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Date 2 November 2020

Our ref: 20SYD-16247

Richard Crookes Constructions
Level 3, 4 Broadcast Way
Artarmon NSW 2064

Attention: Anthony Mayo

Dear Anthony,

RE: Response to Department of Planning, Industry and Environment comments

Eco Logical Australia Pty Ltd (ELA) has been asked by Richard Crookes Constructions on behalf of the Department of Education to provide an explanation regarding the comments provided by the Environment, Energy and Science Group (EES) in the Department of Planning, Industry and Environment (DPIE) following their review of the Biodiversity Development Assessment Report (BDAR) version 5 prepared by ELA (last updated on 5 June 2020) for the Chatswood Education Precinct State Significant Development (SSD) application (SSD 9483).

ELA has provided a table below containing the comments provided by DPIE and ELA's response to the comments. ELA has also provided a list of actions required to finalise the Chatswood Education Precinct SSD application, also provided below.

Regards,

Belinda Failes
Ecologist/ BAM accredited assessor (BAAS 18159)

EES Comments	ELA explanation	Actions
Finalisation of report		
EES previously advised the BAM Calculator output included in the BDAR should be from the finalised assessment calculation, prior to an approval being granted. BOAMS administrator has advised that the two BAM Calculator assessments have not been finalised and the parent case has not been submitted in BOAMS, meaning the data cannot be checked. Appendix E of BDAR also still shows the BAM Calculator output of cases that are yet "To be finalised".	ELA has received a contact person from the School Infrastructure NSW. Their details have been entered into the case party and the BDAR can now be finalised pending this review.	ELA can finalise the case studies and submit version 6 of the BDAR and spatial data to EES for review.
Introduction to the biodiversity assessment		
It is noted that updates to the development footprint have been made in response to matters raised by EES and that this has resulted in a larger development footprint area and a requirement for an additional 3 ecosystem credits for the proposed works. This is reflected in output from BAM Calculator in Appendix E; however, it is recommended that the consent authority ensure that this remains the case in the finalised BAM Calculator case.	ELA can now finalise the latest BDAR into the BOAMs which includes the additional 3 ecosystem credits for the proposed works.	ELA can finalise the case studies and submit version 6 of the BDAR and spatial data to EES for review.
Identification of landscape features at the development site		
Based on previous comments by EES the landscape features in the calculator and in Figure 2 of the BDAR have been updated. However, Figure 2 now has a thick light blue line that isn't identified in legend.	ELA can confirm that the thick light blue line was the LGA line. An updated Figure 2 has been provided in version 6 of the BDAR.	An updated version of Figure 2 has been provided in Version 6 of the BDAR
Native vegetation cover		
The revised BDAR states that "Areas mapped by OEH (2016) which include mapped vegetation communities and areas mapped as Urban native/exotic were included in the percent native vegetation." However, EES's specific query about the area of native vegetation within the 1500 metres buffer area has not been addressed. Comparison of spatial data provided by the accredited assessor from ELA and shows different areas being used by ELA in the calculation compared to the latest version 3 of the Sydney Metro vegetation mapping (VIS catalogue E_4489; OEH 2016). Under EES's analysis, the calculated total area of mapped vegetation within the assessment circle was 341.5 ha including 217.18 ha of the 'urban native/exotic' map unit. Whereas ELA's spatial data includes only 70.5 ha of this 'urban native/exotic' map unit. If the larger area is used, the NVC class required to be selected in the BAM Calculator is	ELA has packaged up the spatial data used to assess the native vegetation within the 1,500 m assessment area and will submit this in the BOAMs for EES review. ELA has reassessed the extent of native vegetation and can confirm that we have used OEH 2016 version 3. ELA has calculated 176 ha of native vegetation which includes Urban native/exotic (70.5 ha) and additional 7 ha of Urban exotic/native or areas not previously assessed was included as part of the native vegetation. The majority of the 7 ha of areas not previously assessed includes areas within the development site which was validated by ELA during field surveys.	ELA will provide the latest spatial data for EES review.

