

Referral Response

Development – Flora/Fauna



Application Number: DA/1443/2016

Date: 30/09/2016

Location: LOT 803 DP 1156934 14 HALYARD WAY, BELMONT NSW 2280

I have inspected the site and reviewed the application, including:

- Statement of Environmental Effects (Tattersall Lander August 2016)
- Flora Assessment and Assessment of Significance (Anne Clements and Associates 22/08/2016)
- Bushfire Threat Assessment (Tattersall Lander August 2016)
- Fauna Assessment (Wildthing Environmental Consultants July 2016)

Where required the application has been assessed for compliance with ecological requirements / recommendations detailed in the LMCC LEP (2014), LM DCP 1 (2014), TSC Act 1995, Native Vegetation Act 2003, Lake Macquarie Flora and Fauna Survey Guideline (2012), Lake Macquarie Vegetation Management Plan Guideline (2012), Lake Macquarie Squirrel Glider Planning and Management Guidelines (2015), Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines (2014), Interim Lake Macquarie Large Forest Owl Planning and Management Guidelines (2014), Interim Lake Macquarie *Grevillea parviflora* subsp. *parviflora* Planning and Management Guidelines (2013), Lake Macquarie Wetlands Management Study, Lake Macquarie Coastal Management Plan, SEPP 14, 19, 26 & 44, FM Act 1994 and EPBC Act 1999. Flora and fauna comments are provided below:

Summary of ecological attributes at the site

The site provides high quality ecological habitat to a number of state and nationally listed threatened species and nationally listed migratory species (see Table 1).

Table 1 – Summary of TSC Act and EPBC Act threatened species, and EPBC listed migratory species with potential to be impacted.

Level of Occurrence	Species
Threatened species known to occur within the site	• Squirrel glider <i>Petaurus norfolcensis</i>, grey-headed flying-fox <i>Pteropus poliocephalus</i>*, powerful owl <i>Ninox strenua</i>, eastern bentwing-bat <i>Miniopterus schreibersii oceanensis</i> and little bentwing-bat <i>Miniopterus australis</i> • Black-eyed Susan <i>Tetratheca juncea</i>*
Threatened species considered to potentially occur within the site	• Little Eagle <i>Hieraaetus morphnoides</i>, square-tailed kite <i>Lophoictinia isura</i>, masked owl <i>Tyto novaehollandiae</i>, sooty owl <i>Tyto tenebricosa</i>, barking owl <i>Ninox connivens</i>, scarlet robin <i>Petroica boodang</i>, flame robin <i>Petroica phoenicea</i>, regent honeyeater <i>Anthochaera phrygia</i>*, varied sittella <i>Daphoenositta chrysoptera</i>, swift parrot <i>Lathamus discolor</i>*, little lorikeet <i>Glossopsitta pusilla</i>, glossy black cockatoo <i>Calyptorhynchus lathami</i>, gang-gang cockatoo <i>Callocephalon fimbriatum</i>, wompoo fruit-dove <i>Ptilinopus magnificus</i> rose-crowned fruit-dove <i>Ptilinopus regina</i> superb fruit-dove <i>Ptilinopus superbus</i>. • Tiger quoll <i>Dasyurus maculatus maculatus</i>*, koala <i>Phascolarctos cinereus</i>*, eastern pygmy-possum <i>Cercartetus nanus</i>.

	Large-footed myotis <i>Myotis macropus</i>, greater broad-nosed bat <i>Scoteanax rueppellii</i>, large-eared pied bat <i>Chalinolobus dwyeri</i>, eastern false pipistrelle (<i>Falsistrellus tasmaniensis</i>), eastern cave bat <i>Vespadelus troughtoni</i>, yellow-bellied sheath-tail-bat <i>Saccolaimus flaviventris</i>, east coast freetail-bat <i>Mormopterus norfolkensis</i>.
EPBC listed migratory species known to occur within the site	White-bellied sea eagle <i>Haliaeetus leucogaster</i>
EPBC listed migratory species with potential to occur within the site	Rainbow bee-eater <i>Merops ornatus</i>, white-throated needletail <i>Hirundapus caudacutus</i>, and black-faced monarch <i>Monarcha melanopsis</i>.

*Note: Species also listed as threatened on the EPBC Act (i.e. in addition to the TSC Act).

Native vegetation at the site is characteristic of MU 30e coastal plains stringybark apple forest, MU 15 Lake Macquarie spotted gum forest and MU12 hunter valley moist forest. Although these vegetation communities are not characteristic of threatened communities listed on the TSC Act and EPBC Act, they provide habitat for a range of threatened species (see Table 1).

