

Engineering Referral Response

Application Number:	DA2023/1400
Proposed Development:	Demolition works and construction of a Residential Flat Building
Date:	08/11/2023
To:	Thomas Prosser
Land to be developed (Address):	Lot CP SP 30051 , 13 Lodge Lane FRESHWATER NSW 2096

Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m² 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

1. The methodology used for calculating the on site detention size is generally accepted. The 5 yr ARI storm however does not correlate to the 20% AEP event. Amended modelling needs to be undertaken to show that post development flows have been attenuated to pre development levels for all events from the 20% AEP to the 1% AEP. Bearing this in mind, the on-site detention system appears slightly undersized and the orifice too large to effectively attenuate the frequent storm events. Use ARR 2019 methodology with an IL-CL model. Assume a minimum Storm Initial Loss of 28 mm for pre-development (State of Nature) site. Provide DRAINS model to Council with amendments for perusal.
2. Provide an overflow pipe/ weir from the on-site detention tank. Use an appropriate blockage factor for sizing. Any overflow from tank is to be a minimum of 300 mm below habitable areas,

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.