Natural Environment Referral Response - Flood

Application Number:	DA2022/1252
Proposed Development:	Construction of a dwelling house including swimming pool
Date:	23/01/2023
To:	Adam Croft
Land to be developed (Address):	Lot 32 DP 7090 , 20 The Esplanade 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 development application seeks consent for the demolition of the existing dwelling and construction of a new two storey dwelling. An in-ground swimming pool with spa and landscaping works are also proposed.

The property is flood affected, with High Flood Risk Precinct at the front, Medium Flood Risk Precinct in the middle and Low Flood Risk Precinct at the rear. The majority of the property is affected by Flood Life Hazard Category H4-H5.
Relevant flood levels are:
1% AEP level: 3.05m AHD
Flood Planning Level (FPL): 3.55m AHD
Probable Maximum Flood (PMF) level: 5.02m AHD

Based on review of the updated plans and amended Flood Impact Assessment Report, the proposed development now generally complies with the flood requirements of Section E11 of the Warringah DCP and Clause 5.21 of the Warringah LEP.

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. The driveway is to be suspended as shown on the plans, such that floodwaters can flow underneath.

Building Components and Structural Soundness – B1
All new development below the Flood Planning Level of 3.55m AHD shall be designed and constructed from flood compatible materials 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 level of 5.02m 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, connections or power points must be either located above the Flood Planning Level of 3.55m AHD or if below, must be protected by residual current devices which would 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 3.55m AHD.

Floor Levels – C3
The underfloor area of the dwelling below the 1% AEP flood level of 3.05m AHD 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 of 3.05m AHD.

Fencing – F1
Any new fencing below the 1% AEP flood level of 3.05m AHD (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.

Details demonstrating compliance are to be submitted to the Principal Certifier 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 new development considering lateral flood flow, buoyancy, suction effects, wave action and debris load impact of the Probable Maximum Flood (PMF) design flood depths and velocities.

Details demonstrating compliance are to be submitted to the Principal Certifier 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.

Certification of Services (B3)
A suitably qualified electrician is to certify that all new electrical equipment, connections or power points are located above the Flood Planning Level of 3.55m AHD or if below, are protected by residual current devices which would cut electricity supply during flood events.

Details demonstrating compliance are to be submitted to the Principal Certifier 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.

ON-GOING CONDITIONS THAT MUST BE COMPLIED WITH AT ALL TIMES

Flood Management
Flood Effects Caused by Development (A2)
There shall be no filling of the land below the 1% AEP flood level of 3.05m AHD, or obstruction of the underfloor or under driveway areas where required by DA consent to be left open.

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.