

Natural Environment Referral Response - Flood

Application Number:	DA2024/1219
Proposed Development:	Demolition and construction of mixed use development with residential and senior living housing, shops and basement
Date:	16/10/2024
To:	Claire Ryan
Land to be developed (Address):	Lot 28 DP 394337 , 142 - 146 Pitt Road NORTH CURL CURL NSW 2099 Lot 29 DP 394337 , 142 - 146 Pitt Road NORTH CURL CURL NSW 2099 Lot 30 DP 394337 , 142 - 146 Pitt Road NORTH CURL CURL NSW 2099 Lot 262 DP 1028346 , 142 - 146 Pitt Road NORTH CURL CURL NSW 2099

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

This proposal is for the demolition of existing structures and construction of mixed use development, consisting of retail, residential and senior living, including a basement carpark. The proposal includes new pipes and a new overland flow path, and is supported by flood modelling. This proposal is assessed against Section E11 of the Warringah DCP and Clauses 5.21 and 5.22 of the Warringah LEP.

The 'FIRMP' refers to the Flood Impact and Risk Management Report dated 14/08/2024, created by Integrated Group Service. 'The Plans' refers to the plans dated 12/08/2024, created by Warren and Mahoney Living Pty Ltd, Job No 10146.

Modifications are required to the proposal to satisfy the following:

1. The ground floor apartments are identified as seniors living use. This is a vulnerable land use as defined in clause 5.22 of the WLEP and clause E11 of the WDCP. As per prescriptive control C2 in E11 of the WDCP, floor levels of vulnerable land uses must be at or above the PMF level.
2. The FIRMP 'Water surface and depth map during 1% AEP storm events for proposed (post) scenario' map (Page 36 of the FIRMP), shows depths of 1.50 – 2.00m. The invert level of the overland flow path at the northeast of the site is 13.8mAHD. The floor level of the ground floor of the building has a level of 15.0mAHD. The FIRMP states that the peak flood level at the site is 14.5mAHD. These inconsistencies must be addressed and it must be ensured that standard residential floor levels are at

or above the 1% AEP flood level plus 500mm as per prescriptive control C1 of the WDCP. If a vulnerable land use continues to be proposed for the ground floor, than the same inconsistencies for the PMF must be resolved to ensure all vulnerable floors are at or above the PMF and basement carpark entry points are protected to the PMF level.

3. The FIRMP indicates that the level of the top of the basement stairs at the southeast corner of the building is 14.70m AHD (page 29 of the FIRMP), the plans indicate the land on the outside of the door to the stairs is at 13.60m AHD (page 8 of the plans). This is a change in height of 1.1m that must be addressed in the plans to be consistent with prescriptive control D7 of the WDCP.

4. The proposed PMF Overland Flow path is blocked by a bike storage room (Page 27, Drawing No. SK. 101). There must be no solid walls in the overland flow path and no storage of any items, including bins, bikes, etc. Any gates must be designed to minimise blockage and any possible blockage must be considered in modelling.

5. The 'Water surface and depth map during PMF storm events for proposed (post) scenario' map (page 39 of the FIRMP) indicates an increase of 0.2m in depth to the front of 148 Pitt Road, compared to the pre depth map. The PMF afflux map (page 44 of the FIRMP) indicates an increase of 0.1 - 0.5m in depth to the front of 148 Pitt Road. The PMF afflux map also indicates an increase of 0.05 - 0.1m to the front of 150 Pitt Road. This increased flood level is defined as an adverse flood impact as per Section A.8 of the WDCP and is inconsistent with prescriptive control A1 of Section E11 of the WDCP.

The following additional information is required:

1. The resolution of the modelled results indicate the grid size of the model through the site does not appear to be fine enough and not fit for purpose. The pixels appear to be 2mx2m, which is consistent with the modelling used in the Greendale Creek Flood Study. However, due to the overland flow path through the site being narrow (3m wide or less) and fairly complex, a reduced model grid size for the site is required to ensure the modelling is fit for purpose.
2. The FIRMP states that fencing at the rear and east of the site must be open to allow egress of floodwater. The plans need to clearly show locations of open boundary fences/walls.
3. According to the FIRMP, the overland flows currently pond at the rear of 146 -148 Pitt Road and there is no escape route, causing a "basin" to be formed. Please confirm in reality that this is the case for a PMF. If in reality, the floodwaters would traverse through/around the building, then the pre-model should be updated to replicate actual conditions. This could include modeling the "pre" without site buildings being blocked out and instead incorporating high roughness for the existing site buildings and/or ensuring flowpaths between buildings are captured in the model.
4. Depth afflux maps should also show areas that have changed from flooded to not flooded (wet to dry) and not flooded to flooded (dry to wet) in order to assess potential adverse flood impacts.

The flood referral body is not satisfied that the current proposal:

- is compatible with the flood behaviour on the land, and
- will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and
- incorporates appropriate measures to manage risk to life in the event of a flood, and

For the development to be supported, design modification and additional information is required. Currently, the development application is inconsistent with Section E11 of the Warringah DCP and Clauses 5.21 and 5.22 of the Warringah LEP.

The proposal is therefore unsupported.

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

Responsible Officer.

Recommended Natural Environment Conditions:

Nil.