Our Ref: A17143LRMP

6 April 2018



Mr S Sirdah Impact Group Level 3, 924 Pacific Highway GORDON NSW 2072

Dear Sam

RE Office of Environment and Heritage comments on Notification of Modification Seniors Living Housing Development, 34-36 Memorial Avenue, Kellyville (MP09_0180 MOD 7)

I refer to the correspondence dated 26 February 2018 by the Office of Environment and Heritage (OEH) providing comment and requesting further information on the Environmental Assessment (EA) for the Modification Request (MOD 7) to modify the Project Approval for a Seniors Housing Development at 34-36 Memorial Avenue, Kellyville.

OEH has reviewed the EA for MOD 7 and relevant documentation and provides the following recommendations and detailed comments in Attachment A in relation to biodiversity related issues.

OEH Comments and response

OEH Comments	Response
The MOD 7 proposal is in accordance with the Biodiversity Offset principles which are included in Appendix 2 of the Guideline for Threatened Biodiversity Assessment Under Part 3A of the Environmental Planning and Assessment Act 1979 - draft (May 2009) which the DGRs for MP09_0180 require the project to have regard to	The approved conservation area has been approved and this DA requires a minor amendment to an impacted portion of the woodland reserve. The impact on CPW reserve as previously approved is small at approximately 35m ² and are not significant and are not automatically required to be offset. 5 individual trees are impacted as discussed below some of which were approved to be removed under the masterplan DA and the EPBC Act consent. The original approved 'area' of CPW reserve within the site will be maintained with a minor adjustment to the reserve boundary that reflects current site conditions. The existing CPW reserve will be improved through ongoing vegetation works in accordance with the updated Landscape Restoration Management Plan and this DA will close off the northern portion of the reserve and finalise the restoration works as required under the previous approvals and EPBC Act approval of the Masterplan.

38A The Avenue Mt Penang Parklands Central Coast Highway Kariong NSW 2250

In accordance with the first offset principle the impacts to native vegetation are avoided first by using prevention and mitigation measures. If impacts are unavoidable, offsets then must be used to address any remaining impacts to native vegetation	The proposed development footprint is based on the existing site constraints and the retention or otherwise of trees was considered up front in the Masterplan DA. The area of impacted vegetation is of low quality and consequently an insignificant impact is caused. The proposed DA results in improved woodland reserve but this can only be achieved through a combination of bush regeneration and revegetation works.
	The impacts of the redesign of the approved Stage 3 buildings was considered during the design process and it resulted in an adjustment to the design to save one significant <i>Eucalyptus tereticornis</i> which is considered visually significant within the reserve. All other trees were previously identified for removal in the Masterplan DA. Therefore I conclude that the proposed DA has avoided impacts as much as possible.
	The proposed changes ensures a net equivalent area as approved under the EPBC Act and the masterplan DA approval. Further offsetting is not required for this site as it is consistent with the Masterplan approval and in particular meeting the target area required for conservation of CPW within the site.
Existing trees and hollows to be removed are offset in accordance with Offset Principle 6 (offsets should aim to result in a net improvement in biodiversity over time)	Agreed – refer to the nest box and hollow comments below
All trees that are to be removed with hollows are sensitively dismantled to protect and reuse the hollows within the Cumberland Plain Woodland (CPW) parkland	The existing reserve is already overloaded with nest boxes and over supply of nest boxes is not recommended nor of any ecological value. It is however supported that up to ten natural modified hollows be installed in the reserve to provide high quality nesting habitat not being provided by the existing nest boxes
Any trees to be removed are salvaged and used in the CPW parkland to enhance habitat including tree hollows and tree trunks (greater than approximately 25-30cm in diameter and 3m in length)	The existing affected hollows are not of significant value and not suitable for salvaging and relocation, however we can installation ten modified branch hollows salvaged from Native hardwood trees of appropriate size and dimensions.
	We can consider retention of one or two large log sections (less than 5m in length within the reserve as possible on ground

	habitat
The nest boxes are monitored on an ongoing basis to determine if they are being used by native fauna.	Monitoring in perpetuity.

