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Dear Rose-Anne

**Sunraysia Solar Farm Project (SSD 7680) - Exhibition**

I refer to your email dated 3 February 2017 inviting the the Department of Industry - Division of Resources & Energy (DRE) to provide comments on the Sunraysia Solar Farm Project (SSD 7680) submitted by Sunraysia Solar Farm Two Pty Ltd (the Proponent).

DRE has reviewed and assessed the adequacy of information in the *Sunraysia Solar Farm, Balranald Environmental Impact Statement* dated January 2017 and notes the following:

The proposal is aligned to Government's NSW Renewable Energy Action Plan, and would deliver positive social aspects, driving investment and growth in regional NSW and provide alternate income streams. Increasing solar energy in NSW will help the Government meet its commitment to support the national Renewable Energy Target of 33,000 gigawatt hours (GWh) by 2020.

The proposal is located next to the Exploration Licence (EL) 7626 (Fig. 1) held by Iluka Resources Limited (Iluka) within the Loxton-Parilla Heavy Mineral Potential Resource Area. This area has been identified as having significant potential to host buried heavy mineral sand deposits. The area of the proposal is situated between two identified deep, high grade heavy mineral sands deposits.

DRE has assessed that the probability of overlap between the area of the proposal and the identified heavy mineral sands deposits or the area which may be required for any potential mining footprint of those deposits is minimal.

In consideration of the economic and technical investment by Iluka into exploration, the potential economic significance of the deposits to both Iluka and the State, and the proposed power transmission line transecting Iluka's exploration tenure, DRE requires the following:

Details of consultation undertaken in the EIS does not include DRE agency consultation or requirements (Appendix H – Consultation Results), and as there is no evidence of consultation with Iluka, it is unclear if direct consultation with the titleholder has occurred (page 109 – Mining).

DRE requires records of future consultation conducted, including any agreements reached between parties, must be documented in full to DRE.

The Proponent is required to conduct detailed and authentic consultation with the intent of reaching collaborative works agreement with Iluka Pty Ltd regarding:

- the Sunraysia Solar Farm proposal and intended power transmission line location,
- the distribution of heavy mineral sand deposits in the area with respect to sterilisation;
- the potential for interference between the solar farm and future (potential) mining operations,
- the potential cumulative impact of the Limondale Sun Farm proposal on exploration of EL7626, and
- access arrangements for further mineral exploration in EL7626.

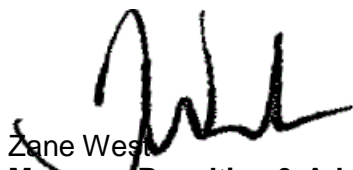
To assist in achieving these requirements, DRE provides the below contact details for the Titleholder:

Tom Blackwell,  
Project Manager,  
Balranald Mineral Sands Project  
Phone: (03) 5551 2402  
Email: [tom.blackwell@iluka.com](mailto:tom.blackwell@iluka.com).

The context, rationale and detail behind this recommendation are provided in the supplemental information included below for further assistance.

