

Our Ref: DOC19/948454
Your Ref: SSD-9438

Tatsiana Bandaruk
Environmental Assessment Officer
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2000

Dear Ms Bandaruk

RE: Bonshaw Solar Farm (SSD-9438) (Inverell Shire)

Thank you for requesting advice about the Bonshaw Solar Farm from the Biodiversity and Conservation Division (BCD) of the Environment, Energy and Science Group in the NSW Department of Planning, Industry and Environment. I appreciate the opportunity to provide input.

The BCD was formerly part of the Office of Environment and Heritage, but now forms part of a Group that has responsibilities relating to biodiversity (including threatened species and ecological communities, or their habitats), Aboriginal cultural heritage, National Parks and Wildlife Service estate, climate change, sustainability, flooding, coastal and estuary matters.

We have reviewed the Bonshaw Solar Farm Environmental Impact Statement prepared by ERM dated 18 October 2019. We have identified several issues in relation to Aboriginal cultural heritage and biodiversity. These issues are discussed in detail in **Attachment 1** to this letter. In summary we provide the following recommendations.

Recommendations

1. The BDAR should be reviewed, updated and certified to comply with the BC Act and resubmitted as part of the proposal.
2. The BDAR should ensure adequate consideration of the NVR mapping for the site.
3. Ensure the correct application of the Streamlined assessment module – clearing paddock trees
4. The BDAR should be updated to include reference to existing threatened species habitat mapping.
5. The BDAR should provide further justification of the Masked Owl to ensure it has been adequately considered.
6. The BDAR should be updated to remove the recommendation to change the offset requirement for vegetation zone 11.
7. The future vegetation integrity scores for all vegetation zones is to be reduced to zero.

8. The BAM Calculator is to be updated and finalised for review.
9. The mitigation measures as outlined in Table 7.1 of the BDAR should form part of any proposed development consent conditions.
10. The inconsistencies within the EIS and CHA need to be addressed prior to final determination.
11. Further assessment, including sub-surface investigation, for a number of sites and locations within the project area to test the hypothesis proposed by the consultant that the project area constitutes a long-term, high density occupational complex.
12. Further amendments are required to the Unexpected Finds Procedure.
13. The demarcation of Aboriginal heritage sites should be clearly marked on the ground to avoid potential impacts.
14. All Aboriginal scar trees should be retained in-situ and the assessment of the significance relating to Aboriginal scar trees should be reviewed.

If you have any questions about this advice, please do not hesitate to contact me at krister.waern@environment.nsw.gov.au or 6640 2503.

Yours sincerely



02.12.19

KRISTER WAERN
A/Senior Team Leader Planning, North East Branch
Biodiversity and Conservation

Enclosure: Attachment 1 detailed BCD Comments

Attachment 1: Detailed BCD Comments – Bonshaw Solar Farm (SSD-9438)

Biodiversity matters

We have reviewed the Biodiversity Development Assessment Report (BDAR) dated 26 July 2019 and provide the following comments for consideration.

Currency of the BDAR

We note that the BDAR prepared by ERM environment consultants is dated 26 July 2019. Appendix K of the BDAR shows the credit report for the proposal and that the Biodiversity Assessment Method (BAM) Calculator was last updated on 12 July 2019. However, the BAM Calculator has not been finalised. As the proposal has not been finalised, we have not reviewed the BAM Calculator.

Section 6.15(1) of the *Biodiversity Conservation Act 2016* (BC Act) states that 'A biodiversity assessment report cannot be submitted in connection with a relevant application unless the accredited person certifies in the report that the report has been prepared on the basis of the requirements of (and information provided under) the biodiversity assessment method as at a specified date and that date is within 14 days of the date the report is so submitted.'

The currency of the BDAR is important to ensure the most relevant biodiversity updates have been included for the proposal.

Considering that the BDAR has not been finalised and further amendments are likely based on our comments, we look forward to reviewing an updated and finalised BDAR.

Recommendation:

The BDAR should be reviewed, updated and certified to comply with the BC Act and resubmitted as part of the proposal.

