Our ref: DOC22/233283
Your ref: SSD-12346552

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Dear Javier

Greater Western Battery Energy Storage System – EIS Exhibition

Thank you for your e-mail dated 2 March 2022 to the Biodiversity, Conservation and Science Directorate (BCS) of the Department of Planning and Environment (DPE) inviting comments on the Environmental Impact Statement (EIS) for the Greater Western Battery Energy Storage System.

BCS has reviewed the Biodiversity Development Assessment Report (BDAR) for the project. Our biodiversity recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**.

If you require any further information regarding this matter, please contact Ben Ellis, Principal Project Officer, via ben.ellis@environment.nsw.gov.au or (02) 8275 1838.

Yours sincerely

Samantha Wynn

Samantha Wynn
Senior Team Leader Planning North West
Biodiversity, Conservation and Science Directorate

24 March 2022

Attachment A – BCS's Recommendations

Attachment B – BCS's Detailed Comments

BCS's recommendations

Greater Western Battery Energy Storage System – Environmental Impact Statement

BAM	Biodiversity Assessment Method
BAM-C	Biodiversity Assessment Method Calculator
BC Act	*Biodiversity Conservation Act 2016*
BC Regulation	Biodiversity Conservation Regulation 2017
BDAR	Biodiversity Development Assessment Report
EEC	Endangered Ecological Community
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
HBT	Hollow bearing tree
HTE	High threat exotic
MNES	Matters of National Environmental Significance
PCT	Plant Community Type
SAII	Serious and Irreversible Impacts
TEC	Threatened Ecological Community
TBDC	Threatened Biodiversity Data Collection
VI score	Vegetation Integrity Score

Recommendations

1.1. Rationalise the differing impact extents and project definitions within the BDAR and update the BAM-C if necessary.

1.2. Confirm that all development components which will result in surface disturbance to biodiversity values have been addressed in Stage 2 of the BDAR and associated BAM-C calculations.

1.3. If the final impact resulting from the project has yet to be determined assume a worse-case scenario and calculate a maximum credit obligation accordingly.

2.1. Clarify if all areas of native vegetation and habitat will be avoided by the use of horizontal directional drilling techniques within the transmission line corridor.

2.2. Spatially define the areas of trenching and horizontal directional drilling within a Figure in the BDAR.

3.1. Undertake finer scale vegetation extent mapping and include both woody and non-woody vegetation within mapping.

4.1. Reconcile the identified errors in the calculator with the data in the BDAR.

5.1. Revise the exclusion of ecosystem credit species from the BAM-C.

6.1. Reconcile and correct the errors within the BAM-C to be consistent with the findings of the BDAR.

7.1. Revise the species polygon to be consistent with the advice contained with the species TBDC profile.

8.1. Provide adequate justification on why the Vegetation Zone 732-NOG could be discounted as potential habitat for Austral Toadflax, such that no targeted survey is necessary, beyond reasonable doubt. Alternatively conduct further targeted survey within this habitat, obtain an expert report or assume presence.

9.1. Assess all impacts resulting from the development on the identified population of *Veronica blakelyi*. All residual impacts, including residual indirect impacts, should be calculated and offset.

10.1. Address the inconsistencies between Figures within the BDAR and update the BAM-C calculations as necessary.

11.1. Undertake a Koala assessment report prepared according to the requirements of the Koala SEPP.

12.1. The assessor should generate and attach a Biodiversity Credit Report (like-for-like) from the BAM-C to the BDAR.

Attachment B

BCS's detailed comments

Greater Western Battery Energy Storage System – Environmental Impact Statement

1. The definition of the impact resulting from the project should be made explicit and rationalised within the BDAR

Section 1.3 of the BDAR identifies the following key terms within the BDAR:

"The subject land is defined as the total area of proposed disturbance, encompassing the proposed development footprint and all areas that could be disturbed, including direct, indirect and prescribed impacts. The subject land is approximately 52.72 ha in area…

The development footprint is the area of land that would be required to construct the Project (including the BESS, the new transmission line, and part of the Transgrid Wallerawang 330 kV substation. This area would be directly impacted by the Project…. The development footprint is approximately 25.29 ha in area."

BCS have noted several sections within the BDAR and BAM-C which are inconsistent with the key terms identified in Section 1.3.

