

Engineering Referral Response

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| Application Number: | DA2019/1346 |
| To: | Lashta Haidari |
| Land to be developed (Address): | Lot 1 DP 1220196 , 4 - 10 Inman Road CROMER NSW 2099 |

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

Council's Stormwater Assets:

The submitted information does not provide adequate detail of Council's existing stormwater drainage infrastructure located on the site. As outlined in the Development Application Checklist, the applicant shall demonstrate compliance with Council's Warringah Building Over or Adjacent to Constructed Drainage Systems and Easements Technical Specification. This consists of accurately locating, confirming dimensions including depth and plotting Council's stormwater pipelines and associated infrastructure to scale on the DA plans in accordance with Section 8.1 of this Specification. Council has public Planning Maps online with stormwater information as a reference for detailed stormwater investigations, available under the "Stormwater" overlay map (<https://services.northernbeaches.nsw.gov.au/icongis/index.html>).

Insufficient information has been provided with regard to the proposed reconstruction of Council's stormwater infrastructure. In accordance with Council's Building Over and Adjacent to Constructed Council Drainage Systems and Easements Technical Specification Section 3, full hydrological and hydraulic details shall be provided and the design requirements are detailed in Section 4, including HGL analysis.

A stormwater drainage easement will be required over the existing/reconstructed stormwater infrastructure, a minimum width of 1 metre on each side of the external width of the channel/pipe. This shall be clearly indicated on the plans, and it shall be demonstrated that all structures are located outside of the easement extent. This shall include additional cross-sections of the proposed channel, particularly in the location of the access driveway and retaining wall 2.

Stormwater:

Insufficient information has been provided to support the Stormwater Concept Plan. Council's downstream pipeline has not been assessed to determine whether there is sufficient capacity to cater for stormwater flows from the development.

No DRAINS model has been submitted for review. The permissible site discharge is to be restricted to the "state of nature" (0% impervious) condition for all storm durations for the 5-year, 20-year and 100-year ARI storm event.

Overland Flow:

The submitted Civil Engineering Report does not adequately address overland flow affectation of the site. No summary information or supporting calculations/modelling has been provided with respect to stormwater flows or levels affecting the property and within the existing/proposed channel.

Any future submission shall provide an overland flow flood report to assess the impact of the development with respect to local overland flows. The report shall be prepared by a suitably qualified engineer in accordance with Council's Warringah Water Management Policy Section 9.3 and shall include, but not be limited to, an address of the following:

- The site survey and all levels shall be provided to Australian Height Datum (AHD).
- Catchment plan highlighting the full upstream catchment(s).
- A detailed analysis for any overland flow paths in both pre-development and post-development conditions, considering the 1% AEP storm.
- Consideration is to be given to the capacity of existing Council drainage infrastructure with appropriate blockage factors.
- Submission of plans clearly indicating pre-development and post-development flow path extents for the 1% AEP storm.
- Any relevant supporting longitudinal and cross-sectional information at appropriate intervals, including at the upstream and downstream property boundaries.
- Provision of any stormwater models (DRAINS, HEC-RAS) used in assessment, and relevant supporting input and output information.
- Demonstration of compliance with flood related development controls, in particular Warringah LEP 2011 Section 6.3 and DCP 2011 Section E11.
- Demonstration that there is no adverse impact to adjoining property and the road reserve in relation to flood level, velocities and extents.

Access:

Insufficient information has been provided with regard to the proposed access driveways. The Applicant shall provide a long-section at both edges of each of the proposed access driveways across the road reserve to the proposed development and demonstrate compliance with AS2890. The driveways shall incorporate Council's normal vehicle crossing profile. Any transitions to the driveway levels/gradients are to occur within the development site.

The proposed application cannot be supported by Development Engineering due to lack of information to address:

- Vehicle access for the development in accordance with clause C2 Traffic, Access and Safety.

- Stormwater drainage and overland flows for the development in accordance with clause C4 Stormwater.
- Council's stormwater assets for the development in accordance with clause C6 Building Over or Adjacent to Constructed Council Drainage Easements.

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.