind Farm and may hold conflicts of interest</li> <li>• The site is not suited as a wind farm</li> </ul>	Neighbour/local
s47F	Att <a href="#">E9</a>	<ul style="list-style-type: none"> <li>• Action may be inconsistent with Recovery Plans for the PBTL, IGNTF TEC and PBGW TEC</li> </ul>	Neighbour/local
s47F	Att <a href="#">E10</a>	<ul style="list-style-type: none"> <li>• No shadow flicker or noise reports were provided as part of the referral</li> <li>• Impacts of runoff/silting in the Light River have not been addressed</li> <li>• No geology or hydrology report have been provided</li> </ul>	Neighbour/local
s47F	Att <a href="#">E11</a>	<ul style="list-style-type: none"> <li>• The referral does not consider the potential changes to water quality in the Light River from runoff form the tracks and construction</li> </ul>	Visitor/recreational user of land

		<ul style="list-style-type: none"> <li>• Changes in water quality may impact the use of the river for recreational fishing</li> </ul>	
s11C	<p>Att <a href="#">E12.1</a>; <a href="#">E12.2</a>; <a href="#">E12.3</a>; <a href="#">E12.4</a>; <a href="#">E12.5</a>; <a href="#">E12.6</a> <a href="#">E12.7</a> &amp; <a href="#">E12.8</a></p>	<ul style="list-style-type: none"> <li>• Cumulative impacts of multiple windfarms in the region on protected matters need to be addressed</li> <li>• Referral claims that there are no trees or shrubs on the site but several turbines are proposed adjacent to clumps of trees</li> <li>• Riparian spring fed vegetation exists in the creekline</li> <li>• Springs and permanent pools in the area are vital for fauna and have not been properly considered</li> <li>• Construction of a 100 mast has already commenced next to proposed T36 turbine with no notice to the community</li> <li>• Immediate and nearby neighbours are strongly opposed to the project</li> <li>• Concerned about sound impacts (has commissioned independent survey)</li> <li>• Concerned about shadow flicker and blade glint</li> <li>• Vegetation maps are inaccurate and misleading</li> <li>• Wildlife corridors and fauna movement areas have not been considered adequately in the referral</li> <li>• PBTL does not require native vegetation and habitat for the species in degraded areas has not been fully considered</li> <li>• Maps of Lomandra do not show the entire extent of the vegetation</li> <li>• Areas outside the immediate project footprint have not been mapped and downstream/indirect impacts have not been considered</li> </ul>	Neighbour/local



s47F	Att <a href="#">E13.1</a> & <a href="#">E13.2</a>	<ul style="list-style-type: none"> <li>• PBTL habitat survey is not adequate – areas mapped as likely are actually known habitat</li> <li>• Proponent has divided populations into high or low abundance but all populations are important with the project area containing the most significant population of the species at the southern end of their known range</li> <li>• Area is a refuge site should the species contract southward due to climate change</li> <li>• PBTL Recovery Plan not adequately addressed</li> <li>• Impacts of weed invasion, habitat fragmentation, changes to hydrology and shadow flickering, vibration and noise have not been fully considered in the referral</li> <li>• No reference to the survey guidelines so not clear if the surveys were undertaken in the correct manner</li> <li>• Surveys have not been undertaken along access routes</li> <li>• Offset area has not been surveyed in some time and adequate comparison of the habitat quality and population density has not been made between the offset site and the development area</li> <li>• Statements in the referral about translocation are vague</li> <li>• Flora surveys were undertaken out of season</li> <li>• No evidence of what was originally proposed so avoidance effort cannot be measured</li> <li>• No 'options assessment' report has been provided with the referral and no proof exists that the development is sited in the most appropriate locations</li> </ul>	Neighbour/local
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		<ul style="list-style-type: none"> <li>• The statement in the referral that the public was informed of the project via a dedicated website is misleading as individuals who registered as interested were never provided with project updates and the website is out of date</li> <li>• Statements on the project website that there would be very low environmental impacts are misleading</li> <li>• Requests for information from members of the public were ignored</li> </ul>	
s47F	Att <a href="#">E14</a>	<ul style="list-style-type: none"> <li>• The project will have a significant impact on the PBTL</li> <li>• Traffic around the site will be intense and the PBTL will be disturbed by this traffic</li> <li>• Translocation areas don't make sense as it appears lizards will be translocated onto sections of road and hardstand</li> </ul>	Neighbour/local
s47F	Att <a href="#">E15.01</a> ; <a href="#">E15.02</a> ; <a href="#">E15.03</a> ; <a href="#">E15.04</a> ; <a href="#">E15.05</a> ; <a href="#">E15.06</a> ; <a href="#">E15.07</a> ; <a href="#">E15.08</a> ; <a href="#">E15.09</a> & <a href="#">E15.10</a>	<ul style="list-style-type: none"> <li>• Impacts of water runoff not considered in referral – particularly how the Light River may be polluted</li> </ul>	Neighbour/local
s47F	Att <a href="#">E16</a>	<ul style="list-style-type: none"> <li>• Construction impacts and vehicle movements will have significant impacts on the PBTL</li> <li>• The construction footprint has been underestimated as it does not take into account construction areas needed around the turbine footprints</li> <li>• The referral does not provide adequate detail around where spoil will be dumped or disposed to.</li> </ul>	Neighbour/local Researcher/expert

