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ATT: Dale Holder

15 August 2020

**RE: PROPOSED BATTERY ENERGY STORAGE SYSTEM FOR THE AEP BLOEMSMOND SOLAR 2 ON PORTIONS 5 AND 14 OF THE FARM BLOEMSMOND 455**

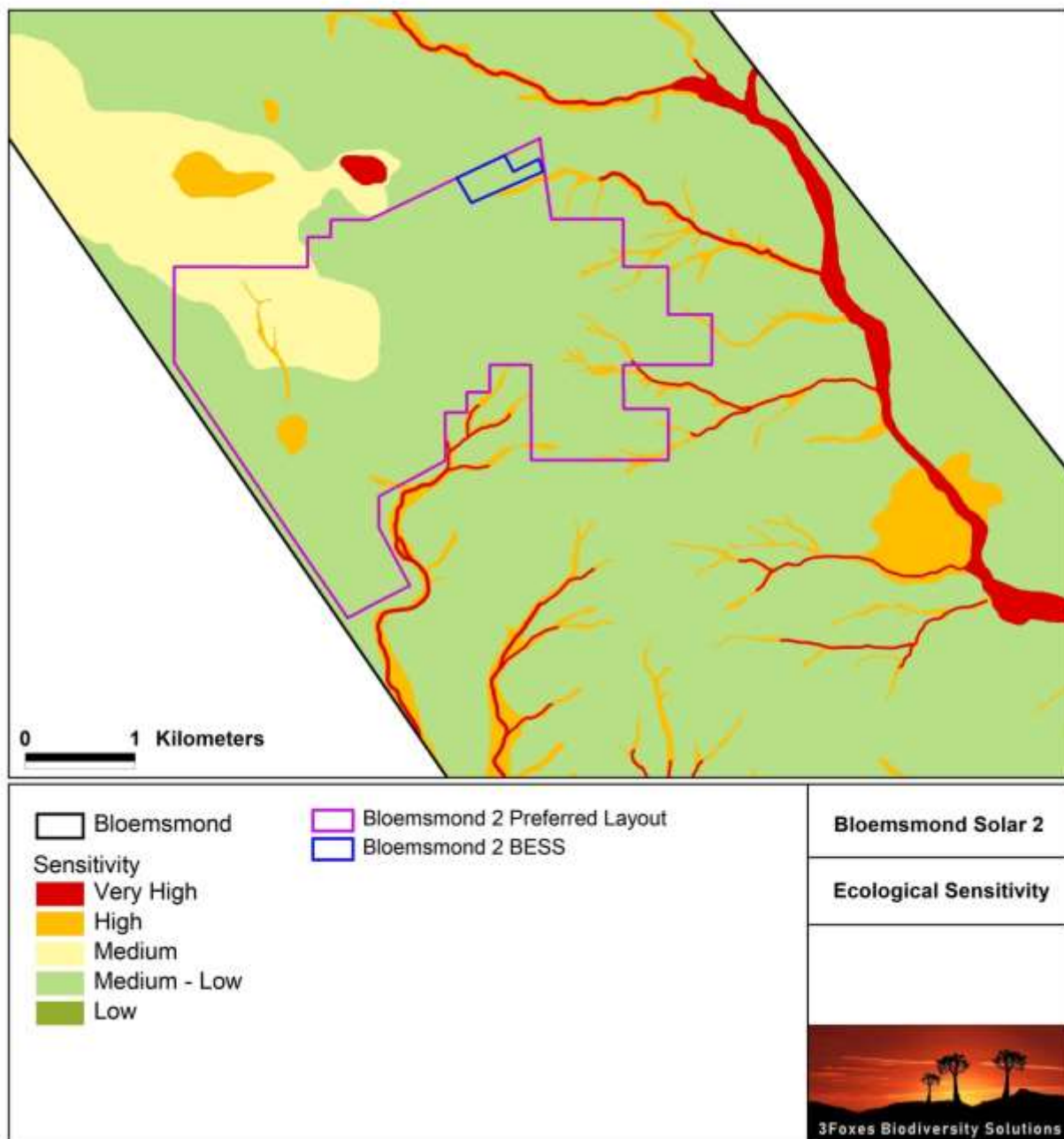
Cape Environmental Assessment Practitioners (Cape EAPrac) have been appointed by AEP Bloemsmond Solar 2 (Pty) Ltd. to apply for an amendment to the EA for the authorised Bloemsmond Solar 2. The applicant intends to amend the EA to make provision for a Battery Energy Storage System (BESS) within the authorised footprint, adjacent to the on-site sub-station. The applicant intends including provision for an up to 500 Megawatt Hour (MW/h) BESS on approximately 4.2 hectares within the authorised footprint. As part of the amendment application, Cape EAPrac has requested input from 3Foxes Biodiversity Solutions to provide an assessment of the proposed changes in the context of the original Ecological Impact Assessment and to determine any novel impacts resulting from the proposed amendment. The request includes the following:

