

Engineering Referral Response

Application Number:	DA2018/1800
To:	Daniel Milliken
Land to be developed (Address):	Lot 101 DP 868560 , 93 McIntosh Road NARRAWEENA 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

Reference is made to Development Engineering Referral Response dated 05/02/19 and 01/03/19 and additional information provided by the Applicant.

Council's Stormwater Assets:

Discussion has been held with Council's Stormwater Engineering section and the proposed easement width and vertical clearance is considered satisfactory. Further detail to be provided under S68 Local Government approval and shall be appropriately conditioned.

No objections are raised to the proposed development, subject to conditions.

Referral Body Recommendation

Recommended for approval, subject to conditions

Refusal comments

Recommended Engineering Conditions:

FEES / CHARGES / CONTRIBUTIONS

Construction, Excavation and Associated Works Bond (Drainage)

The applicant is to lodge a Bond of \$100,000 as security against any damage or failure to complete the construction of Stormwater drainage works as part of this consent. Details demonstrating payment of the bond are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

Construction, Excavation and Associated Works Bond (Crossing / Kerb)

The applicant is to lodge a Bond of \$60,000 as security against any damage or failure to complete the construction of any vehicular crossings, kerb and gutter, any footpath works and removal of any redundant driveways required as part of this consent. Details demonstrating payment of the bond are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

Construction, Excavation and Associated Works Bond (Maintenance for civil works)

The developer/applicant must lodge with Council a Maintenance Bond of \$10,000 for the construction of stormwater drainage. The Maintenance Bond will only be refunded on completion of the six-month Maintenance Period, if work has been completed in accordance with the approved plans and to the satisfaction of Council. The maintenance bond is to be paid prior to Council issuing practical completion.

Reason: Protection of Council's infrastructure.

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

Stormwater Disposal from Low Level Property

The Applicant is to demonstrate stormwater from the new development within this consent shall be disposed of in accordance with Northern Beaches Council's Warringah Water Management Policy PL 850 in particular the Stormwater Drainage from Low Level Properties Technical Specification. Details demonstrating compliance with the Northern Beaches Council's Warringah Water Management Policy PL 850 are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

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

Pump-Out System Design for Stormwater Disposal

The design of the pump-out system for stormwater disposal will be permitted for drainage of hard surfaces areas such as driveways and basement pavement areas only, and must be designed in accordance with AS/NZS 3500. The Applicant is to provide engineering details demonstrating compliance with this requirement and certified by an appropriately qualified and practising hydraulic engineer. 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.

Submission Roads Act Application for Civil Works in the Public Road

The Applicant is to submit an application for approval for Infrastructure works on Councils roadway. Engineering plans for the new development works within the road reserve within 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 civil works which shall be generally in accordance with the Council's specification for engineering works - AUS-SPEC #1. The plan shall be prepared by a qualified civil engineer.

The design must include the following information:

- i. Relocation of Council's stormwater pipeline and associated works. Proposed relocation works shall be supported by a detailed hydrologic and hydraulic assessment.
- ii. Provision of layback and vehicular crossing 6m wide.
- iii. Removal of one on-street parking bay and relocation of kerb.
- iv. Provision of any streetscape works in accordance with Council's Warringah Public Space Design Guidelines, including any bike racks, wheels stops, infill paving etc.

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.

Tanking of Basement Level

The basement area is to be permanently tanked. The Applicant is to submit structural details of the tanking are to be prepared by a suitably qualified Engineer. Where temporary dewatering works are required on the development site during construction, the developer/applicant must apply for and obtain a bore license from the NSW Office of Environment and Heritage. The bore license must be obtained prior to commencement of dewatering works. All requirements of the NSW Office of Water are to be complied with and a copy of the approval must be submitted to the Certifying Authority. Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To prevent ingress of sub-surface flows into the basement area and to comply with State Government Requirements.

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.

Sub-Soil Seepage

The Applicant is to submit plans demonstrating that all sub-soil seepage drainage is discharged via a suitable silt arrester pit, directly to Council's nearest stormwater drainage line within the property and is to be carried out in accordance with relevant Australian Standards. (Note: At the time of determination the following (but not limited to) Standards applied:

- Australian/New Zealand Standard AS/NZS 3500.3 - 2003 Plumbing and drainage - Stormwater drainage
- Australian/New Zealand Standard AS/NZS 3500.3 - 2003 / Amdt 1 - 2006 Plumbing and drainage - Stormwater drainage.)

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

Reason: To ensure appropriate drainage and stormwater management on site to protect amenity of residents.

Shoring of Adjoining Property

Should the proposal require shoring to support an adjoining property or Council land, the Applicant shall provide the adjoining(s) with engineering drawings of the proposed shoring works for their consideration and approval.

An application to Council for approval under Section 138 of the Roads Act 1993 is required if temporary ground anchors are to be used within Council's road reserve. Owner's approval is to be submitted to the

Certifying Authority prior to the issue of the Construction Certificate

Reason: To ensure that owners consent is obtained for ancillary works, and to ensure the protection of adjoining properties and Council land.

Traffic Management and Control

The Applicant is to submit plans an application for Traffic Management Plan to Council for approval. The Traffic Management Plan shall be prepared to RMS standard by an appropriately certified person. An approval from Council is to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

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 in a manner that respects adjoining owner's property rights and protects amenity in the locality, without unreasonable inconvenience to the community.

Stormwater Drainage Application

The Applicant is to provide a stormwater drainage application under Section 68 of the Local Government Act 1993 to Council for approval. The submission is to include four (4) copies of Civil Engineering plans for the design of stormwater drainage which are to be generally in accordance with the civil design approved with the Development Application and Council's specification for engineering works - AUS-SPEC #1. The form can be found on Council's website using the following link.

