



Office of Environment & Heritage

Your reference: SSD 8436
Our reference: DOC17/283391
Contact: Andrew Fisher
Ph 02 6022 0623

Ms Eleanor Parry
Environmental Assessment Officer
Resource & Energy Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Parry

RE: Tarleigh Park Solar Project (SSD 8436) – Edward River LGA – Exhibition of Environmental Impact Statement

I refer to the email from Anthony Ko dated 20 November 2017 seeking comment from the Office of Environment and Heritage (OEH) about the Environmental Impact Statement (EIS) for the Tarleigh Park Solar Project (SSD 8436). 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 conducting spring surveys to determine whether hollow-bearing trees within the development site are being used for breeding by Superb Parrot or Major Mitchell's Cockatoo. Spring surveys will also be done for three plant species: Silky Swainson-pea, Slender Darling Pea and Winged Peppercreess. OEH expects to see the results of these surveys in the Response to Submissions. There are some errors or inconsistencies in the Main EIS Report and the Biodiversity Assessment Report (BAR) that require correction or clarification. The correct Final Credit Report needs to be included with the revised BAR.

We note that development of a Cultural Heritage Management Plan for Aboriginal cultural heritage (ACH) has been recommended for the site. OEH require that this be undertaken prior to any construction works commencing and should contain a suitable protocol for unexpected finds, including skeletal remains, and include the plan of management for fencing works.

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 (02) 6022 0623 or email andrew.fisher@environment.nsw.gov.au.

Yours sincerely

 20/12/17

PETER EWIN
Senior Team Leader Planning
South West Branch
Regional Operations
Office of Environment & Heritage

ATTACHMENT A – OEH Assessment Summary for the Tarleigh Park Solar Project Environmental Impact Statement (SSD 8436)
ATTACHMENT B – Detailed comments for the Tarleigh Park Solar Project Environmental Impact Statement (SSD 8436)

ATTACHMENT A OEH Assessment Summary for the Tarleigh Park Solar Project Environmental Impact Statement (SSD 8436)

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 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>	Hollow-bearing trees 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>	Spring survey is required for three plant species: Silky Swainson-pea (<i>Swainsona sericea</i>), Slender Darling Pea (<i>Swainsona murrayana</i>) and Winged Peppergrass (<i>Lepidium monoplacoides</i>). The BAR needs to be revised once these results are known.
	<i>Extent and Timing</i>	Pre-determination
5	<i>Issue</i>	The Final Credit Report (Appendix E of the BAR) is incorrect; the report for Currawarra Solar Farm has been included and not the report for Tarleigh Park Solar Farm. The correct version of the Final Credit Report must be included with the revised BAR.
	<i>Extent and Timing</i>	Pre-determination

6	<i>Issue</i>	<p>Some entries in the paddock tree calculator are incorrect or inconsistent between the paddock tree calculator and the calculator calculations supplied:</p> <ul style="list-style-type: none"> • 'Number of hollow bearing trees in the sample area' for PCT 15: is this 0 or 1? • 'Number of paddock trees within a sample area' for PCT 76: is this 27 or 6? • "Number of hollow bearing trees in the sample area' for PCT 76: is this 16 or 5? • Sample area in which the number of paddock trees were counted' for PCT 76: 352 ha is used, but the entire proposal site is only 250 ha (BAR, page 9). <p>The revised BAR needs to clearly demonstrate how the figures entered in the paddock tree calculator have been derived and state if there are any changes to the calculations of 'effective clearing area' which alter the overall credit requirement for this proposal.</p>
	<i>Extent and Timing</i>	Pre-determination