s47F	Att <a href="#">E17</a>	<ul style="list-style-type: none"> <li>Proposed action will cause disturbance from noise, vibration and shadow flickers which will create a barrier effect for Rainbow Bee-eaters which nest nearby</li> </ul>	Neighbour/local
s47F	Att <a href="#">E18</a>	<ul style="list-style-type: none"> <li>The PBTL is at threat of extinction if the project goes ahead</li> <li>Burrowing animals are at risk of impacts from infra-sound travelling through the ground</li> <li>There are likely to be impacts to wombats</li> <li>There are cumulative impacts from the large number of wind turbine projects proposed in the district</li> </ul>	Unclear

s22

**From:** s22 on behalf of s22  
**Sent:** Tuesday, 19 November 2019 1:22 PM  
**To:** s22 s22  
**Subject:** FW: EPBC 2018- 8208 Twin Creek Wind farm [SEC=Government, DLM=Sensitive]  
**Attachments:** EPBC 2018-8208\_DEW response.pdf

**Importance:** High

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**From:** s22 sa.gov.au]  
**Sent:** Wednesday, 18 July 2018 5:04 PM  
**To:** s22  
**Cc:** DL:DEW E&SD EPBC Referrals  
**Subject:** EPBC 2018- 8208 Twin Creek Wind farm [SEC=Government, DLM=Sensitive]  
**Importance:** High

**Sensitive**

Hi s22

Please find attached the South Australian Government's response to the Twin Creek Wind Farm Referral.

If you have any questions please let me know.

Regards

s22

s22  
Coordinator – Planning and Impact Assessment

Strategic Policy and Impact Assessment  
Economic and Sustainable Development Group  
Department for Environment and Water

s22  
Level 8, 81-95 Waymouth St, Adelaide SA 5001



*Helping South Australians conserve, sustain and prosper*

The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information to anyone other than the intended recipient is prohibited and may be unlawful. If you have received this email in error please advise by return email.



DEWD0000158

Date: 18 July 2018

s22

Director, Project Assessments West Section  
Assessments & Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

Level 8  
81-85 Waymouth St  
GPO Box 1047  
Adelaide SA 5001  
Australia  
Ph: +61 8  
Fax: +61 8  
[www.environment.sa.gov.au](http://www.environment.sa.gov.au)

Dear s22

Thank you for your letter dated 3 July 2018 regarding Twin Creek Windfarm (EPBC 2018/8208).

The South Australian Government provides the following response with regard to potential for impacts to Matters of National Environmental Significance. In general, the South Australian Government agrees with the RES Australia's assessment of significant impacts to Matters of National Environmental Significance, specifically impacts to Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*).

The project area identified in EPBC 2018/8208 contains the most significant population of Pygmy Blue-tongue Lizard at the southern extent of their current known range. The South Australian Department for Environment and Water (DEW) is actively working towards recovering populations of Pygmy Blue-Tongue Lizard through a range of initiatives in an effort to improve the *Environment Protection and Biodiversity Conservation Act 1991* (EPBC) status of Endangered. DEW supports RES Australia's consultants recommendation to avoid areas with suitable habitat for Pygmy Blue-tongue lizard.

DEW concurs with the Proponents assessment on the impacts of climate change on this species and in addition, notes that as the impacts of climate change become more pronounced then it is highly likely that this species range will further contract southward.

Population fragmentation is an important issue raised in the consultants' report provided by RES. DEW suggests that some tracks that split large areas of good Pygmy Blue-tongue habitat could be reasonably removed/relocated and that this could be addressed during the micro-siting process. Specifically tracks between turbines 14 and 7, and between 29, 21 and the intersection of 22 and 23, between 51 and 22 to 17. The status of the track network is not clear due to the maps still showing these areas as wind farm infrastructure zones, which may or may not contain tracks.

