Natural Environment Referral Response - Flood

Application Number:	DA2021/0367

Date:	10/06/2021
To:	Anne-Marie Young
Land to be developed (Address):	Lot 5 DP 28164 , 26 Riverview 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 DA generally complies with the flood controls in the LEP and DCP. The 1% AEP flood level is 31.74m AHD and PMF is 32.49m AHD. The new floor level of the western dwelling is 32.40m AHD which is above the FPL of 32.24m AHD. The existing floor level of the eastern secondary dwelling is at 31.70m AHD which is 40mm below the 1% AEP flood level. The existing footprint is however mainly located outside the 1% AEP extent. A first floor addition is proposed to the eastern dwelling. The existing carport of the existing eastern dwelling is proposed to be converted to a garage. The proposed garage level is 31.65m AHD which is below the 1% AEP by 90mm.

The proposed eastern swimming pool is proposed to be inground. Any fencing located within the Flood Planning Level must be constructed of at least 50% open design to the 1% AEP level. That is have openings of a minimum 75 x 75mm. The rear pool has a BBQ area that could potentially block/divert overland flows. Any proposed BBQ structure below the FPL is to the located outside of the 1% AEP flowpath or be at least 50% open below the 1% AEP level and have openings of a minimum 75X75mm.

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:

Flood Effects Caused by Development – A2
There is to be no filling of the land or any other reduction of the available flood storage which results in a net loss of storage below the 1% AEP flood level of 31.74m AHD.

Building Components and Structural Soundness – B1
All new development below the Flood Planning Level of 32.24m AHD of 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 – B2
All new development must be designed to ensure structural integrity up to the Flood Planning Level (32.24m AHD), taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion.

Building Components and Structural Soundness – B3
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 (FPL of 32.24m AHD). All existing electrical equipment and power points located below the Flood Planning Level must have residual current devices installed to cut electricity supply during flood events.

Floor Levels – C1
New floor levels within the development shall be set at or above the Flood Planning Level of 32.24m AHD.

Flood Emergency Response – E1
The shelter-in-place refuge must:

a) Have a floor level at or above the Probable Maximum Flood level; and
b) Have a floor space that provides at least 2m² per person where the flood duration is long (6 or more hours) in the Probable Maximum Flood event, or 1m² per person for less than 6 hours;
c) Is intrinsically accessible to all people on the site, plainly evident, and self-directing, with sufficient capacity of access routes for all occupants without reliance on an elevator.

Fencing and Other Structures– F1
New fencing (including pool fencing, boundary fencing, balcony balustrades and accessway balustrades) shall be open to allow for the unimpeded movement of flood waters. It must be designed with a minimum of 50% open area from the natural ground level up to the 1% AEP flood level. Openings should be a minimum of 75mm x 75mm. The rear pool has a BBQ area that could potentially block/divert overland flows. Any proposed BBQ structure below the FPL is to the located outside of the 1% AEP flowpath or be at least 50% open below the 1% AEP level and have openings of a minimum 75X75mm.

Storage of Goods – G1
Storage areas for hazardous or potentially polluting materials shall not be located below the Flood Planning Level unless adequately protected from floodwaters in accordance with industry standards.

Recommendations

The development must comply with the recommendations outlined in the Flood Impact Assessment Report prepared by SES Engineering dated 12th March 2021.

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.

CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

Certification of Services (B3)
Certification that new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections are located above the FPL (32.24m AHD) and waterproofing of electrical equipment and installation of residual current devices below the Flood Planning Level (B3).

A suitably qualified electrical engineer or contractor is to certify that all new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections are located above the Flood Planning Level and any existing electrical devices, wiring and the like located below the FPL are protected from water egress or have residual current devices installed to cut electricity supply during flood events.

Details demonstrating compliance are to be submitted to the Certifying Authority for approval.

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.