

## Natural Environment Referral Response - Flood

<b>Application Number:</b>	DA2018/1514
<b>To:</b>	Lashta Haidari
<b>Land to be developed (Address):</b>	Lot 100 DP 1015283 , 145 Old Pittwater Road BROOKVALE NSW 2100

### 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 deferred commencement condition has not been satisfied so is recommended to be remain as a condition of consent.

The Letter Report by Cardno dated 28 September 2019 has been reviewed. The 50% blockage that was recommended in the Letter Report is not deemed to be appropriate. 25% barrel blockage is considered appropriate as per ARR2019. Council's interpretation of S6.4.4.11 of ARR2019 is that sensitivity analysis of "all clear" and twice the calculated guideline blockage level is recommended to be analysed and compared to the guideline blockage level. However, it is sensitivity analysis and 25% blockage scenario is the guideline blockage level. Therefore to satisfy the deferred commencement condition, the 25% blockage scenario must be modelled and shown that the development will not cause an increase in peak water levels of more than 2cm on upstream private lots in the design 1% flood.

Subject to conditions (including the deferred commencement condition), the proposed development complies with flood prone land development controls and flood planning objectives. Development on the site during the previous decade has resulted in significant improvements in flood risk to life and property, both within the site and on neighbouring properties.

### Referral Body Recommendation

Recommended for approval, subject to conditions

### Recommended Natural Environment Conditions:

## DEFERRED COMMENCEMENT CONDITIONS

### Flood Modelling

It must be demonstrated through modelling that the development will not cause an increase in peak

water levels of more than 2cm on upstream private lots in the design 1% AEP Flood. The design 1% AEP Flood should have appropriate blockage applied and justified, as per Australian Rainfall and Runoff (ARR 2019) Guidelines or other guidelines/standards if considered to be more appropriate.

Reason: To ensure that the development does not cause significant adverse flooding affects to neighbouring properties (DACNEADC2)

## **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

All new development below the relevant Flood Planning Level 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

All new development must be designed and constructed to ensure structural integrity up to the relevant 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

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

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

New floor levels within the development shall be set at the Flood Planning Level, which is the 100 year ARI flood level plus 500mm freeboard.

#### Fencing

New fencing (including boundary fencing and accessway balustrades) shall be open for passage of flood waters if within by the 1% flood area - All new fencing on the property must be design with a minimum of 50% open area between the 1% flood level and natural ground level, to allow flood waters to pass through.

#### Recommendations

The development must comply with all recommendations and conclusions outlined in:

- The Updated Flood Impact Assessment Report prepared by Cardno (NSW/ACT) Pty Ltd dated 10 August 2018.

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.