

Engineering Referral Response

Application Number:	DA2023/0129
Proposed Development:	Subdivision of one lot into 13 lots and associated works
Date:	22/05/2023
To:	Adam Croft
Land to be developed (Address):	Lot B DP 370222 , 4 Forest Road WARRIEWOOD NSW 2102

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

Please Note:

1. The assessment has not focused on road layout and geometry, as it is assumed that the Traffic Section will be providing comment on these matters. Excessive vertical grade for one road has however been noted.

2. The proposal to provide OSD for the road component of the entire development on Lot 7 and provide individual on site detention for lots on the individual lots is not supported. This would place the responsibility of maintaining the on site detention of the road area for the whole development on to one private owner. This is seen by the as an unacceptable risk to downstream properties.

The following amendments are required

1. Provide DRAINS models to Council for perusal of the following:
 - (i) Existing conditions for the 20%, 5% and 1% AEP events. (Confirm whether the upstream catchment is proposed to drain through the site and OSD basin for road runoff).
 - (ii) Developed conditions for the 20%, 5% and 1% AEP events. The model should estimate built conditions on each lot including on-lot on-site detention.
 - (iii) Developed conditions for the 20%, 5% and 1% AEP events with the proposed OSD tank on lot 7 only. Assume there is no on lot detention.

2. Civil Engineering drawings by Acor rev B dated 20.01.23.

- (i) DWG No. C1.201. Manly Council standard drawings do not apply to development in Region 1. Refer to the Warringah Council Development Engineering Minor Works Specification which are applicable for works in Northern Beaches
- (ii) DWG No. C2.101. Given the grade separation between road level and majority of lot area, please advise on the proposed vehicle access into property/ garage.
- (iii) DWG No. C7.001 & DWG No. C7.202. - Drainage Channel Detail. Provide a 1D HEC-RAS model to confirm the proposed overland flow channel can safely convey flows up to th1 1% AEP. Provide 100mm freeboard. It is noted that the drainage channel has a proposed dual use as a access road for the on site detention/ WSUD basin. This is not feasible in the proposed form and is not supported.
- (iv) DWG No. C7.201 & C7.202. Provide top of pit levels for all pits shown on Section A & B and walls to justify the selected emergency overflow route through stairs. Provide pipe invert levels at all inlet pipes in to OSD system.
- (v) DWG No. C5.201. The proposed vertical grade of 18% is not supported. Design should be amended to provide an absolute maximum vertical grade of 15% in line with Austroads guidance.
- (vi) DWG No. C7.402. Maintain 6% pipe grade from Pit 07/2 to Pit 07/4 to reduce pipe drop at Pit 07/4.

3. DWG No. SKC2.01 - Subdivision Plan. The proposed maintenance access needs to be reviewed in line with comments below asking for an operation manual. Any vehicle using the access road is to be provided with front in, ingress and egress. A turning path for the proposed vehicle should be provided with amended plans.

4. A maintenance and operation manual in regard to the GPT and BIO Retention/detention basin operation is to be submitted for Councils review.

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.