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Senders ref: SSD 9483 (Willoughby City)

Navdeep Singh Shergill  
Social and Other Infrastructure Assessments  
Planning and Assessment Group  
Department of Planning, Industry and Environment  
4 Parramatta Square  
12 Darcy Street  
Parramatta NSW 2150

Dear Mr Shergill,

**Subject: Request for Notice of Exhibition for Chatswood Education Precinct, (SSD 9483)  
(Willoughby City)**

Thank you for your letter received on 3 April 2020, requesting input from Environment, Energy and Science Group (EES) in the Department of Planning, Industry and Environment on the Notice of Exhibition for Chatswood Education Precinct.

EES has reviewed the supporting documents and make the following comments.

Biodiversity

The BDAR report is considered inadequate and incomplete with many issues which need to be addressed. A full explanation and EES recommendations are at Attachment A.

Flooding

EES makes no further comments in relation to flooding issues.

Should you have any queries regarding this matter, please contact Bronwyn Smith, Senior Conservation Planning Officer on 9873 8604 or [bronwyn.smith@environment.nsw.gov.au](mailto:bronwyn.smith@environment.nsw.gov.au).

Yours sincerely



12/05/20

**Susan Harrison**  
**Senior Team Leader Planning**  
**Greater Sydney Branch**  
**Climate Change and Sustainability**

## **Attachment A – Chatswood Education Precinct – SSD 9483 – Biodiversity Development Assessment Report**

### **Finalisation of report**

Status of biodiversity development assessment report (BDAR) dated 10 March 2020 is stated to be 'Final', however the biodiversity assessment method (BAM) Calculator output in Appendix D of BDAR shows "To be finalised". Further, Appendix D contains output from two different revisions (0 and 4) of the BAM Calculator assessment (with different BOAMS assessment ids, 00014503/BAAS18159/20/00014647 and 0014503/BAAS18159/20/00014640 respectively).

Further, this is reflected in biodiversity offset and agreements management system (BOAMS) in which two separate cases exist, both not finalised. In both cases the minimum information (landholder and property details) are either missing or incomplete.

EES recommends that the assessor finalise and submit one of the cases, or both, if both are intended to apply. If the latter is the case it needs to be explained in the BDAR. The BAM Calculator output included in the BDAR should be from the finalised assessment calculation, prior to an approval being granted.

Spatial data was not provided, therefore consistency of it with the BAM Calculator case or BDAR could not be confirmed. EES recommends that all spatial data be provided.

### **BDAR certified as BAM compliant within 14 days of submission date**

The BDAR is unsigned, and there is no certification that the report has been prepared based on the requirements of BAM as at a specified date, as required by Section 6.15 of the BC Act. It is unknown when the BDAR was submitted, however the date of the BAR is not within 14 days of the date shown on the relevant finalised credit report generated using the BAM Calculator in Appendix D, this date being 26 November 2011.

### **Introduction to the biodiversity assessment**

No reference is made to more detailed information contained within the EIS, or to which version of plans were relied on for the biodiversity assessment.

The "development site footprint" (bounded in red on Figure 1 in section 1.1.2) appears to encompass only the operational footprint, or part thereof, and it is not clear how some features of the proposed development will impact biodiversity values.

These features include:

- the construction footprint; areas required for cut and fill excavations, as shown in 'Bulk Earthworks Plan - Centennial Avenue' Dwg. CI-100-001 (in App.1 of Stormwater Management Plan)
- concrete paving (code PV-01) extending 2.5-3.5 metres on the western side of building S (see Landscape plan SD-AX-L1001 Issue P2) and
- the "ancillary facilities" referred to in Table 14. Furthermore, section 1.1.2 states "The proposed redevelopment of Building R (shown in grey in Figure 1) within the eastern portion of Site 1, has been assessed under a separate development application and impacts of Building R are not included in this SSD assessment". Contrary to this statement, the landscape plan SD-AX-L1002 Issue P2 (for SSD 9483) shows numerous elements to be constructed immediately adjoining the northern side of building R and existing building M. This includes a sensory garden and pathways of synthetic, rubber and bark materials, and areas of plantings, all of which will impact an area identified in the BDAR as "planted native vegetation" and attributed to PCT 1237.