For example, the development footprint (defined in Section 1.3 as the area to be directly impacted by the project) is comprised of approximately 17.5 hectares of native vegetation. However, the BDAR and associated BAM-C calculations only account for the loss of 0.93 hectares of native vegetation and habitat.

In addition, within the spatial data supplied to BCS two other development components are identified:

- The construction footprint – an area of 9.15 hectares within the development footprint; and
- The development site – an area of 220 hectares extending outside of the subject land

It is unclear to BCS, based on the differing definitions above, what the full scope of residual impact to biodiversity values will be. The BDAR should be explicit in defining the area of impact resulting from the development and rationalise all of the different key terms within the BDAR.

All activities and development components which will result in surface disturbance to biodiversity values i.e. direct clearing, indirect impacts and prescribed impacts should be defined in Section 1.3 of the BDAR, accounted for in Stage 2 of the BDAR and included within BAM-C calculations. If the final impact resulting from the project has yet to be determined for the biodiversity values that may be impacted, a worse-case scenario must be assumed, and a maximum credit obligation calculated accordingly.

The assessor should note that if areas of impact are changed within the BDAR, this must also be made consistent within the BAM-C. Changes to the BAM-C have the potential to affect the minimum survey requirements associated within the project i.e. minimum BAM plots required for vegetation zones or candidate species lists and also the total credit obligation of the project.

Recommendations

1.1. Rationalise the differing impact extents and project definitions within the BDAR and update the BAM-C if necessary.

1.2. Confirm that all development components which will result in surface disturbance to biodiversity values have been addressed in Stage 2 of the BDAR and associated BAM-C calculations.

1.3. If the final impact resulting from the project has yet to be determined assume a worse-case scenario and calculate a maximum credit obligation accordingly.

2. Areas proposed to be underbored should be spatially defined within the BDAR

Section 1.1 of the BDAR states that:

The proposed transmission line would be constructed using a combination of an underboring method known as horizontal directional drilling (HDD) and open trenching. HDD would be used where required to avoid areas of sensitivity, including Aboriginal heritage, biodiversity, Pipers Flat Creek, and rail crossings.

BCS notes that there is no figure within the BDAR or spatial data which depict the areas within the proposed transmission line which will receive horizontal directional drilling and which will be impacted by trenching. It is important that these areas are explicitly defined in the BDAR as any areas of native vegetation which will disturbed by trenching will need to be accounted for in the residual impact of the development and offset.

A figure showing areas of trenching and areas of horizontal directional drilling would also provide a useful reference for the consent authority to refer to when preparing conditions of consent for the project, if approval is granted.

Recommendations

2.1. Clarify if all areas of native vegetation and habitat will be avoided by the use of horizontal directional drilling techniques within the transmission line corridor.

2.2. Spatially define the areas of trenching and horizontal directional drilling within a Figure in the BDAR.

3. The mapping of native vegetation extent requires consistency between Figures 4 and 5 of the BDAR and the vegetation cover class estimate requires revision

BCS notes that the native vegetation cover within the 1500m landscape buffer has only been coarsely mapped. An example of potential native vegetation which has not been included within the vegetation cover class assessment has been provided in Figure 1 below.

In addition, areas of native vegetation extent (derived native grassland) have been excluded from Figure 4 of the BDAR and the landscape vegetation assessment despite these areas being identified within the subject site's native vegetation extent mapping in Figure 5.

The assessor should note that, native vegetation extent identified and mapped within the subject site (inclusive of both woody and non-woody native vegetation) is required to be included within the native vegetation cover polygon on the landscape assessment map and the vegetation % cover class assessment (Section 3.2 of the BAM 2020).

Further clarification is provided in the Native Vegetation Cover Section of the BAM Operational Manual Stage 1 which states that the mapping requirements for the landscape vegetation cover class assessment must mirror that for the subject site and must be inclusive of all areas of native vegetation, including areas which are ground cover only.

The assessor should undertake finer scale vegetation extent mapping and include both woody and non-woody vegetation, in accordance with the requirements set out within Section 3.2 of the BAM 2020.

If areas of native vegetation extent are changed within the BDAR, this must also be made consistent within the BAM-C. The assessor should note that as vegetation cover estimates function as a habitat suitability filter for candidate threatened species this may also impact the species list generated for the project.

