Addendum to
Flora & Fauna Assessment

60 Bonner Rd, Agnes Banks

8 November 2021

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Report prepared by:

[redacted]

Signed: Date: 8th November 2021

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1 INTRODUCTION

1.1 Background

Development Consent was granted by Penrith City Council (PCC) for Development Application No. DA18/0429. The development subdivides 60 Bonner Rd, Agnes Banks (Lot B DP38896) into two lots, a front lot (Lot 1) and a rear lot (Lot 2). Both Lots are approximately 1 ha in size. A new dwelling is to be constructed on Lot 1 with a 600m^2 Building Envelope. Access to the rear lot is via a formalised driveway within a right of carriage way. Construction of the formalised driveway has commenced but has not followed the approved driveway alignment.

Additionally, Condition 14 of the development consent requires the replanting of thirty (30) trees to compensate for clearing undertaken as part of the approved development. An area, the 'tree replenishment zone', has been identified in the Tree Removal/ Retention and Replenishment Plan (TRRRP) (Monaco, 2021), for the replanting of the thirty (30) trees. Council has raised concerns that the proposed 'tree replenishment zone' is on land that is shaded on the NSW Government's Biodiversity Values Map (BVM) indicating that the vegetation there has high biodiversity value.

1.2 Purpose of this Addendum

It is proposed to submit to PCC a Section 4.55(1A) modification application for an alteration to the alignment of the approved driveway. The alteration to the driveway alignment is illustrated in Figure 1-1 below. This addendum supplements the earlier Flora and Fauna Assessment report (SIAEEP, 2018), prepared for the approved DA18/0429, in order to assess the flora and fauna impacts of the proposed driveway re-alignment. This addendum also addresses Condition 14 of the development consent concerning the location of the proposed 'tree replenishment zone'. An alternative location is proposed as illustrated below in Figure 1-2.

