Our ref: DOC20/695124
Your ref: SSD 10415

Lander Robinson
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Dear Mr Robinson

Yarren Hut Solar Farm (SSD 10415)

Thank you for your request dated 12 August 2020 to the Biodiversity and Conservation Division (BCD) requesting advice on the Yarren Hut Solar Farm project (SSD 10415).

The proposal consists of a solar farm covering 92.7ha hectares near Nyngan. The majority of the site has been assessed by NGH Pty Ltd as Category 1 – exempt land (as defined in the *Local Land Services Act 2013*). The proposal will impact 3 paddock trees and 0.08ha of native roadside vegetation.

BCD has reviewed the biodiversity development assessment report (BDAR) for the project. BCD's biodiversity recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**.

The majority of the BCD comments and recommendations stem from inadequacies in the description of the development footprint associated with the site access from the Mitchell Highway. It is likely that improved site maps, photographs and habitat description will allow those issues to be resolved and the requirements of the Biodiversity Assessment Method (BAM) to be satisfied.

If you require any further information regarding this matter, please contact Erica Baigent, Conservation Planning Officer, via erica.baigent@environment.nsw.gov.au or (02) 6883 5311.

Yours sincerely

Samantha Wynn

Samantha Wynn
Senior Team Leader Planning North West
Biodiversity and Conservation Division

14 September 2020

Attachment A – BCD's Recommendations

Attachment B – BCD's Detailed Comments

Attachment A

BCD's recommendations

Yarren Hut Solar Farm – Environmental Impact Statement

1.1 Provide the following:

a) a clear map at an appropriate scale which confirms the proposed location and extent of the footprint associated with the access treatment, correctly aligned with an aerial image. The polygon showing the footprint should be outlined only, with no shading.

b) multiple photographs across the access treatment footprint to confirm the nature of the vegetation and structural elements in that area.

1.2 Describe the habitat assessment undertaken and present the results of that assessment.

1.3 Confirm the number of paddock trees that will be removed by the project.

2.1 Ensure all plot data associated with the project is presented in the BDAR.

2.2 Ensure all statements regarding the information used to avoid and minimise impacts on biodiversity are correct.

3.1 Adequately justify the exclusion of the squatter pigeon, bush stone curlew, major mitchell's cockatoo, barking owl, masked owl and little eagle from further assessment via effective use of the following:

a) a map of the final verified location, extent of the footprint and adequate site photographs (see Recommendation 2.1)

b) the habitat assessment results (see Recommendation 2.2)

c) peer-reviewed or other published information (referenced) relating to the microhabitats used by the subject species

to demonstrate the absence or degradation of habitat constraints or known microhabitats such that the subject species would no longer be present.

Alternatively, the BDAR should present an expert report(s) prepared in accordance with subsection 6.5.2 of the BAM, advising on the likelihood of the subject species being present on the subject land or specific vegetation zone.

4.1 Unless justification can be provided that survey conditions were optimal, the shrub sida should be assumed present or an expert report obtained to assess the presence or absence of this species.

5.1 Certify the BDAR, for instance by signing the first page. The date of submission of the BDAR must be within 14 days of the date shown on the finalised credit report generated using the BAM Calculator for the BDAR to be considered valid.

5.2 Map the location of the flora survey transects and specify their length.

5.3 Ensure descriptions of direct and indirect impacts and proposed mitigation measures are consistent in the EIS and BDAR.

5.4 Ensure all proposed mitigation measures are adequately described. For the restoration and enhancement actions noted in the BDAR, inclusion of an indicative map of the proposed location and extent of these measures is recommended.

BCD's detailed comments

Yarren Hut Solar Farm – Environmental Impact Statement (EIS)

1 Clarification of the development footprint and associated impacts is required.

The scale of the maps presented and some apparent conflict between them has made it difficult to verify the exact location of the 'access treatment' portion of the development footprint and the impact of the access area on native vegetation and habitat elements. Clarification of the footprint via a definitive map at an appropriate scale, habitat assessment results and adequate photos of this area will assist in addressing the comments and recommendations provided in this attachment.