1. Whether the inclusion of a BESS adjacent to the on-site substation will change the nature or significance of any of the impacts as assessed in the original ecological study.
2. Whether the BESS is likely to result in any additional impacts that were not previously assessed.
3. Whether any additional management outcomes or mitigation measures would be applicable to the BESS.

**1. Change in Impact Due to the Proposed Inclusion of the BESS**

The layout of the Bloemsmond 2 facility and the location of the BESS within the footprint area is indicated below in Figure 1. The BESS is located adjacent to the facility substation and is within a low sensitivity area with no features of concern in close proximity to the BESS. In the original ecological assessment, it was assumed that the habitat within the facility would be largely lost in its entirety to the development.

As such, the addition of the BESS within the assessed footprint would not increase direct habitat loss. In terms of additional risks, there do not appear to be any significant additional risks to ecology associated with the BESS. The original impacts associated with the Bloemsmond 2 facility are illustrated below in Table 1. Based on the footprint and technical specifications of the BESS as provided for this statement, there are no changes to the assessed impacts that are warranted based on the inclusion of the BESS into the Bloemsmond 2 facility.



**Figure 1.** Ecological sensitivity map of the area including and surrounding the Bloemsmond 2 site showing the approved footprint of the project and the location of the BESS within the site.

**Table 2.** The pre- and post-mitigation ecological impacts associated with the Bloemsmond 2 facility as originally assessed which remain applicable.

<b>Impact</b>	<b>Before Mitigation</b>	<b>After Mitigation</b>
<b>Construction Phase</b>		
Impacts on vegetation and plant species of conservation concern	Medium Negative	Low Negative
Construction phase impact on fauna	Medium Negative	Low Negative
Increased erosion risk	Medium Negative	Low Negative
<b>Operational Phase</b>		
Operational Phase impacts on fauna	Low Negative	Low Negative
Increased alien plant invasion	Medium Negative	Low Negative
Increased erosion risk	Medium Negative	Low Negative
<b>Decommissioning Phase</b>		
Increased alien plant invasion	Medium Negative	Low Negative
Faunal impacts due to decommissioning	Low Negative	Low Negative
<b>Cumulative impacts</b>		
Cumulative impacts on broad-scale ecological processes	Medium Negative	Low Negative

## **2. Potential for Novel Impacts Associated with the BESS**

The BESS consists of battery storage units in containers and would not change the nature of impacts associated with the solar facility. However, the BESS would include cooling systems which presumably would include fans that would generate some noise above that which would have occurred at the substation alone. As such, the BESS may increase noise associated with the facility to a small degree. However, since this is likely to be of a low intensity, this is not seen as adding significant impact to the existing development. Overall, there are no additional or novel impacts associated with the BESS that were not already assessed for the existing solar facility.

## **3. Additional Mitigation Measures**

No additional mitigation measures or changes to the EMPr mitigation measures would be required in terms of this amendment, as no significant change to impacts or new impacts will occur. All the original avoidance and mitigation measures as indicated in the original botanical and faunal study are still relevant and applicable to the amended layout and must be implemented.

## Conclusions and Summary Findings

- The footprint of the BESS would be entirely contained within the assessed footprint of the original Bloemsmond 2 PV facility. The affected area is classified as low sensitivity and there are no sensitive features in close proximity to the BESS location.
- The original impacts as assessed for the Bloemsmond 2 facility are considered still applicable to the facility with the inclusion of the BESS.
- There are no novel or changed impacts associated with the inclusion of the BESS within the facility.
- The Bloemsmond 2 amendment is therefore supported in terms of terrestrial ecology impacts. The impact of the amended layout on fauna and flora would be similar to the authorised layout and no changes to the assessed impacts are considered warranted.
- No additional mitigation or avoidance measures are recommended as a result of the amendment. The original mitigation and avoidance measures as included in the EIA should still be applied to the current study.

Prepared by Simon Todd

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