

Engineering Referral Response

Application Number:	DA2021/0900
Date:	18/01/2022
To:	Gareth David
Land to be developed (Address):	Lot 151 DP 6937 , 40 Sunrise Road PALM BEACH NSW 2108

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

The stormwater plans proposes to discharge stormwater, via a private drainage easement, to a council pit located on the low side of Barrenjoey Road. As this requires crossing a state road concurrence from TfNSW is required prior to approval.

Review 29/11/2021

The stormwater management plan by Acor Consultants dated 7/6/2021 proposes an interallotment easement along the northern boundary of No 1174 Barrenjoey Rd to connect to the Council system in Barrenjoey Road. However there is a previous approval for a stormwater system for the development at 1174 Barrenjoey Rd (Lot 2) with a pipeline and an underground OSD system along the northern boundary. Correspondence from the applicant suggest the proposal is to connect to the approved system once constructed. The issues with this proposal is as follows:

1. The proposed private interallotment easement as per the current stormwater plan for 40 Sunrise Rd conflicts with the existing approval for 1174 Barrenjoey Road. The current plans does not appear to have considered the approved system. Due to the narrow area of Lot 2, along the northern boundary, there does not appear to be enough room for both an easement and private drainage system for Lot 2.
2. The interallotment drainage line must be separate from the private drainage for 1174 Barrenjoey Rd and cannot pass through the private OSD system.
3. The private connection across Barrenjoey Road is not supported. If the proposal involves the connection to the council system on the western side of Barrenjoey Rd, then the applicant shall extend the council system via a new pit and pipe connection across Barrenjoey Road. The

Private line can connect to the new pit on the eastern side of Barrenjoey Rd.

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

- *Stormwater drainage for the development in accordance with clause B5.15 Stormwater.*

Additional Information Provided on 17/12/2021

The amended stormwater plans showing the interallotment drainage line via No 1178 Barrenjoey Rd and the extension of the council system to the eastern side of Barrenjoey Rd is satisfactory. The proposed drainage works across Barrenjoey Rd are subject to TfNSW approval as conditioned. No objections to approval subject to conditions as recommended.

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 JK Geotechnics dated 18/2/2020 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 Certifying Authority prior to the issue of the Construction Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

Traffic Management and Control

The Applicant is to submit an application for Traffic Management Plan to Council for approval prior to issue of the Construction Certificate. The Traffic Management Plan shall be prepared to RMS standards by an appropriately certified person.

Reason: To ensure appropriate measures have been considered for site access, storage and the operation of the site during all phases of the construction process.

Private Interallotment Stormwater Drainage Line

The Applicant is to provide drainage plans including specifications and details of the interallotment drainage line to the Accredited Certifier for approval prior to the issue of the Construction Certificate. Such details are to be accompanied by a certificate from a suitably qualified Civil Engineer, who has membership to [Engineers Australia](#), [National Engineers Register \(NER\)](#) and registered in the General Area of Practice for civil engineering, that the stormwater management system complies with the requirements of AS/NZS 3500.3.2 - Stormwater Drainage and Council standards.

The drainage plans must address the following:

1. The inter- allotment line to be minimum Ø150mm at minimum 1% grade
2. Thrust blocks to be utilised where pipe grades exceed 10%
3. Pit details to be provided
4. HGL analysis to be provided.

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

Reason: To ensure adequate provision is made for the discharge of stormwater from the excavated parts of the site.

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 ACOR Consultants, project number NSW202638, drawing number C1.01, C1.02, C1.05, C1.06, C1.07, C3.01, C3.10, dated 9/12/2021. 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 shall be provided in accordance with Clause 9.0

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.

Submission Roads Act Application for Civil Works in the Public Road

The Applicant is to submit an application for approval for infrastructure works on Council's roadway. Engineering plans for the new development works within the road reserve and this development consent are to be submitted to Council for approval under the provisions of Sections 138 and 139 of the Roads Act 1993.