Two example maps (Figure 3-1 and 6-1) from the Biodiversity Development Assessment Report (BDAR) are provided below. They appear to show two different alignments for the access treatment. The alignment shown in Figure 6-1 appears to conflict with that shown in the remainder of the maps in the BDAR.

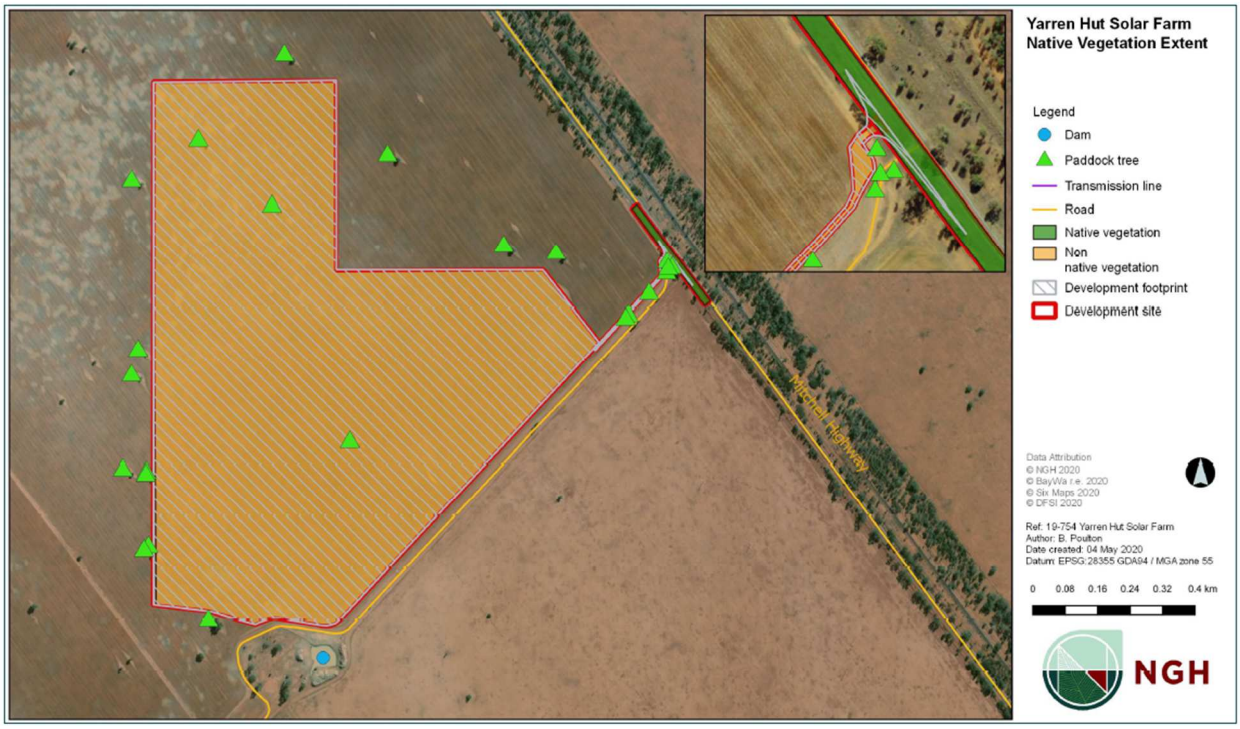


Figure 3-1 Native vegetation extent within the development site

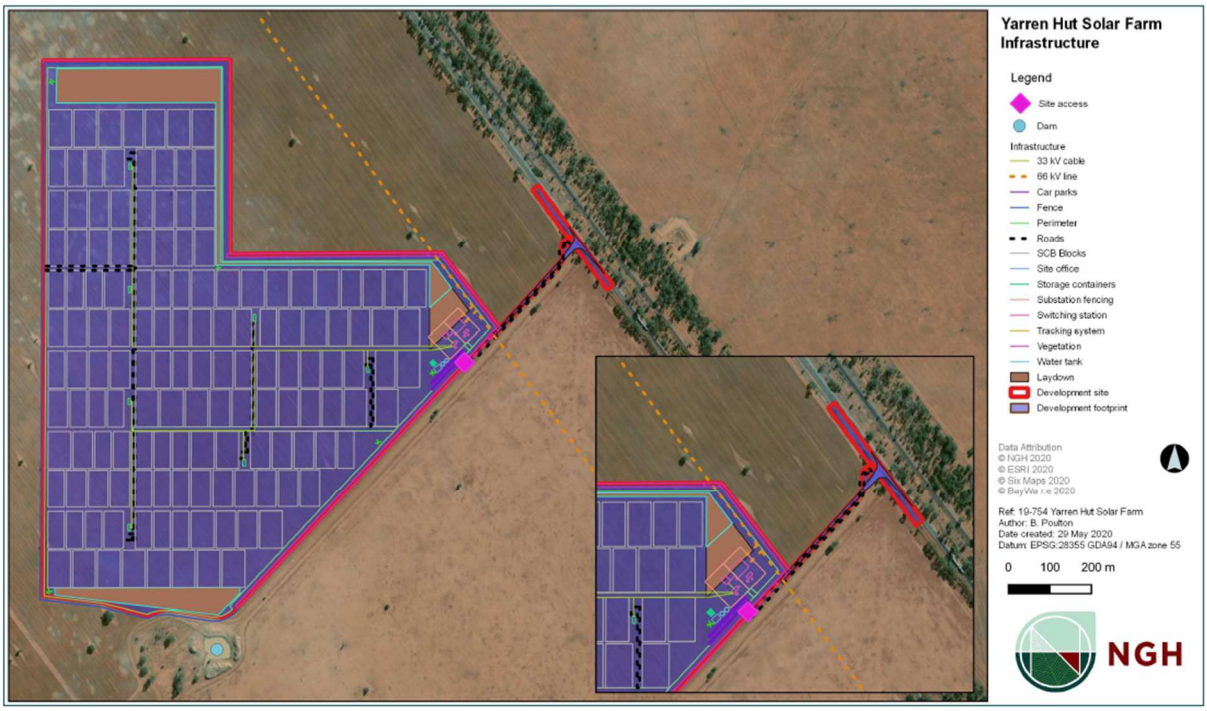
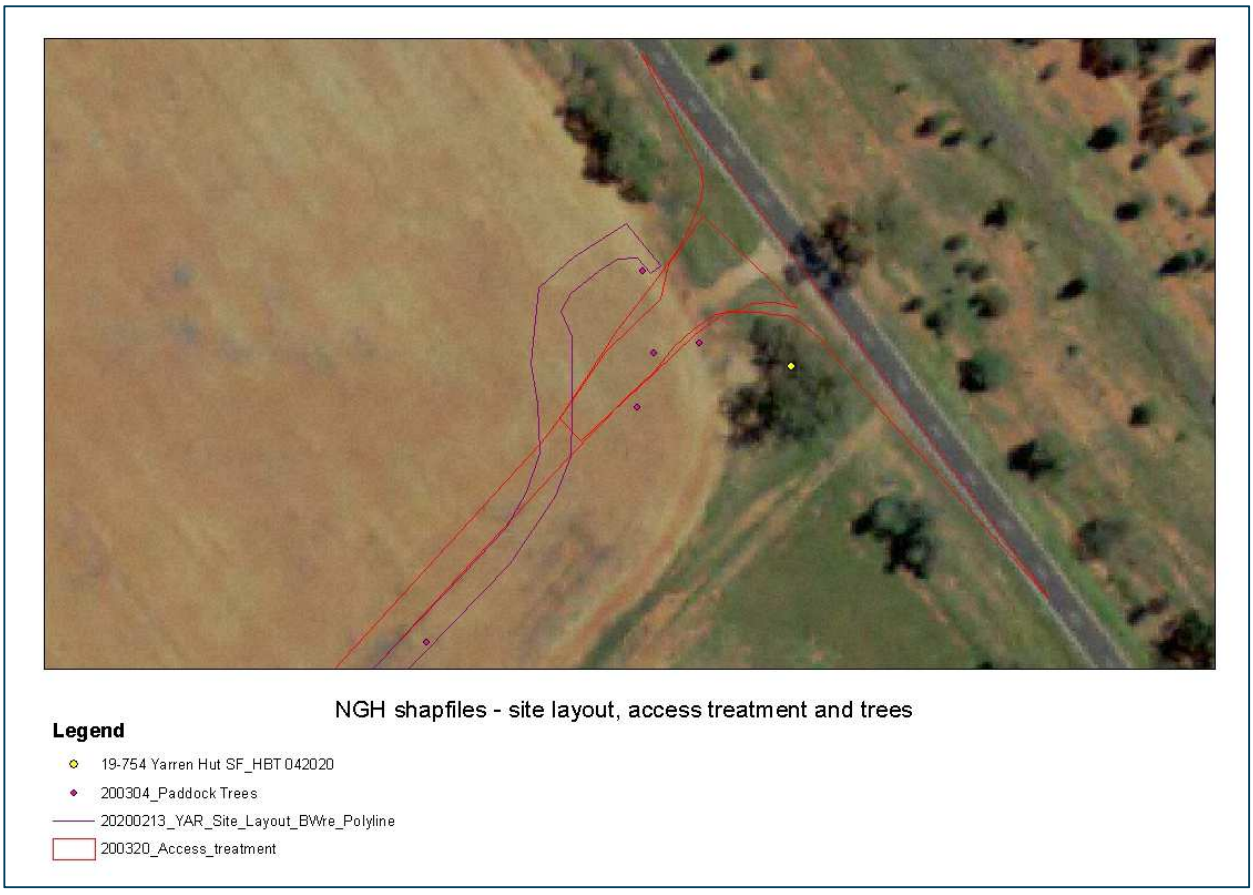