Within the detailed comments of the OEH correspondence the following matters were raised in addition to the above comments:-

OEH Comment	Response
Tree retention and removal	
The EA indicates that while a change in the building footprints is proposed, the total area of CPW will be maintained at a minimum of 0.5421ha. The change in building footprint will however impact a total of 7 trees (T024, T025, T027, T037, T048, T049 and T050) (Section 4.2.7 of EA, page 9). It notes that apart from T027 all the other trees were previously indicated for removal as part of the previous studies and that T052 which was previously to be removed is now being retained as part of the MOD 7 development.	Noted however T024 & T037 have already been removed
OEH notes the 7 trees to be removed are Narrow-leaved Ironbark <i>(Eucalyptus crebra)</i> as is T052 (Schedule 1 of Tree Assessment).	TBE confirms that 5 trees (excluding T024 & T037) will be removed
OEH acknowledges and supports the retention of T052 but seeks clarification as to whether there is any potential to modify the footprint of the proposed buildings to avoid removing T027 (and/or any of the other 6 trees which have previously been indicated for removal). It appears, for example the reason why T024 and T027 are proposed to be removed is that the structural root zone of these trees slightly overlaps with the proposed footprint of the buildings (see Schedule 2 of Tree Assessment). If there is no potential to retain these trees, their loss should be offset.	As recently discussed with Janne Grose (OEH) the retention of T052 was a result of reviewing the building footprint. Offsetting the loss of five trees is a negligible outcome in terms of offset credits but they can be replaced within the proposed landscaping of the CPW Reserve or replanted as part of landscaping in a more sustainable location Offsetting the loss of CPW reserve will be an offset for the loss of a highly degraded portion of the CPW reserve and it will have a very low site value score based on its condition. It is the clients preference to replant and recreate a high quality CPW outcome within the site.
Revised Landscape Restoration	
<u>Management Plan (LRMP)</u>	
The revised Landscape Restoration Management Plan (LRMP) proposes to replace lost trees at a minimum of 1:1 ratio (section 4.1, page 18). The	Five trees are confirmed to be removed. Based on the proposed landscape plan a replanting density of 1 tree every 30-50m ² within the currently no revegetation portion

replacement of lost trees at a ratio of at least 1:1 is considered to be too low. It is recommended the offset is in accordance with the sixth Biodiversity Offset Principle as the loss of existing trees and the	of the CPW reserve would result in between 10-15 additional trees to be planted. This is equivalent to a 2-3:1 replacement ratio within the proposed reserve.
benefits that they provide takes years for a juvenile tree to grow and replace. The benefits they provide include:	The landscape plan allows for up to 28 new trees of various CPW species to be planted which is equivalent to a 5:1 offset ratio.
 habitat and support for biodiversity- habitat features include -tree hollows/roosting/breeding resources, foraging (such as flowering eucalypts) 	Consequently we do not consider offsetting the loss of these trees to be a viable outcome or required when a good outcome can be achieved onsite with the proposed landscaping and revegetation works.
 a natural cooling effect - shade – block the sun's radiation and reduce sun exposure - reduce temperature including in buildings reduce energy demand. 	The landscape design allows for the installation of a vegetated canopy screen within the northern portion of the reserve to soften the proximity of the adjacent buildings and to provide shading and habitat.
Of the seven trees to be removed, T024 is identified as a habitat tree and T052 is also identified as a habitat tree (Table 4, page 13 LRMP). It is unclear if T024 has already been removed. The LRMP notes habitat trees removed to date are listed in Table 4 and T024 is one of the trees listed (see section 2.5 page 12 and Table 4 page 13). Clarification is required on this.	T024 & T037 have already been removed. T024 was a poor quality habitat tree that has no value of retention in its current form. Hence we supported its removal and replacement with appropriate repurposed branch hollows as discussed below.
Table 4 indicates T024 has 1 small tree hollow and T052 has 1 small and 1 medium sized hollow (revised LRMP, Table 4). According to Table 4, 13 hollows in total have been/or are to be removed from the site (10 small and 3 medium sized hollows). This number could be 14	The landscape Restoration management plan as previously amended for previous stages required the installation of 10 nest boxes and 15 microbat boxes within the CPW reserve. These nest boxes have been installed.
hollows depending on whether T056 is meant to be retained or removed. Table 4 indicates T056 has 1 medium hollow and it is to be retained but Schedule 1 indicates it is to be removed. Clarification is required on this.	The installation of another 23 nest boxes would result in a very heavy overloading of nesting resources which are rarely used by the fauna within the site. However the provision of repurposed natural
The LRMP recommends replacing hollows at a ratio of at least 1:1 to supplement the loss of natural hollows (page 17) and proposes to replace the hollows by installing a total of 23 nest boxes:	branch hollows is considered by TBE to be a more useful approach and we do recommend the installation of 23 modified branch hollows for the full range of species likely to be utilising the site. These are used by microbats, possums and birds alike
 19 artificial nest boxes (including 10 nest boxes for arboreal mammals and birds and 5 nest boxes for microbats) an additional 4 nest boxes of 	It is agreed that nest boxes and repurposes hollows should be monitored for effectiveness, pest control and damage rectification.