DEW notes the potential for ongoing impacts to existing populations of Pygmy Bluetongue due to stormwater run-off. As noted by RES Australia's consultant, this could reasonably result in spider / lizard burrows filling with silt and causing a reduction in quality and size of habitat available. In addition, site development processes that result in a significant change in land management e.g. the removal of stock for extended periods may reduce habitat quality by allowing the build-up of grass and groundcover. This could result in burrows being covered and reduced feeding and basking

opportunities. It is important that grazing management is included as part of the operational management aspects of the project, so that habitat quality is maintained or improved.

Infrastructure such as overhead power lines can significantly reduce habitat quality for Pygmy Blue-tongue Lizards particularly if it traverses occupied habitat or potential habitat areas. Power lines provide perching opportunities for raptors allowing them to improve their hunting efficiency in such locations. It is suggested that any proposed overhead powerlines be clearly mapped and positioned to avoid negative impacts.

DEW considers the viability of recently identified populations of Pygmy Blue-tongue lizards in areas surrounding the proposed wind farm as lower due to the high level of fragmentation at these sites. Individuals are considered more sparsely distributed than the core population that occurs on the Twin Creek property. It may be in the best interest of RES Australia to undertake further survey work in the areas to the north and to the west of the site. If further populations were located, this would provide an indication as to the ability of the species to persist in properties outside of the development footprint.

DEW notes that the surveys completed have focussed on the wind turbine footprint only. There does not appear to be consideration of potential habitat or existing populations in areas such as roadsides where additional infrastructure associated with the development may be required. Should RES Australia require infrastructure within the roadside corridor, there may be a need to undertake further surveys. Natural Resources Adelaide and Mount Lofty Ranges have recorded this species in Flagstaff Hill and Mosey Road roadside reserves within the vicinity of the site. Further survey work may be required if this area forms part of the overall development footprint.

DEW supports RES Australia's proposal regarding a collaboration with SA Museum, the Pygmy Blue-tongue Recovery Team and Flinders University, in relation to a research proposal for translocation and/or relocation. This is consistent to the approach described in the Pygmy Blue-tongue Lizard Recovery Plan 2012.

With regard to assessment, if the action is declared controlled, please note that this proposal is not a major development at the State level. As per the bilateral arrangements in place at this time, only major developments are subject to assessment under the bilateral agreement.

Given the level of impact reported by RES Australia it would be reasonable to declare the action controlled. However, RES have provided extensive information detailing management and mitigation measures for this species and it is assumed that additional information will be provided to clarify the footprint concerning ancillary infrastructure. Through the development and implementation of further onsite management and mitigation requirements through the State Development approval process and investment into research into this species through a collaborative research program, the South Australian Government suggests that AG DotEE may wish to consider if approval as the action will be undertaken in a "particular matter" is appropriate.

For further information please contact myself on s22 [redacted] or s22 [redacted] @sa.gov.au

s22

Coordinator, Planning and Impact Assessment  
Economic and Sustainable Development Branch  
South Australian Department for Environment and Water

s22

s22



**From:** [EPBC Referrals](#)  
**To:** ["DEWNRPlanning&Assessment@sa.gov.au"](mailto:DEWNRPlanning&Assessment@sa.gov.au)  
**Cc:** [EPBC Referrals](#)  
**Subject:** Invitation to comment on Referral - (EPBC 2018/8208) [SEC=UNCLASSIFIED]  
**Date:** Wednesday, 4 July 2018 9:35:17 AM  
**Attachments:** [2018-8208 Referral-Letter-InviteComment-State.pdf](#)

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Good morning

We are sending you the attached link to a referral received for consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for your comments, as it falls within your area of interest: <http://epbcnotices.environment.gov.au/invitations/>

Formal notification of this referral is attached to this email.

Any comment should be sent by 18 July 2018 via:

by letter **s22**  
Director  
Project Assessments West Section  
Assessments & Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

by email **s22**

Regards

Referrals Gateway  
Governance and Business Support Section

**s22**  
Referrals Gateway | Assessments and Governance Branch  
Department of the Environment and Energy  
GPO Box 787, CANBERRA ACT 2601  
Email: [EPBC.Referrals@environment.gov.au](mailto:EPBC.Referrals@environment.gov.au) | Web: [www.environment.gov.au](http://www.environment.gov.au)



s22

s22

s22



s22  
Senior Policy Officer – Assessments  
Planning and Assessment Team  
Department of Environment, Water and  
Natural Resources  
PO Box 1047  
ADELAIDE SA 5001

Date: 3 July 2018  
EPBC Ref: 2018/8208  
EPBC contact: s22

Dear s22

**Invitation to comment on referral  
Twin Creek Wind Farm, 80 km north-east of Adelaide, SA.**

I am writing to you, as the delegated contact for the South Australian Minister for Environment and Water, The Hon David Speirs MP, in relation to consultation on actions being assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Department of the Environment and Energy (the Department) has received a referral of a proposed action from RES Australia Pty Ltd to develop the Twin Creek Wind Farm project, 80 km north-east of Adelaide, South Australia, for consideration under the EPBC Act.

