

Date: 4 October 2016

Our reference: 8477

Nick Canto
Principal Consultant
icubed consulting Pty Ltd
Suite 2/ 39 Sherwood Road
Toowong QLD 4066
Email: nick.canto@icubed.com.au

Dear Nick,

Re: Response to submissions to Development Application for Yarranlea Solar Farm (MCUI/2016/3225 & RAL/2016/3227)

Ecology and Heritage Partners Pty Ltd have been engaged by icubed consulting Pty Ltd on behalf of Yarranlea Solar Pty Ltd to prepare a response to submissions lodged with Toowoomba Regional Council (TRC) regarding the development application for the Yarranlea Solar project. In preparing this response, Ecology and Heritage Partners have drawn on the following reports:

- Ecology and Heritage Partners. 2016. Ecological Assessment of the Proposed Yarranlea Solar Project, Yarranlea, Queensland. Version: Final 2 (August 2016). A report prepared for Yarranlea Solar Pty Ltd.
- Ecology and Heritage Partners. 2016. Construction and operation of a renewable energy facility (solar farm), Yarranlea, Queensland. A referral submitted to the Commonwealth Department of Environment and Energy. A report prepared for Yarranlea Solar Pty Ltd.

The following submissions have been addressed in this letter:

- Submission 4 – Facilitation of Koala *Phascolarctos cinereus* movement through the solar farm;
- Submission 5 – Disturbance of habitat for Condamine Earless Dragon *Tympanocryptis condaminensis* and Koalas;
- Submission 12 – Removal of vegetation and population of Belson's Panic *Homopholis belsonii*; and
- Submission 17 – Habitat for Koalas.

Submission 4

- a) Appendix H – Ecological Assessment stated the low likelihood of this being a Koala habitat. This statement is incorrect. On the 9th July (2016) we photographed 8 Koalas along the Watson and Yarranlea Roads and contacted Landcare immediately. Because Koala habitat radiates for seven kilometres, this site is definitely part of their habitat.

- c) Performance Outcome PO4 of the Environmental Significance Overlay Code requires that movement of fauna within and through the site is facilitated. This has not been addressed to enable Koalas to move from remnant vegetation west of the site to an indicated area of like vegetation to the north. Therefore, this puts the survival of these Koalas at risk.
- d) Such a large installation of this facility has the ability to create a microclimate resulting in high temperatures creating potential environmental risks to humans, native birds and animals, crops and vegetation.

Response

- a) At the time of writing the Ecological Assessment, database searches did not show any Koala records from the Watson Road or Yarranlea Road area. The Ecological Assessment Report noted that food trees are present within the study area (primarily along road reserves), however inspection of trees did not reveal the presence of scratches or scats characteristic of usage by Koalas. Based on this, the significant species assessment (Table 10 in the EAR) considered that Koalas had a 'low' likelihood of occurrence within the study area. The definition of low likelihood includes:
 - i. The species is likely to visit the study area occasionally or opportunistically whilst en route to more suitable sites; and/or,
 - ii. There are only limited or historical records of the species in the local area (i.e. more than 20 years old); and/or,
 - iii. The study area contains few or no characteristics of the species' preferred habitat.

Although it is acknowledged that Koalas occur in the region (based on these new records and existing database records) the assessment of Koala usage within the study area does not change. This assessment is based on the data that was available at the time of preparation and the limited habitat value of the study area for the species. Furthermore, the proposed impact on Koala trees from the solar farm is minimal and trees within Yarranlea – Murlaggan Road will not be impacted.

- b) There are currently no vegetated connections between the remnant vegetation to the west of the study area (near the corner of Yarranlea and Watsons roads) and remnant vegetation to the north-east of the study area (south of Pittswort-Norwin Road), a straight line distance of over two kilometres across intensively farmed land. Regardless, isolated stands of trees along Yarranlea – Murlaggan Road (within the study area) provides some connectivity between these two habitat patches. As the vegetation within Yarranlea – Murlaggan Road is not proposed to be impacted by the construction of the solar farm, this connection (however limited) will remain.
- c) Although there is a paucity of data on the environmental effects of operating large-scale solar farms, a recent report by Armstrong *et al*¹ has shown that the microclimate under solar PV panels results in temperatures up to 5 degrees Celsius cooler in summer and 1.7°C cooler in winter. Although this study has yet to be replicated in the Australian context, the physical shading of solar PV panels to the

¹ Armstrong, A., Ostle, N.J. & Whitaker, J. (2016) Solar park microclimate and vegetation management effects on grassland carbon cycling. *Environmental Research Letters*. **11**(7).

ground is considered to result in lower temperatures under the panels as with any other shade producing objects with similar thermal properties.