Figure 6-1 Final project layout

The map below shows the access treatment, site layout and recorded trees shapefiles provided to BCD by NGH. Despite checking the datum and projection of all layers, it appears there may be an issue in alignment of the files and the aerial image. Nevertheless, it appears the footprint shapefiles align with Figure 6-1 above but not the remainder of the maps in the BDAR.



Furthermore, it appears that the BAM plot established was located adjacent to, but outside of the development footprint. No plot data is provided from within the area of impact associated with the access treatment.

The BDAR (pages 50 and 59) states that whilst the BAM plot contained native shrubs and trees, the portion of footprint within the road reserve (0.08ha) contains only grass, grass-like and forb growth forms. Based on this, the future integrity score was calculated assuming that no shrubs or trees would be impacted.

BCD note the BAM calculator entry also assumes that no coarse woody debris (fallen logs) will be impacted. However, the BDAR description of direct impacts includes disturbance to stags and fallen timber and proposed mitigation measures include relocation of fallen timber and hollow logs.

Page 31 of the BDAR states that an *'onsite habitat assessment, including recording of important habitat features such as hollow-bearing trees'* was undertaken. No further details on the methods used, nor any resulting data, are presented. Only the data from the single BAM plot is included in the BDAR for zone 1.

A single hollow bearing eucalypt (>80cm dbh) was recorded in the BAM plot. Page 60 of the BDAR also notes the possibility that some additional hollows may be present and states *'… it was noted where it was considered likely that hollows were present but not visible from ground level'*. It is not clear where this information is presented nor how it has been considered in the BDAR.

Page 13 of the EIS also refers to the removal of four paddock trees, however the BDAR states that only three paddock trees will be removed.

