

Engineering Referral Response

Application Number:	DA2021/0329
Date:	31/05/2021
To:	Kent Bull
Land to be developed (Address):	Lot 53 DP 22275 , 49 Binburra Avenue AVALON BEACH NSW 2107

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

21/04/2021:

Access

At present an attached carport adjacent to the south-western side of the dwelling is existing and driveway access is via an existing concrete driveway from Binburra Avenue.

Proposal is for construction of attached double garage and driveway (existing driveway access remains).

A new crossing and layback will be required.

Excavation

The site is identified as Geotechnical Hazard H1 on Council's Geotechnical Hazard Map. Geotechnical Report prepared by White Geotechnical Group, Ref No. J3241, dated 8th March 2021 is submitted along application.

Proposal is for new swimming pool which will be at a low level within the rear yard. An excavation depth of 2.5m is proposed to facilitate the pool.

Applicant is advised to incorporate Geotechnical Report prepared by White Geotechnical Group, Ref No. J3241, dated 8th March 2021, into construction and design phases.

Stormwater

The site falls away from the street towards the rear boundary, existing stormwater from the site is dispersed within the rear yard.

The new works and roof areas will be connected to the existing system which disperses stormwater within the rear yard of the site.

As the impervious area is increased by 68 sqm, an Onsite Detention System with a dispersion trench is

proposed.

Stormwater plans prepared by Barrenjoey Consulting Engineers, Job No. 210205, Drawing No. SW1 to SW3 (Internal ref. TRIM2021/222374), the proposed OSD capacity seems to be small, Applicant is advised to redesign the OSD as per Council's Water Management for Development Policy, Appendix 4.

Level spreader to be 3m away from site boundary and any structure (pool).

But before Council consider amended plans applicant is advised as below:

a) The Stormwater drainage for the site shall demonstrate compliance with Council's Water Management for Development Policy, particularly Stormwater Drainage from Low Level Properties Technical Specification Section 5.5. As the subject site falls to the rear, an easement to drain water is to be created in favor of the site over the downstream properties. Evidence of owners consent by the property owner (41 Binburra Avenue) shall be submitted with the Development Application. The Application shall be supported by a long section of the inter-allotment drainage to the connection with Council's road drainage system.

b) Should this method of stormwater disposal not be possible, evidence shall be submitted with the Application.

For sample letter refer Appendix 2, Easement Letter of Council's Water Management for Development Policy.

Where evidence of the refusal of an easement is provided, the steps in accordance with clause 5.5.1.2 of the Policy are to be followed.

31/05/2021:

Stormwater

Stormwater easement refusal letter signed by property owner (41 Binburra Avenue) is provided.

Amended Stormwater plans by Barrenjoey Consulting Engineers, Job No. 210205, Drawing No. SW1 to SW3, Rev - A, Dated- May 2021 (Internal ref. TRIM2021/385846), are satisfactory.

The proposal is therefore supported.

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

Recommended Engineering Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

Geotechnical Report Recommendations have been Incorporated into Designs and Structural Plans

The recommendations of the risk assessment required to manage the hazards as identified in the Geotechnical Report prepared by White Geotechnical Group, Ref No. J3241, dated 8th March 2021 are to be incorporated into the construction plans. Prior to issue of the Construction Certificate, Form 2 of the Geotechnical Risk Management Policy for Pittwater (Appendix 5 of P21 DCP) is to be completed and submitted to the Accredited Certifier. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

On-site Stormwater Detention Details

The Applicant is to provide a certification of drainage plans detailing the provision of on-site stormwater detention in accordance with Northern Beaches Council's Water Management for Development Policy, and generally in accordance with the concept drainage plans prepared by Barrenjoey Consulting Engineers Pty Ltd, Job Number. 210205, Drawing number SW1 to SW3, Issue-A, Dated May 2021. Detailed drainage plans are to be prepared by a suitably qualified Civil Engineer, who has membership to the Institution of Engineers Australia, National Professional Engineers Register (NPER) and registered in the General Area of Practice for civil engineering.

The drainage plans must address the following:

- i) OSD to be provided in accordance with Clause 9.0 of Council's Water Management for Development Policy.
- ii) Dispersion trench is to be 3m away from the site boundary.
- iii) Dispersion trench to be provided parallel to the contours.
- iv) Detailed drainage plans, including engineering certification, are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

Reason: To ensure appropriate provision for the disposal of stormwater and stormwater management arising from the development.