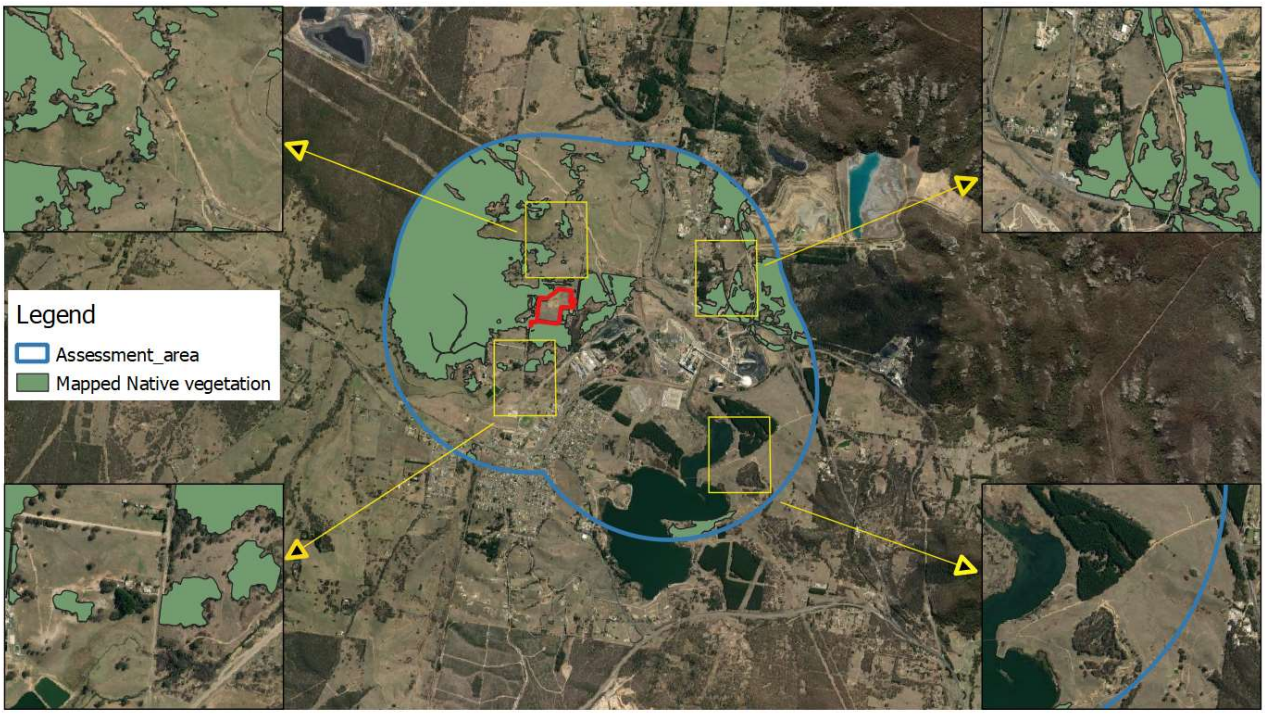

Figure 1 Mapped native vegetation extent within 1500m buffer

Recommendation

3.1. Undertake finer scale vegetation extent mapping and include both woody and non-woody vegetation within mapping

4. The assessor should assign appropriate spatial locations and identifiers to each plot entered into the BAM-C

BCS have identified inconsistencies in the plot identification and spatial location for all plots entered into the BAM-C as compared to the BDAR, this includes:

- All plots being assigned a generic identifier rather than being made consistent with the plot identifiers listed in the BDAR, i.e. there are 4 different plots named "*Plot 1*" entered into the BAM-C; and
- The spatial location of all plots have been assigned the numbers "123456" as their geographic coordinates, rather than their actual location.

The inaccurate entering of information into the BAM-C creates difficulty in the review process when comparing data within the BAM-C to data within the BDAR. The spatial location and identifiers need to be updated in order for BCS to complete the review of the BDAR.

