



Office of
Environment
& Heritage

Your reference: SSD 8437
Our reference: DOC17/574285
Contact: Andrew Fisher
Ph 02 6022 0623

Mr Tim Stuckey
Planning Officer - Resource & Energy Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Stuckey

RE: Currawarra Solar Project (SSD 8437) – Edward River LGA – Exhibition of Environmental Impact Statement

I refer to your email dated 20 November 2017 seeking comment from the Office of Environment and Heritage (OEH) about the Environmental Impact Statement (EIS) for the Currawarra Solar Project (SSD 8437). We have reviewed the exhibited EIS against the Secretary's Environmental Assessment Requirements (SEARs) provided by the Department of Planning and Environment (DPE) to the proponent on 2 June 2017.

OEH considers that the EIS **does not** meet the Secretary's requirements. A summary of our assessment and advice, and recommended conditions of approval, is provided in **Attachment A** and detailed comments in **Attachment B**.

With respect to biodiversity, the proponent has committed to spring surveys to determine if Superb Parrot or Major Mitchell's Cockatoo are using hollow-bearing trees on the development footprint for breeding. Spring surveys will also be done for four plant species: Slender Darling Pea, Silky Swainson-pea, Winged Peppergrass and *Austrostipa wakoolica*. OEH expects to see the results of these surveys in the Response to Submissions.

The patch of native vegetation that is shown in maps in the EIS and on aerial imagery but is no longer present on the site needs to be explained and clearance approval documentation provided. There are some errors or inconsistencies in the Main EIS Report and the BAR that require correction or clarification relating to the credit report and the vegetation to be cleared.

We note that Cultural Heritage Management Plan is to be developed for the site and recommend that this be undertaken prior to any construction works commencing.

All plans required as a Condition of Approval that relate to biodiversity or ACH should be developed in consultation and to the satisfaction of OEH, to ensure that issues identified in this submission are adequately addressed.

If you have any questions regarding this matter, please contact Andrew Fisher on 6022 0623 or email andrew.fisher@environment.nsw.gov.au.

Yours sincerely

PE 21/12/17

PETER EWIN
Senior Team Leader Planning
South West Branch
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ATTACHMENT A – OEH Assessment Summary for the Currawarra Solar Project Environmental Impact Statement (SSD 8437)
ATTACHMENT B – Detailed comments for the Currawarra Solar Project Environmental Impact Statement (SSD 8437)

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ATTACHMENT A OEH Assessment Summary for the Currawarra Solar Project Environmental Impact Statement (SSD 8437)

Key Issues

1	<i>Issue</i>	<p>Cultural Heritage Management Plan should be developed in consultation with Registered Aboriginal Parties and include protocols for unexpected finds, including human remains, prior to construction activity occurring.</p> <p>It should include a description of the proposed salvage procedure for the Aboriginal objects that will be harmed by the project (in accordance with Requirement 26 of the '<i>Code of Practice for Archaeological Investigation of Aboriginal objects in NSW</i>'), an unexpected finds protocol and a clear mitigation strategy (including fencing) to ensure that the Aboriginal objects that are to be avoided during construction are not harmed.</p>
	<i>Extent and Timing</i>	Pre-construction
2	<i>Issue</i>	<p>The potential for Superb Parrot and Major Mitchell's Cockatoo to use hollow-bearing trees (HBTs) for nesting within the development site has not been adequately assessed. Survey in May and August would not have detected use by these species which breed in spring/summer.</p> <p>A spring survey of HBTs within the development footprint is required to confirm whether they are being used for breeding by Superb Parrot or Major Mitchell's Cockatoo. The Biodiversity Assessment Report (BAR) needs to be revised once these results are known.</p>
	<i>Extent and Timing</i>	Pre-determination
3	<i>Issue</i>	HBTs should not be removed during spring to early summer to avoid the main breeding period for hollow-dependent fauna.
	<i>Extent and Timing</i>	Pre- and Post-determination
	<i>Recommended Condition of Approval</i>	<i>The removal of hollow-bearing trees is not to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna</i>
4	<i>Issue</i>	<p>Spring survey is needed for four plant species: a spear grass (<i>Austrostipa wakoolica</i>), Slender Darling Pea (<i>Swainsona murrayana</i>), Silky Swainson-pea (<i>Swainsona sericea</i>), Winged Peppergrass (<i>Lepidium monoplacoides</i>). The BAR needs to be revised once these results are known.</p>
	<i>Extent and Timing</i>	Pre-determination
5	<i>Issue</i>	<p>The patch of native vegetation approximately 300 metres north-east of the large dam on the proposal site is shown on numerous maps in the report and on OEH aerial imagery (dated 21 December 2011). A site inspection confirmed that it is no longer on the site. This needs to be explained in the BAR and EIS Main Report, and clearance approval documentation provided.</p>
	<i>Extent and Timing</i>	Pre-determination