Native vegetation regulatory map

Section 4.3.2 of the BDAR states that the Native Vegetation Regulatory (NVR) map was accessed on 12 April 2019 and the subject land is not Category 1 or Category 2 land.

Category 1 and Category 2 (regulated land) mapping has not been released yet. Transitional arrangements are in place until a comprehensive NVR Map with all the land categories is published. During the 'transitional period', landholders are responsible for determining the categorisation of their land in accordance with section 60F of the LLS Act.

Further information can be accessed at <https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/native-vegetation-regulatory-map>

If you require assistance with determining which categories are applicable to any unmapped areas on your landholding, contact the Local Land Services office in your area.

Section 2.3.1.1 (d) of the BAM states, '*biodiversity values associated with the assessment of the impacts of any clearing of native vegetation and loss of habitat on category 1-exempt land (within the meaning of Part 5A of the LLS Act), other than the additional biodiversity impacts in accordance with clause 6.1 of the BC regulation.*'

Accordingly, it is important that the BDAR has adequately considered the potential categories of the NVR map and/or the transitional arrangements.

Recommendation:

The BDAR should ensure adequate consideration of the NVR mapping for the site.

Paddock Trees

The BDAR identifies that the Streamlined assessment module – clearing paddock trees (Appendix 1 of the BAM) has been used as part of the proposal.

Figure 4.4 maps the paddock trees within the development site. It appears that some of the mapped paddock trees occur within the mapped Plant Community Type (PCT) polygons. The full BAM is applied to the mapped PCT polygons and as such the paddock tree module does not need to be applied to those trees.

Further, the intent of the paddock tree module is that it should only be used where it does not provide habitat for threatened species. Although not clear in the BAM, the updated draft BAM currently on public exhibition makes this point clearer.

An initial assessment will need to be made to determine the presence of threatened species before using the paddock tree module. This issue overlaps with the species polygon for the Bristle-faced Free-tailed bat which maps its habitat over the entire development area. The BCD is able to provide further support to ensure the correct application is followed.

The credit obligation for this module will be assessed once the BAM Calculator has been finalised.

Recommendation:

Ensure the correct application of the Streamlined assessment module – clearing paddock trees

Threatened species habitat mapping

For a small number of species, a habitat constraint may refer to a mapped location. Mapped locations identify areas that are considered important for the species. Maps currently available include important areas for the swift parrot and the regent honeyeater. These maps can be accessed by sending a request to bam.support@environment.nsw.gov.au. The BDAR does not appear to have checked these important habitat maps. The BDAR should be updated to include reference to the important habitat maps.

Recommendation:

The BDAR should be updated to include reference to existing threatened species habitat mapping.

Species Polygons

Table 5.4 identifies the species credit species. The masked owl has been assumed to be present, however a species polygon has not been created for the species. Table 5.3 provides the reasons for exclusion of the species. Section 5.8 of the BDAR states that the Masked Owl has been assumed to occur as the survey window for this species could not be met.

However, the BCD are of the opinion that this species has potentially been dismissed too soon without any survey effort. Further information should be provided to justify the decisions made for this species. Alternatively, further surveys or an expert report can be prepared for the species.

Recommendation:

The BDAR should provide further justification of the Masked Owl to ensure it has been adequately considered.

Vegetation zones

Page 39 of the BDAR recommends that vegetation zone 11 is removed from the final credit obligation. It is acknowledged that the PCT is not associated with a vulnerable ecological community, however the PCT is linked to a number of threatened species (ecosystem species).

The BAM Calculator takes into account predicted threatened species and the vegetation integrity score to calculate a credit requirement. In this case, if the vegetation integrity score is above the threshold of 17 so a credit requirement will be generated.

The BCD is able to provide further information in relation to this issue if required.

Recommendation:

The BDAR should be updated to remove the recommendation to change the offset requirement for vegetation zone 11.

Future vegetation integrity scores

Table 6.3 of the BDAR identifies the current and future vegetation integrity scores for each vegetation zone. The future vegetation integrity scores have not been appropriately applied to indicate the vegetation clearing associated with the development. Section 9.1.2.5 of the BAM states that, '*For proposals that will result in the total clearing of the site, the future value for each attribute must be 0*'.