7	<i>Issue</i>	<p>The BAR contains some minor issues that require clarification:</p> <p>Vegetation to be cleared</p> <p>In the EIS Main document, Table 8-1 (page 66) shows total of 3.37 ha to be cleared, however the figures in the table add up to 3.18 ha. The total area of 3.37 ha is consistent with what is stated in the BAR. The correct figures need to be shown in Table 8-1.</p> <p>A small amount of native vegetation (0.015 ha) is proposed to be cleared at the intersection of the Riverina Highway and Palfreys Road (BAR Figure 3-9). This clearance needs to be shown on Figure 3-10 of the BAR as this is part of the development footprint. The proponent needs to confirm that this clearing (zone 9, PCT16/MU514) is included in Table 3-4 (BAR, page 35) and Table 11-1 (BAR, page 83).</p> <p>Further justification is required for the distinction between the two zones within PCT 15 classified as being in moderate-good condition (BAR, page 22). These are differentiated as 'moderate-good_poor' and 'moderate-good_other', but they get the same site value score in the credit calculator (44.67). It is noted that in Table 3-4 (BAR, page 35) that both of these areas are presented as 'moderate-good_poor'. This discrepancy needs to be clarified and a consistent classification used throughout the BAR.</p> <p>In section 4.7.1 of the BAR (pages 46-49) it is stated six times that the area of impact along Parfreys Road is 0.134 ha of low quality habitat, made up of PCTs 15, 16 and 76. It needs to be clearly shown how this figure of 0.134 ha was derived.</p> <p>There are inconsistencies in the clearance figures provided:</p> <ul style="list-style-type: none"> • Table 3-1 (BAR, page 22) states that 0.429 ha of PCT15 (MU515) is to be cleared, but the figures for this PCT in Table 3-4 add up to 0.428 ha (excluding 2.3 ha effective clearing area for paddock trees). • It is stated in the BAR (pages 27 and 77) that 0.026 ha of PCT 76 is proposed to be cleared along Parfreys Road, but on pages 35 and 83 the figure of 0.025 ha is used.
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		<p>Other information</p> <p>In the BAR (Table 4-5, page 45) the maximum and minimum temperatures have been transposed for 23 - 25/8/2017.</p> <p>The BAR (page 86) states that 'approximately 6.77 ha of vegetation communities [were mapped] outside the development envelope'. However Table 13-1 (page 87) lists the 'areas of vegetation communities mapped outside the development envelope during the field survey', and shows a total of 13 ha.</p> <p>These inconsistencies must be clarified and presented correctly in the BAR and EIS Main Report.</p>
	<i>Extent and Timing</i>	Pre-determination

8	<i>Issue</i>	<p>It is indicated (page 137, EIS Main Report) that the approved B-double section of Parfreys Road could be extended to the proposed site entrance. If vegetation maintenance during construction or operation includes clearing or lopping that is additional or different to that included in the BAR (dated 10 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>.</p>
	<i>Extent and Timing</i>	Post-determination
	<i>Recommended Condition of Approval</i>	<p><i>All clearing of native vegetation, which is additional or different to that included in the Biodiversity Assessment Report dated 10 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></p>

9	<i>Issue</i>	<p>Section 10.2 of the EIS Main Report states that a Construction Environmental Management Plan (CEMP) will be prepared, along with a Flora and Fauna Management Plan (Table 8-2). Table 10-1 provides a summary of mitigation measures. 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 • 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 Tarleigh Park Solar Project Environmental Impact Statement (SSD 8436)

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 12 credits may be met on site by 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 of the BAR) is incorrect; the report for Currawarra Solar Farm has been provided and not the report for Tarleigh Park Solar Farm. The correct version of the Final Credit Report must be included with the revised BAR, updated if necessary to reflect the outcomes of the additional field surveys.

Vegetation to be cleared

In the EIS Main document, Table 8-1 (page 66) shows total of 3.37 ha to be cleared, however the figures in the table add up to 3.18 ha. The total area of 3.37 ha is consistent with what is stated in the BAR. The correct figures need to be shown in Table 8-1.

BAR Figure 3-9 shows clearing of native vegetation at the intersection of the Riverina Highway and Palfreys Road. This road intersection is 1.6 kilometres north of the proposed solar farm site, however as it is part of the development, this must be included as part of the development footprint. Therefore, the clearing at this road intersection needs to be shown on Figure 3-10 of the BAR. The clearing at this road intersection has not been included in the GIS shapefiles 'TP_Vegetation_20171010.shp' and 'TP_20171010_impact.shp' provided with the EIS. It appears that the proposed clearance of vegetation at this road intersection (zone 9, PCT16/MU514, 0.015 ha) is included in Table 3-4 (BAR, page 35) and Table 11-1 (BAR, page 83), however this needs to be confirmed by the proponent.

The BAR (page 21) refers to two zones within PCT15 which were both classified as in moderate-good condition. An area of 0.14 ha of zone 1 was further classed as 'moderate-good_poor' whereas a 0.19 ha area was classed as 'moderate-good_other'. In the credit calculator, the site value score for these two areas within zone 1 is the same (44.67). Further justification for the distinction between these areas is required. It is noted that in Table 3-4 (BAR, page 35) that both of these areas are presented as 'moderate-good_poor'. This discrepancy needs to be clarified and a consistent classification used throughout the BAR.

