

Mr Dimitri Gotsis
Infrastructure Assessment
PO Box 5022
PARRAMATTA NSW 2124

Dear Mr Gotsis

RE: Murwillumbah Education Campus, 86 Riverview Street, Murwillumbah (SSD-16848913)

Thank you for your e-mail dated 26 April 2022 about the Murwillumbah Education Campus at 86 Riverview Street, Murwillumbah seeking comments from the Biodiversity and Conservation Division (BCD) of the Biodiversity, Conservation and Science Directorate in the Environment and Heritage Group of the Department of Planning and Environment. I appreciate the opportunity to provide input.

The BCD forms part of a Group that has responsibilities relating to biodiversity (including threatened species and ecological communities, or their habitats), National Parks and Wildlife Service estate, climate change, sustainability, flooding, coastal and estuary matters.

We have reviewed the documents supplied and advise that, although we have no issues to raise about National Parks and Wildlife Service estate, climate change, sustainability, flooding or coastal and estuary matters, several issues are apparent with the assessment for biodiversity, which should be addressed by the proponent prior to the development application being determined.

The main issues include:

- a. Under-estimation of the development footprint presented in the Biodiversity Development Assessment Report (BDAR).
- b. Incorrect determination of low threat vegetation in the bushfire risk assessment.
- c. Inconsistent statements about the proposed retention or management of the hoop pine plantation.
- d. Under-estimation of grassland vegetation in the bushfire risk assessment.
- e. Insufficient provision of bushfire Asset Protection Zones (APZs).
- f. Lack of proposed mitigation and management measures to protect the critically endangered flora species, *Rhodamnia rubescens*, during the operational phase of the project.

These issues are discussed in detail in **Attachment 1** to this letter.

In summary, the BCD recommends that:

1. The BAM accredited assessor:

- a. review the proposed construction and demolition footprints and ensure they are accurately presented in the BDAR as part of the development footprint.
 - b. review the bushfire risk assessment and ensure all areas subject to fire hazard reduction measures additional to any existing measures that require removal or modification of native vegetation are identified in the BDAR as part of the development footprint.
 - c. revise the BDAR to include mitigation and management measures aimed at maintaining and protecting *Rhodamnia rubescens* and its habitat on the subject land during the operational phase of the project.
2. The bushfire risk assessor:
- a. either amend the bushfire risk assessment to include further explanation and justification for identifying the hoop pine plantation as low threat vegetation or revise the bushfire risk assessment to include a bushfire APZ consistent with PBP 2019 between the proposed buildings and the hoop pine plantation.
 - b. revise the bushfire hazard assessment and setback requirements specified in the bushfire risk assessment on the basis the area of pasture on the property adjoining the subject land is grassland vegetation.
 - c. revise the bushfire risk assessment to demonstrate how the hoop pine plantation would be managed to the standard of an Asset Protection Zone without impacting the habitat viability for the critically endangered flora species, *Rhodamnia rubescens*, occurring within the hoop pine plantation.
 - d. revise the BDAR to include mitigation and management measures aimed at maintaining and protecting *Rhodamnia rubescens* and its habitat on the subject land during the operational phase of the project.
3. The bushfire risk assessment, BDAR and EIS be reviewed to ensure the proposed bushfire hazard reduction measures have been consistently described and assessed throughout the project EIS documentation.

If you have any questions about this advice, please do not hesitate to contact Mr Don Owner, Senior Conservation Planning Officer, at don.owner@environment.nsw.gov.au or 6659 8239.

Yours sincerely



26 May 2022

GABRIELLE PIETRINI
Director, North East Branch
Biodiversity and Conservation

Enclosure: Attachment 1: Detailed BCD Comments – Murwillumbah Education Campus, 86 Riverview Street, Murwillumbah (SSD-16848913)

Attachment 1: Detailed BCD Comments – Murwillumbah Education Campus, 86 Riverview Street, Murwillumbah (SSD-16848913)

Development footprint

When preparing a Biodiversity Development Assessment Report (BDAR) the assessor must provide a detailed description of the 'development footprint'. The development footprint should encompass all construction and operational phase components of the project including areas of proposed demolition and the location and extent of proposed bushfire asset protection measures that require clearing or modification of native vegetation.

The development footprint illustrated in the BDAR site map (refer to page 19) does not show the full extent of proposed demolition works as illustrated in Figure 31 of the project EIS (refer to page 47).

Furthermore, the development footprint illustrated in the BDAR does not include the full extent of proposed bushfire hazard management measures described in the bushfire risk assessment and associated landscape management plan. For example, the landscape management plan proposes slashing around the perimeter of the hoop pine plantation, which has not been included within the development footprint. Figure 8 of the bushfire risk assessment also shows all forest remnants on the subject land as being 'managed', which warrants their inclusion within the development footprint assessed in the BDAR if additional to existing hazard reduction measures.

BCD recommendation:

1. The BAM accredited assessor should review the proposed construction and demolition footprints and ensure they are accurately presented in the BDAR as part of the development footprint.
2. The BAM accredited assessor should review the bushfire risk assessment and ensure all areas subject to fire hazard reduction measures additional to existing measures that require removal or modification of native vegetation are identified in the BDAR as part of the development footprint.

Bushfire risk assessment determination of low threat vegetation

Planning for Bushfire Protection 2019 (PBP 2019) excludes areas of 'low threat vegetation' from consideration. One definition of low threat vegetation contained in PBP 2019 is "*a single area of vegetation less than 1 hectare in area and greater than 100 metres separation from other areas of Category 1 or 2 vegetation*". The bushfire risk assessor has referred to this definition when determining the hoop pine plantation on the subject land as being an area of low threat vegetation.