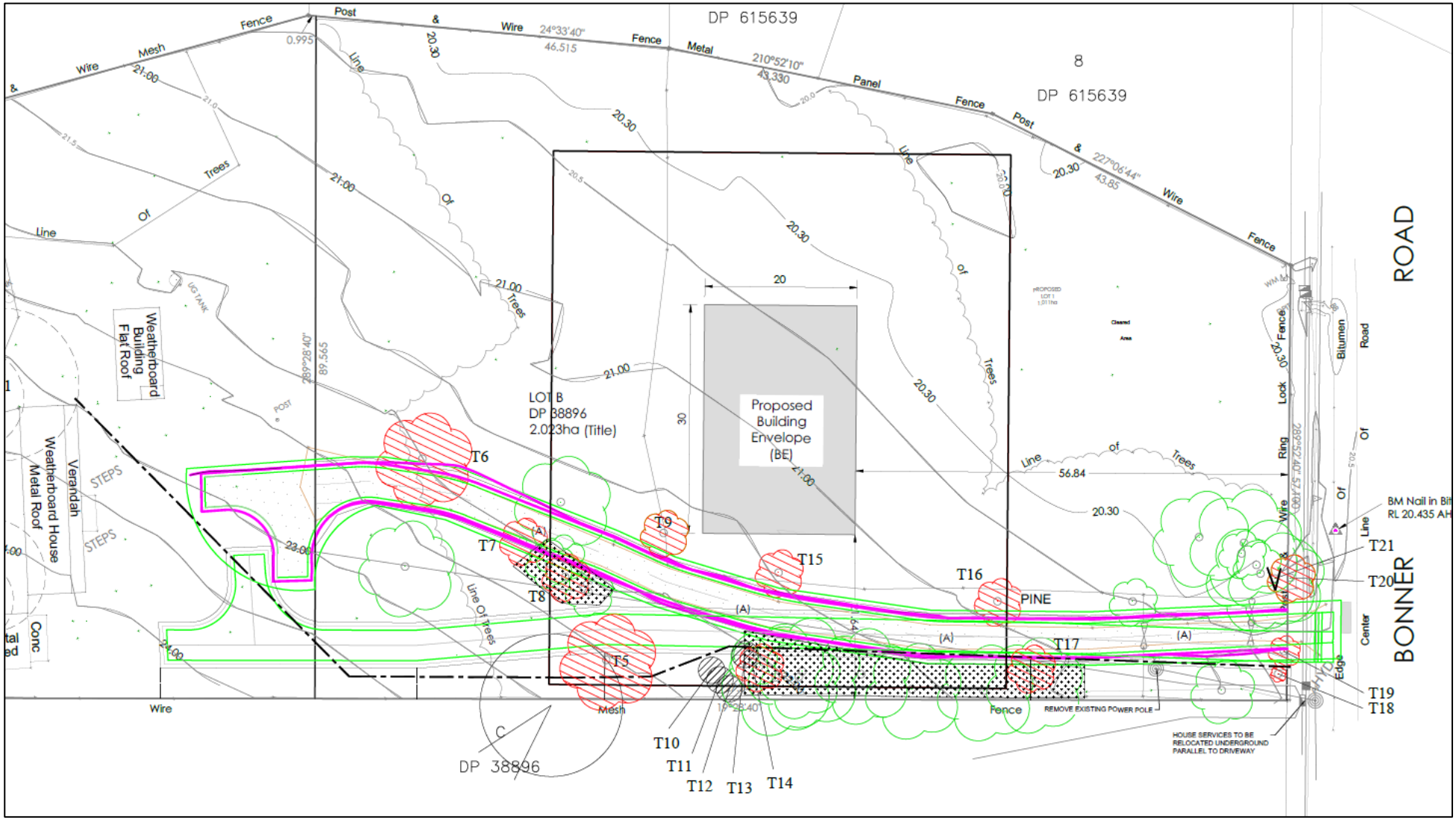

Figure 1-1: Approved driveway (pink) and proposed driveway re-alignment (green). The trees to be removed are illustrated in red (from the TRRRP (Monaco, 2021)).

Figure 1-2: Proposed location of the 'tree replenishment zone' shaded in red (from the TRRRP (Monaco, 2021)).

2 THREATENED SPECIES DATABASE SEARCH UPDATE

2.1 Flora

A search of the BioNet Atlas of NSW Wildlife database (on 11/10/2021) indicated that fifteen (15) species of flora listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and/ or Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been recorded within a 10km x 10km square centred on the property. This compares with the thirteen (13) species of flora on the database when the original Flora and Fauna Assessment report (SIAEEP, 2018) was completed. The two additional species of listed flora are presented in Table 2.1 below. The table indicates whether potential habitat for the species exists on the site. Neither of the species was observed during the site assessment.

2.2 Fauna

A search of the BioNet Atlas of NSW Wildlife database (on 11/10/2021) indicated that thirty-nine (39) species of fauna listed under the BC Act and/ or EPBC Act have been recorded within a 10km x 10km square centred on the property. This compares with forty-three (43) species of fauna on the database when the original Flora and Fauna Assessment report (SIAEEP, 2018) was completed. Six species that were in the original Flora Fauna Impact Assessment report are no longer on the list, while two new species are on the list. The two new species are presented in Table 2-2 below. The table indicates whether potential habitat for the species exists on the site. Neither of the species was observed during the site assessment.

Table 2.1: Species of flora listed under the BC Act or EPBC Act not in earlier Flora Fauna Impact Assessment report (SIAEEP, 2018).

Scientific Name	Common Name	Habitat	TSC Act/ EPBC Act Status *	Potential Habitat On-site	Observed On-site
Isotoma fluviatilis subsp. fluviatilis		Known to grow in damp places, on the Cumberland Plain, including freshwater wetland, grassland/alluvial woodland and an alluvial woodland/shale plains woodland (Cumberland Plain Woodland) ecotone. May be an early successional species that benefits from some disturbance. Possibly out competed when overgrown by some species such as Cynodon dactylon.	-/ X	Yes	No
Rhodamnia rubescens	Scrub Turpentine	Found in littoral, warm temperate and subtropical rainforest and wet sclerophyll forest usually on volcanic and sedimentary soils. This species is characterised as highly to extremely susceptible to infection by Myrtle Rust. Myrtle Rust affects all plant parts.	CE/ -	No	No

* E = Endangered, E2 = Endangered Population, V = Vulnerable.