Table 3-1 (BAR, page 22) states that 0.429 ha of PCT15 (MU515) is to be cleared, but the figures for this PCT in Table 3-4 add up to 0.428 ha (excluding 2.3 ha effective clearing area for paddock trees). If figures are going to be given to three decimal places then they need to be consistent.

In section 4.7.1 of the BAR (pages 46-49) it is stated six times that the area of impact along Parfreys Road is 0.134 ha of stated as low quality habitat made up of PCT 15, 16 & 76. It needs to be clearly shown how this figure of 0.134 ha was derived.

It is stated in the BAR (pages 27 and 77) that 0.026 ha of PCT 76 is proposed to be cleared along Parfreys Road. On pages 35 and 83 the figure of 0.025 ha is used. Again, consistency is required in the figures presented.

Paddock trees

A number of entries in the paddock tree calculator are incorrect:

'Tarleigh Park Paddock Tree Calculator - PCT 15.xls' shows a figure of zero for the 'Number of hollow bearing trees in the sample area' but in the calculations provided ('Tarleigh Park Paddock Tree Calculator Calculations.xls') there is 1 hollow-bearing tree listed in the sample area.

'Tarleigh Park Paddock Tree Calculator - PCT 76.xls' shows a figure of 352 for the 'Sample area in which the number of paddock trees were counted', but the entire proposal site is only 250 ha (BAR, page 9). A figure of 27 is used for the 'Number of paddock trees within a sample area' but the calculations provided show that there were 6 trees in the sample area. A figure of 16 is used for the 'Number of hollow bearing trees in the sample area' but the calculations provided show that there were 5 hollow-bearing trees in the sample area.

The figures used in the credit calculator need to be consistent with the calculations provided. The BAR needs to clearly demonstrate how the figures entered in the paddock tree calculator have been derived (as per Appendix B: Assessing scattered trees in the Biobanking and the Framework for Biodiversity Assessment Operational Manual). In particular, the area used for the calculation of paddock trees needs to be substantiated, ideally supported by a shapefile. The revised BAR must indicate if there are any changes to the calculations of 'effective clearing area' and thus to the overall 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 four plant species. Section 4.7.1 of the BAR states that appropriately timed surveys will be completed for three of these plant species: Silky Swainson-pea (*Swainsona sericea*), Slender Darling Pea (*Swainsona murrayana*) and Winged Peppercreese (*Lepidium monoplocoides*).

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). Table 4-7 (BAR page 59) should note the additional surveys for these two species.

As stated above, 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 27) that 'the vegetative screen would consist of a range of native tree and shrub species endemic to the locality'. We support this and suggest that the species used should correspond to the vegetation communities identified in the EIS (Western Grey Box tall grassy woodland and Black Box 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 OEH.

Section 10.1 of the EIS Main Report 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 10-1 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.

EIS Main Report (page 136) states that the first 900 m of Parfreys Rd from the Riverina Highway is approved for B-double heavy vehicle traffic. It is indicated (page 137, EIS Main Report) that this approved B-double section could be extended to the proposed site entrance. Any additional impacts to vegetation during construction or operation, including clearing, lopping or trimming that is different to that included in the BAR (6 September 2017) 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 *Threatened Species Conservation Act 1995*.

Other information

In the BAR (Table 4-5, page 45) the maximum and minimum temperatures have been transposed for 23 - 25/8/2017, which is confusing and should be corrected.

The BAR (page 86) states that 'approximately 6.77 ha of vegetation communities [were mapped] outside the development envelope'. However Table 13-1 (page 87) lists the 'areas of vegetation communities mapped outside the development envelope during the field survey', and shows a total of 13 ha. This discrepancy needs to be clarified.

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 xx 2017, and will be cleared, lopped or trimmed 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.*
- *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.*

Aboriginal cultural heritage

Based on assessment of the information provided, the Tarleigh Park Solar Farm Aboriginal Cultural Heritage Assessment Report (ACHAR) appears to be consistent with the requirements identified by the Code of Practice for Archaeological Investigation in New South Wales (OEH 2010) and SEARs issued for SSD 8436.

ACHAR Recommendation

OEH support the recommendations outlined in the ACHAR (9. Recommendations) however consider a commitment to CHMP development prior to approval is required. 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 CHMP be developed for the site prior to the commencement of any construction works inclusive of protocols for encountering unexpected ACH.*
- *The CHMP should contain the Plan of Management for Fencing Works which should clearly detail and describe mitigation measures for protecting the known scarred tree sites.*
- *Protective fencing be established around each scar tree site with buffer zone sufficient to protect tree root system.*

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 9.6.6), the site is a low flood risk. As such we do not have any issue from a flood risk perspective.