The Department is currently undertaking an assessment to decide whether this proposed action requires approval under the EPBC Act before it can proceed. The referral may be viewed or copied from the Department's website, [www.environment.gov.au/epbc](http://www.environment.gov.au/epbc).

I am writing to invite you to provide any relevant information as to whether you consider the proposed action is likely to have a significant impact on any of the matters protected under the EPBC Act.

In addition, I would be grateful if you could provide the Department with your views on the assessment approach you believe is appropriate to assess the impacts of the project, in the event that it is determined to be a 'controlled action'.

In particular, I would appreciate your advice as to whether the proposed action should be assessed at the state level, using one of the processes agreed under the bilateral agreement with the Commonwealth.

In accordance with the EPBC Act, we need to receive your response by 18 July 2018. Please quote the title of the action and EPBC reference, as shown at the beginning of this letter, in any correspondence. You can send information to the Department:

by letter s22  
Director  
Project Assessments West Section  
Assessments & Post Approvals Branch  
Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

by email s22

If you have any questions about this process, please contact s22 [REDACTED] and quote EPBC 2018/8208.

For your information, the Department has published an *Environmental Impact Assessment Client Service Charter* (the Charter) which outlines its commitments when undertaking environmental impact assessments under the EPBC Act. A copy of the Charter can be found at:  
<http://www.environment.gov.au/epbc/publications/index.html>.

Yours sincerely

s22 [REDACTED]  
Director  
Referrals Gateway



EPBC Ref: 2018/8208

s22

Senior Policy Officer – Assessments  
Planning and Assessment Team  
Department of Environment, Water and  
Natural Resources  
PO Box 1047  
ADELAIDE SA 5001

Dear s22

**Decision on referral  
Twin Creek Wind Farm, 80 km north-east of Adelaide, South Australia**

This letter is to advise you of my decision about the referral of the proposed action, to develop the Twin Creek Wind Farm within the Mid-north area of South Australia, including the construction of up to 51 wind turbines, access tracks and other associated infrastructure.

**As a delegate of the Minister for the Environment and Energy, I have decided under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that the proposed action is a controlled action and, as such, it requires assessment and a decision about whether approval for it should be given under the EPBC Act.**

The information that I have considered indicates that the proposed action is likely to have a significant impact on:

- Threatened Species and Communities (section 18 and section 18A)

Based on the information available in the referral, the proposed action is likely to have a significant impact on the following matters of national environmental significance, including but not limited to:

- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) – Endangered

The proposed action involves direct impacts to at least 16 individuals and the clearance of known habitat across the project site.

- Iron-grass Natural Temperate Grassland of South Australia – Critically Endangered

The proposed action may impact on habitat considered critical to the survival of the ecological community and therefore the precautionary principal has been applied.

Please note that this decision only relates to the potential for significant impacts on matters protected by the Australian Government under Chapter 2 of the EPBC Act.

I have also decided that the project will need to be assessed by preliminary documentation.

A copy of the document recording this decision is enclosed.

If you have any questions about the referral process or this decision, please contact the project manager, s22 [REDACTED] by email to s22 [REDACTED]@environment.gov.au, or telephone s22 [REDACTED] and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Gregory Manning  
Assistant Secretary  
Assessments (WA, SA, NT) and Post Approvals Branch

November 2018



s22

**From:** s22 sa.gov.au>  
**Sent:** Tuesday, 13 November 2018 12:23 PM  
**To:** s22  
**Subject:** RE: EPBC 2018/8208 Twin Creek Wind Farm, 80 km north-east of Adelaide [DLM=For-Official-Use-Only]

**For Official Use Only**

Thanks s22

Also s22 has left our team, so could you please advise your section to address correspondence to myself for the time being, using the same email.

