

Water Management Referral Response

Application Number:	DA2018/1826
To:	Rebecca Englund
Land to be developed (Address):	Lot 29 DP 5464 , 27 Warriewood Road WARRIEWOOD NSW 2102 Lot 28 DP 5464 , 25 Warriewood Road WARRIEWOOD NSW 2102

Reasons for referral

Council's Water Management Officers are required to consider the likely impacts.

Officer comments

This application is recommended for refusal as modifications to the bio-retention outlet design are required, as is additional information to make a proper assessment.

1. Some modifications are required regarding the outlet of the bio-retention in the creek corridor. The outlet should be designed according to http://www.water.nsw.gov.au/__data/assets/pdf_file/0011/547058/licensing_approvals_controlled_activit
 - a. Update the stormwater plan 202B to show the creek centreline, top of bank and 25m inner creekline corridor (to be dedicated to Council).
 - b. The outlet must be relocated slightly to ensure the outlet structure and discharge are directed downstream (they currently sit perpendicular to the creek).
 - c. Given the distance of the outlet for the bio-retention from the creek itself, and the grade of the bank; a spreader is required at the outlet to defuse flows. The scour apron should be graded to just below any permanent water.
 - d. Update the stormwater plans to show detail of the outlet design to reflect the above.

2. The impervious area may not have been updated for this new proposal. What is making me uncertain is that I have three different layouts all claiming the same impervious area of 59% for this lot.
 - a. Water Management Report dated 12 May 2017 (all townhouses) stated "77.6% impervious fraction for the developed aged care site and 59% (averaged) impervious for the townhouses site
Total catchment area addressed for Bioretention 1 (townhouses) was 11,498.72sqm
 - b. Water Management Report dated 23 Feb 2018 (RFB in middle between rows of townhouses) stated "77.6% impervious fraction for the developed aged care site and 59% (averaged) impervious for the townhouses site
 - c. The current WMR dated 19 October 2018 (RFB at lower side of lot) states "77.6% impervious fraction for the developed aged care site and 59% (averaged) impervious for the townhouses site"
Total catchment area addressed for Bioretention 1 (townhouses) was 10,226.07sqm.

Also, it appears the original WMR drew a straight line through the lots to divide catchments, whereas the new WMR cuts out a triangle of catchment East of Lorikeet Grove and downstream of the only part of the townhouses lot on the eastern side of Lorikeet Grove. Only a concern because it means this area hasn't been addressed in water balance for the overall 23-27 Warriewood Road site.

The uncertainty about the impervious area raises a concern that the water balance hasn't correctly been updated for this site, and therefore the sizing of the OSD and the bio-retention basin may not be appropriate for the amount of impervious area.

3. The sediment and erosion control plan needs to include treatment of the area of the proposed bio-retention basin and Lorikeet Grove, as I assume these will be constructed as part of this stage of development, not as part of the Aged Care development.

4. The Geotech report comments on groundwater presence existing from about 4.5m below ground level generally across the site. The report says there is no concern about seepage, however this is based on a basement to 3m deep (Page 9, Geotechnique Report 13787/1-AA 3 August 2016). I suspect the report may not have been updated for the planned RFB, which is the main difference from the proposal assessed in the Geotech report. According to the current plans, there are to be two basement levels on the RFB with excavation to a depth of 6-6.5m. I can condition for dewatering requirements just in case, but the geotech consultant's recommendations based on 3m deep doesn't provide me with confidence in how to consider the deeper excavation. I imagine the fact the report refers consistently to an excavation depth of only 3m has implications for other aspects of the development as well. I recommend the applicant gets the geotech report updated for the new proposal.

Referral Body Recommendation

Recommended for refusal

Refusal comments

Recommended Water Management Conditions:

Nil.