

Engineering Referral Response

Application Number:	DA2023/1000
Proposed Development:	Demolition works and construction of a dwelling house including swimming pool and double garage.
Date:	04/11/2023
To:	Dean Pattalis
Land to be developed (Address):	Lot 79 DP 232295 , 22 Birrong Avenue BELROSE NSW 2085

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

In accordance with Councils Water Management for Development Policy Version 2 26 February 2021 (WMfDP), the applicant is nominally required to undertake the following sequential process:

1. Obtain an easement from a downstream property to connect to the street. Use Appendix 2 of the WMfDP as proof of acceptance or rejection of easement request.
2. If an easement request is rejected, the applicant is required to investigate the feasibility of an absorption pit as per Appendix 3 of the WMfDP. This will require a geotechnical report and permeability testing.
3. If an absorption pit is not feasible, the applicant is required to construct an on site detention system and a level spreader as per the requirements of Appendix 4 of the WMfDP. The on site detention system will be required to restrict flows back to the state of nature (100 % pervious pre-development) 20% AEP event.

Review of Stormwater plans by Hyve Designs.

1. The charged line into the On site detention basin is not supported. Amended plans need to show the basin located on the downstream side of the dwelling with gravity flows from rainwater tank into OSD basin.
2. The top water level in the OSD basin for the 1% AEP storm event is to be a minimum of 300mm below all habitable floor levels and 150mm below the garage level. The submitted design has not satisfied this criteria.

3. The on site detention basin does not appear to have been designed to attenuate flows back to the state of nature event. Provide DRAINS model or alternate method of calculating OSD and orifice size.

Engineering comments 04.11.23

An easement refusal letter from the most suitable downstream property has been provided. Step 1 has been satisfied. A Geotechnical report has been submitted after the first development engineering response. The borehole data from the report indicated that rock is found approximately 1.3 metres from the surface. This makes the suitability of an Absorption system unlikely. Step 2. can be considered to be satisfied. Step 3 however has not been satisfied. The following matters also require attention:

Review of Stormwater plans by Hyve Designs.

1. The charged line into the On site detention basin is not supported. Amended plans need to show the basin located on the downstream side of the dwelling with gravity flows from rainwater tank into OSD basin.

2. The top water level in the OSD basin for the 1% AEP storm event is to be a minimum of 300mm below all habitable floor levels and 150mm below the garage level. The submitted design has not satisfied this criteria.

3. The on site detention basin does not appear to have been designed to attenuate flows back to the state of nature event. Provide DRAINS model or alternate method of calculating OSD and orifice size. The on-site detention system needs to be designed so that all post-development flows from the site up to the 1% AEP are attenuated back to the 20% State of Nature event (100% pervious pre-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.