

29 August 2018

Sandra Hinchey
Director
Webber Architects
Suite 3, L1, 426 Hunter Street
Newcastle NSW 2300

Dear Sandra

**Re: Catherine McAuley Catholic College, Medowie Biodiversity Development
Assessment Report – Response to submissions**

Project no. 26652

Biosis Pty Ltd was commissioned by Webber architects to provide a response to Port Stephens Council (Council) 'Ecological Impact' submissions on the Environmental Impact Statement (EIS) and Biodiversity Development Assessment Report (BDAR) prepared for the Catherine McAuley Catholic College, Medowie, NSW.

In summary, we felt all issues raised by Council were adequately addressed in the EIS and BDAR. Our detailed response to each submission item is provided in Table 1.

We trust this response is sufficient for you to prepare your response document. However, should you require any additional information please call me directly on 0409 817 406.

Kind regards,



Renae Baker
Principal Ecologist

Table 1 Biosis response to PSC submissions – ecological impact

PSC submission	BDAR	Biosis response	Amendments to BDAR
Ecological impact			
<p>2. The development site is located in proximity of identified koala habitat and the proposed development is likely to have a direct impact on this vegetation due to the need for asset protection zones. In addition, the proximity of the development to koala habitat that will not need to be cleared will likely result in edge-effects on local koala populations. These impacts could be mitigated by a reduction in the footprint of the development.</p>	<p>The development footprint assessed for ecological impact includes all parts of the proposal, including Asset Protection Zones (APZs). The proposed footprint considered the ecological constraints of the site and was designed to minimise impacts to native vegetation and species habitats. A detailed impact assessment for Koala habitat was provided in the BDAR. The main edge effects of concern would be increased weed invasion / weed introduction, increased water and nutrients as runoff and changes in microclimate in adjacent areas. Minor changes to microclimate and water runoff are expected from installation of APZs, due to the subject site already consisting of cleared land with clumps of scattered trees. Weed control and management within the APZs will be detailed in the Vegetation Management Plan to be implemented as part of the works, and therefore it is unlikely this edge effect would be increased beyond what has already occurred at the site.</p>	<p>The BDAR considered all direct and indirect potential impacts to Koala habitat and provides the required offsets.</p>	<p>No amendments made.</p>

<p>3. If the development footprint is not reduced, the following matters are recommended to be considered:</p> <p>a. The Environmental Impact Statement should consider the Wattagan to Stockton Green Corridor identified in the Lower Hunter Regional Strategy 2031 and Hunter Regional Strategy 2036;</p>	N/A	N/A	For EIS
<p>b. The BDAR should:</p> <p>i. Identify the Wattagan to Stockton Green Corridor identified in the Lower Hunter Regional Strategy 2031 and Hunter Regional Strategy 2036;</p>	<p>Figure 3 of the BDAR shows the placement of the proposed development on the western fringe of existing urban areas. The site currently contributes a small area of scattered trees over cleared land to local and regional corridors. Connectivity and discussion of local and regional connectivity is provided throughout the BDAR, particularly with reference to Koala corridors.</p>	<p>Biosis agrees the Wattagan to Stockton corridor is an important one. However, Biosis considers that the development will not have a significant impact on the local and regional functionality of existing green corridors, as it has been designed to avoid major ecological impact and is proposed within that part of the site consisting of scattered native tree over cleared land.</p>	No amendments made.
<p>ii. Consider in additional detail the indirect impacts of altered hydrological regime on the wetland listed under State Environmental Planning Policy No. 14 Wetlands. A neutral or beneficial approach should be recommended; the current recommendation that any discharge is not of a substantially difference volume relative to the pre-development regime is insufficient</p>	<p>Section 4 of the BDAR notes that the following measures will be implemented as part of the proposal:</p> <ul style="list-style-type: none"> • Stormwater generated from roof, hardstand and landscaped areas associated with the college and ancillary areas (e.g. carparks, etc.) is to be detained and treated on-site such that any discharge to the SEPP 14 wetland and associated retained native vegetation west of the subject land is not of substantially different in volume relative to the pre-development regime. • Stormwater infrastructure for the college has been designed to incorporate a mix of Atlantis infiltration tanks and bio filtration detention ponds, gross pollutant traps (GPTs) and pollutant pit inserts (in carpark areas). As such stormwater quality for the 	<p>The proposal will comply with Council DCP and the Protection of the Environment Operations Act 1997 as well as implement a water management system that will result in an expected neutral impact to surrounding areas in terms of runoff. All other areas such as APZs and areas without hardstand are expected to drain rapidly to the groundwater below and the adjacent wetland, as the soil of the site is primarily sand/sandy loam. The unmapped watercourse located in the south of the site, which possibly connects constructed waterbodies of the golf course east of Medowie Road, to the SEPP 14 wetland, will not be removed and will remain in the APZ as a feeder to the wetland.</p>	No amendments made.