6	<i>Issue</i>	<p>The BAR contains some minor issues that require clarification:</p> <p>Credit Report</p> <p>The Final Credit Report (Appendix E) shows that 90 credits would be created by the proposed development, requiring an area of 7.06 ha to offset, which is consistent with the output of the credit calculator. Table 13-1 (BAR, page 102) shows a total of 9.7 ha using the credit conversion tool. This error needs to be corrected.</p> <p>Vegetation to be cleared</p> <p>The upgrades to five road intersections (BAR, Figures 3-12 to 3-16) will each require the removal of a small amount of native vegetation. Given this they need to be included within the development envelope and shown on Figure 3-11. It is assumed that the figures for the vegetation clearance at these intersections are included in the figures presented in the BAR and EIS Main Report, but this needs to be confirmed and demonstrated by the proponent.</p> <p>The area of vegetation to be cleared is taken to be 7.06 ha (BAR, page vii and elsewhere) but different figures are provided through the BAR and EIS:</p> <ul style="list-style-type: none"> • The EIS Main Report (page xiv) states that 'the amount of native vegetation to be removed [is] 3.8 hectares', but this does not include the other areas referred to on the same page. • BAR (page vii) states that 'a total of 7.06 ha of native vegetation ... will be cleared'. However, the figures presented in the following two paragraphs (0.44 + 2.976 + 2.6 + 2.7) sum to 8.716 ha. <p>There are other inconsistencies in the figures presented:</p> <ul style="list-style-type: none"> • BAR Table 3-5 adds up to 7.063 ha but 7.064 ha is stated repeatedly throughout the BAR • BAR (page 92) states that 'the proposal would remove 67.064 ha of vegetation'. The correct figure is 7.063 ha according to Table 3-5. • In the EIS Main Report (page xiv) the area of PCT 80 to be cleared sums to 3.411 ha, however Table 3-3 of the BAR (page 27) includes 0.01 ha of derived native grassland, giving a total of 3.412 ha. <p>These inconsistencies must be clarified and presented correctly in the BAR and EIS Main Report.</p> <p>Paddock trees</p> <p>The information supplied does not demonstrate how the figures entered into the paddock tree calculator for PCTs 15 and 80 were derived. Given the errors and inconsistencies with the paddock tree calculator for the Tarleigh Park Solar Farm proposal, OEH needs to be satisfied that the correct figures have been used. Any changes to these figures may result in a change to the 'effective clearing area' and potentially alter the credit requirement for this proposal.</p>
	<i>Extent and Timing</i>	Pre-determination

7	<i>Issue</i>	If vegetation maintenance during construction or operation includes clearing or lopping that is additional or different to that included in the BAR (dated 9 November 2017), then it must be assessed for biodiversity impacts and documented in accordance with the FBA, unless otherwise agreed by OEH. The assessment must be undertaken by a person accredited in accordance with s142B(1)(c) of the <i>Threatened Species Conservation Act 1995</i> .
	<i>Extent and Timing</i>	Post-determination
	<i>Recommended Condition of Approval</i>	<i>All clearing of native vegetation, which is additional or different to that included in the Biodiversity Assessment Report dated 9 November 2017, and will be cleared or lopped for construction or operation of the proposal, must be assessed for biodiversity impacts and documented in accordance with the Framework for Biodiversity Assessment, unless otherwise agreed by OEH. The assessment must be undertaken by a person accredited in accordance with s142B(1)(c) of the Threatened Species Conservation Act 1995.</i>

8	<i>Issue</i>	<p>Table 8-2 in the EIS Main Report provides a summary of mitigation measures and states that a Construction Environmental Management Plan and a Flora and Fauna Management Plan will be prepared. To ensure that these actions are carried out at the appropriate time, OEH request that the following details are supplied for each action:</p> <ul style="list-style-type: none"> • who will be responsible for individual actions (including the position title of the officer responsible); • outcome or measure of success; and • when the action will be completed. <p>These details should be completed before the start of construction to clearly identify the proponent's commitments for management and mitigation.</p> <p>OEH have noticed that Cultural Heritage and Environmental Management Plans have not been required by DPE for some recently approved developments. If conditions do not require the preparation of individual plans, OEH will need to see more detail for actions relating to biodiversity and Aboriginal cultural heritage before the start of construction.</p>
	<i>Extent and Timing</i>	Pre- and Post-determination