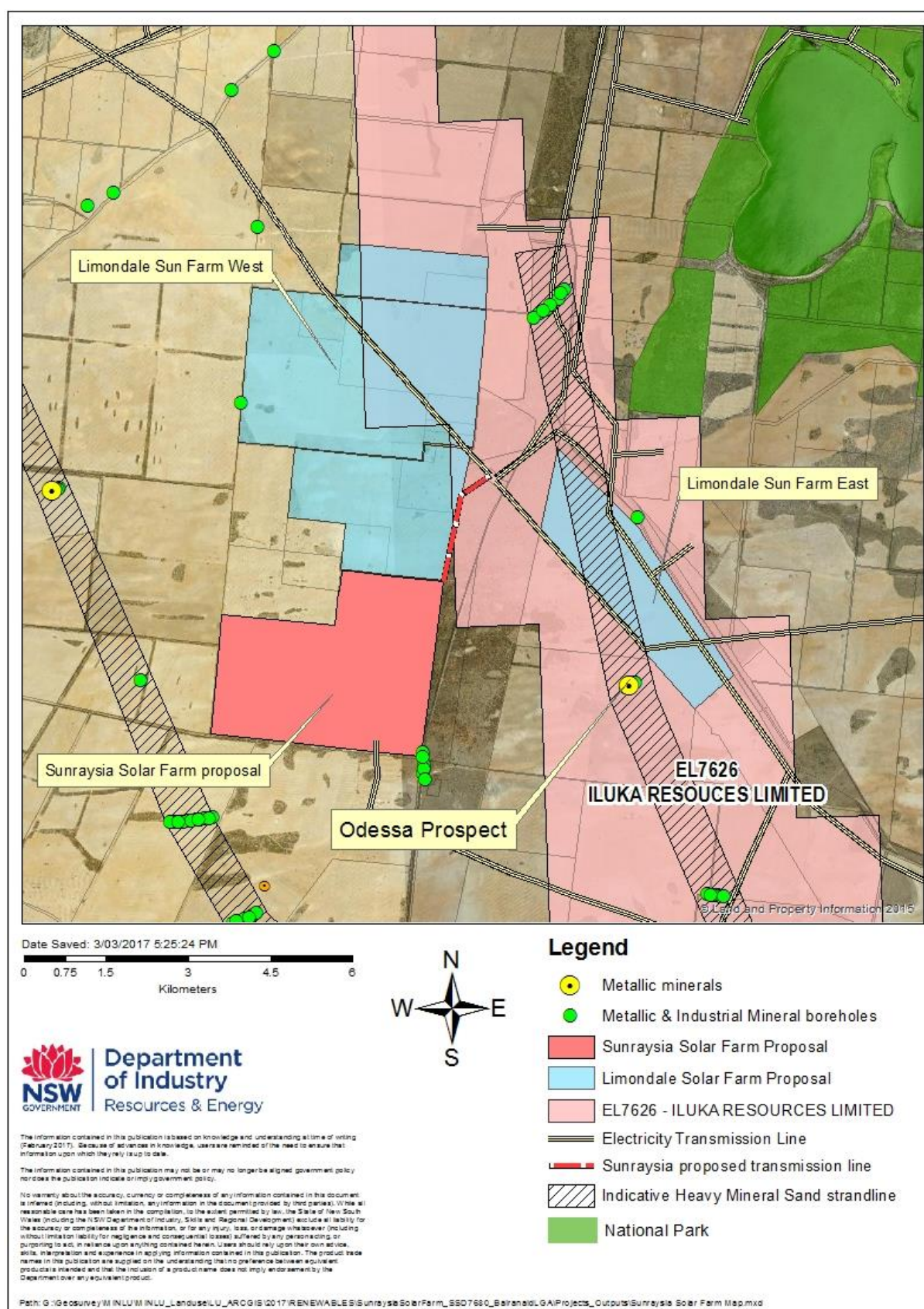
Should you have any enquires regarding this matter please contact Steve Cozens, Senior Project Officer, Royalty & Advisory Services on 9842 8573.

Yours sincerely



Zane West  
**Manager Royalties & Advisory Services**  
7 March 2017

**Figure 1: Sunraysia Solar Farm Proposal – Exploration Licence (EL) 7626**



## **Supplementary Information – Balranald Heavy Mineral Sand projects**

Australia is the world's largest producer of Heavy Mineral Sands (HMS e.g. rutile, zircon, ilmenite and leucoxene). The Murray Basin, containing the Loxton-Parilla Heavy Mineral Potential Resource Area in the Balranald region of south western NSW, is emerging as a world-class HMS province with a total output in 2015 of ~110 Ktpa zircon, ~170 Ktpa of rutile from two mines in NSW (operated by Cristal Mining Australia).