Vehicle Driveway Gradients

The Applicant is to ensure driveway gradients within the private property are not to exceed a gradient of 1 in 4 (25%) with a transition gradient of 1 in 10 (10%) for 1.5 metres prior to a level parking facility. Access levels across the road reserve are to comply with the allocated vehicle profile detailed in this consent.

Details demonstrating compliance are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

Reason: To ensure suitable vehicular access to private property.

Structural Adequacy and Excavation Work

Excavation work is to ensure the stability of the soil material of adjoining properties, the protection of adjoining buildings, services, structures and / or public infrastructure from damage using underpinning, shoring, retaining walls and support where required. All retaining walls are to be structurally adequate for the intended purpose, designed and certified by a Structural Engineer, except where site conditions permit the following:

- (a) maximum height of 900mm above or below ground level and at least 900mm from any property boundary, and
- (b) Comply with AS3700, AS3600 and AS1170 and timber walls with AS1720 and AS1170.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.

Reason: To provide public and private safety.

Vehicle Crossings Application

The Applicant is to submit an application for driveway levels with Council in accordance with Section 138 of the Roads Act 1993. The fee associated with the assessment and approval of the application is to be in accordance with Council's Fee and Charges.

An approval is to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To facilitate suitable vehicular access to private property.

CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

Road Reserve

The applicant shall ensure the public footways and roadways adjacent to the site are maintained in a safe condition at all times during the course of the work.

Reason: Public safety.

Vehicle Crossings

The Applicant is to construct one vehicle crossing 4.5 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/ 3NL and the driveway levels application approval. An Authorised Vehicle Crossing Contractor shall construct the vehicle crossing and associated works within the road reserve in plain concrete. All redundant laybacks and crossings are to be restored to footpath/grass. Prior to the pouring of concrete, the vehicle crossing is to be inspected by Council and a satisfactory "Vehicle Crossing Inspection" card issued.

A copy of the vehicle crossing inspection form is to be submitted to the Principal Certifying Authority.

Reason: To facilitate suitable vehicular access to private property.

CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

Positive Covenant and Restriction as to User for On-site Stormwater Disposal Structures

The Applicant shall lodge a Legal Documents Authorisation Application with Council. The application is to include the original completed request forms (NSW Land Registry standard forms 13PC and/or 13RPA) and a copy of the Works-as-Executed plan (details overdrawn on a copy of the approved drainage plan by a Registered Surveyor) and Hydraulic Engineers' certification for the completed onsite stormwater detention system works. A guide to the process can be found on Council's website using the following link.

<https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/pdfforms/legaldocumentsauthoris: - on-site-stormwater-detention-systems/guide-submitting-lda-anov19.pdf>

The form for the application can be found on Council's website using the following link.

[https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/pdfforms/legaldocumentsauthorisation-on-site-stormwater-detention-systems/4023 legaldocumentsauthorisationoct19.pdf](https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/pdfforms/legaldocumentsauthorisation-on-site-stormwater-detention-systems/4023%20legaldocumentsauthorisationoct19.pdf)

The Applicant shall create on the Title a positive covenant in respect to the ongoing maintenance and restriction as to user over the on-site stormwater detention system within this development consent. The terms of the positive covenant and restriction are to be prepared to Council's standard requirements at the applicant's expense and endorsed by Northern Beaches Council's delegate prior to lodgment with the NSW Land Registry Services. Northern Beaches Council shall be nominated as the party to release, vary or modify such covenant. A copy of the certificate of title demonstrating the creation of the positive covenant and restriction as to user for the on-site stormwater detention system is to be submitted.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any Final Occupation Certificate.

Reason: To ensure the on-site stormwater disposal system is maintained to an appropriate operational standard and not altered.

Retaining wall

The retaining wall works shall be certified as compliant with all relevant Australian Standards and Codes by a Structural Engineer. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any Final Occupation Certificate.

Reason: Public and Private Safety

Geotechnical Certification Prior to Occupation Certificate

The Applicant is to submit the completed Form 3 of the Geotechnical Risk Management Policy (Appendix 5 of P21 DCP) to the Principal Certifying Authority prior to issue of any Final Occupation Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.