OEH Advice

- | | | |
|------------|---|------------|
| 1.1 | Is the 'baseline' for impact assessment reasonable? | Yes |
| 1.2 | Are predictions of impact robust (and conservative) with suitable sensitivity testing? | Yes |
| 1.3 | Has the assessment considered how to avoid and minimise impacts? | Yes |
| 1.4 | Does the proposal include all reasonably feasible mitigation options? | Yes |
| 2. | Is the assessed impact acceptable within OEH's policy context? | No |

Adequate assessment of the potential impacts of the proposed development on nesting by Superb Parrot and Major Mitchell's Cockatoo needs to be completed.

3. Confirmation of statements of fact

Statements of fact are correct.

4. Elements of the project design that could be improved

The proponent's commitment to mitigation and management actions would be clarified by including details about project stage, timeframes, outcomes and responsibility for each action.

ATTACHMENT B Detailed comments for the Currawarra Solar Project Environmental Impact Statement (SSD 8437)

Biodiversity

The EIS does not meet the Secretary's requirements for biodiversity assessment. The Biodiversity Assessment Report (BAR) does not fulfil the requirements of the Framework for Biodiversity Assessment (FBA). Please note with the commencement of the *Biodiversity Conservation 2016* (BC Act) on the 25 August 2017, the *Threatened Species Act 1995* has been repealed. However, Savings and Transition provisions are in place. The comments below recommend continuation of processes as identified under the previous Offsets Policy (rather than as requirements of the BC Act) but there may be time restrictions within the transitional period that mean that future actions may need to be done in accordance with the more recent legislation.

OEH commends the proponent on the effort made to avoid most of the native vegetation remnants and in particular most of the Western Grey Box woodland endangered ecological community within the proposed development area, as outlined in section 7.1.1 of the BAR.

Biodiversity Offset Strategy

The BAR states that an offset will be established subject to consent conditions within two years of construction commencing. A Biodiversity Offset Plan (BOP) will be developed and implemented as part of the approval. Pending the results of the additional field surveys, the current requirement of 90 ecosystem credits may be met through an offset within the proposal area but outside the development envelope. Alternatively, the proponent may choose to meet their offset obligation through payment into the Biodiversity Conservation Fund.

Credit Report

The Final Credit Report (Appendix E) shows that 90 credits would be created by the proposed development, requiring an area of 7.06 ha to offset, which is consistent with the output of the credit calculator. Table 13-1 (BAR, page 102) shows a total of 9.7 ha using the credit conversion tool. This error needs to be corrected. The Final Credit Report must be updated if necessary to reflect the outcomes of the additional field surveys and included with the revised BAR.

Vegetation to be cleared

Figures 3-12 to 3-16 in the BAR show upgrades to five road intersections. As these will each require the removal of a small amount of native vegetation, these intersection upgrades need to be included within the development envelope and shown on Figure 3-11. It is assumed that the figures for the vegetation clearance at these intersections is included in the figures presented in the BAR and EIS Main Report, but this needs to be confirmed and demonstrated by the proponent.

The GIS shapefile 'C_Vegetation_2017.shp' that has been supplied does not show the paddock trees to be cleared (zone 2, PCT 15, 'effective area' 2.6 ha and zone 4.3, PCT 80, 'effective area' 2.7 ha) or two of the intersection upgrades (zone 7.1, PCT 16, 0.016 ha and zone 7.2, PCT 16, 0.05 ha).

The area of vegetation to be cleared is taken to be 7.06 ha (BAR, Table 3-5) but different figures are provided through the BAR and EIS:

- The EIS Main Report (page xiv) states that 'the amount of native vegetation to be removed [is] 3.8 hectares', but this does not include the other areas referred to on the same page.
- BAR (page vii) states that 'a total of 7.06 ha of native vegetation ... will be cleared'. However, the figures presented in the following two paragraphs (0.44 + 2.976 + 2.6 + 2.7) sum to 8.716 ha.

There are other inconsistencies in the figures presented:

- BAR Table 3-5 adds up to 7.063 ha but 7.064 ha is stated repeatedly throughout the BAR.
- BAR (page 92) states that 'the proposal would remove 67.064 ha of vegetation'. The correct figure is 7.063 ha according to Table 3-5.
- In the EIS Main Report (page xiv) the area of PCT 80 to be cleared sums to 3.411 ha, however Table 3-3 of the BAR (page 27) includes 0.01 ha of derived native grassland, giving a total of 3.412 ha.