	<p>existing site will not be compromised by the proposed development.</p> <p>Water quality exiting the subject land will comply with the requirements of the Protection of the Environment Operations Act 1997 and Port Stephens Council DCP.</p>		
<p>iii. Consider any potential existence of groundwater dependant ecosystems onsite, the potential indirect impacts of the development on the groundwater / vegetation interactions and minimise or mitigate any possible impacts;</p>	<p>Groundwater dependent ecosystems are identified in Section 3.2.7. The primary GDE identified are the swamp sclerophyll vegetation communities and the adjacent SEPP 14 wetland. Direct and indirect impacts and proposed mitigation of effects on these values are detailed in Section 4.</p>	<p>The BDAR is a way for impacts to be identified and offset appropriately. OEH has considered this has been achieved with the offsets calculated for the project, including impacts to the Swamp Sclerophyll communities and adjacent SEPP 14 wetland.</p>	<p>No amendments made.</p>
<p>iv. Consider the findings of the Arboricultural Impact Assessment Report prepared by Joseph Pidutti Consulting Arborist;</p>	<p>Biosis conducted a thorough ecological investigation of trees and habitats on site in order to inform the BDAR. All hollow-bearing trees were mapped and their locations are shown on Figure 4.</p>		<p>No amendments made.</p>
<p>v. Consider the importance of the koala corridor to the Anna Bay hub as an area of 6 generational persistence;</p>	<p>A thorough and detailed assessment of the impacts of the proposal on the Koala and habitat connectivity was provided in the BDAR (see Appendix 4). In addition the BDAR recognises the importance of the local adjacent habitats as Koala habitat and as a functional corridor.</p>	<p>The BDAR is a way for impacts to be identified and offset appropriately. OEH has considered this has been achieved with the offsets calculated for the project, including impacts to the Koala.</p>	<p>No amendments made.</p>
<p>vi. Have the rationale in table 9 amended to consider species habitat preferences and foraging behaviour and provide improved justification. For some species little justification has been provided whereas for others there is significant justification</p>	<p>Table 9 presents a summary of habitat and foraging preferences for each species and the rationale for inclusion / exclusion as a candidate species. These are in the form usually presented in an ecological impact assessment and/or BDAR.</p>	<p>Biosis considers all data provided sufficient to assess the potential occurrence of a candidate species, which has been summarised in Table 9. OEH has not requested additional detail.</p>	<p>No amendments made.</p>
<p>vii. Provide improved justification for why no significant impact assessment has been undertaken for other species listed under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999;</p>	<p>Section 8.1 and Appendix 4 assess the impacts of the proposal on Matters of National Environmental Significance (including significance impact assessments) protected under the EPBC Act. No other species listed under the EPBC Act were considered likely to occur within the site.</p>	<p>Refer to Appendix 4 of the BDAR. No additional information or assessment of EPBC matters is required in a BDAR.</p>	<p>No amendments made.</p>

