

## Engineering Referral Response

<b>Application Number:</b>	DA2021/1805
<b>Date:</b>	04/03/2022
<b>To:</b>	Adam Mitchell
<b>Land to be developed (Address):</b>	Lot A DP 379308 , 4 Alexander Street COLLAROY NSW 2097

### Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m<sup>2</sup> or
- Alterations to existing or new driveways or
- Where proposals affect or are adjacent to Council drainage infrastructure incl. watercourses and drainage channels or
- Torrens, Stratum and Community Title Subdivisions or
- All new Commercial and Industrial and RFB Development with the exception of signage or
- Works/uses in flood affected areas

And as such, Council's development engineers are required to consider the likely impacts on drainage regimes.

### Officer comments

#### Updated Comments 4/3/22

After an initial assessment of the Overland flood report and amended architectural plans, the Woolacotts Flood report has confirmed that the 1 in 100 AEP level is 4.73m AHD. This is derived from the ponding level at the intersection of Alexander Street and Pittwater Road and aligns with Council's flood mapping from the Council LGA study. The Woolacotts report has two recommended options as follows:

#### Option 1 – Flood Gate

Install flood gates to the entry points at all site access openings. The top of flood gate is to be equal to the Flood Planning Level (FPL).

As detailed within Northern Beaches Council Local Environment Plan (LEP) 2011, The Flood Planning Level (FPL) is considered as the 1% AEP top water level +

500mm freeboard. Based on the ponding external to the site within the intersection, we consider the FPL for the proposed site as RL 4.73.

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The architectural plans prepared PBD Architects with revision B dated 17/02/2022 are deemed acceptable in terms of appropriately addressing the flood impacts.

### o Option 2 – Ground Floor Levels

The ground floor level of the proposed development is to be raised equal to the FPL (RL 4.73).

To ensure protection of the proposed development from the risk of inundation from

localised overland flow, the proposed retail and habitable floor levels are to be a

minimum +150mm above the highest adjacent existing boundary level, and no less than the FPL detailed above.

A DRAINS analysis is undertaken to determine whether the proposed system has sufficient capacity.

The fundamental issue with option one is that as the amended architectural plans detail the FFL of ground floor unit one as RL 2.78 which does not comply with the flood controls as outlined in WDCP 2011 E11 which require in clause C1 all new floor levels to be at or above the FPL and or the PMF . The plans detail flood gate protection to this unit which is not in accordance with the DCP controls. Option two may be acceptable to Council.

The recently LEC approved development (DA2020/1453) at 4 Collaroy street & 1 Alexander street has all habitable unit floor levels well above the FPL.

Additionally the flood report has not addressed clauses A1 and A2 that requires demonstration that there are no adverse impacts of the development on flood levels , no adverse impacts on surrounding properties and no net loss of flood storage.

Also Council require the submission of the DRAINS hydrological/hydraulic model for review as referenced in the Woolocotts flood report.

The application is not supported.

**Updated Comments 7/2/22**

**The revised stormwater drainage plans have been reviewed and are satisfactory. However, the Overland Flow Study prepared by Woolacotts Consulting Engineers, had only just been submitted at the time of finalising this report, and so the outcome of that review will be reported to the Panel separately.**

The proposed stormwater report prepared by C & M consulting engineers was reviewed and the following further information is required:

- 1) Submission of a stormwater drainage plan detailing the provision of On Site Detention in accordance with Council water management policy for development.
- 2) Submission of a DRAINS model for Council review including design summary parameters. Please note the pre existing condition is to be set at state of nature.

Additionally Councils overland flow mapping indicated the property is affected by overland flow and as such a Overland flow hydrological/hydraulic study is to be provided in accordance with the design parameters and relevant chapters of Australian Rainfall and Runoff 2019. Councils preferred model is DRAINS and the study is also to be in accordance Councils Water Management Policy for Development.

The proposal is therefore unsupported.

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

**Recommended Engineering Conditions:**

Nil.