Thanks,

s22  
Principal Policy Officer

Strategic Policy and Impact Assessment Branch | Economic and Sustainable Development Group  
Department for Environment and Water

s22  
Unit email: DEWNRPlanning&Assessment@sa.gov.au  
Level 8, 81-95 Waymouth St, Adelaide  
PO Box 1047, Adelaide SA 5001  
[environment.sa.gov.au](http://environment.sa.gov.au) | [naturalresources.sa.gov.au](http://naturalresources.sa.gov.au) | [envirodata.sa.gov.au](http://envirodata.sa.gov.au) | [parks.sa.gov.au](http://parks.sa.gov.au)  
[Twitter](#) | [YouTube](#) | [Good Living](#)

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**From:** s22 environment.gov.au]  
**Sent:** Tuesday, 13 November, 2018 11:26 AM  
**To:** DEW:Planning & Assessment <DEWPlanning&Assessment@sa.gov.au>  
**Subject:** EPBC 2018/8208 Twin Creek Wind Farm, 80 km north-east of Adelaide [SEC=UNCLASSIFIED]

Dear s22

A referral decision by the Delegate on the Twin Creek Wind Farm, 80 km north-east of Adelaide (EPBC 2018/8208) has now been made. Please find attached a letter of notification and the decision notice. The referral decision has also been published on the Department's website.

Hard copies of these documents have not been sent. If you require hard copies, or have any questions on this decision, please let me know.

Regards,

s22

Environmental Impact Assessment Officer  
Project Assessments West Section  
Department of the Environment and Energy

GPO Box 787, Canberra ACT 2601

s22 [@environment.gov.au](mailto:s22@environment.gov.au)



EPBC Ref: 2018/8208

Mr Daniel Leahy  
Development Project Manager  
Suite 4, Level 1  
760 Pacific Highway  
CHATSWOOD NSW 2067

Dear Mr Leahy

**Additional information required for preliminary documentation.  
Twin Creek Wind Farm, 80 km north-east of Adelaide, South Australia**

I am writing to you in relation to your proposal to develop the Twin Creek Wind Farm within the Mid-north area of South Australia, including the construction of up to 51 wind turbines, access tracks and other associated infrastructure.

On 9 November 2018, Gregory Manning, Assistant Secretary, Assessments (WA, SA, NT) and Post Approvals Branch decided that the the proposed action is a controlled action and that it will be assessed by preliminary documentation. Further information will be required to be able to assess the relevant impacts of the proposed action.

Details outlining the further information required are at [Attachment A](#).

Further information on the assessment process and the responsibilities of the proponent is available from the department's website at <http://www.environment.gov.au/epbc>.

If you have any questions about the assessment process or the further information required, please contact s22 [redacted] by email to s22 [redacted]@environment.gov.au, or telephone s22 [redacted] and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely,

Director  
Project Assessments West Section

18 December 2018

## Listed threatened species and ecological communities

### 1. For the Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) - endangered

The Department is aware that the proposed action will result in the clearing of approximately 30.71 ha of habitat for the endangered Pygmy Blue-tongue Lizard (PBTL). To assist the Department to assess the potential impacts to the PBTL, the Department requires the following information:

#### Impacts

Provide:

- Further discussion on the potential for impacts to the PBTL from:
  - turbine vibration and noise (including an analysis of the total area of impact and the number of individuals which may be impacted),
  - shadow flicker (including an analysis of the total area of impact and the number of individuals which may be impacted),
  - vehicle and personnel movement on site during construction and during ongoing maintenance activities,
  - Pitfall during construction,
  - Dust from construction or dust suppression activities,
  - Grazing regime,
  - Weed invasion from mulching or transmission by vehicles, and
  - Vehicle strike both during and post construction.
- Information on how many individuals could potentially be impacted by sedimentation of burrows from both construction run-off and run-off from access tracks.
- A discussion on the potential for increased erosion as a result of the proposed action and whether this will result in further sedimentation of burrows both within, and outside the project footprint.
- A detailed discussion on the likelihood of success of translocation including information about site selection, timing, methodology, how success will be measured and how failure will be redressed.
- Information about the presence and number of PBTL within the access routes outside of the development site and within the footprint of the transmission lines (noting any

additional surveying should be consistent with the *Survey Guidelines for Australia's Threatened Reptiles: EPBC Act Survey Guidelines 6.6*).

- A discussion of the potential impacts to the species from division and isolation of sub-populations by infrastructure/roads.
- Discussion on the relative importance of the local population particularly given its southern location which may be less vulnerable to climate change than populations in the northern extent of the species range.

#### Avoidance, mitigation and monitoring

Provide avoidance and mitigation measures to:

- Reduce or eliminate the impacts to the PBTL from vibration and noise, shadow flicker, pitfall, vehicle strike, dust, weeds, erosion and division and isolation or any other potential impacts identified.

Describe how the planning, monitoring and management activities proposed are consistent with Duffy, A., L. Pound and T. How (2012) *Recovery Plan for the Pygmy Bluetongue Lizard Tiliqua adelaidensis*. South Australia: Department of Environment and Natural Resources.