Native vegetation at the site forms part of a corridor mapped in Council's Native Vegetation and Corridor Map v1 (2011), with several crossing points. A key strategic corridor and crossing point links native vegetation north and south of Croudace Bay Road, and is of critical importance to connect patches of habitat for threatened species including *Tetratheca juncea*, squirrel glider *Petaurus norfolkensis* and powerful owl *Ninox strenua*.

The application proposes to clear 4.83 ha of habitat, with an additional 8.62 ha of vegetation clearing and management within the bushfire asset protection zone (APZ) (13.45 ha total; 15.6% of native vegetation on the site). The application proposes to clear 36 habitat trees, amounting to 88 hollows (9 owl size, 13 possum size, 51 glider size and 15 microbat size). An additional 22 habitat trees (78 hollows) occur within the APZ; some if not the majority of these would also be lost to comply with Planning for Bushfire Protection (RFS 2006).

The nominated APZ would result in a significant amount of native vegetation clearing, as it extends for 100 m to the north, 55 m to the northwest, >140 m to the south southwest and west, and 100 m to the east. The APZ extends onto Lot 3 DP 1012856. No perimeter road is provided by the development. As the road is outside the APZ, it results in increased clearing of native vegetation.

Comments in relation to Council planning documents

The application does not meet the E2 zone objectives:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values
- To prevent development that could destroy, damage or otherwise have a n adverse effect on those values.
- To conserve, enhance and manage corridors to facilitate species movement, dispersal and interchange of genetic material

The application does not meet the E4 zone objectives:

- To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.
- To ensure that residential development does not have an adverse effect on those values.
- To protect, enhance and manage corridors to facilitate species movement, dispersal and interchange of genetic material.
- To encourage rehabilitation and conservation of environmentally important land.

The application does not meet the Flora and Fauna objectives in Council's DCP Part 7 Development in Environmental Protection Zones:

- To avoid or minimise impacts on native flora and fauna
- To protect and enhance significant flora and fauna, vegetation communities and significant habitat on the site and on surrounding development sites.
- To protect and enhance ecological corridors and increase the connections between habitats

The application does not comply with Lake Macquarie Flora and Fauna Survey Guideline in relation to protection of corridors, protection of high value native vegetation and protection of threatened species and their habitat.

The application does not meet the site E2 Environmental Protection and E4 Environmental Living zone objectives or Part 7 of Council's DCP and cannot be supported from a flora and fauna perspective. The site contains high value ecological habitat including threatened flora and fauna, hollow-bearing trees and a mapped corridor and crossing point which provides a key strategic habitat linkage for threatened species that are protected by the *Threatened Species Conservation Act*, *Environmental Protection and Assessment Act* and Council's Local Environmental Plan. Even with substantial modification and a Species Impact Statement the application would be unable to meet the E2 and E4 zone objectives or Council's DCP Part 7.

Ecological impacts associated with the application- flora

Tetratheca juncea

There are 1594 clumps of *T. juncea* which occur over the site. These clumps form part of a viable local population, and meet the criteria for 'important population' Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines (LM TjPMG) as they occur within an area of over 50 ha of native vegetation, the number of clumps recorded are >1000, and the site is connected to other *T. juncea* populations. The *T. juncea* population at the site also meets the criteria for an important population under the EPBC Act. Note *T. juncea* habitat currently protected in conservation reserves is not adequate to either protect viable populations or to conserve the species over its geographic range.

The application proposes to clear 279 (17.5%) of the clumps on site. An additional 904 clumps (57%) occur within the nominated APZ. The Bushfire Threat Assessment proposes '*The pockets of T. juncea are to be left intact except for the removal (by hand) of lantana (L. camara, bitou bush (C. monilifera) and small-leaf privet (L. sinense). No activities is to occur within three (3) metres of each of the T. juncea clumps, except for weed removal (as noted above). A buffer area of at least seventeen (17) metres is to surround these three (3) metre exclusion areas and within this buffer zone activities shall be limited to weed removal, as well as ground fuel reduction prior to the commencement of the fire season.*'

The APZ has been widened to allow for these patches of unmanaged land within the APZ. The patches of unmanaged land are intended to meet the buffer requirement in the Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines. However, the connectivity of *T. juncea* habitat is determined primarily by the ability of pollinators (native bees) to transfer genetic material to habitat fragments; it is likely that maximum flight distance would be around 300-500 m and that they would not fly more than 100 m through hostile habitat (Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines). The ability for pollinators to continue to fly through urbanised areas, roads and managed vegetation within an APZ (ie hostile habitat) post development to retain connectivity between habitat patches and viability of the population onsite as proposed in the application is unlikely as the distance between retained patches is greater than 100m. The nominated management of retained *T. juncea* within the APZ is not supported. The long-term retention of *T. juncea* within the APZ as described in the application is unlikely.

