

## Memo

### Stormwater & Floodplain Engineering

**To:** Paula Moretti – Principal Planner, Strategic & Place Planning

**CC** Patrick Stuart – Team Leader, Floodplain Planning and Response

**From:** Christina Femia – Senior Water Cycle Officer - Stormwater & Floodplain Engineering

**Date:** Updated - 2 November 2022

**Subject:** Planning Proposal Referral (PEX2022/001)  
10-12 Boondah Rd, Warriewood  
Flood Comments

**Record** 2022/473856

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We have reviewed the following documents that have been prepared for a rezoning proposal at 10-12 Boondah Rd, Warriewood:

- Stormwater and Flooding Management Strategy Memo by Calibre dated 14<sup>th</sup> October 2022 [TRIM: 2022/663656](#)
- NSW SES Preliminary Advice dated 31 August 2022 [TRIM: 2022/543296](#)
- Water Management Report by Calibre dated 2nd June 2022 [TRIM: 2022/434482](#)
- Planning Proposal Report by SJB Planning [TRIM: 2022/434473](#)
- Urban Design Report by Buchan Group [TRIM: 2022/434480](#)

The review was undertaken in accordance with:

- Local Planning Directions (NSW DPE, March 2022) - Direction 4.1 Flooding
- Pittwater LEP 2014 Clause 5.21 Flood Planning and 7.4 Floodplain Risk Management
- Pittwater DCP 21 B3.11 Flood Prone Land, B3.12 Climate Change and C6.1 Design Criteria for Warriewood Valley Release Area
- Warriewood Valley Urban Land Release (Water Management Specification) 2001
- Council's Water Management for Development Policy
- NSW Government Flood Prone Land Policy and Floodplain Development Manual 2005
- PS21-006 Considering Flooding in Land Use Planning Guidelines

### The Site and Proposal

The proposal involves rezoning land from RU2 Rural Landscape to R3 Medium Density Residential and C2 Environmental Conservation.

The site is located in the Flood Planning Area, affected by both the medium and high flood risk precincts as identified in both the Narrabeen Lagoon Flood Study, 2013 and Ingleside, Elanora and Warriewood Overland Flow Flood Study, 2019.

The 1% AEP plus climate change level (1%AEP+CC) and Flood Planning Level (FPL) level at the site is 3.9m AHD and 4.4m AHD (based on Council's Flood Information Report). The Calibre Report (2/6/2022) modelled the peak Probable Maximum Flood (PMF) level to be 5.27m AHD.

Residential development of 44 dwellings is proposed which includes 40 townhouses (3 storey) and 4 affordable housing dwellings. The proposed townhouses and affordable housing dwellings have floor levels set at the FPL (4.4m AHD). The garages in the townhouses are at the 1% AEP+CC level (3.9m AHD). The proposed residential area is within the medium flood risk precinct. Roads and driveways fronting townhouses are proposed to be at 3.9m AHD.

The southern portion of the site is proposed to be retained as a riparian corridor, with conveyance of flows up to 1% AEP event at 10 hours.

### Flooding Assessment

The planning proposal involves rezoning land within the flood planning area from a Rural to a Residential Zone, which is inconsistent with the Direction 4.1 (NSW DPE, March 2022). It is proposed to fill the area designated for residential development, however it would still be affected by the Flood Planning Area.

The Applicant has not demonstrated that the proposed development will not result in significant adverse impacts to other properties. Land filling required to raise the roads and building platforms appears to result in a net loss of flood storage in the mainstream lagoon floodplain. No volumetric figures showing the cut and fill balance has been provided. Council must be satisfied that the proposed development will convey water and have the same flood storage function as per the existing condition.

A detailed flood assessment (including flood modelling and difference mapping for all events) has not been provided which demonstrates that the proposed drainage structures under Boondah Road will result in no adverse impacts.

The NSW SES Preliminary Advice dated 31 August 2022 notes that future development must not conflict with the NSW SES's flood response and evacuation strategy for the existing community. Using 'shelter in place' is not an endorsed flood management strategy by the NSW SES for new development.

In accordance with the Australian Disaster Resilience Handbook Collection Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia Handbook 7, there are some instances where an individual development may be designed as a shelter during a flood event however this would generally only be considered appropriate in existing developed areas. As such, it is not appropriate for Council to support future development that uses 'shelter in place' as a management strategy in new development areas that will increase the flood risk and the number of people exposed to flooding.

The Applicant has not demonstrated that the proposed development will not result in a significantly increased requirement for government spending on emergency management services, flood mitigation or emergency response measures. Shelter in place is a last resort for addressing emergency response in R3 medium density residential zoning and is currently not seen as an appropriate measure for land that does not have a flood free evacuation route at or above the peak of the PMF event. Properties within the floodplain are at greater risk of having critical services disrupted during major events. In addition, the increased dwelling density on the land would add to the required emergency response and relevant agencies would be unable to access the site.

Council has not been satisfied that the proposal demonstrates compliance with the objectives and requirements of the Pittwater LEP 2014 Clause 5.21 Flood Planning. This includes but, is

not limited to: ensuring that the proposed planning proposal will not adversely affect the safe occupation and efficient evacuation of people; or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood.

### Recommendations

The planning proposal is not supported.

It is not deemed to be compliant with Direction 4.1 (NSW DPE, March 2022) due to, but not limited to:

- Rezoning of land within the flood planning area from Rural, to a Residential Zone.
- Provisions that apply to the flood planning area which:
  - Permit development that will result in significant flood impacts to other properties,
  - Permit a significant increase in the development and/or dwelling density of that land,
  - Are likely to result in a significantly increased requirement for government spending on emergency management services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities.
- Inconsistencies with the principles of the Floodplain Development Manual 2005 and not in accordance with the Narrabeen Lagoon Floodplain Risk Management Study or Plan (2018).
- Inconsistencies with the Australian Disaster Resilience Handbook Collection Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia Handbook 7
- Inconsistencies with Direction 4.1 (NSW DPE, March 2022) that are not of minor significance, or of no significance.
- Inconsistencies with Council planning requirements (in addition to the above), including, but not limited to:
  - The proposal is deemed to adversely affect the safe occupation and efficient evacuation of people; exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood (requirements of the Pittwater LEP 2014 Clause 5.21 Flood Planning)
  - The proposal is deemed to adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties (requirement of the Pittwater LEP 2014 Clause 5.21 Flood Planning). The objective is to avoid cumulative impacts on flood behaviour.