## 2. For the Iron-grass Natural Temperate Grassland of South Australia – critically endangered

The Department is aware that the proposed action will result in the clearing of 3.17 ha of Lomandra grassland which is below the condition threshold for EPBC listing. However, the Department is concerned about the potential for indirect impacts to other areas of vegetation which may be of condition class A or B and therefore part of the listed community. To assist the Department to assess the potential impacts to the Iron-grass Natural Temperate Grassland of South Australia (INTG), the Department requires the following information:

#### Impacts

Provide:

- Additional information about the grassland vegetation in the north of the project area, particularly the area bounded by turbines 43, 47, 48 and 49 and in the central area, particularly in the area bounded by turbines 11, 12, 13 and 53 as these were not covered by the assessment sites mapped in figure 36 of the Flora and Fauna Report provided with the referral. Please provide a discussion as to whether or not these areas qualify as listed INTG.
- Further information about the size (in ha) of sites 18 and 22 which qualify as the EPBC listed community and a discussion about potential indirect impacts to these sites such as, but not limited to, from dust, runoff, erosion and sedimentation or spread of weeds or direct impacts from any changes in grazing regime.

- Further information about whether the access track which passes through site 22 will be used during construction and whether it will need to be upgraded to facilitate this, and whether that could impact the INTG in the area.
- A discussion on the potential for restoration of Class C vegetation given that the Conservation Advice notes that remnants of Class C may also be habitat critical to the survival of the ecological community, if they adjoin, buffer or connect high integrity remnants or have good potential for restoration. This discussion should particularly focus on sites 19, 20 and 21 which are contiguous with site 18 (which qualifies as the listed community) and site 17 which is nearby.
- Further information about the potential for direct or indirect impacts sites 17, 19, 20 and 21 (potential habitat critical to the survival of the ecological community) from factors including, but not limited to, dust, runoff, erosion and sedimentation, changes in grazing regime or spread of weeds.
- A discussion on the potential for INTG to occur along the external access roads which will be upgraded and, if the community does occur, and analysis of the potential impacts.
- Information about other areas outside the project area, whether INTG occurs, and if it will be directly or indirectly impacted by the action through factors including, but not limited to, dust, runoff, erosion and sedimentation or spread of weeds.

Avoidance, mitigation and monitoring

Provide avoidance and mitigation measures to:

- Prevent both direct and indirect impacts to INTG or Condition Class C vegetation which is habitat critical to the survival of the ecological community (adjoins, buffers or connects high integrity remnants or has good potential for restoration).

Describe how the planning, monitoring and management activities proposed are consistent with Department of the Environment, Water, Heritage and the Arts (2008) *Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia*. Canberra: Department of the Environment, Water, Heritage and the Arts and Turner, J. (2012) *National Recovery Plan for the Irongrass Natural Temperate Grassland of South Australia Ecological Community*. South Australia: Department of Environment and Natural Resources.

**Environmental Offsets**

3. In the event that impacts cannot be fully avoided or mitigated, please provide further details on any offsets proposed to compensate for any significant residual impacts on the PBT and INTG. Details should include:
  - a. type of offsets proposed;

- b. extent to which the proposed offset actions correlate to, and adequately compensate for, the significant residual impacts of the proposed action on the protected matter;
- c. suitability of the location of any proposed offset site for the protected matter;
- d. conservation gain to be achieved by the offset i.e. positive management strategies that improve the site or averting the future loss, degradation or damage of the protected matter;
- e. time it will take to achieve the proposed conservation gain;
- f. level of certainty that the proposed offset will be successful;
- g. current land tenure of any proposed offset and the method of securing and managing the offset for the life of the impact; and
- h. completed *Offset Assessments Guide* for the proposed offset area including further discussion/justification for the figures used to complete the offset calculations.

Demonstrate how the proposed offset is consistent with the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, October 2012*.

#### **Recovery Plans, Conservation Advice and Threat Abatement Plans**

4. Discuss and demonstrate that the action is not inconsistent with the following Recovery Plans, Conservation Advice and Threat Abatement Plans:
  - Duffy, A., L. Pound and T. How (2012) *Recovery Plan for the Pygmy Bluetongue Lizard Tiliqua adelaidensis*. South Australia: Department of Environment and Natural Resources.
  - Department of the Environment, Water, Heritage and the Arts (2008) *Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia*. Canberra: Department of the Environment, Water, Heritage and the Arts
  - Turner, J. (2012) *National Recovery Plan for the Irongrass Natural Temperate Grassland of South Australia Ecological Community*. South Australia: Department of Environment and Natural Resources.
  - Department of the Environment (2016) *Threat Abatement Plan for Competition and Land Degradation by Rabbits*. Canberra: Department of the Environment.