Table 2.2: Species of fauna listed under the BC Act or EPBC Act not in earlier Flora Fauna Impact Assessment report (SIAEEP, 2018).

Scientific Name	Common Name	Habitat	TSC Act/ EPBC Act Status *	Potential Habitat On-site	Observed On-site
Hirundapus caudacutus	White-throated Needletail	In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. White-throated Needletails almost always forage aerially, at heights up to 'cloud level', above a wide variety of habitats ranging from heavily treed forests to open habitats, such as farmland, heathland or mudflats, though they sometimes forage much closer to the ground in open habitats, once as low as about 15 cm in a coastal saltworks. The species has been recorded roosting in trees in forests and woodlands, both among dense foliage in the canopy or in hollows, though the number of references to Needletails roosting in trees possibly over-emphasizes such occurrences. It has been suggested that they also sometimes roost aerially, and it was formerly erroneously thought that the species did not alight while in Australia. The species breeds in wooded lowlands and sparsely vegetated hills, as well as mountains covered with coniferous forests. White-throated Needletails may take refuge during extreme conditions. Many birds were seen perching on the trunks of trees during a bushfire; during cold weather, one was found roosting during the day in the hollow branch of a eucalypt and some were seen sheltering in stunted scrub during bad weather on the high plains. They may also alight on the trunks or branches of trees during hot or inclement weather; and there is a record of Needletails resting on a lawn under sprinklers during hot weather.	-/ V	No	No

Scientific Name	Common Name	Habitat	TSC Act/ EPBC Act Status *	Potential Habitat On-site	Observed On-site
Pommerhelix duralensis	Dural Land Snail	The species has a strong affinity for communities in the interface region between shale-derived and sandstone-derived soils, with forested habitats that have good native cover and woody debris. It favours sheltering under rocks or inside curled-up bark. It does not burrow nor climb. The species has also been observed resting in exposed areas, such as on exposed rock or leaf litter, however it will also shelter beneath leaves, rocks and light woody debris. Migration and dispersal is limited, with overnight straight-line distances of under 1 metre identified in the literature and studies. The species is active from approximately one hour after dusk until dawn and no confirmed diurnal activity is reported. It exhibits no roost-site behaviour. The species is known to aestivate, and secretes an epiphragm to protect against desiccation. The main food sources are hyphae and fruiting bodies of native fungi. It is possible other detritus may be consumed. Reproduction rates are very low, with few eggs (about 32) per season. Mortality is 90% in the first year, and 99.8% within four-five years.	E/ E	No	No

* E = Endangered, E2 = Endangered Population, V = Vulnerable.

3 IMPACT ASSESSMENT

3.1 Flora

It is proposed to remove seven (7) native trees that were not approved for removal in the development consent for DA18/0429. The trees are illustrated in red in Figure 1-1 above. The trees are two (2) Grey Box (*Eucalyptus moluccana*), three (3) Cabbage Gum (*E. amplifolia*), and two (2) White Cedar (*Melia azedarach*). The other trees proposed for removal are non-native Monterey Pines (*Pinus radiata*). Photographs of the trees are provided in Appendix A.

The trees to be removed are not old, although one, T17 is larger, with a Diameter at Breast Height (DBH) of 700mm and a height of greater than 20m. The trees are part of the ecological community '*River-flat Eucalypt Forest on Coastal Floodplains*' listed as Endangered under the BC Act and Critically Endangered under the EPBC Act. Only several trees that are not old would be removed from an area that is already highly disturbed and there are relatively large areas of the community in good condition in the local area. Consequently, the proposal would not result in a significant impact to this ecological community. This is confirmed in a 5-part test provided in Appendix B.

There would be no significant impact on flora from the proposal.