Submission 5

The landholders in this area have been diligent in their attention to redeveloping original habitat for local species in the area of the planned development. Of particular note are the endangered (sic) Koalas and their habitat and the endangered Grassland Earless Dragon. Both of these endangered (sic) species are given little more than a cursory comment in the Environmental Impact Study. Any disturbance of the current equilibrium which exists between the remnant vegetation, cropping land and attempts by landholders to re-establish habitat will be devastating to these and other species.

Response

At the time of writing the Ecological Assessment Report, no information was forthcoming regarding re-establishing habitat within the study area as a result of consultation undertaken with the landholder and adjacent landholders by Yarranlea Solar.

As the Koala was considered to be a low likelihood of occurrence within the study area (refer to response to Submission 4 above), and no evidence of their presence was detected during the field survey, this species was not discussed further in the Ecological Assessment Report. Section 5.1.2 of the Ecological Assessment Report provides a discussion on the likelihood of occurrence of the Condamine Earless Dragon *Tympanocryptis condaminensis*. In addition, section 6.2 of the referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides further information regarding the Condamine Earless Dragon in the context of assessment of impacts under the EPBC Act:

- The Condamine Earless Dragon is a high likelihood within road reserves adjacent to the study area and adjacent cropping areas due to existing records within proximity to the study area. This species is regularly found within actively cropped areas and does not seem to be impacted by regular harvesting or planting of crop species. Although it would appear to have lost a significant percentage of its native grassland habitat prior to agricultural development, the nature of the black cracking clay soils upon which it is dependent has not changed and continues even after ploughing. Though not supported by evidence, road reserves may be important habitat refuges in intensively cropped areas. The proposed solar farm will not significantly change the soil profile or cracking characteristics and the disturbed grassland habitats along Yarranlea-Murlaggan Road will not be impacted from construction activities. Therefore it is considered unlikely that the development will have a significant impact on this species.

Submission 12

Performance Outcome PO12 stipulates that the retention of existing vegetation and biodiversity values is maximised.

- Remnant vegetation reclassified for clearing purpose
- Protected species 'Belsons (sic) Panic' approved for removal
- Failure to report presence of Koalas which are in the area.

- Fencing inhibiting migration of fauna.
- *Other points removed as they are not relevant to the ecological assessment completed.*

Response

- The patch of regulated vegetation within the southern portion of the study area was reclassified as Category X vegetation by the Department of Natural Resources and Mines on 15 June, 2016. No approval is necessary to clear Category X vegetation under the *Vegetation Management Act 1999*.
- The population of Belson's Panic within the study area was approved for removal by the Department of Environment and Heritage on 27 July, 2016 subject to payment of an environmental offset contribution. The removal of the population was also assessed to be a 'not a controlled action' by the Commonwealth Department of Environment and Energy under the EPBC Act on 16 September, 2016.
- As discussed in the previous response, at the time of writing the Ecological Assessment, database searches did not show any Koala records from the Watson Road and Yarranlea Road area. Further searches of the Atlas of Living Australia on 28 September, 2016, do not show any records of Koala from the study area or immediate surrounds. The closest records are from Tummaville Road (2010), south of the Gore Highway and on Irongate Road (2010).
- As provided in the response (b) to submission 4, the local movements of Koalas and other medium to large terrestrial fauna species are unlikely to be impacted by the presence of a security fence as there will not be any suitable habitat for such species within the constructed solar farm. In other words, the exclusion of fauna species from the solar farm is not considered to be an impact due to the lack of habitat within the study area, post-construction.

Submission 17

It is the habitat of Koalas. In the 26 years we resided in the area they were frequently cited (sic) in roadside and remnant vegetation and are still frequent visitors.

Response

It is acknowledged that Koalas may occasionally utilise suitable habitat trees along Yarranlea – Murlaggan Road (Poplar Box) and Yarranlea Road. As the Koala was considered to be a low likelihood of occurrence within the study area (refer to response to Submission 4 above), and no evidence of their presence was detected during the field survey, this species was not discussed further in the Ecological Assessment Report. Further searches of the Atlas of Living Australia on 28 September, 2016, do not show any records of Koala from the study area or immediate surrounds. The closest records are from Tummaville Road (2010), approximately 5 kilometres south of the study area and on Irongate Road (2010) approximately 5 kilometres north-east. Regardless, the proposed impact on Koala trees from the solar farm is minimal and habitat trees within the study area (along Yarranlea – Murlaggan Road) will not be impacted.



Thank you for opportunity to respond to the concerns raised by submitters for this project. Should you have any remaining queries or concerns, please don't hesitate to contact me on mobile: 0419 715 351 or email: dfleming@ehpartners.com.au.

Kind regards

A handwritten signature in black ink, appearing to read "Dave Fleming".

Dave Fleming

Principal Ecologist

Ecology and Heritage Partners Pty Ltd