The justification for not reducing the vegetation integrity score to '0' is that some groundcover under the solar arrays will continue to be available for grazing. This is not an appropriate justification and there are no secure measures to ensure the integrity of the groundcover vegetation after development consent has been provided.

Recommendation:

The future vegetation integrity scores for all vegetation zones is to be reduced to zero.

BAM Calculator

The above amendments to the BDAR is likely to change the biodiversity credits required for the proposed development.

Recommendation:

The BAM Calculator is to be updated and finalised for review.

Mitigation measures

Table 7.1 of the BDAR outlines the recommended management and mitigation measures to be implemented as part of the development. The BCD supports these measures.

Recommendation:

The mitigation measures as outlined in Table 7.1 of the BDAR should form part of any proposed development consent conditions.

Aboriginal Cultural Heritage matters

We have reviewed the Bonshaw Solar Farm EIS and Cultural Heritage Assessment (CHA), which forms Appendix D to the overall document. We can provide general support for the findings and most of the management recommendations however we provide the following comments which identify deficiencies or uncertainties in the proposed management of Aboriginal objects located during the survey.

We note that Table 6.2 of the primary EIS document identifies each Aboriginal object/site located during the survey and provides a small amount of information on each of those sites. We also note that no information regarding the proposed management of the site/objects is included. To provide further clarity, this table should be updated to include a column which briefly identifies the proposed management for each of the sites. Furthermore, we note significant differences between Section 9 and Section 10 of the CHA in particular Figure 9.1, Table 9.1 and Table 10.1. Table 10.1 clearly states that all Aboriginal scar trees will be protected during, and avoided by, the proposed works whereas Figure 9.1 and Table 10.1 indicate a possibility that a number of those trees will be harmed by the proposed works.

This information needs to be updated to reconcile this discrepancy and provide clarity over the level of harm proposed by the project. There are also extensive and repeated references to “possible harm” which may result from the proposed works. The extent of proposed harm should be quantified and clearly articulated at all relevant places in both the EIS and CHA in order to ensure a complete and clear understanding of the proposed impact to tangible Aboriginal cultural values is available to all parties involved in the determination of this application.

Recommendation:

The inconsistencies within the EIS and CHA need to be addressed prior to final determination.

In relation to the riparian occupation complex, there are repeated references by both consultant and project RAPs to the likelihood that the central riparian zone within the project area represents a single site complex evidential of intensive ongoing occupational use over a long time by the traditional Aboriginal custodians of the subject lands. We note significant tracts of land, between sites BSF9 and BSF14, and between BSF14 and BSF22, where no surface objects were located as a result of the Aboriginal cultural heritage (ACH) survey carried out to inform the EIS.

Further, the tract of land situated between sites BSF14 and BSF22 comprises an area which will be subject to harm under the proposed works. We also note that the proposed works will impact on Site BSF 22. Based on this understanding we recommend that a regime of subsurface testing is carried out both at site BSF22 and also at any location between site BSF22 and BSF14 which retain any residual topsoil. The subsurface testing should be carried to further inform the hypothesis that the riparian corridor and associated landforms represents a complex of connected occupation sites.

The results of such testing will increase understanding of the nature and significance of the landform, the sites it contains, and whether they should be reclassified as a single, extensive occupation site. Furthermore, this understanding is vital to ensure the nature and significance of the ACH evidence at this location is clearly understood prior to making any final determination on its long term management and acceptable harm.

Recommendation:

Further assessment, including sub-surface investigation, for a number of sites and locations within the project area to test the hypothesis proposed by the consultant that the project area constitutes a long-term, high density occupational complex.

