Natural Environment Referral Response - Flood

Application Number:	DA2024/1079
Proposed Development:	Community title subdivision into five (5) lots and civil works
Date:	17/10/2024
To:	Stephanie Gelder
Land to be developed (Address):	Lot 3 DP 1115877 , 53 B Warriewood Road WARRIEWOOD NSW 2102 Lot 3 DP 942319 , 53 Warriewood Road WARRIEWOOD NSW 2102 Lot 2 DP 1115877 , 53 A Warriewood Road WARRIEWOOD NSW 2102

Reasons for referral

This application seeks consent for the following:

- All Development Applications on land below the 1 in100 year flood level;
- All Development Applications located on land below the Probable Maximum Flood levels.

And as such, Council's Natural Environment Unit officers are required to consider the likely impacts on drainage regimes.

Officer comments

The proposed development at 53, 53A and 53B Warriewood Rd cannot be properly assessed until the Flood Study and Water Management Report are appropriately updated.

The Water Management Report that was submitted on 30.9.2024 is dated 19.03.2019. The Flood Study in Appendix E is dated 20.02.2019. The table of flood results shows different levels to the Civil Engineering Works Report submitted by Enspire for this DA. The modelling seems to have been done based on a previous DA related only to 53B Warriewood Rd. The flood mapping for the proposed case shows quite clearly that no development has been modelled on 53A Warriewood Rd. It is noted that 53A Warriewood Rd is further upstream than 53B Warriewood Rd, and the FPL would be higher. Also, the model does not seem to take into account the development across the other side of the creek at 6 - 10 Macpherson St, which has resulted in higher ground levels on that side of the creek. Updating of the model should include the raising of this area to account for the development, which could potentially raise flood levels on 53, 53A and 53B Warriewood Rd and velocity of flow in the creek. The flood modelling needs to be updated to reflect all of the proposed development, and modelling for the existing case needs to be updated to reflect existing conditions for the numerous nearby properties.

Further details are required on the modelling itself. The flood study report for this proposed development says that the flood model is based on the model from the Narrabeen Lagoon Flood Study. However the Overland Flow Impact Assessment (July 2021, Craig & Rhodes) submitted for a previous DA2021/1478 for 53A Warriewood Rd in 2021 was based on the flood model from the Ingleside, Elanora and Warriewood Overland Flow Flood Study (IEW OFFS). The IEW OFFS is the

more appropriate model to use in this location. Clarification should be provided as to which model has been used as the basis, and if it is not the IEW OFFS, then justification should be provided as to why not. It is noted that the IEW OFFS was completed 6 years later than the Narrabeen Lagoon Flood Study, and flood mapping seems to take into account the post-development levels at 6-10 Macpherson St. Also, it should be identified which, if any, parameters have been changed from the original model. For instance, if the Manning's n parameter has been changed anywhere, details should provided such as a map showing what Manning's n values have been used in each location. If the hydrological modelling has been changed then that too should be detailed. Rainfall should be based on ARR 2019 rainfall patterns.

Also, the Flood Study needs to provide sufficient information for the proposed development to be assessed against the flood requirements in the Warriewood Valley Urban Land Specification, LEP Clause 5.21 and DCP Clauses C6.1, B3.11 and B3.12. For instance, flood results need to include climate change. Also, the 20% AEP flood event needs to be modelled, not the 5 year ARI event (which equates to a 18.13% AEP event) - it is not appropriate to model the 5 year ARI and call it the 20% AEP event. It needs to be demonstrated that the requirements of Table 4.3 in the Warriewood Valley Urban Land Specification have been met (noting that even though the specification does not specifically mention climate change, the DCP does require consideration of climate change to be included in the results). Mapping should be provided which shows the locations of inner and outer creek corridors, basin, building footprints and the relevant design flood extents, superimposed.

The Flood Study and Water Management Report are inadequate and need to be appropriately updated.

The proposal is therefore unsupported.

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

Recommended Natural Environment Conditions:

Nil.