<p>All habitat trees are retained where possible and where not possible compensatory nest boxes should be considered in accordance with Council's Tree Technical Specification 2014. Nest boxes should be suitable for a similar species to that which would have utilised the hollows;</p>	<p>Biosis recommended installation of nest boxes to replace all hollows removed from the site: 'Consideration is to be given to the installation of nest boxes prior to commencement of vegetation clearing for construction. Installation of nest boxes prior to clearing will allow time for microbats and other hollow-dependent fauna to encounter these new resources prior to removal of existing hollows within trees to be removed'.</p>		<p>Proponent to confirm number of hollow-bearing trees to be removed and implement nest box management plan prior to construction</p>
<p>All preferred koala feed trees are recommended to be retained where possible and where removed offset at a ratio consistent with Port Stephens Council's Tree Technical Specification 2014</p>	<p>Section 4.1 of the BDAR states 'As far as practicable, establishment of APZs will seek to remove trees not considered Koala feed trees in preference to Koala feed trees'. Section 8.6 details that 'The subject land supports known and/or potential habitat for Koalas. The development is therefore required to demonstrate compliance with SEPP No. 44. As advised by DPE in a response to the SEARS for the project, compliance of the development with the provisions of Appendix 4 of the Port Stephens Council Comprehensive Koala Plan of Management (CKPoM) constitutes compliance with SEPP No. 44. Koala habitat assessment was undertaken for the development in accordance with the guidelines provided in Appendix 6 of the CKPoM. '</p>	<p>The BDAR is a way for impacts to be identified and offset appropriately. OEH has considered this has been achieved with the offsets calculated for the project, including impacts to the Koala. Biosis acknowledges Council's technical specification for an offset ratio planting at 1:6, 1:8 or 1:10, dependent on tree size. At this stage the requirement for removal of Koala feed trees from the APZ is not known. Once a final number of feed trees to be removed is ascertained, then the proponent can discuss with Council options for compensatory plantings, acknowledging that offsetting of Koala habitat has already been calculated through the BAM.</p>	<p>No amendments made to BDAR, proponent can discuss with Council any compensatory plantings once final impact to feed tree numbers is known.</p>

<p>A 10 metre fully revegetated buffer should be maintained along the waterway traversing the southern section of the subject land and the management of the riparian buffer should be consistent with the Controlled activities on waterfront land – guidelines for riparian corridors on waterfront land prepared by the NSW Office of Water and dated 2012;</p>	<p>Section 4.1 of the BDAR states 'Following the Controlled activities on waterfront land - guidelines for riparian corridors on waterfront land (NSW Office of Water, 2012a) a 10 metre vegetated riparian zone (VRZ) should be maintained along either side of the waterway traversing the southern section of the subject land from the top of both banks. Wherever possible works within the VRZ should be avoided so that the existing riparian vegetation is maintained. This recommendation is made in line with the overarching objective of the controlled activity provisions of the WM Act, which is to establish and preserve the integrity of riparian corridors. Further specific recommendations relevant to the proposed development are made, with regards to the specific objectives listed in Controlled activities on waterfront land - guidelines for riparian corridors on waterfront land (NSW Office of Water, 2012a) below:</p> <ul style="list-style-type: none"> • Road crossings are permitted within the 10 metre VRZ according to the riparian corridor matrix, however the number of access road crossings should be minimised as far as practicable. • Treat any stormwater run-off prior to discharge into the waterway. • Locate services and infrastructure outside the VRZ or utilise road crossings wherever practicable. 	<p>The proposed mitigation and management measures will be detailed in the environmental management plans for the proposed development works.</p>	<p>No amendments made.</p>
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<p>A construction environmental management plan is recommended to be requested in accordance with NSW Government Guideline for the Preparation of Environmental Management Plans and include the recommended minimisation and mitigation measures in the Biodiversity Development Assessment Report prepared by Biosis and dated 2018. This should include the Ecological Management Plan/ Vegetation Management Plan as identified by Biosis, 2018; and be prepared in accordance with the Guidelines for vegetation management plans on waterfront land prepared by NSW Office of Water and dated 2012 and Port Stephens Council Vegetation Technical Specification 2014. The Vegetation Management Plan should consider the requirements of the Bushfire Assessment Report prepared by Newcastle Bushfire Consulting including delineation of management zones. Any plans of management should include monitoring schedules; particularly for the koala</p>	<p>Section 4.3 of the BDAR states: 'Both the CEMP and VMP will include actions to monitor, assess and adaptively manage the effectiveness of planned mitigation measures.'</p>	<p>The proposed mitigation and management measures of the BDAR and the EIS will be detailed in the environmental management plans for the works. Section 4.3 of the BDAR states: 'Both the CEMP and VMP will include actions to monitor, assess and adaptively manage the effectiveness of planned mitigation measures.'</p>	<p>No amendments made.</p>
<p>It is noted that any offsetting proposal will be reviewed and determined by the Biodiversity Conservation Trust and is not included in the scope of these recommendations. However; it is recommended that as a first option to discharge the biodiversity offset obligations that the retirement of credits from the subject site be undertaken to provide a permanent conservation measure for the remaining vegetation.</p>			<p>Suggestion noted.</p>