#### **Economic and Social Matters**

5. Provide further detail on the social and economic costs and/or benefits of undertaking the proposed action, including the:
  - basis for any estimations of costs and/or benefits;

- potential employment opportunities expected to be generated at each phase of the proposed action;
- benefits to the local and wider community as a result of the proposed action; and
- details of any public and stakeholder consultation activities, including the outcomes.



EPBC Ref: 2018/8208

Mr Daniel Leahy  
Development Project Manager  
Suite 4, Level 1  
760 Pacific Highway  
CHATSWOOD NSW 2067

Dear Mr Leahy

**Additional information required for preliminary documentation.  
Twin Creek Wind Farm, 80 km north-east of Adelaide, South Australia**

I am writing to you in relation to your proposal to develop the Twin Creek Wind Farm within the Mid-north area of South Australia, including the construction of up to 51 wind turbines, access tracks and other associated infrastructure.

On 9 November 2018, Gregory Manning, Assistant Secretary, Assessments (WA, SA, NT) and Post Approvals Branch decided that the the proposed action is a controlled action and that it will be assessed by preliminary documentation. Further information will be required to be able to assess the relevant impacts of the proposed action.

Details outlining the further information required are at [Attachment A](#).

Further information on the assessment process and the responsibilities of the proponent is available from the department's website at <http://www.environment.gov.au/epbc>.

If you have any questions about the assessment process or the further information required, please contact s22 [redacted] by email to s22 [redacted] [@environment.gov.au](mailto:s22[redacted]@environment.gov.au), or telephone s22 [redacted] and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely,

s22 [redacted]  
Director  
Project Assessments West Section

December 2018



**Listed threatened species and ecological communities**1. For the Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) - endangered

The Department is aware that the proposed action will result in the clearing of approximately 30.71 ha of habitat for the endangered Pygmy Blue-tongue Lizard (PBTL). To assist the Department to assess the potential impacts to the PBTL, the Department requires the following information:

Impacts

Provide:

- Further discussion on the potential for impacts to the PBTL from:
  - turbine vibration and noise (including an analysis of the total area of impact and the number of individuals which may be impacted),
  - shadow flicker (including an analysis of the total area of impact and the number of individuals which may be impacted),
  - vehicle and personnel movement on site during construction and during ongoing maintenance activities,
  - Pitfall during construction,
  - Dust from construction or dust suppression activities,
  - Grazing regime,
  - Weed invasion from mulching or transmission by vehicles, and
  - Vehicle strike both during and post construction.
- Information on how many individuals could potentially be impacted by sedimentation of burrows from both construction run-off and run-off from access tracks.
- A discussion on the potential for increased erosion as a result of the proposed action and whether this will result in further sedimentation of burrows both within, and outside the project footprint.
- A detailed discussion on the likelihood of success of translocation including information about site selection, timing, methodology, how success will be measured and how failure will be redressed.
- Information about the presence and number of PBTL within the access routes outside of the development site and within the footprint of the transmission lines (noting any

additional surveying should be consistent with the *Survey Guidelines for Australia's Threatened Reptiles: EPBC Act Survey Guidelines 6.6*).

- A discussion of the potential impacts to the species from division and isolation of sub-populations by infrastructure/roads.
- Discussion on the relative importance of the local population particularly given its southern location which may be less vulnerable to climate change than populations in the northern extent of the species range.

#### Avoidance, mitigation and monitoring

Provide avoidance and mitigation measures to:

- Reduce or eliminate the impacts to the PBTL from vibration and noise, shadow flicker, pitfall, vehicle strike, dust, weeds, erosion and division and isolation or any other potential impacts identified.

Describe how the planning, monitoring and management activities proposed are consistent with Duffy, A., L. Pound and T. How (2012) *Recovery Plan for the Pygmy Bluetongue Lizard Tiliqua adelaidensis*. South Australia: Department of Environment and Natural Resources.

