Natural Environment Referral Response - Flood

Application Number:	DA2022/0216

Date:	22/04/2022
To:	Thomas Prosser
Land to be developed (Address):	Lot 49 DP 17694 , 45 Wimbledon Avenue NORTH NARRABEEN NSW 2101

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 meets the flood controls in the LEP and DCP. The development proposes to demolish existing structures and construct a new two storey dwelling with double lock up garage. The existing garage is retained and converted to a cabana.

The ground floor is proposed to be suspended at the FPL (3.55m AHD) with open subfloor to allow free passage of flood water and minimise loss of flood storage. Likewise, the proposed garage and driveway access is also proposed to be suspended structures above the 1% AEP level.

The proposed pool is located slightly above existing ground level and is considered satisfactory as there is no net loss in flood storage when compare with existing. The proposed pool fencing appear to be a solid type, hence will need to be modified to permeable type. Likewise front fencing is solid, hence will also need to be modified to a permeable type of construction.

In emergency event evacuation is proposed to the first floor which is located above the PMF level. The building will need to be structurally designed to withstand the PMF flood water forces.

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 3.05m AHD.

Building Components and Structural Soundness – B1
All new development below the Flood Planning Level 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 Probable Maximum Flood, taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion.

Floor Levels – C1
New floor levels within the development shall be set at or above the Flood Planning Level of 3.55 m AHD.

Floor Levels – C3
The underfloor area of the dwelling below the 1% AEP flood level is to be designed to allow clear passage of floodwaters. At least 50% of the perimeter of the underfloor area must be of an open design from the natural ground level up to the 1% AEP flood level.

Car parking – D5
The floor level of the proposed garage shall be set at or above the 1% AEP flood level.

Fencing – 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.

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.

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 the Structural Stability of the Building (B2)
A suitably qualified structural engineer is to certify the structural stability of the shelter in place

considering lateral flood flow, buoyancy, suction effects, wave action and debris load impact of the Probable Maximum Flood (PMF) (4.98 m AHD) design flood depths and velocities.

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.