The discrepancies in these figures need to be corrected in the BAR and Main EIS Report.

Paddock trees

Although the paddock tree calculator has been supplied for PCTs 15 and 80, the calculations that demonstrate how these figures were derived have not been provided. Given the errors and inconsistencies with the paddock tree calculator for the Tarleigh Park Solar Farm proposal, this is important. In particular OEHL needs to be satisfied that the correct figures have been used for average crown diameter of paddock trees, average percent foliage cover taken from a sample of paddock trees, number of paddock trees within a sample area, the sample area in which the number of paddock trees were counted (ideally supported by a GIS shapefile) and the number of hollow bearing trees in the sample area. Any changes to these figures may result in a change to the 'effective clearing area' and potentially alter the credit requirement for this proposal.

Threatened species

It is noted in Table 4-3 of the BAR that the field surveys in May and August were outside the required survey period for six plant species. Section 4.7.1 of the BAR states that appropriately timed surveys will be completed for four of these plant species: a spear grass (*Austrostipa wakoolica*), Slender Darling Pea (*Swainsona murrayana*), Silky Swainson-pea (*Swainsona sericea*), Winged Peppergrass (*Lepidium monoplacoides*)

Similarly, surveys for Superb Parrots (*Polytelis swainsonii*) and Major Mitchell's Cockatoos (*Lophochroa leadbeateri*) will be completed during their breeding season (BAR section 4.7.2).

The revised BAR must reflect the outcomes of the additional field surveys, including any changes to the credit requirements.

Vegetation buffer

We note the intention to use a vegetation buffer at various points around the perimeter of the development to screen the solar farm from surrounding residential landowners. It is stated (EIS Main Report, page 29) that 'native trees and shrub species suited to the site conditions would be used ... to achieve effective screening'. We support this and suggest that the species used should correspond to the vegetation communities identified in the EIS (Western Grey Box - White Cypress Pine tall woodland and Black Box grassy open woodland wetland). This is important to minimise the potential for 'non local' species associated with the vegetation buffers to invade the surrounding areas of remnant native vegetation.

Mitigation and management

The minimum information requirements for Stage 2 of the BAR are listed in Appendix 7 of the FBA (Table 21, page 102). This includes a 'table of measures to be implemented before, during and after construction to avoid and minimise the impacts of the project, including action, outcome, timing and responsibility'. However, this data requirement is not specified in the text of the FBA and is inconsistently applied in BARs submitted to OEHL.

The EIS Main Report (Table 8-2) states that a Construction Environmental Management Plan (CEMP) will be prepared. Table 8-2 also states that a Flora and Fauna Management Plan will be prepared. Table 8-1 provides a summary of mitigation measures but it is not clear who will be responsible for individual actions, the outcome or measure of success or when the action will be completed. We consider that these details should be completed prior to construction to clearly identify the proponent's commitments for mitigation and management.

We recommend that the removal of HBTs does not occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna.

Any additional impacts to vegetation during construction or operation, including clearing, lopping or trimming that is different to that included in the BAR (9 November 2017) must be assessed for biodiversity impacts and documented in accordance with the FBA, unless otherwise agreed by OEHL. The assessment must be undertaken by a person accredited in accordance with s142B(1)(c) of the *Threatened Species Conservation Act 1995*.

Other information

All of the maps using aerial imagery in the BAR (Figures 1-1, 3-11, 3-17, 3-18, 4-2, 4-3, 7-1) and the EIS Main Report (Figures 4-1 and 8-10) show a patch of native vegetation approximately 300 metres north-east of the large dam on the proposal site. This native vegetation remnant is also shown in Google Maps (accessed 01 December 2017) and on OEH aerial imagery (dated 21 December 2011). This remnant has not been referred to within the documentation, and a site inspection confirmed that it is no longer on the site. The 'Currawarra Tree Impacts 20170912.xls' file supplied indicates that 60 paddock trees were noted on aerial photography but that these had been cleared by the time of the field survey. When asked about this during the site visit the landholder indicated that this had been cleared a number of years ago, and the approval included a Property Vegetation Plan which is not on this site. Given the discrepancy between aerial imagery and what is present on the ground, the BAR and EIS Main Report should address this issue, and provide the clearance approval documentation for this site.