## Identification of landscape features at the development site

Section 1.3.2 states that “The development site falls within the Pennant Hills Ridges and Port Jackson Basin Mitchell Landscapes .... The Pennant Hills Ridge Mitchell Landscape has been mapped over site 2 and a portion of site 1 (Figure 2). The majority of site 1 is represented by Port Jackson Basin Mitchell Landscapes. The Port Jackson landscape has been used in the BAM Calculator for both cases.” However, EES considers that the Pennant Hills Ridges is the more appropriate NSW Landscape that should be selected, considering:

- the documented limitations in spatial accuracy of mapped boundaries of NSW Landscapes (Eco Logical 2008; Mitchell 2009)
- comparison with the boundaries of the soil landscapes in the higher resolution mapping of the Sydney 1:100,000 map sheet (Chapman et al. 1989) and its description of the Glenorie (gn) soil landscape, which is the soil landscape acknowledged in section 1.4.2.1 of the BDAR that applies to the entire subject site and is used as one of the rationales for determining PCT 1237 to be present across both sites 1 and 2, and
- distribution of PCT 1237, as mapped in the Sydney Metropolitan vegetation mapping (v.3, OEH 2016) as vegetation community S\_WSF01 Blue Gum High Forest, predominantly on the Glenorie soil landscape.

As such, EES recommends the BAM assessment(s) be amended accordingly as this may alter the number of biodiversity credits required to offset unavoided impacts.

## Native vegetation cover

BDAR section 1.3.7.2 states “percent native vegetation cover in the landscape was assessed in a Geographic Information System (GIS) using aerial imagery sourced from SIX Maps using increments of 5% ... within the 1,500 m buffer area (916.6ha) [this] is 20% (176 ha).” Although not referred to as such, presumably this is the same as the ‘Native Vegetation Extent’ shown on Figure. 2, but no shape file was provided to verify this or show how the 176ha area figure was derived. This is not consistent with EES calculations of Sydney Metro native vegetation mapped within the 917ha 1500m buffer area:

- all native vegetation including ‘urban native/exotic’ = 341.5 ha (37%)
- native vegetation not including ‘urban native/exotic’ = 124.4 ha (14%)
- urban native/exotic = 217.18 ha
- weeds and exotics = 7.50 ha.

BDAR 1.3.5 Connectivity features – Table 3 recognises certain connectivity features, Ferndale Park, Swaines Creek riparian corridor, and Lane Cove National Park and states that they are shown on Figure 2, but they are not.

There is no mention that part of the Blue Gum High Forest (BGHF) on the site is a Council Bushcare site.

The feature that makes a difference (native vegetation cover) has been entered in accordance with the BAM, however the connectivity features identified in Table 3-5 have not been listed as landscape features in the BAM Calculator.

## Description of PCTs

BDAR Section 1.4.2 identifies one PCT represented in the development site, being PCT 1237 Sydney Blue Gum - Blackbutt - Smooth-barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion. The information provided in section 1.4.2.1 to justify the selection of PCT 1237 is accepted and considered sufficient.

BDAR makes the statement that “[c]omponents of this PCT are listed as a threatened ecological community (TEC) under the BC and EPBC Act”. The TEC only later being identified as ‘Blue Gum High Forest’. This statement is not correct in relation to the determination of this TEC under the Biodiversity Conservation Act 2016 by the NSW Threatened Species Scientific Committee (TSSC), but only in relation to its determination under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Under the BC Act determination there is no minimum patch size threshold or condition criteria for this community, and in fact, paragraph 9 of the determination explicitly states that “[h]ighly modified relics of the community also persist as small clumps of trees without a native understorey.”

The native vegetation on the subject site was divided into three vegetation zones (VZs), as follows:

<b>PCT and Veg Zone</b>	<b>Impacted (ha)</b>	<b>Retained (ha)</b>	<b>TOTAL (ha)</b>
PCT1237 Zone 1_Good condition	0	0.58	<b>0.58</b>
PCT1237 Zone 2_Weedy	0.006	0.82	<b>0.82</b>
PCT1237 Zone 3_Planted native	0.14	1.13	<b>1.27</b>

VZs 1 and 2 were considered to satisfy “the criteria for listing under the BC Act and EPBC Act”, on the grounds that they satisfy the minimum patch size and canopy cover criteria of the Commonwealth EPBC Act determination. “DotEE 2018” is cited, but not referenced. Presumably this is meant to refer to the determination of the National TSSC determination under the EPBC Act. As discussed above, this is not relevant to the TEC under the BC Act.