We also note the comments provided in the ACHAR regarding the attempted rediscovery of AHIMS registered site 11-3-0083. BCD notes that the directions for finding the site, as recorded on the AHIMS site recording form, are very clear being, *"Approximately 3 km along Bruxner from Beardy River crossing located on the access track from the Bumaresq (sic) Switching station to structure W5 between structures 3 and 4."*

Although it appears the scale on the site map included in AHIMS maybe wrong, the map itself, along with the written description of the site location should make rediscovery possible. Given the fact that 11-3-0083 likely represents an extension of the hypothesised occupation complex and contains not only stone artefacts but also an Aboriginal scar tree, we recommend that further attempts, using all the information available, to rediscover AHIMS 11-3-0083 should be made. It is very likely that AHIMS 11-3-0083 represents a further extension of any occupational complex that may be present within the project area and is located in an area identified for impact by the proposed works.

Recommendation:

Further assessment of the site should include a concerted effort to rediscover the previously recorded AHIMS 11-3-0083 which we consider highly important to the contextual understanding of the Aboriginal Cultural Heritage (ACH) value of the project area.

We note the inclusion of an 'Unexpected Finds Procedure' (UFP) in the draft CHA. We support the proposed process however we note that it is incomplete. The UFP, as outlined in the draft CHA only includes steps up to the point where *"an appropriately qualified heritage professional should record the location and attributes of the site and determine the significance of the find."*

Given the particular nature of the task, this statement should be reworded to read *"an appropriately qualified archaeologist should record the location and attributes of the site and determine the significance of the find."*

Furthermore, we consider that a number of additional steps are required in order to complete the procedure and ensure appropriate management of any unexpected finds. Recommended additions to the process include;

- visually demarcating an appropriate perimeter to ensure no inadvertent disturbance or harm whilst the finds are being assessed.
- Identify the need to consider conservation *in-situ* wherever possible
- Either include a salvage methodology and/or require that an appropriate salvage methodology is formulated and agreed upon by BCD, the projects RAPs and the consultant archaeologist
- Include an unambiguous requirement for works to remain stopped until BCD provides written authorisation to continue/recommence.

Recommendation:

Further amendments are required to the Unexpected Finds Procedure.

We note that Section 10.2.1 of the CHA indicates that; *"during works, the location of all recorded Aboriginal heritage sites should be clearly marked on all construction plans for the PA and site foremen informed of their presence and the need to avoid disturbance;"*.

We concur with this approach however we recommend that protections for those sites/Aboriginal objects which are to be avoided is improved by demarcating with a visible barrier for the duration of the proposed works.

Recommendation:

The demarcation of Aboriginal heritage sites should be clearly marked on the ground to avoid potential impacts.

Although a number of Aboriginal scar trees will be retained, at least 3 Aboriginal scar trees have been marked for removal. We also note that the consultant considers Aboriginal scar trees to be common in the region and of low scientific significance. BCD disagrees with both of these statements and considers Aboriginal scar trees to be a relatively rare and a highly significant site type. As noted in the relevant documents a number of times, the region is considered highly understudied from an archaeological perspective with the number of historical local surveys specifically relevant to the project area being limited to one. Aboriginal scar trees are generally considered to be a significant and rare site type with their rarity (and thus significance) increasing rapidly as a result of natural, and anthropogenically accelerated, attrition.

We do not support the removal of any scar trees unless it is for the specific purpose of conservation. We also note the comments of RAPs, both in the document and in independent emails, regarding the proposed removal of the trees. The original draft CHA provided to the project RAPs for comment proposed to retain all Aboriginal scar trees *in-situ*. We further note that on 10 July 2019 the consultant contacted RAPs requesting their position on a new proposal to remove a number of Aboriginal scar trees as part of the proposed works. We note, and support, the comments of Helen Duroux that she does not support the removal of any Aboriginal scar trees within the project area. Table 10.1 of the CHA clearly indicates that the option to avoid all Aboriginal scar trees is available and we support this position. Furthermore, we note that AHIMS 11-3-0083, which the consultant was unable to rediscover as part of the CHA process, also contains an Aboriginal scar tree which should be rediscovered in order to ascertain its current status and include in the overall management of Aboriginal objects within the project area.

Recommendation:

All Aboriginal scar trees should be retained in-situ and the assessment of the significance relating to Aboriginal scar trees should be reviewed.