Based on consideration of the above, we recommend the following conditions of development consent:

- *All clearing of native vegetation, which is additional or different to that included in the Biodiversity Assessment Report dated 9 November 2017, and will be cleared, lopped or trimmed for construction or operation of the proposal, must be assessed for biodiversity impacts and documented accordance with the Framework for Biodiversity Assessment, unless otherwise agreed by OEH. The assessment must be undertaken by a person accredited in accordance with s142B(1)(c) of the Threatened Species Conservation Act 1995.*
- *The removal of hollow-bearing trees is not to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna.*

Flooding

The proposal site is outside of the Billabong Creek and Tuppal-Bullatale Creek floodway system, and remote from any towns. As discussed in the EIS Main Report (section 9.5.5), the site is a low flood risk. As such we do not have any issues from a flood risk perspective.

Aboriginal cultural heritage

Based on assessment of the information provided, the Currawarra Solar Farm Aboriginal Cultural Heritage Assessment Report (ACHAR) is largely consistent with the requirements identified by the Code of Practice for Archaeological Investigation in New South Wales (OEH 2010). OEH support the recommendations outlined in the ACHAR (9. Recommendations) however consider further detail is required prior to approval.

Cultural/Social Values

SEARs issued by OEH for SSD 8437 required the EIS to describe and document the Aboriginal cultural heritage values existing for the area affected by the Currawarra Solar Farm. Impacts to these values are to be assessed and documented in the EIS; however, the ACHAR has not identified any cultural values (social values), particularly those associated with sites identified during field assessment. While we note the ACHAR states that 'an opportunity to identify cultural and social values was provided to the Aboriginal representatives throughout the fieldwork and draft reporting process' (5. Cultural Heritage Values and Statement of Significance) there is no description of these values or how they informed management decisions for known Aboriginal cultural heritage (ACH). While information from the Registered Aboriginal Parties in relation to cultural/social value may not always be forthcoming, any discussions about these values should be recorded, documented and provided to demonstrate if this is the case.

ACHAR Recommendation 2

The ACHAR identifies that the 2 artefact sites are not avoidable and should be subject to salvage prior to development commencing (Table 6, 7.2 Consideration of Harm). It is also recommended that the two sites should be relocated to a safer area within the property not subject to disturbance (page 53). ACHAR Recommendation 2 (Section 9) identifies that a new site card will be completed once the artefacts have been salvaged and relocated to advise AHIMS of any new details (i.e. location coordinates). As a condition of approval, we require the proponent to complete and submit an Aboriginal Site Impact Recording Form which has been developed to ensure current information about the status of AHIMS sites is maintained and an accurate picture of all registered sites across NSW is always available. This form is intended to compliment (not replace) the AHIMS site recording form and must be completed after authorised impacts to AHIMS sites occur and submitted to the AHIMS Registrar. The form can be found here:

www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf.

ACHAR Recommendation 4

While it is identified that the two Aboriginal culturally modified trees and intact subsurface deposits should be avoided by all works, OEH considers that 'avoidance' alone is insufficient and the risk of potential harm still exists such as through unintentional heavy machinery impacts. The EIS should clearly describe additional management strategies to ensure trees are not harmed. As a minimum, we recommend that protective fencing should be erected outside each scarred tree canopy dripline and contain any associated intact subsurface deposits.

ACHAR Recommendation 7

Recommendation 7 identifies that a CHMP should be prepared to address potential for finding additional artefacts during works. Given the presence of known ACH and potential for the subject area to yield further Aboriginal sites/objects, OEH consider that the CHMP should be prepared in consultation with the RAPs and OEH prior to any development occurring. This should include the development of an appropriate process for the discovery of ACH, including skeletal remains, should they be encountered during development works.

We recommend the following as a condition of consent:

Develop an Unexpected Finds Protocol for inclusion in CHMP and incorporate the following process –

If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:

1. *Not further harm the object*
2. *Immediately cease all work at the particular location*
3. *Secure the area so as to avoid further harm to the Aboriginal object*
4. *Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location*
5. *Not recommence any work at the particular location unless authorised in writing by OEH.*

In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.

Based on consideration of the above, we recommend the following conditions of development consent:

- *A Cultural Heritage Management Plan be developed for the site prior to the commencement of any construction works inclusive of protocols for encountering unexpected ACH.*
- *Protective fencing be established around each scar tree site with buffer zone sufficient to protect tree root system and any associated areas of subsurface potential.*
- *Finalise the artefact salvage process and complete and submit an Aboriginal Site Impact Recording Form.*
- *Site induction for any contractors or works crews (construction and operation) and clear identification of any known sites on any associated plans.*