However, it is claimed in section 6.3 of the bushfire risk assessment that the mapped bushfire prone vegetation within the school boundary is less than 1 hectare in total area. However, the total area of mapped bushfire prone vegetation within the school boundary is approximately 1.3 hectares, which consists of 1.1 hectares of Category 1 vegetation and 0.2 hectares of Category 2 vegetation (refer to Figure 1).



Figure 1: Bushfire prone areas on the subject land (red polygon = hoop pine plantation; dark yellow polygon = Category 2 vegetation).

The landscape management plan provided in Figure 7 of the bushfire risk assessment outlines an intention to remove native vegetation from the south-eastern end of the Category 1 area specifically to reduce the forest remnant size to less than one hectare. However, even if the area of the forest remnant was reduced to less than one hectare, the resulting forest remnant would still be less than 100 metres from the remnant of Category 2 vegetation located south of the hoop pine plantation (refer to Figure 1).

Therefore, if the hoop pine plantation is not consistent with the definitions of low threat vegetation provided in Section A1.10 of PBP 2019, the proposed development will most likely require an Asset Protection Zone (APZ) with a separation distance between the buildings and the hoop pine plantation of up to 81 metres depending on the effective slope on the subject land (refer to Section A1.11.1 and Table A1.12.1 of PBP 2019).

BCD recommendation:

3. The bushfire risk assessor should either amend the bushfire risk assessment to include further explanation and justification for identifying the hoop pine plantation as low threat vegetation or revise the bushfire risk assessment to include a bushfire APZ consistent with PBP 2019 between the proposed buildings and the hoop pine plantation.

Proposed removal of the hoop pine plantation

It is indicated in section 6.4 of the bushfire risk assessment that the plantation, consistent with a rainforest structure, situated along the south western boundary of the subject land is planned to be cleared for the future development, thus eliminating the bushfire hazard. This paragraph appears to be referring to the hoop pine plantation, which currently supports a population of the critically endangered flora species, *Rhodamnia rubescens*. The proposed removal of the plantation and the critically endangered flora species within it is inconsistent with the management actions listed in the landscape management plan contained in Figure 7 of the bushfire risk assessment. Furthermore, the biodiversity impacts of removing the plantation have not been considered in the BDAR.

BCD recommendation:

4. The bushfire risk assessment, BDAR and EIS should be reviewed to ensure the proposed bushfire hazard reduction measures have been consistently described and assessed throughout the project EIS documentation.

Bushfire assessment of grassland areas

The bushfire risk assessor has identified the sugar cane paddock on the property adjoining the south-western boundary of the subject land as 'grassland' for the purpose of assessing bushfire hazard. However, the bushfire risk assessor has not classified the area of pasture on the adjoining property between the sugar cane paddock and the hoop pine plantation as 'grassland' (refer to Figure 2).



Figure 2: Area of pasture (pink dashed line) between the sugar cane paddock and the hoop pine plantation.

The pasture area should also have been considered as grassland for the purpose of assessing bushfire hazard given it does not comply with the PBP 2019 definition of 'managed land' (i.e. not regularly maintained at or below 10cm in height).

BCD recommendation:

5. The bushfire risk assessor should revise the bushfire hazard assessment and setback requirements specified in the bushfire risk assessment on the basis the area of pasture on the property adjoining the subject land is grassland vegetation.

Asset protection zone and setback requirements

It is recommended in Section 8 of the bushfire risk assessment to “*manage vegetation within the school grounds to APZ standards (plantation managed to less than 1 ha in area and as low threat vegetation/windbreaks) as per Figure 7*”. However, given the plantation has a dense tree canopy and a dense ground layer of thick leaf litter, simply reducing the area of the plantation to less than one hectare by removing 0.2 hectares from the south-eastern end of the remnant would not achieve APZ standards, which typically require tree canopy cover of 15% and 30% for inner and outer protection areas respectively and ongoing removal of leaves and vegetation debris from the ground layer.

Based on the proposed fire hazard reduction measures, the removal of 0.2 hectares of vegetation from the south-eastern end of the hoop pine plantation would be unlikely to reduce the speed or intensity of a bushfire that approaches the subject land from the west or southwest through the sugar cane plantation and pasture grassland. Furthermore, the northern half of the hoop pine plantation is situated on an upslope to the proposed buildings of greater than 18 degrees, which is likely to increase the speed and intensity of a bushfire approaching from the direction of the sugar cane plantation.

BCD recommendation:

6. The bushfire risk assessor should revise the bushfire risk assessment to demonstrate how the hoop pine plantation would be managed to the standard of an Asset Protection Zone without impacting the habitat viability for the critically endangered flora species, *Rhodamnia rubescens*, occurring within the hoop pine plantation.

Management of *Rhodamnia rubescens*

Section 5.3 of the BDAR contains several appropriate mitigation and management measures aimed at protecting individuals of *Rhodamnia rubescens* during the construction phase of the project. However, neither the BDAR nor landscape management plan contained in the bushfire risk assessment provide any mitigation or management measures to maintain and protect *Rhodamnia rubescens* and its habitat on the subject land during the operational phase of the project.

BCD recommendation:

7. The BDAR and landscape management plan should be revised to include mitigation and management measures aimed at maintaining and protecting *Rhodamnia rubescens* and its habitat on the subject land during the operational phase of the project.