EES Comments	ELA explanation	Actions
the next highest class, which may affect (increase) the calculation biodiversity credits required. It is recommended that this be checked and reviewed.		
Inclusion of species occurrence by plot, cover and abundance data in new Table 39 in Appendix B of the BDAR is noted. Nevertheless, this does not meet the requirements of the BAM to provide copies of plot field data sheets and field data in MS Excel spreadsheet form.	BAM plot data were entered directly into the MS Excel spreadsheet form in a tablet while in the field. As such hard copies of the plot field data sheets can not be provided. ELA can upload the MS Excel spreadsheet into the BOAMs. ELA has also entered the abundances for each plot into Table 39.	ELA will upload the MS Excel spreadsheet into the BOAMs.
Description of PCTs		
Use of an "opportunistic species list" of native plants within an ill-defined area of VZ1 is invalid for use in the OEH Sydney metro vegetation analysis tool (referred to in Appendix C as 'Veg analysis tool (Hager Metro)') which must be based on species identified from a fixed 0.04 ha area. Inclusion of species occurrence by plot, cover and abundance data in new Table 39 in Appendix B is noted. Nevertheless, this does not meet the requirements of the BAM to provide copies of plot field data sheets and field data in MS Excel spreadsheet form.	As noted in Section 1.4.2.1 of the BDAR, the plot data was entered into a vegetation analysis tool, however, the plot data did not achieve the minimum number of diagnostic species required to identify a suitable PCT. Therefore, the use of additional species ground cover and shrub species recorded while traversing VZ1 was conducted due to the small number of native species represented within plot 1. This was done to assist in confirming the correct PCT for vz1. The use of the analysis tool was only used to supplement the assessment of suitable PCTs for the site.	ELA will upload the MS Excel spreadsheet into the BOAMs.
Vegetation Integrity Assessment		
EES questioned the 53 metres of fallen logs greater than 10cm in diameter recorded for plot 2 (VZ2) as it seems extraordinarily high, especially for a patch of vegetation immediately adjacent to school buildings. EES recommended that this be confirmed. There is no response recorded in the Table.	Plot 2 contained several piles of cut logs within the 20 x 50 transect. A picture of a small log pile is provided below (Figure 1). From memory, a much larger pile of cut logs was also present, however, no photos were taken of this pile. 53 m of logs sound excessive, however, ELA stands by the data collected in the field.	No action required.
Potential Species Credit Species		
EES previously recommended that more information is provided to clearly show how *Syzygium paniculatum* (Magenta Lily Pilly) will not be impacted by the proposed development. It is noted that this recommendation has resulted in the obligation for an additional 2 species credits for this species. This is reflected in output from BAM Calculator in Appendix E;	The final case submitted in the BAM calculator will include the requirements for two species credits for *Syzygium paniculatum.*	ELA to ensure that the final case study includes *Syzygium paniculatum* species credits.

EES Comments	ELA explanation	Actions
however, it is recommended that approval authority ensure that this remains the case in the finalised BAM Calculator case.		
Table of habitat or habitat components and their sensitivity class		
EES previously stated that Tables 10 and 11 provide Sensitivity to gain class but not the biodiversity risk weighting. The response in the Table was "No action required". However, BAM requires that the assessor report on the biodiversity risk weighting (BRW) for each ecosystem and species credit requirement generated (refer BAM Operational Manual Stage 2, section 4.2).	The biodiversity risk weighting is required for ecosystem and species credit species generated in the BDAR, for this development site, this includes *Syzygium paniculatum* (species credits) and PCT 1237 (ecosystem credits). Version 5 of the BDAR submitted to EES for review included the biodiversity risk weighting for *Syzygium paniculatum* in Table 35 and the biodiversity risk weighting for ecosystems was included in the Biodiversity credit report in Appendix E. ELA has provided a new column for the biodiversity risk weighting for ecosystem credits in Table 34.	ELA as provided the biodiversity risk weighting in the version 6 of the BDAR.
Assessment of impacts on prescribed biodiversity values		
EES previously recommended that a condition of consent require for threatened microbat species pre-demolition physical searches in conjunction with ultrasonic call detection surveys. EES further recommends that the condition require that this work be undertaken by a suitably qualified ecologist and the pre-demolition searches be of built structures that may afford roosting habitat for the identified threatened microbat species.	Additional mitigation measures including the use of ultrasonic devices have been included in Table 23 mitigation measures.	Updated Table 23 included in version 6 of the BDAR.

Figure 1: photo indicating presence of a large amount of cut logs present in Plot 2