Natural Environment Referral Response - Flood

Application Number:	DA2020/0364

Date:	07/05/2020
To:	Thomas Prosser
Land to be developed (Address):	Lot 23 DP 17189 , 36 Albert Road AVALON BEACH NSW 2107

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 is affected by the Medium Flood Risk Precinct and a Flood Life Hazard Category of H1-H2.
Flood levels vary across the property due to the slope, with the maximum depth of floodwaters being 0.3m.
According, Flood Planning Levels (FPLs) also vary across the property. With the low Depth and low Velocity Depth product, a reduced freeboard of 0.3m is acceptable.
The FPLs on this property are generally higher than the Probable Maximum Flood levels, due to the additional safety factors that are incorporated into the freeboard.
1% AEP flood levels may be taken from Figure 3 of the Flood Management Report by Pittwater Data Services.
Flood Planning Levels may be taken as 0.3m above the 1% AEP levels provided in this Figure.

The floor level of 8.5m AHD in Bedroom 2 (which extends out from the existing footprint of the house) is below the FPL, which at this location is 8.6m AHD. However there are no external doors to this bedroom, and the impact on flooding from this extension is considered insignificant.
The floor level of 8.5m AHD in Bedroom 1 is the same level as the 1% AEP level at the location of the doors which open on to the new deck. With flood waters flowing down the slope towards these doors, the design needs to address protection against the inflow of flood waters into the bedroom.
The deck level at the rear of the house is above the 1% AEP level. If the deck is rebuilt, it needs to retain the capacity for flood waters to flow underneath so as not to impact on flooding.

The proposed development can meet the flood requirements of the LEP and DCP.

The proposal is therefore supported.

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

Recommended Natural Environment Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

Flooding
In order to protect property and occupants from flood risk the following is required:

Building Components and Structural Soundness – C1

All new development shall be designed and constructed as flood compatible buildings in accordance with Reducing Vulnerability of Buildings to Flood Damage: Guidance on Building in Flood Prone Areas, Hawkesbury-Nepean Floodplain Management Steering Committee (2006).

Building Components and Structural Soundness – C2

All new development must be designed and constructed to ensure structural integrity up to the Flood Planning Level taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion. Structural certification shall be provided confirming the above.

Building Components and Structural Soundness – C3

All new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections must be waterproofed and/or located above the Flood Planning Level. All existing electrical equipment and power points located below the Flood Planning Level must have residual current devices installed cut electricity supply during flood events.

Storage of Goods – D1

Hazardous or potentially polluting materials shall not be stored below the Flood Planning Level unless adequately protected from floodwaters in accordance with industry standards.

Floor Levels – F2

If the rear deck is rebuilt, its underfloor area must be designed to allow clear passage of floodwaters up to the 1% AEP flood level.

Car parking – G6

The new car port is to be designed to allow flood waters to pass through and is to have a minimum of 50% open area below the 1% AEP flood level.

Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To reduce the impact of flooding and flood liability on owners and occupiers of flood-prone property and reduce public and private losses in accordance with Council and NSW Government policy.