<https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/pdf-forms/stormwater-drainage-approval/4022-stormwater-drainage-approval.pdf>

The design must include the following information:

i. Relocation of Council's stormwater pipeline and associated works. Proposed relocation works shall be supported by a detailed hydrologic and hydraulic assessment.

ii.

Appropriate access to the easement is provided, including a minimum vertical clearance of 4 metres as determined in consultation with Council.

iii. Gate/fencing

shall be in accordance with Council's Building Over or Adjacent to Constructed Council Drainage Systems and Easements Technical Specification.

The fee associated with the assessment and approval of the application is to be in accordance with Council's Fees and Charges. Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

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

Structures Located Adjacent to Council Pipeline or Council Easement

All structures are to be located clear of any Council pipeline or easement. The Applicant is to ensure footings of any new development within this development consent adjacent to an easement or pipeline are to be designed in accordance with Northern Beaches Council's Warringah Water Management Policy PL850. Details and certification prepared by a suitably qualified Civil Engineer demonstrating compliance are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

Pre-commencement Dilapidation Report

The applicant must prepare and submit a pre-commencement dilapidation report providing an accurate record of the existing condition of adjoining public property and public infrastructure (including roads, gutter, footpaths, etc). A copy of the report must be provided to Council, any other owners of public infrastructure and the owners of adjoining and affected private properties.

The pre-construction/demolition dilapidation report must be submitted to Council for written approval and the written approval is then to be submitted to the Certifying Authority prior to the issue of the any Construction Certificate and the commencement of any works including demolition.

Reason: Protection of Council's infrastructure during construction.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO ANY COMMENCEMENT

Public Liability Insurance - Works on Public Land

Any person or contractor undertaking works on public land must take out Public Risk Insurance with a minimum cover of \$20 million in relation to the occupation of, and approved works within Council's road reserve or public land, as approved in this consent. The Policy is to note, and provide protection for Northern Beaches Council, as an interested party and a copy of the Policy must be submitted to Council prior to commencement of the works. The Policy must be valid for the entire period that the works are being undertaken on public land.

Reason: To ensure the community is protected from the cost of any claim for damages arising from works on public land.

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 and Section 68 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.

Notification of Inspections

The Applicant shall notify Council's Development Engineering and Certification team is to be given 48-hour notice when the works reach the following stages:

- a) Installation of Silt and Sediment control devices
- b)
Prior to backfilling of pipelines
- c) Prior to pouring of stormwater gully pits
- d) Prior to pouring of kerb and gutter
- e)
Subgrade level / basecourse level / subbase
- f)
All layers of the road formation are to be proof rolled to Council's satisfaction
- g)
Sealing road pavement

NOTE: Any inspections carried out by Council do not imply Council approval or acceptance of the work, and do not relieve the developer/applicant from the requirement to provide an engineer's certification.

Reason: To ensure new Council infrastructure is constructed in accordance with AUSPEC 1 Council's design and specification standards.

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

Stormwater Disposal

The Applicant shall submit a certificate from a suitably qualified person that the stormwater drainage works have been constructed/installed in accordance with all relevant Australian Standards and Codes. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

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

Certification of Structures Located Adjacent to Council Pipeline or Council Easement

The Applicant shall submit a suitably qualified Civil Engineer's certification that the completed footing works have been constructed in accordance with this consent, Northern Beaches Council's Warringah Water Management Policy PL850 and the approved Construction Certificate plans. Civil Engineer demonstrating compliance is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: Protection of Council's Infrastructure.

Positive Covenant for the Maintenance of Stormwater Pump-out Facilities

The Applicant shall lodge the Legal Documents Authorisation Application with the original completed request forms (NSW Land Registry standard forms 13PC and/or 13RPA) to Council and a copy of the Works-as-Executed plan (details overdrawn on a copy of the approved drainage plan), hydraulic engineers' certification.

The Applicant shall create on the Title a positive covenant in respect to the ongoing maintenance of the pump-out facility on the property being developed. Northern Beaches Council shall be nominated in the instrument as the only party authorised to release, vary or modify the instrument. Northern Beaches Council's delegate shall sign these documents prior to the submission to the NSW Land Registry Services. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

A copy of the certificate of title demonstrating the creation of the positive covenant and restriction for on-site storm water detention as to user 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 adequate provision is made for the stormwater pump out system to be maintained to an appropriate operational standard.

Certification of Tanking of Basement

The Applicant shall submit a suitably qualified Civil Engineer's certification that the completed tanking of basement areas had been undertaken in accordance with this consent and the approved Construction Certificate plans. Civil Engineer demonstrating compliance is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: To ensure compliance of works.

Post-Construction Dilapidation Report

The applicant must submit a post-construction dilapidation report prepared by suitably qualified civil engineer. The report must clearly detail the final condition of all public property, infrastructure, natural and man-made features that were originally recorded in the pre-commencement dilapidation report. A

copy of the report must be provided to Council, any other owners of public infrastructure.

The post-construction / demolition dilapidation report must be submitted to Council for review after the completion of all building works. Any damage to Council's infrastructure is to be rectified to the satisfaction of Council prior to the refund of any security deposits.

Reason: To ensure security against possible damage to Council.

Certification of Civil Works and Works as Executed Data

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 68 and 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.

CONDITIONS THAT MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF ANY STRATA SUBDIVISION OR SUBDIVISION CERTIFICATE

Easement for Drainage

The Applicant shall create a 3 metre wide easement for drainage (under the provisions of Section 88B of the Conveyancing Act) on the land to ensure all drainage infrastructure is located within the appropriate easement(s). Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: Protection of and access to Council's infrastructure.