various sizes (Table 5 on page 16 and 28).	also be replaced with new branch hollows.
The replacement of existing hollows at a ratio of at least 1:1 is too low particularly as threatened and several non-threatened micro-chiropteran bat species occur at the site. It is recommended the offset is in accordance with the sixth Biodiversity Offset Principle as outlined above.	
It is also recommended the nest boxes are monitored on an ongoing basis to determine if they are being used by native fauna.	
The proposed works program for stage 1 in the LRMP include an action to relocate hollows if required (Table 6, page 32) and the Restoration Strategy includes a strategy to mulch removed trees (Section 5.1, page 21). OEH recommends that any trees to be removed are salvaged and used to enhance habitat in the CPW parkland rather than be mulched. Tree hollows and tree trunks (greater than approximately 25-30cm in diameter and 3 m in length) should be retained and used in the CPW parkland.	The use of selected trunk sections within the reserve is recommended as determined by the project ecologist. We recommend a maximum of 4 trunk sections of up to 4 m in length.
The LRMP recommends that due to the presence of threatened and several non- threatened micro- chiropteran bat species, the hollow bearing characteristics of the trees should be examined via a habitat tree analysis to designate trees for sensitive dismantling (section 3.1, page 17). It is recommended all trees to be removed which have hollows are sensitively dismantled, to protect and reuse the hollows.	Agreed
The revised LRMP concludes that the loss of trees is acceptable subject to the trees being replaced by the new planting within the open space park (Table 3 of EA, page 27). As noted above, impacts to native vegetation at the site should be avoided first and if impacts are unavoidable then offsets must be used and the loss of trees and hollows are replaced in accordance with the sixth Biodiversity Offset Principle	Impacts were avoided as part of the design [process as a result of changes to the footprint of the proposed buildings.

Recommendations

Travers bushfire & ecology recommends the following actions as a result of the OEH review:-

- Installation of 23 repurposed natural hollows instead of nest boxes which are already in high density with the reserve.
- To replace damaged or lost nest boxes within the reserve with repurposed natural hollows or nest boxes.
- Planting of a minimum 28 new CPW trees within the CPW open space reserve and 10m defendable zone which achieves a 5:1 offset ratio.
- Harvesting of up to 4 trunk sections 3-4m in length to be relocated onto the CPW reserve for on-ground habitat.
- Implement monitoring of the nest boxes and hollows.
- Update the Landscape restoration management plan and landscape plans to reflect the above outcomes.

Should you have any questions regarding this correspondence please do not hesitate to contact the undersigned on (02) 4340 5331 or at <u>info@traversecology.com.au</u>.

Yours faithfully

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Michael Sheather-Reid – General Manager Senior Ecologist – Ba. Nat Res. Hons **Travers bushfire & ecology**