Recommendation

4.1. Reconcile the identified errors in the calculator with the data in the BDAR.

5. The exclusion of ecosystem credit species within the BAM-C requires revision

Several ecosystem credit species have been removed from further assessment within Tab 4 the BAM-C. The removal of these species is not consistent with the assessment requirements set out in Steps 2 and 3 of Section 5 of the BAM. A species can only be removed from the list if the species:

A.) has habitat constraints listed in the TBDC and none of these constraints are present on the site. Documentation in the BDAR should reflect the TBDC information and evidence that the features are not present (field data); or

B) where habitat constraints are not listed in the TBDC and the assessor proposes to remove the species based on absence of habitat constraints or known microhabitats that the species requires to persist, the assessor must provide adequate justification in the BDAR, this must be based on evidence such as published literature. As a minimum, the justification must include;

i. the specific habitat constraint(s) or microhabitat missing from the vegetation zone; and

ii. a description of the field technique used to assess the presence of the constraint or microhabitat (eg the survey effort and technique used to assess hollow-bearing trees) and any other data or information used to make the decision; or

C) has geographic limitations listed in the species' NSW profile and the site is outside of the defined geographic area (note listed geographic limitations may be specific to IBRA sub regions); or

D) is vagrant to the area. Vagrancy is taken as the record being well outside the species range or natural distribution. The suspect record will need to be reviewed against the species known distribution and the assessor will need to confirm with species experts that it is likely to be a vagrant. If agreed by experts the assessor should contact BCS to have the record quarantined from BioNet Atlas and re-labelled as vagrant. The BDAR will need to contain supporting information such as who was contacted, when, their credentials and the resultant response from BCS.

The following species, which have been excluded as candidates within Tab 4 of the BAM-C, do not have habitat constraints or geographic limitations listed in the TBDC and are not considered vagrant. Therefore, if the assessor proposes to exclude these species adequate justification must be provided in the BDAR as per (B) above;

- Spotted-tailed Quoll
- White-throated Needletail
- Barking Owl (Foraging Habitat)
- Rosenberg's Goanna

The assessor should note that although the presence/absence of records for specific species may be used to inform the overall assessment, using the absence or paucity of BioNet records to exclude candidate species is not a valid step outlined in Section 5 of the BAM.

Recommendation

5.1. Revise the exclusion of ecosystem credit species from the BAM-C

6. The exclusion of species credit species within the BAM-C requires revision

Several species credit species have been removed from further assessment within Tab 5 the BAM-C based on a lack of suitable habitat being present within the subject land, including:

- Silver-leafed Gum
- Hoary Sunray
- Tarengo Leek Orchid
- Silky Swainson-pea
- Austral Toadflax
- *Veronica blakelyi*
- Eastern Pygmy-possum

From review of Table A.1 and A.2 of the BDAR many of the above species do have suitable habitat within the site but were removed as candidate species on the basis of targeted survey being conducted (Tab 6 of the BAM-C). For BCS to review if the exclusion of these species is appropriate i.e. surveys conducted during appropriate survey windows, the BAM-C case should be revised with the appropriate basis for candidate species exclusion being applied.

In relation to *Veronica blakelyi* BCS notes that the species has been excluded as a candidate from Tab 5 despite it being incidentally recorded by the assessor directly adjacent to the project's construction footprint (See recommendation 9.1 below).

In relation to the Eastern Pygmy Possum BCS notes that the species has been removed as a candidate species from Tab 5 despite it being stated in the BDAR that the species was assumed present and a species polygon prepared.

In addition to the list of species above there are several species which have been stated within the BDAR to have been assumed present (with no targeted survey occurring) but have been excluded on the basis of targeted survey within Tab 6 of the BAM-C, these include:

- Large-eared Pied Bat
- Large Bent-winged Bat
- Purple Copper Butterfly

Recommendation

6.1. Reconcile and correct the errors within the BAM-C to be consistent with the findings of the BDAR.

7. The species polygon extent for the Purple Copper Butterfly is not adequate

For the Purple Copper Butterfly Section 4.2.3 of the BDAR states that:

Targeted survey could not be conducted for the species within the allowable surveyable period, and thus targeted survey was not performed. However, habitat mapping was carried out in March 2021 for the species, including mapping all areas containing Bursaria spinosa subsp. lasiophylla identified within the development footprint.

From review of the BDAR it is unclear how the extent of the Purple Copper Butterfly species polygon has been mapped.