3.2 Fauna

The proposed removal of seven native trees that are not old would have a minor impact on native fauna. There are relatively vast areas of partially cleared forest in the local area that provide similar habitat to that on the subject property. Furthermore, there are large areas of remnant vegetation in good condition the local area that provide even better habitat.

There would be no significant impact on fauna from the proposal.

3.3 Tree Replenishment Area

The proposed tree replenishment area is at the rear of the property on the eastern side, outside of the land that is shaded on the NSW Government's Biodiversity Values Map.

4 CONCLUSION

It is proposed to re-align the driveway and remove seven (7) native trees. The trees are not old and do not contain any tree hollows. The trees are part of the *River-flat Eucalypt Forest on Coastal Floodplains* ecological community that is listed as Endangered under the BC Act and Critically Endangered under the EPBC Act. The proposal would not have a significant impact on the ecological community. No listed species of flora or fauna would be impacted by the proposal. The proposal would not have a significant impact on flora or fauna.

The proposed location of the Tree Replenishment Zone at the rear of the property is a good location as it adjoins an existing remnant of native vegetation and replanting in this area would add to and consolidate that area of remnant vegetation.

5 REFERENCES

Monaco, 2021. *Tree Removal/ Retention and Replenishment Plan*. Monaco Designs PL. Dated 17 May 2021.

SIAEEP, 2018. *Flora and Fauna Assessment*. SIA Ecological & Environmental Planning. Report dated 5 September 2018.

Appendices

APPENDIX A – PHOTOGRAPHS

Photo 1: A Cabbage Gum and Grey Box proposed for removal (arrowed).

Photo 2: Looking up at the canopy of the Grey Box from Photo 1 proposed for removal.

Photo 3: The larger Cabbage Gum proposed for removal.

Photo 4: Two White Cedar proposed for removal.

Photo 5: A photo of the building envelope (white pegs). One of the dead Monterey Pines proposed for removal can be seen on the left (arrow).

APPENDIX B – TESTS OF SIGNIFICANCE (5-PART TESTS)

5-Part Test for "River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South-east Corner Bioregions"

(a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

N/A.

(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

It is proposed to remove seven trees that are part of the Endangered Ecological Community (EEC). The trees are within a partly cleared remnant that has no native understorey and only a proportion of native groundcovers present, the remaining groundcover comprised of introduced species. None of the trees are old. There are substantial areas of the EEC locally including more than 10 ha along the banks of the Hawkesbury River approximately 1km to the west of the site. The seven trees to be removed would not place at risk of extinction the local occurrence of this community.

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

The proposal would slightly reduce the number of trees present within the partly cleared remnant. As discussed above, as there are substantial areas of the community locally so the proposal would not place at risk of extinction the local occurrence of this community.

(c) in relation to the habitat of a threatened species, population or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and

The proposal would remove seven trees from within a small area of highly disturbed habitat. There are relatively vast areas of the ecological community in the local area including more than 10ha along the banks of the Hawkesbury River approximately 1km to the west of the site.

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and

The trees on the property are part of a scattering of trees on the property and adjoining properties that provide some connectivity between remnants of the community in the local area. The proposal would remove a small area of the trees on the property and thus would slightly reduce the amount of connectivity in the area. However, it would not completely sever connectivity and thus would not result in any areas becoming fragmented or isolated from other areas. It should also be noted that it is proposed to replant trees on the property to compensate for the proposed tree clearing.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,

The trees proposed for removal are relatively young regrowth with no shrub layer and a sparse groundcover layer of native vegetation. The area of habitat would not be important for the long-term survival of the community in the locality as there are substantial areas of similar and better quality habitat locally, including more than 10ha along the banks of the Hawkesbury River approximately 1km to the west of the site.

(d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),

The proposal would not impact any declared areas of outstanding biodiversity value.

(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

The proposal involves 'clearing of native vegetation' that is identified as a key threatening process.

Conclusion

Based on the above assessment it is concluded that the seven trees to be removed would not have a significant impact on the River-flat Eucalypt Forest endangered ecological community.