

Engineering Referral Response

Application Number:	DA2020/1517
Date:	03/02/2021
To:	Anne-Marie Young
Land to be developed (Address):	Lot 2 DP 349085 , 45 Warriewood Road WARRIEWOOD NSW 2102 Lot 1 DP 349085 , 49 Warriewood Road WARRIEWOOD NSW 2102

Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m² or
- Alterations to existing or new driveways or
- Where proposals affect or are adjacent to Council drainage infrastructure incl. watercourses and drainage channels or
- Torrens, Stratum and Community Title Subdivisions or
- All new Commercial and Industrial and RFB Development with the exception of signage or
- Works/uses in flood affected areas

And as such, Council's development engineers are required to consider the likely impacts on drainage regimes.

Officer comments

DEVELOPMENT ENGINEERING REFERRAL STORMWATER QUANTITY and ROAD DESIGN COMMENTS – 145 WARRIEWOOD ROAD WARRIEWOOD DA2020/1517

- 1) The stormwater management plan prepared by C and M Consulting engineers details the provision of a 900mm RCP stormwater line to be constructed within the existing drainage reserve traversing the site. The stormwater line is designed to cater for the 1 in 100 Year AEP upper catchment flow that arrives at the site . This approach is supported however the designer is to demonstrate how the majority of the proposed 3.4m³/s flow is to enter the 900mm pipe via a combination of sag and on grade inlet pits within Warriewood Road.
- 2) The design is demonstrate that a safe overland flow path can be provided over the proposed 900mm line assuming the applicable upstream pit blockage factors as required by Councils Auspec One in Warriewood Road this may need to be modelled in DRAINS . The minimum easement width required by council is 3m , the design should also indication an additional easement adjoining the exist Drainage Reserve (DR) in favour of council as the existing DR is only 2m in width. Typical cross sections are to be provided detailing the overland flow path finished surface levels and the corresponding 1 in 100 Year AEP Top water surface levels.
- 3) The designer is to verify that the following in relation to the On Site Stormwater detention

design (OSD) that minimum site storage requirements (SSR) listed in Table A.1 of the Warriewood Valley water management specification are provided and permissible site discharges not to be greater than those listed in Table A.2 for all storm events listed .

- 4) Verification also to include maintenance of the base case hydrograph shape · Use of the Australian Rainfall and Runoff Method (1987) to determine compliance with the requirements. During the preparation of the Water Management Report for the sector the model established is to match the peak sector outflow discharge to the pre-development condition of the sector within $\pm 5\%$ of the peak reported in Appendix A and shows the pre-development hydrograph and the developed hydrograph with the tail cut at the duration of the storm .The developed hydrograph is to be no more than $\pm 10\%$ of the pre-development hydrograph at any location on the rising or falling limb.
- 5) Confirmation that the OSD design hydraulically design has the relevant climate change factor,
- 6) Confirmation that the detention tanks are to be 1%AEP flood levels. (Note that Water Quality control ponds can be below the 1%AEP flood level, but are to be above the 20%AEP flood level but wholly within the private buffer zone - See Section 4.5, Table 4.3 and Section 4.3.2).
- 7) The proposed road alignment/cross sections do not match the existing road/footpath alignments of the recently completed Bubalo Road subdivision. The distance from the proposed dish drain/kerb face is not consistent and the footpath width should match the adjoining eastern footpath which is 2.2m . Additionally the proposed Lorikeet Grove road width does not match the road existing alignments at both ends.

The proposal is therefore unsupported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Engineering Conditions:

Nil.