

Date: 30 July 2020

Our ref: 20SYD-15191

School Infrastructure NSW
c/- Mace Australia
Level 17, 44
Markey Street, Sydney 2000

Attention: Daniel Luliano

Dear Daniel,

Response to biodiversity comments on Darlington Public School

Eco Logical Australia Pty Ltd (ELA) prepared a Biodiversity Development Assessment Report (BDAR) for School Infrastructure NSW (SINSW) for the redevelopment of Darlington Public School. The proposed redevelopment has been submitted as part of a State Significant Development (SSD) (application SSD19-9914). Mace Australia on behalf of SINSW have requested ELA to respond to comments made on the BDAR from the consent authority and members of the general public. ELA has provided a table of the comments and our response below.

If you should require additional information, please do not hesitate to contact me on (02) 9259 3707.

Regards,



Belinda Failes
Ecologist / Accredited BAM assessor (BAAS 18159)

Table 1: ELAs response to comments

Name	Issue	ELAs response
Department of Planning, Industry and Environment (DPIE)	Address comments made in the public submissions regarding the need to consider cumulative impacts of tree removal on fauna and the application of the precautionary principle.	ELA has addressed comments regarding the cumulative impacts, removal of trees in the paragraph 3 below.
Environment, Energy and Science Group – Biodiversity and Conservation (EES)	<p>Biodiversity</p> <p>Plant community types and threatened ecological communities EES supports the assessment by Eco Logical Australia that the vegetation on the development site has been planted sometime since 1943, and most probably since 1975 when the site was cleared of previous buildings to construct the school. EES notes that, in line with guidance in the Biodiversity Assessment Method Operational Manual Stage 1 (OEH May 2018) relating to treatment of planted ‘native vegetation’, a ‘best matching’ plant community type (PCT) has been selected for this vegetation, being PCT 1281 ‘Turpentine Grey Ironbark open forest on shale in the lower Blue Mountains, Sydney Basin Bioregion’.</p> <p>It is not clear as to why PCT 1647 ‘Red Bloodwood–Smooth-barked Apple heathy woodland on the Central and lower North Coast south-east’ was included as one of the four candidates for ‘best matching’ PCTs. Section 1.4.2.1 of the BDAR cites the Office of Environment and Heritage’s 2013 publication of The Native Vegetation of the Sydney Metropolitan Area (OEH 2013) as mapping this PCT 3.5km to the south-east of the development site. However, this PCT was not mapped or documented as occurring anywhere within the Sydney metropolitan study area by OEH 2013.</p> <p>EES notes that in section 1.4.2.2 of the BDAR it is stated that “The BioNet Vegetation Classification lists PCT 1281 as a component of Sydney Turpentine Ironbark Forest which is listed as a critically endangered ecological community (CEEC) under the BC Act and EPBC Act.” This statement is only correct with respect to the listing of this CEEC under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). With respect to its listing under the NSW Biodiversity Conservation Act 2016 (BC Act), the BioNet</p>	<p>ELA has provided a map (Figure 1) which shows the location of nearest PCT recorded to the development site. A patch of PCT 1647 <i>Red Bloodwood – Smooth-barked Apple Heathy woodland on coastal sands of the Central and lower North Coast</i> was the closest PCT recorded to the development site.</p> <p>PCT 1647 was mapped by OEH 2013 and is approximately 3.5 km south-east of the development site. This was the closest mapped PCT to the development site and as such this was included in the list of candidate PCTs when considering the ‘best-fit’ PCT for the development site. This PCT was not considered a suitable candidate for the development site as it did not represent the suitable soil landscape or topography.</p> <p>ELA understands that EES have confirmed that the appropriate PCT for the development site is PCT 1281. No additional response is required from ELA regarding this matter.</p>

Name	Issue	ELAs response
	<p>Vegetation Classification states that PCT 1281 is equivalent to the CEEC 'Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion' as determined under the BC Act.</p> <p>EES accepts that the assessment that the vegetation within the development site does not form part of the 'Sydney Turpentine Ironbark Forest' CEEC as determined under either the BC Act or EPBC Act because the vegetation present in the development site has been established through plantings.</p> <p>The vegetation exists as a mix of planted eucalypt and exotic canopy species and horticultural varieties of native ground cover or shrubs; there is no evidence of remnant vegetation within the development site or surrounding lands; and the soil profile has been substantially modified and does not represent original profile.</p>	
	<p>Microbat habitat and prescribed impacts assessment. EES notes that Section 2.1.3 Prescribed biodiversity impacts of the BDAR records that visual surveys of the existing buildings within the development site did not identify any small gaps which may contain potential roost sites for microbats. The BDAR also states that most of the buildings are multi-storey with a corrugated iron flat roof which are not particularly suitable for microbats.</p> <p>However, section 2.2.4 Prescribed biodiversity impacts assesses that there remains a level of uncertainty about whether the buildings contain suitable gaps in the roof cavity, such that the presence of roof-roosting microbats within the development footprint cannot be completely disregarded. There is potential that the removal of the buildings may impact upon roosting resources for microbats, such as the two bent-winged bat species, migrating to breeding or non-breeding habitats.</p>	<p>ELA has provided additional text in Table 2 below to support the BDAR and mitigation measures (Table 21) regarding microbats.</p>

