



Our Ref: 1495

Date: 10 November 2017

PULVER COOPER & BLACKLEY

ATTENTION: ASHLEE RYAN

Via Email: aryan@pcbns.w.com.au>

Dear Ashlee,

**RE: PROPOSED RESIDENTIAL SUBDIVISION
ECOLOGICAL CONSIDERATIONS
18 WINTERLAKE ROAD, WARNERS BAY, NSW**

As requested, Anderson Environment & Planning (AEP) herewith provide results of recent investigations to identify preliminary constraints and opportunities for possible development options within land situated at 18 Winterlake Street, Warners Bay, NSW (the site), giving consideration to rezoning parts of the land from "E2" (Environmental Conservation) to "R2" (Low-density Residential).

The site was inspected by an AEP ecologist on 2 November 2017. Fieldwork conducted included general site reconnaissance and traversal, targeted searches for threatened flora and fauna species, compilation of a flora list and overall recording of incidental observations.

Fieldwork was performed with a view to verifying (or otherwise) vegetation community and other ecological information gathered at the desktop level, and to identify the presence of potential habitat for Squirrel Glider, Koala, and other threatened fauna and flora.

The Site

The site comprises approx. 3.15ha. As per *Lake Macquarie Local Environmental Plan* (2014), (the LEP), the site is currently zoned E2 within lands to be conserved in accordance with Lake Macquarie City Council (LMCC) *East Munibung Hill Area Plan*.

While the land is currently zoned E2 under the LEP, LMCC's current Lifestyle 2030 Strategy identifies that the land is in a growth and expansion corridor, however does not include a specific recommendation to rezone the land for residential purposes. LMCC does not typically rezone E2 Environmental Conservation land as this is inconsistent with their planning policies, however it is noted that the *East Munibung Hill Area Plan* (EMHAP):

"Further development may be possible subject to suitable geotechnical scenic quality investigations being prepared to the satisfaction of Council."





From EMHAP mapping, approx. 1.15ha of land in the downslope eastern part of the site may be suitable for development subject to the abovementioned constraints. The site location is shown in **Figure 1**.

Current Land Use

The study area presents as a mosaic of long-term anthropogenic management and influence; including cleared and seeded grazing pasture, and highly disturbed remnant vegetation, mostly within and adjoining drainage lines running through the site. Two unmapped though well-established 1st order drainage lines (the watercourses) run through the site, one roughly west to east through the centre of the site, and the other roughly north to south near the eastern boundary. The watercourses are tributaries of North Creek which flows into Lake Macquarie approx. 1.1km to the south-east. The watercourses will likely be required to be retained, with a 10m each side of 'top-of-bank' wide Vegetated Riparian Zone (VRZ) under the NSW *Water Management Act 2000* (WM Act) (DPI 2012). The indicative location of the watercourses is shown in **Figure 1**.

Disclaimer: While all reasonable care has been taken to ensure the information shown on this map is up to date and accurate, no guarantee is given that the information portrayed is free from error or omission. Please verify the accuracy of all information prior to use.

Legend

-  Site Boundary
-  Potential Rezoning Area
-  10m Riparian Buffer
-  Drainage Line



Note:
1. Boundaries are not survey accurate
2. Do not scale off this plan



AEP

Title: Site Location

Date: Dec 2017

Location: Warners Bay

Client: PCB

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Surrounding Land Use

The site is bounded to the north and south by EMHAP E2 zoned large lots with development constraints as described above. AEP understands land to the south is currently subject to a rezoning application.

Land to the west is zoned E2 and under ELMHAP is listed as *“Maintain undeveloped (other than drainage/landscaping/recreation). No further subdivision.”*

Land to the east is zoned R2 and is largely developed.

Site Vegetation

Remnant vegetation within the study area was deemed to constitute a highly disturbed variant of Hunter Valley Moist Forest, with areas of managed pasture. This community is not listed as a threatened community under either the NSW TSC Act or Commonwealth EPBC Act.

Fauna species recorded were typical of those found in this habitat and those commonly associated with cleared lands and semi-isolated, disturbed remnant vegetation. There is very limited potential for a small number of threatened species (mostly microbats and birds) to utilise the subject site as part of a larger home range.

Fieldwork revealed that the site is highly disturbed, canopy trees where they remain have dominant exotic noxious weed species in the understorey, and a limited number of native colonising-type herbs, ferns and shrubs persist. Open areas are dominated by rank grasses, and have been extensively grazed.

Threatened Flora

No threatened species were recorded within the study area, and given the highly managed and disturbed state, it is unlikely that any local threatened flora population would be found within the site. A site walkover indicated the whole site has been heavily grazed, and the almost total lack of native understorey makes it unlikely any seed bank exists for threatened native species.

Habitat Assessment

The site offers very limited habitat features for native fauna as outlined below:

Vegetation - Habitat in the understorey was absent due to highly managed understorey in open areas and the dominance of exotics under remnant native canopy trees. Apart from some potential habitat in split trunks and bark for microfauna in canopy trees, no habitat was observed.

Patch Size and Connectivity – Due to its small and highly disturbed nature the site does not represent a patch. It is tenuously connected to other discontinuous patches of forest in the locality but due to absence of understorey and limited canopy paddock trees, would not contribute to any connectivity within the locality.



In summary, the site provides very marginal potential habitat at best for fauna species, is poorly vegetated and does not connect any patches of vegetation and hence habitat.

Fauna

Desktop studies revealed no records of threatened fauna utilising the site. This was confirmed during fieldwork, with fauna recorded being typical of a disturbed site.

The few mature eucalypts within the site could offer very limited seasonal foraging habitat and limited roosting habitat for mobile threatened species, but higher quality resources would be available in the wider locality, and it is not considered removal of vegetation from the site would have an impact on any threatened fauna species.

Conclusion

It is considered that the removal of vegetation for any proposed development will not have any notable impact on the viability of any locally occurring threatened fauna species or ecological community.

However, the potential exists for the unmapped 1st order watercourses bisecting the site to present yield / cost issues.

The exact location of the watercourses should be established by site survey to establish areas which may be affected by WM Act.

However, required protection of these watercourses combined with adjoining required Asset Protection Zones (APZ's) will likely affect most if not all of the indicated land area in regards to future residential uses.

We trust that the information and advice presented herewith is as required. If you need any further information or clarification, please do not hesitate to contact the writer.

Yours faithfully,

ANDERSON ENVIRONMENT & PLANNING

CRAIG ANDERSON
DIRECTOR