Iluka Resources Limited (Iluka), the largest producer of HMS in Australia, are in the initial stages of developing the Balranald Mineral Sands Project (Mining Lease 1736), approximately 14km North West of Balranald. The core assets of the project include the West Balranald and Nepean deposits, which contain a combined resource of 16.3 million tonnes of heavy mineral sands.

The Balranald Mineral Sands Project is projected to annually produce around 0.5 million tonnes of heavy mineral concentrate worth up to \$150 million per annum for about 15 years. Mining is proposed to commence at the West Balranald deposit and later progress to the Nepean deposit. Iluka Resources Limited's planned production combined with that of their competitor Cristal Mining Australia, would allow New South Wales to challenge Western Australia as Australia's largest producer of heavy mineral sands. The Balranald region is in need of economic stimulus and the local population is mostly supportive. Iluka Resources Limited are currently in the process of transitioning their focus of activity from their Victorian mining operations to the Balranald Project in NSW.

The Balranald Project will have a long term positive economic impact on a remote regional area of NSW.

### **Sunraysia Solar Farm Proposal**

The proposed Sunraysia and Limondale Solar Farm sites are located approximately 30km to the South of the core assets of the Balranald Mineral Sands Project. The Sunraysia proposal is situated between two identified heavy mineral sands deposits (Odessa and N309). The Odessa deposit is considered a second order exploration priority relative to the core assets of the Balranald Project. At the time of submittal of the Sunraysia proposal, the combined area of the Odessa and N309 deposits, and the area of the Sunraysia solar proposal, were held under exploration licence EL7626 by Iluka.

The area of EL7626 was reduced upon submittal of the application for renewal on 11th October 2016 in compliance with the requirements for reduction of tenure area under the Mining Act 1992. The title will remain in force until a determination has been made by the decision maker regarding the renewal application. The licence EL7626 now only covers the Odessa deposit and does not overlap with the Sunraysia proposal. However, the location of the proposed power transmission corridor does transect EL7626 and the Odessa deposit (Figure 1).

The Odessa and N309 deposits are large (generally 80m wide by 2km long), deep (approximately 60 – 70m), extremely high grade (average grade of up to 33% HM). Based on currently available information, these deposits are potentially economically viable. Their economic viability will increase subsequent to the development of the Balranald Mine due to their proximity to the central mining operation. Although Iluka do not currently have exploration tenure on the N309 deposit, DRE considers the deposit to be a significant potential mineral resource and has

considered the potential for sterilisation of the State's resources accordingly, independent of the title holder's current tenure.

DRE has considered the potential area required for a hypothetical future open cut mining operation for the N309 and Odessa deposits. Based on currently available information from broad spaced drilling of these deposits, and considering a low 25° to 30° angle of repose of a potential open cut pit, DRE has determined that the potential proximity of a final pit top for hypothetical mining proposals on the N309 and Odessa Deposits could be as close as 250m and 500m respectively. DRE is therefore satisfied that there is unlikely to be a direct intersect between the solar farm proposal and a hypothetical future mining operation on the Odessa and N309 deposits. However, these distances represent very close proximity for a mining operation, and there may be interference between possible future operations. The proponent should consult further with Iluka on this matter.

#### Limondale Solar Farm Proposal

The Limondale Sun Farm proposal consists of two parts which are adjacent and contiguous to the north (West Limondale) and proximal to the north east (East Limondale) of the Sunraysia Solar Farm proposal. Both parts of the Limondale proposal are coincident with the EL7626 and the Odessa Deposit. Additionally the proposed Sunraysia transmission line intersects EL7626. DRE has concerns regarding the cumulative impact of multiple solar farm proposals on Iluka Resource's ability to comprehensively complete their exploration program, and consequently on the subsequent assessment and development of the economic potential of the in-situ heavy mineral sands resource contained within EL 7626. The proponent should consult further with Iluka on this matter.