Name	Issue	ELAs response
	<p>Given that, the measures in Table 21 Measures proposed to mitigate and manage impacts should be revised to consider the possibility that microbats might be encountered. EES recommends that measures such as inclusion of pre-clearing surveys, daily surveys and staged clearing, and the presence of a trained ecological or licensed microbat wildlife handler during clearing events, should apply to demolition of existing structures, not just to clearing of trees, as is currently proposed.</p>	
Public	<p>Further consider the impact on native species and ESD, in particular:</p> <ul style="list-style-type: none"> Consider cumulative impact of surrounding tree removal (feed trees) relating to the grey headed flying fox, a vulnerable species, determined there would be no significant impact due to the loss of their feed trees. Consider the cumulative impact of removing hollow bearing trees at the site and elsewhere within the surrounding area. The BDAR concludes that the precautionary principle does not apply. However, the loss of habitat for species such as the flying fox may occur. The precautionary principle should apply in this case. <p>Consider cumulative number of trees being removed in calculating the biodiversity credits.</p>	<p><u>Point 1</u></p> <p>ELA has assessed the loss of potential foraging habitat for Grey-headed Flying-fox through the preparation of Assessment of Significance under the EPBC Act. The assessment takes into consideration the cumulative impacts of the removal of vegetation within the development site and within the locality of the development site.</p> <p>The removal of 0.12 ha of native vegetation within the development site may result in the contributing to a minor cumulative impact on this species. The EPBC Act Assessment of Significance has determined that the removal of 0.12 ha of potential foraging habitat is unlikely to result in a significant impact upon this species given this species may disperse more than 50 km per night to forage.</p> <p><u>Point 1 and 2</u></p> <p>ELA has conducted a review of the current development applications lodged with the City of Sydney and register of Major Projects within the last 12 months to identify relevant projects which may require assessment of the accumulative impacts. Of which only minor modifications to existing buildings were identified in the City of Sydney DA tracker. Only one State Significant Development which is currently responding to submissions will likely contribute to the cumulative impacts in the locality of the site. SSD7539 proposes to remove 38 planted trees and retain 57 trees and provide replacement of 36 trees. The removal of these trees has potential to result in the loss of foraging habitat for Grey-headed Flying-fox and potentially for hollow-dependent fauna species. Additionally, Darlington Public School has a separate DA to remove 0.045 ha of planted native vegetation which also provides potential foraging habitat for this species. One hollow-bearing tree will be retained in the Darlington Public School and will not be impacted by the proposed works.</p> <p>According to OEH 2016 vegetation maps there is an additional 70 ha of native vegetation mapped in the assessment area which provides potential habitat for this species. To date,</p>

Name	Issue	ELAs response
		<p>there is no available data regarding the ability to assess the accumulative impacts of the removal of two hollow-bearing trees within the development site. An additional hollow-bearing tree will be retained in the development site and supplementary nest boxes will also be installed as part of the SSD.</p> <p><u>Point 3</u></p> <p>In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequences of various options.</p> <p>The development design has avoided where possible, serious and irreversible damage to the environment by retaining a small amount of native vegetation within the development site. The two mature <i>Eucalyptus saligna</i> (Sydney Blue Gum) are located in the centre portion of the development site will be removed due to the size of their tree protection zone, impacts to these trees was unavoidable. Measures to minimise the impacts include retaining a small amount of native vegetation within the development site. Additionally, mitigation measures to re-establish the loss of canopy species has been considered through landscaping designs.</p> <p>In accordance with the <i>Guidance to assist a decision-maker to determine a serious and irreversible impact (SAII)</i> Table 1, State Significant Developments are only required to take SAII into consideration and determine if there are any additional and appropriate measures that will minimise the impact if consent authority or approval is granted.</p> <p>In this situation, Grey-headed Flying-fox was not considered a candidate for SAII as they do not satisfy the listing for the four principles of a SAII entity.</p> <p>To justify this, ELA has assessed the impacts of the removal of 0.12 ha of planted native vegetation which has been identified as potential foraging habitat for the Grey-headed Flying-fox. ELA acknowledges that the removal of planted native vegetation will result in a loss of potential foraging habitat for this species. However, the impacts are considered negligible when compared with the extent of potential foraging habitat within the assessment area. A preliminary desktop assessment has identified 70 ha of mapped native vegetation mapped by OEH (2016) within the 1,500 m assessment area. This species is known to traverse up to 50 km to forage each night, as such potential foraging is present outside of the assessment area. This species will respond to flowering events across NSW (beyond 50 km radius), so the extent of potential foraging for this species may consider a</p>