## 2. For the Iron-grass Natural Temperate Grassland of South Australia – critically endangered

The Department is aware that the proposed action will result in the clearing of 3.17 ha of Lomandra grassland which is below the condition threshold for EPBC listing. However, the Department is concerned about the potential for indirect impacts to other areas of vegetation which may be of condition class A or B and therefore part of the listed community. To assist the Department to assess the potential impacts to the Iron-grass Natural Temperate Grassland of South Australia (INTG), the Department requires the following information:

#### Impacts

Provide:

- Additional information about the grassland vegetation in the north of the project area, particularly the area bounded by turbines 43, 47, 48 and 49 and in the central area, particularly in the area bounded by turbines 11, 12, 13 and 53 as these were not covered by the assessment sites mapped in figure 36 of the Flora and Fauna Report provided with the referral. Please provide a discussion as to whether or not these areas qualify as listed INTG.
- Further information about the size (in ha) of sites 18 and 22 which qualify as the EPBC listed community and a discussion about potential indirect impacts to these sites such as, but not limited to, from dust, runoff, erosion and sedimentation or spread of weeds or direct impacts from any changes in grazing regime.

- Further information about whether the access track which passes through site 22 will be used during construction and whether it will need to be upgraded to facilitate this, and whether that could impact the INTG in the area.
- A discussion on the potential for restoration of Class C vegetation given that the Conservation Advice notes that remnants of Class C may also be habitat critical to the survival of the ecological community, if they adjoin, buffer or connect high integrity remnants or have good potential for restoration. This discussion should particularly focus on sites 19, 20 and 21 which are contiguous with site 18 (which qualifies as the listed community) and site 17 which is nearby.
- Further information about the potential for direct or indirect impacts sites 17, 19, 20 and 21 (potential habitat critical to the survival of the ecological community) from factors including, but not limited to, dust, runoff, erosion and sedimentation, changes in grazing regime or spread of weeds.
- A discussion on the potential for INTG to occur along the external access roads which will be upgraded and, if the community does occur, and analysis of the potential impacts.
- Information about other areas outside the project area, whether INTG occurs, and if it will be directly or indirectly impacted by the action through factors including, but not limited to, dust, runoff, erosion and sedimentation or spread of weeds.

Avoidance, mitigation and monitoring

Provide avoidance and mitigation measures to:

- Prevent both direct and indirect impacts to INTG or Condition Class C vegetation which is habitat critical to the survival of the ecological community (adjoins, buffers or connects high integrity remnants or has good potential for restoration).

Describe how the planning, monitoring and management activities proposed are consistent with Department of the Environment, Water, Heritage and the Arts (2008) *Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia*. Canberra: Department of the Environment, Water, Heritage and the Arts and Turner, J. (2012) *National Recovery Plan for the Irongrass Natural Temperate Grassland of South Australia Ecological Community*. South Australia: Department of Environment and Natural Resources.

**Environmental Offsets**

3. In the event that impacts cannot be fully avoided or mitigated, please provide further details on any offsets proposed to compensate for any significant residual impacts on the PBT and INTG. Details should include:
  - a. type of offsets proposed;

- b. extent to which the proposed offset actions correlate to, and adequately compensate for, the significant residual impacts of the proposed action on the protected matter;
- c. suitability of the location of any proposed offset site for the protected matter;
- d. conservation gain to be achieved by the offset i.e. positive management strategies that improve the site or averting the future loss, degradation or damage of the protected matter;
- e. time it will take to achieve the proposed conservation gain;
- f. level of certainty that the proposed offset will be successful;
- g. current land tenure of any proposed offset and the method of securing and managing the offset for the life of the impact; and
- h. completed *Offset Assessments Guide* for the proposed offset area including further discussion/justification for the figures used to complete the offset calculations.

Demonstrate how the proposed offset is consistent with the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, October 2012*.

#### **Recovery Plans, Conservation Advice and Threat Abatement Plans**

4. Discuss and demonstrate that the action is not inconsistent with the following Recovery Plans, Conservation Advice and Threat Abatement Plans:
  - Duffy, A., L. Pound and T. How (2012) *Recovery Plan for the Pygmy Bluetongue Lizard Tiliqua adelaidensis*. South Australia: Department of Environment and Natural Resources.
  - Department of the Environment, Water, Heritage and the Arts (2008) *Approved Conservation Advice for Iron-grass Natural Temperate Grassland of South Australia*. Canberra: Department of the Environment, Water, Heritage and the Arts
  - Turner, J. (2012) *National Recovery Plan for the Irongrass Natural Temperate Grassland of South Australia Ecological Community*. South Australia: Department of Environment and Natural Resources.
  - Department of the Environment (2016) *Threat Abatement Plan for Competition and Land Degradation by Rabbits*. Canberra: Department of the Environment.

#### **Economic and Social Matters**

5. Provide further detail on the social and economic costs and/or benefits of undertaking the proposed action, including the:
  - basis for any estimations of costs and/or benefits;

- potential employment opportunities expected to be generated at each phase of the proposed action;
- benefits to the local and wider community as a result of the proposed action; and details of any public and stakeholder consultation activities, including the outcomes.