The application is to include four (4) copies of Civil Engineering plans for the design of the extension of the existing Council stormwater system to the eastern side of Barrenjoey Rd via a new pit and pipe connection which are to be generally in accordance with the drainage plans by Acor Consultants, drawing number NSW202638 -3C3.10, dated 15/12/2021 and Council's specification for engineering works - AUS-SPEC #1. The plans shall be prepared by a qualified civil engineer. The design must include the following information:

1. The stormwater connection and any associated works on Barrenjoey Road shall be in accordance with TfNSW letter reference SYD21/0112 dated 3 November 2021.
2. Detailed design plans of the proposed works are to be submitted to TfNSW for approval. Approval from TfNSW to be submitted with this application.
3. A v-grate pit to be provided within kerb/layback on the eastern side of Barrenjoey Road in front of No 1178 Barrenjoey Road constructed with Class D grate in accordance with Council Standards.
4. A minimum Ø 375mm RRJ RCP extending from the newly constructed v-grate pit to the existing

council pit located on the western side of Barrenjoey Road.

5. Civil Engineers design certificate.
6. Connection of the private interallotment line from 40 Sunrise Rd to the new pit in front of No 1178 Barrenjoey Road.
7. Long section and HGL analysis.
8. Survey plan showing location and levels of the existing Council pit on the western side of Barrenjoey Road.
9. Road reserve outside No 1178 Barrenjoey to be reinstated as required.
10. A services plan indicating all services in the road reserve. Where any services are to be adjusted as a result of the works, approval from the relevant service authority is to be provided with the application.

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 ensure engineering works are constructed in accordance with relevant standards and Council's specification.

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.

Civil Works Supervision

The Applicant shall ensure all civil works approved in the Section 138 approval are supervised by an appropriately qualified and practising Civil Engineer.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority and/or Roads Authority.

Reason: To ensure compliance of civil works with Council's specification for engineering works.

Traffic Control During Road Works

Lighting, fencing, traffic control and advanced warning signs shall be provided for the protection of the works and for the safety and convenience of the public and others in accordance with RMS Traffic Control At Work Sites Manual (<http://www.rms.nsw.gov.au/business-industry/partners-suppliers/documents/technical-manuals/tcws-version-4/tcwsv4i2.pdf>) and to the satisfaction of the Roads Authority. Traffic movement in both directions on public roads, and vehicular access to private properties is to be maintained at all times during the works

Reason: Public Safety.

Vehicle Crossings

The Applicant is to construct one vehicle crossing 3.0 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/ 5EL 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 on-site 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/pdf-forms/legal-documents-authorisation-on-site-stormwater-detention-systems/guide-submitting-ldaa-nov19.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/pdf-forms/legal-documents-authorisation-on-site-stormwater-detention-systems/4023-legal-documents-authorisation-oct19.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 lodgement 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 final Occupation Certificate.

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

Certification Elevated Parking Facility Work

The Applicant shall submit a Structural Engineers' certificate certifying that the elevated parking facility was constructed in accordance within this development consent and the provisions of Australian/New Zealand Standard AS/NZS 2890.1:2004 parking facilities - Off-street car parking, in particular Section 2.4.5 Physical controls. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the final Occupation.

Reason: Compliance with this consent.

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 the Occupation Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

Creation of Easement for Drainage

As the natural fall of the land is towards the rear of the site the disposal of stormwater drainage is to be in accordance with the drainage plan submitted by ACOR Consultants dated 15/12/2021. The easement is to be created under Sections 88B and/or 88K of the Conveyancing Act 1919. The applicant must provide evidence of the created easement on title and the constructed private stormwater connection from the subject site to the existing council system in Barrenjoey Road.

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

Reason: To ensure adequate provision is made for stormwater drainage from the site in a proper

manner that protects adjoining properties.

Certification of Civil Works and Works as Executed Data on Council Land

The Applicant shall submit a suitably qualified Civil Engineer's certification that the completed works have been constructed in accordance with this consent and the approved Section 138 plans. Works as Executed data certified by a registered surveyor prepared in accordance with Council's 'Guideline for preparing Works as Executed data (details overdrawn on a copy of the approved civil plans) for Council Assets' in an approved format shall be submitted to Council for approval prior to the release of any security deposits.

Reason: To ensure compliance of works with Council's specification for engineering works.