Recommendations

1.1 Provide the following:

a) a clear map at an appropriate scale which confirms the proposed location and extent of the footprint associated with the access treatment, correctly aligned with an aerial image. The polygon showing the footprint should be outlined only, with no shading.

b) multiple photographs across the access treatment footprint to confirm the nature of the vegetation and structural elements in that area.

1.2 Describe the habitat assessment undertaken and present the results of that assessment.

1.3 Confirm the number of paddock trees that will be removed by the project.

2 Information supporting avoidance and minimisation of impacts is alluded to but not presented

Page 45 of the BDAR summarises the constraints analysis used to avoid and minimise biodiversity impacts. Some additional information is presented within the EIS.

The stated measures employed include *'avoiding impacts to vegetation with the highest vegetation integrity score'*. However, the BDAR states that only one Biodiversity Assessment Method (BAM) plot was established. If multiple plots were established to allow impacts to be focussed on areas with the lowest vegetation integrity scores, that additional data should be included in the BDAR.

Recommendations

2.1 Ensure all plot data associated with the project is presented in the BDAR.

2.2 Ensure all statements regarding the information used to avoid and minimise impacts on biodiversity are correct.

3 Exclusion of certain species credit species from further assessment has not been fully explained

In accordance with the BAM, removal of a species from the candidate list of species credit species for further assessment can only occur if the species:

a) has habitat constraints listed in the Threatened Biodiversity Data Collection (TBDC) and none of these constraints are present on the site; or

b) has geographic limitations listed in the species' NSW profile and the site is outside of the defined geographic area; or

c) is vagrant to the area; or

d) the habitat constraints listed in the TBDC, or known microhabitats that the species requires to persist or use, are degraded to the point where the species will no longer be present.

Conclusions regarding which candidate species credit species that require further assessment are presented in Table 4-2 of the BDAR (from page 32).

The BDAR is expected to present a description of the field technique used to assess the presence and condition of the constraint or microhabitat and any other data or information used to make the decisions on the final candidate list for further assessment.

Evidence to support the absence or unsuitability of the relevant habitat constraints or known microhabitats could include reference to attribute scores from assessment of vegetation integrity within the footprint to illustrate poor site condition, together with reference to peer-reviewed or other published information relating to the microhabitats used by the species, photographic evidence and maps etc.

The following species are examples where deficiencies and inconsistencies in depicting and describing the access treatment portion of the development footprint have made it difficult to verify the suitability of the assessor's conclusions. BCD expects that these issues will be easily resolved by the assessor.

- Squatter pigeon (*Geophaps scripta scripta*)

The BDAR considers this this species unlikely to breed in the road reserve as it is very thin, degraded and unsuitable habitat. No habitat constraints are listed in the TBDC for this species. Known microhabitats are not referenced.

- Bush-stone curlew (*Burhinus grallarius*)

This species was excluded from further assessment on the basis of habitat constraints (fallen/standing dead timber including logs) being absent. However, the BAM calculator entry concludes the habitat constraints are present but degraded. The BAM calculator entry also assumes no removal of fallen timber will occur, yet the BDAR includes disturbance to stags and fallen timber as expected impacts. Insufficient information is presented in the BDAR to demonstrate the presence or absence of fallen timber in the access treatment footprint, or suitability for this species.

- Major mitchell's cockatoo (*Lophochroa leadbeateri*), barking owl (*Ninox connivens*) and masked owl (*Tyto novaehollandiae*) and little eagle (*Hieraaetus morphnoides*)

The major mitchell's cockatoo, barking owl and masked owl were excluded from further assessment based on habitat constraints (hollow bearing trees with specific hollow diameters/height for each species) being absent. Similarly, the little eagle (*Hieraaetus morphnoides*) was excluded from further assessment based on the absence of nest trees.

The BDAR indicates a large hollow bearing eucalypt was recorded in the BAM plot adjacent to the access treatment footprint but its relevant characteristics compared to the habitat constraints for the subject species, and its proximity to the footprint are not clear.