VZ 3 PCT 1237\_Planted native was described as “Scattered patches of planted native vegetation within the higher elevations of Site 1 and 2 on the same soil landscape were also mapped as part of this PCT 1237, however, they were not considered part of the TEC” and “does not satisfy the listing criteria under the BC and EPBC Act” on the basis that, “The vegetation exists as a mix of planted eucalypt and exotic canopy species, the soil profile was disturbed, regeneration of native species was not observed, and it was considered that limited opportunity for pollination and exchange of genetic material was available. Therefore, it is not considered that this vegetation zone forms part of the Blue Gum High Forest TEC listings under the BC or EPBC Acts.”

The data from the vegetation plot 1 sampling VZ 3 provided in Appendix B does not adequately support this, since the actual species that occurred in plot 1 or the VZ, have not been identified, however the number of native plants species identified in the plot 1 is only one less than in plot 2 for VZ 2 which was considered to the TEC and a vegetation integrity (VI) score of 25 was determined. There is also no discussion on the purpose of the plantings. EES understands bush regeneration, guided by Willoughby Council, has been carried out on the grounds for several years and it should be clarified if VZ 3 is part of the area regenerated.

Mapped location of plot 2 (for VZ 2) appears to include land not within subject site.

Contrary to BAM Appendix 10 minimum requirements, neither plot field data sheets nor Excel spreadsheet of data were supplied, and location co-ordinates of plots was not supplied. While in section 1.4.1 it is stated that “All field data collected at full-floristic and vegetation integrity plots is included in Appendix B”, the only floristics data provided (as part of Table 34, Appendix B) was species occurrence within the whole subject site – occurrence of species by plot, cover or abundance were not provided.

## Vegetation Integrity Assessment

Three vegetation zones (VZs) are identified and defined (Table 4). VZ 1 was not sampled at all by a plot for floristics and vegetation integrity data, with the reasoning that, “Although this vegetation zone was recorded within the subject site (site 1), the proposed development footprint will not impact upon this vegetation zone (i.e. this vegetation zone was not located within the development footprint)”. The other two VZs were sampled by plots outside the ‘development site’ boundary, since the areas of impact within the development site are small.

Photo 3 (in Appendix B) incorrectly attributed to VZ 2, when it appears to be of VZ 3.

The 53 metres of fallen logs greater than 10cm in diameter recorded for plot 2 (VZ 2) seems extraordinarily high, especially for a patch of vegetation immediately adjacent to school buildings. EES recommends that this is clarified.

Patch size – Section 1.3.7.3 states “Patch size was calculated using available vegetation mapping for all patches of *intact native vegetation* [my emphasis] on and adjoining the development site ... [as] 101 hectares.” However, as was the case with native vegetation cover (NVC), there is no explanation, map or spatial data to support how this was derived.

## Ecosystem credit species and species credit species

Information was provided in Table 10, but most predicted species were excluded from further assessment with only superficial explanation, and no reference to database records.

### **Syzygium paniculatum**

The BDAR states that “*Syzygium paniculatum* (Magenta Lilly Pilly) was recorded from BioNet database record and validated within the Site 1” and it is presumed that this means it was observed on the site. However, the location(s) is not identified/mapped and no plot field data for any of the vegetation plots were provided. As such, it is difficult to agree with the assertion that it “will not be impacted by the proposed development”. Furthermore, the BDAR states “these species have been clearly planted due to the landscaped setting” and “*Syzygium paniculatum* is located outside of its natural habitat”, being that “the species natural distribution is in littoral coastal rainforest areas along NSW from Upper Lansdowne to Conjola State Forest.” However, the Bionet TBDC lists PCT 1237 as being associated with this threatened species.

As such, EES recommends that more information is provided to clearly show how this species will not be impacted by the proposed development, and that, as per Table 25 of the BAM, all plot field data and plot field data sheets (for all vegetation zones) are supplied with the BDAR.

### **Chalinolobus dwyeri**

In the BDAR, the rationale for excluding this species is “Habitat features associated with this species are not present on the development site. There is no suitable breeding habitat such as caves, overhangs, mines or culverts present for the species to utilise the site.” However, the habitat constraint in the TBDC for this species is “within two kilometres of rocky areas containing caves, overhangs, escarpments, outcrops, or crevices, or within two kilometres of old mines or tunnels.”