It is noted that the species polygon does not align with the location of BAM Plot 3 which detected 20 individuals of *Busaria spinosa subsp. lasiophylla*, nor is the species polygon inclusive of the incidentally recorded individuals of *Busaria spinosa* subsp. *lasiophylla* recorded within the development footprint (See Figure 2 below).

The TBDC defines the habitat constraints for Purple Copper Butterfly as "*Bursaria spinosa or within 40m of Bursaria spinosa*". As such, the presence of *Busaria* and areas within 40m of *Busaria* should form part of habitat mapping and the species polygon for the Purple Copper Butterfly.

Figure 2 Purple Copper Butterfly and *Busaira* locations

Recommendation

7.1. Revise the species polygon to be consistent with the advice contained with the species TBDC profile.

8. The habitat suitability assessment and targeted survey effort for Austral Toadflax is not adequate

Section 4.2.2 of the BDAR states that:

"Portions of the development footprint were not subject to targeted survey for threatened flora, as suitable habitat was not present." From review of Figure 8 it is understood that this includes the majority of the Vegetation Zone 732-NOG.

The TBDC profile for Austral Toadflax states that:

"Species may be perennial below ground and ephemeral above ground. Species can occur within un-treed native grassland or heterogeneous native/exotic grassland if host flora for parasitisation are present".

Given the composition of this vegetation zone has been described to contain "*a reduced representation of native grass and forbs species dominated by a composite of exotic pasture species"* it is unclear to BCS why this vegetation zone was discounted as suitable habitat for Austral Toadflax.

The assessor should provide further explanation and justification on why the Vegetation Zone 732-NOG could be discounted as potential habitat for Austral Toadflax, such that no targeted survey is necessary, beyond reasonable doubt. Alternatively, the assessor should conduct further targeted survey within this habitat, obtain an expert report or assume presence.

Recommendation

8.1. Provide adequate justification on why the Vegetation Zone 732-NOG could be discounted as potential habitat for Austral Toadflax, such that no targeted survey is necessary, beyond reasonable doubt. Alternatively conduct further targeted survey within this habitat, obtain an expert report or assume presence.

9. The direct and indirect impacts on *Veronica blakelyi* should be appropriately assessed, mitigated and offset within the BDAR

From the spatial data provided to BCS it is noted that a population of 30 individuals of *Veronica blakelyi* were identified directly adjacent to the outer boundary of the project's construction footprint (See Figure 3 below).

In relation to the assessment of *Veronica blakelyi* within the BDAR it has been stated that:

This species has been previously recorded on 7 occasions within 10 km of the subject land, with closest record being approximately 3.2 km from the subject land. Whilst potential habitat for this species in the development footprint is present, no specimens were identified during targeted flora surveys.

Section 8 of the BAM 2020 states that the assessor must assess the direct, indirect and prescribed impacts resulting from the project, this includes the following impacts which would likely be relevant to this population:

- Direct loss via clearing of habitat or individuals
- Indirect impacts, including:
    - inadvertent impacts on adjacent habitat or vegetation

- reduced viability of adjacent habitat due to edge effects
- reduced viability of adjacent habitat due to noise, dust or light spill
- transport of weeds and pathogens from the site to adjacent vegetation
- trampling of threatened flora species

The assessor should assess all impacts resulting from the development on the identified population of *Veronica blakelyi.* All residual impacts, including residual indirect impacts, should be calculated and offset.