Name	Issue	ELAs response
		<p>greater area. For the purpose of this matter, only the assessment area was considered as potential habitat. Additionally, this species is also known to utilise exotic species such as palms and figs which are not mapped as part of the 70 ha of potential foraging habitat in the assessment area. The removal of 0.12 ha represents 0.17% of potential mapped foraging habitat in the assessment area which may be impacted by the proposed works.</p> <p>Furthermore, the impacts of the development will be offset. Two ecosystem credits are required to offset the impact to planted native vegetation. Species credit species were not applied to Grey-headed Flying-fox as this is a dual species and only breeding habitat is considered a candidate for species credit species.</p> <p>In summary, the precautionary principle does not apply to Grey-headed Flying-fox as the proposed development is likely to have negligible impacts on this species. Therefore, this principle should not be considered as the determining factor in the approval of this development.</p> <p><u>Point 4</u></p> <p>There are no provisions to consider including additional trees outside of the development footprint as part of cumulative impacts. The BDAR has calculated the impacts of 0.12 ha of planted native vegetation which will require 2 ecosystem credits. The BDAR has assessed the removal of exotic vegetation under Prescribed Biodiversity Impacts. Outside of the development site the proponent can not be held responsible for cumulative impacts of other developments. Other developments will likewise be subject to offsets to ecosystem or credit species credits. Therefore, the impacts of the proposed development have been assessed and an offset calculated accordingly.</p>

Previously Mapped Vegetation



Legend

-  Study Area
-  Subject Site

0 170 340 680
Metres

Datum/Projection:
GDA 1994 MGA Zone 56

 **eco**
logical
AUSTRALIA
A TETRA TECH COMPANY
Prepared by: KS Date: 28/07/2020

Figure 1: Location of PCT 1647 (in yellow) mapped by OEH 2013 approximately 3.5 km south-east of the development site

Table 2: Mitigation measures for microbats

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Staff training and site briefing to communicate environmental features to be protected and measures to be implemented	Minor	Negligible	Construction staff to be briefed prior to work commencing to be made aware of sensitive biodiversity values present and environmental procedures such as: <ul style="list-style-type: none"> Potential presence of threatened microbats within tree hollows or within cavities of buildings. Identification of vegetation to be retained and 'No Go' areas. Stop works if fauna present and contact project ecologist for recommendations. 	All staff entering the Development Site are fully aware of all the ecological values present within the Lot and environmental aspects relating to the development and know what to do in case of any environmental emergencies	To occur for all staff entering/working at the development site. Site briefings should be updated based on phase of the work and when environmental issues become apparent.	Project Manager
Installing artificial habitat for fauna in adjacent vegetation to be retained or human made structures to replace the habitat resources lost and encourage animals to relocate from impacted site (i.e. hanging bat boxes)	Minor	Negligible	Compensatory hanging bat boxes (recommended up to two) should be installed under the supervision of an ecologist prior to removal of vegetation and buildings. These should be located within the development site.	Replacement of habitat features removed.	Prior to and during clearing works	Project Manager / Ecologist
Protection of local resident fauna	Minor	Negligible	Project ecologist or a qualified wildlife handler should be appointed prior to the demolition of any buildings and/or vegetation. The project ecologist must also hold a Biodiversity Licence and Animal Care and Ethics Committee approval as well as current Australian Bat Lyssavirus (ABLV) vaccination.	Relocation of fauna in a sensitive manner	Prior to and during clearing works	Project Manager / Ecologist

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Instigating clearing protocols including preclearing surveys, daily surveys and staged clearing, the presence of a trained ecological or licensed wildlife handler during clearing events	Moderate	Minor	<p>Staged clearing should be conducted to allow microbat species to self-relocate (if required) during the stage of the project.</p> <p>Staged clearing should include limits on the amount of clearing of buildings each day and or vegetation. Recommended staging includes clearing of one building per day.</p> <p>Daily pre-clearance surveys are to be conducted by the project ecologist / qualified wildlife handler within the vegetation and buildings prior to removal.</p> <p>Inspections should include use of a bright torch to inspect the tree hollows using an elevated platform and within the building and its cavity before removal. If access into the roof cavity is not feasible then stag watching at dusk or dawn with thermal imagery sensor or the use of an ultrasonic device (anabat) left overnight may be required to monitor the use of the buildings for microbat activity prior to demolition. If microbats are located utilising the building, the project ecologist is to advise on the best method. This may include use of exclusion structures if an entrance location can be found or additional nocturnal surveys prior to demolition works.</p>	Relocation of fauna in a sensitive manner	Prior to and during clearing works	Project Manager / Ecologist