As such, EES recommends reviewing the exclusion of this species because it is likely that such habitat does occur within 2km of the site since, within a short distance to the west, the land falls into tributaries of the Lane Cove River.

## Table of habitats or habitat components and their sensitivity class

Tables 10 and 11 provide Sensitivity to gain class, but not biodiversity risk weighting.

### **Hollow bearing trees (HBTs)**

Tables 12 and 13 in Section 2.1.1 outline the ways in which impacts to biodiversity values have been avoided and minimised and includes reference to the retention of 13 HBTs, with one HBT to

be impacted. However, no data or information has been provided on HBTs in earlier sections of the BDAR and EES recommends this is addressed including a map of where they occur.

### **Demonstration of effort to avoid and minimise impacts**

It has not been explained why proposed building T cannot be oriented so that it completely avoids impacting the Blue Gum High Forest. For example, is the same orientation as the existing buildings possible (see civil engineering drawing CI-070-002 Rev. F)?

EES recommends clarification on this matter.

### **Assessment of indirect impacts**

No consideration has been given to

- overshadowing, even though proposed building S is 4-5 storeys high and immediately adjacent to native vegetation classified as a CEEC BGHF and
- an increase in human use, traffic, lighting, etc. in the operational phase, as a result of increased student numbers in the enlarged educational facilities, affecting vertebrate and invertebrate fauna that are part of the BGHF CEEC.

EES recommends this is addressed.

### **Assessment of impacts on prescribed biodiversity values**

Section 2.2.4/Table 21 identifies permanent impacts “potential roosting habitat for a number of threatened microbat species ... known to occasionally roost in buildings” as a result of demolition of buildings. Species nominated are: *Saccolaimus flaviventris* (Yellow-bellied Sheath-tail Bat) and *Falsistrellus tasmaniensis* (Eastern False Pipistrelle), *Miniopterus australis* (Little Bentwing-bat) and *Miniopterus orianae oceanensis* (Large Bent Winged Bat). But also states that “The habitat within the subject site is unlikely to be important for any of these microbat species.”

Confusingly, the buildings are variously referred to as “existing educational buildings”, “the residential dwelling” and “several multistorey education facilities” in different paragraphs. This needs clarification. It is stated that the removal/demolition is to be approved under a separate development approval pathway and that no habitat assessment of buildings have been done apart from brief mention in section 1.5.2 of inspection from ground using binoculars of building roof cavities for possible entrance for microbats, but there is no further information on location or effort.

EES recommends that approval conditions require pre-demolition physical microbat searches in conjunction with and ultrasonic call detection surveys.

### **Measures to mitigate impacts**

Measures proposed to mitigate and manage impacts at the development site before, during and after construction outlined in section 2.2.5 / Table 22 and should be translated into conditions of approval, following clarification of matters raised elsewhere in review.

Recommend inclusion of clearing protocols for demolition of existing buildings, including: the presence of a trained ecological or licensed wildlife handler during clearing events; pre-clearing inspections and survey by qualified persons for microbats including identification of any potential habitat; and staged clearing.

### **Serious and Irreversible Impacts**

Clearing of 0.006 ha of Blue Gum High Forest CEEC is assessed as candidate SAI entity in section 2.2.6 / Table 23; mapped in Figure. 7. However, the BDAR answers ‘no’ to the following question: Principle 2: Does the proposal impact on a species that is a candidate entity because it has been identified as having a very small population size? This question does not just relate to species and EES questions why the response was not ‘yes’.

In response to question 4c (under Principle 4) BDAR states that “The development proposal has potential to assist in the spread of invasive species into the patch of BGHF that will be retained within the development site. These potential impacts will be controlled during the construction phase and long-term maintenance of the development site. These works will retain better quality BGHF within the development site.”

EES seeks clarification as to how these impacts “will be controlled”, and how “these works will retain better quality BGHF within the development site.”

### **Impact Summary**

Current VI score and change in VI score for VZ 3, stated to be 23 is incorrect - should be 25 – see Table 9.

### **Biodiversity Credit Report**

The following have not been provided:

- table of credit class and matching credit profile
- credit classes for ecosystem credits and species credits at the development site.

EES recommends that these be provided.

**(end of submission)**