An additional assessment has been undertaken regarding potential indirect impacts to *T. juncea*. There are 90 *T. juncea* clumps recorded within 10 m of the development site, and assuming these clumps are indirectly impacted by the development, a total of 369 (23.1%) of the total *T. juncea* clumps at the site would be cleared or impacted. Note that the Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines require an assessment of indirect impacts using a 20 m buffer to retained *T. juncea* clumps not 10 m; hence if this 20 m buffer was taken into account the

application is likely to clear or impact >25% of the *T. juncea* clumps at the site. Table 8 of the Lake Macquarie *Tetratheca juncea* Planning and Management Guidelines state that in regards to S5A of the EP&A Act, a significant impact on *T. juncea* is likely is 25% or more of the total number of plant clumps are removed. The application should have been supported with a Species Impact Statement as required under Section 78(8)(b) of the EP&A Act.

Ecological impacts associated with the application- fauna

The application would result in the following impacts to threatened fauna at the site:

- A reduction in the width and quality of a mapped corridor and crossing points on the site, impacting connectivity to native vegetation south of Croudace Road
- Removal of approximately 4.83ha of foraging/hunting habitat
- Modification of approximately 8.62ha of foraging/hunting habitat for the APZ
- The direct loss of 36 hollow-bearing trees containing potential nesting/den sites and in the case of owls potential habitat for prey species
- The potential loss of a number of the 22 hollow-bearing trees within the APZ
- Reduction in size of the habitat patch from approximately 132ha to 127ha; a reduction of 3.8%

Assessments of significance have been undertaken for threatened species, communities and their habitats listed on the TSC Act which were recorded, or with the potential to occur at the site. The assessments of significance conclude that a species impact statement should be prepared for powerful owl and squirrel glider as per Section 78A(8)(b) of the EP&A Act due to considerations under Section 5A (a) (d), (f) and (g) of the EP&A Act.

With regard to Table 3 Item 4 of the Interim Lake Macquarie Large Forest Owl Planning and Management Guidelines the application triggers a significant impact and should have been supported with a Species Impact Statement as it proposes to remove >1ha of large forest owl habitat and occurs on land zoned Environmental Protection within a home range that has already been reduced to less than 500ha.

With regard to Table 8 of the Lake Macquarie Squirrel Glider Planning and Management Guidelines the application triggers a significant impact and should have been supported with a Species Impact Statement as it proposes to:

- Remove more than 4 ha of squirrel glider habitat, and
- Reduce in the effectiveness of a key strategic corridor linkage connecting habitat patches, and
- Habitat connectivity to a habitat patch will be lost, or narrowed to a width that is not suitable for maintaining in the long term.

There are two natural watercourses within the nominated asset protection zone. These watercourses are classified as first order under the Strahler System of ordering watercourses. In accordance with Council's DCP Part 7 Development in Environment Protection Zones a 10 m vegetated riparian zone should be provided either side of these watercourses, and APZs must not be located within the vegetated riparian zone.

Recommendation

The application does not meet the site E2 Environmental Protection and E4 Environmental Living zone objectives or Part 7 of Council's DCP and cannot be supported from a flora and fauna perspective. The site contains high value ecological habitat including threatened flora and fauna, hollow-bearing trees and a mapped corridor and crossing point which provides a key strategic habitat linkage for threatened species including the squirrel glider and powerful owl that are protected by the *Threatened Species Conservation Act*, *Environmental Protection and Assessment Act* and Council's Local Environmental Plan.

While a Species Impact Statement should have been provided with the application as per Section 78A(8)(b) of the EP&A Act and Councils guidelines for *Tetrahteca juncea*, large forest owls and the squirrel glider, it is recommended that this not be requested rather that the application be refused as even with a Species Impact Statement the application will be unable to meet the environmental zone objectives given the significance of the habitat and threatened species to be impacted

Note: Consent under the Native Vegetation Act would also be required from the Local Land Services.

Should you require any information please contact me on extension ext 1334.

Vanessa Owen
Development Assessment and Compliance