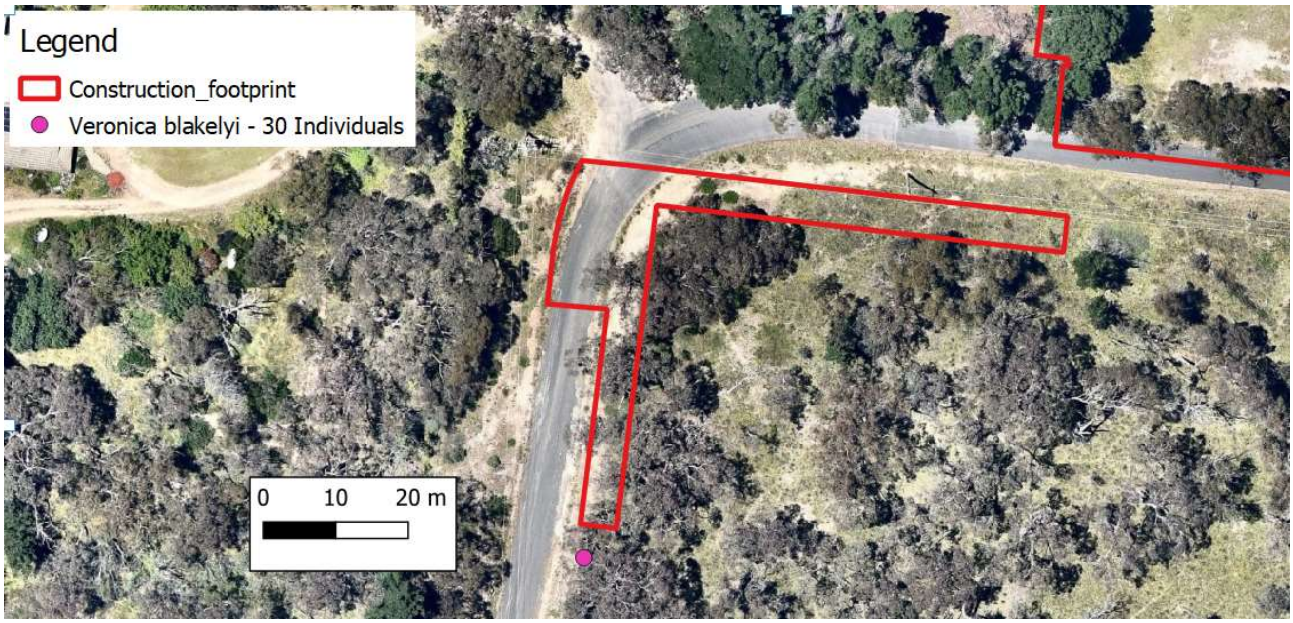

Figure 3 Veronica blakelyi population identified adjacent to the construction footprint

Recommendation

9.1. Assess all impacts resulting from the development on the identified population of *Veronica blakelyi*. All residual impacts, including residual indirect impacts, should be calculated and offset.

10. The inconsistencies between Figures should be rationalised and the BAM-C should be updated if necessary

There are several figures within the BDAR which display the locations of all Black Gums located within the subject site. However, some figures show a significantly higher amount of Black Gums present which are absent from others.

As an example, Figure 11 displays individuals of Black Gum which are absent from Figure 10. The discrepancies between these two maps are shown in Figure 4 below.

From BCS review of the BAM-C only two individuals of Black Gum are proposed to be cleared for the project. However, there is additional Black Gums identified within the centre of the proposed construction footprint in some figures.

The inconsistencies between the figures in the BDAR should be updated, if any additional Black Gums are required for clearing the projects residual offset calculations this should also be updated.

Figure 4 Extract of inconsistent Figures within the BDAR (red squares delineating discrepancies)

Recommendation

10.1. Address the inconsistencies between figures within the BDAR and update the BAM-C calculations as necessary

11. An assessment under SEPP 2021 (Koala Habitat Protection) should be undertaken

The SEPP 2021 - Koala Habitat Protection (Koala SEPP) is mentioned in Section 1.5 of the BDAR as key legislation which applies to the project. However, this is the only instance in the BDAR where this legislation is mentioned.

Lithgow LGA is listed under Schedule 1 of the Koala SEPP. As such the assessor must undertake a Koala Assessment Report prepared according to the 5 key principles detailed in the Koala SEPP.

Recommendation

11.1. Undertake a Koala assessment report prepared according to the requirements of the Koala SEPP

12. A like-for-like credit report should be appended to the BDAR

Section 9 of the BDAR contains a Biodiversity Assessment Method (BAM) credit summary report generated from the BAM Calculator (BAM-C). A credit summary report does not contain the detail necessary to determine the credit trading options available for the project.

It is recommended that a like-for-like credit report is also appended to the BDAR. A like-for-like credit report allows all relevant parties including the proponent, BCS and the consent authority to trace the like-for-like credit trading options available to satisfy the credit obligation for the project.

Recommendation

12.1. The assessor should generate and attach a Biodiversity Credit Report (like-for-like) from the BAM-C to the BDAR