Recommendation

3.2 Adequately justify the exclusion of the squatter pigeon, bush stone curlew, major mitchell's cockatoo, barking owl, masked owl and little eagle from further assessment via effective use of the following:

a) a map of the final verified location, extent of the footprint and adequate site photographs (see Recommendation 2.1)

b) the habitat assessment results (see Recommendation 2.2)

c) peer-reviewed or other published information (referenced) relating to the microhabitats used by the subject species

to demonstrate the absence or degradation of habitat constraints or known microhabitats such that the subject species would no longer be present.

Alternatively, the BDAR should present an expert report(s) prepared in accordance with subsection 6.5.2 of the BAM, advising on the likelihood of the subject species being present on the subject land or specific vegetation zone.

4 It is likely that survey conditions for the shrub sida were suboptimal

The BDAR concludes that suitable habitat for the shrub sida (*Sida rohlenae*) is present within the development footprint and this species was carried forward as a candidate species for further assessment. Floristic surveys were undertaken during late summer 2020 and page 59 of the BDAR notes the possibility that not all plant species present were detected due to seasonal and climatic constraints. Nevertheless, the BDAR has concluded the shrub sida to be absent from the development footprint based on the survey results.

BCD acknowledges that the targeted flora survey was conducted within the recommended months for the shrub sida. However, the site is located within an area that had been experiencing prolonged drought conditions and therefore the survey conditions are likely to have been suboptimal. Detection of the shrub sida has the potential to be substantially reduced during suboptimal survey conditions and under such conditions survey alone is not considered a reliable method to determine presence or absence. The BAM survey guide '*Surveying threatened plants and their habitats'* recommends that where suboptimal conditions such as prolonged drought are occurring, the assessor may choose to either use an expert report to assess the species presence or absence or alternatively the species can be assumed to be present at the development site.

Recommendation

4.1 Unless justification can be provided that survey conditions were optimal, the shrub sida should be assumed present or an expert report obtained to assess the presence or absence of this species.

5 Further matters need to be addressed

The following additional matters must be addressed to ensure the BDAR meets the requirements of the BAM:

- There is no indication that the BDAR has been certified by the assessor. A BDAR 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 BAM as at a specified date and that date is within 14 days of the date the report is so submitted (s 6.15(1) *Biodiversity Conservation Act 2016*).

- To demonstrate consistency with the department's BAM survey guide '*Surveying threatened plants and their habitats'*, the location and total transect lengths for the flora survey should be included in the BDAR.
- The nature and extent of indirect impacts is not well described in all instances. The use of a 2m buffer to define the extent of indirect impacts is not explained (Figure 7.1). It is not clear how the BDAR has utilised the results of the noise and vibration impact assessment undertaken for the project. The EIS contains some additional mitigation measures for light and dust impacts which are not referenced in the BDAR.
- In the section of the BDAR describing measures to avoid and minimise impacts, the BDAR refers to:
    - restoration and rehabilitation (as wildlife habitat) of ten farm dams avoided via the final site layout.
    - developing a biodiversity enhancement plan in consultation with local Landcare to make provision for the ecological restoration, rehabilitation and ongoing maintenance of retained native vegetation habitat on the development site.
    - establishment of plantings of native species to enhance connectivity between the riparian zone and roadside vegetation. It is not clear what riparian zone is being referred to here.

  These measures are not referred to in the EIS. No maps are provided within the BDAR to indicate the proposed location and extent of these measures.

Recommendations

5.1 Certify the BDAR, for instance by signing the first page. The date of certification of the BDAR must be within 14 days of the date shown on the finalised credit report generated using the BAM Calculator for the BDAR to be considered valid.

5.2 Map the location of the flora survey transects and specify their length.

5.3 Ensure descriptions of direct and indirect impacts and proposed mitigation measures are consistent in the EIS and BDAR.

5.4 Ensure all proposed mitigation measures are adequately described. For the restoration and enhancement actions noted in the BDAR, inclusion of an indicative map of the proposed location and extent of these measures is recommended.

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