

Engineering Referral Response

Application Number:	DA2019/1173
To:	Anne-Marie Young
Land to be developed (Address):	Lot A DP 411784 , 3 Berith Street WHEELER HEIGHTS NSW 2097

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

Development Engineers

The condition recommended by Council's Development Engineer to address the following issues are included in the recommendation:

- Stormwater design detention and certification;
- Design details of the accessible footpath along Berith Street and the vehicular crossing;
- Excavation - structural adequacy during excavation using underpinning, shoring and retaining walls where necessary, requirement for dilapidation reports, sub-soil seepage and compliance with recommendations of the geotechnical report and peer review;
- Traffic control and
- Civil works supervision and ongoing site inspections.

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:

FEES / CHARGES / CONTRIBUTIONS

Construction, Excavation and Associated Works Bond (Drainage works)

The applicant is to lodge a bond of \$ 5500 as security against any damage or failure to complete the construction of stormwater drainage works as part of this consent.

Details confirming 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 Security Bond (Crossing / Kerb)

The applicant is to lodge a Bond of \$ 40000 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 confirming 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 (Failure to remove waste)

A bond of \$ 5000 as security against damage to Council's roads fronting the site caused by the transport and disposal of materials and equipment to and from the site.

Details confirming 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.

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 peer reviewed and accepted with the consent are to be incorporated into the construction plans.

Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of any 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 POLICY, and generally in accordance with the concept drainage plans prepared by Taylor Consulting with the submission of the proposal and including required redesigned of the stormwater drainage is required to be provided by a suitably qualified engineer.

The required re-design of stormwater drainage shall implement the following:

- 1) The site stormwater discharge by gravity shall be directed to a boundary control pit, located within the property and outside of the driveway, and shall be piped from the control pit to a new pit constructed over the existing Council pipeline in Berith Street;
- 2) Connection to Council's pipeline must be in accordance with Council's standard drawing A2 5476/A and a new pit must include a minimum of 1.8 m kerb inlet/lintel;
- 3) The new pit shall be located to the south of a new layback, with a minimum of 1.0 m distance between the new layback wing and the new lintel;
- 4) Where there are any conflicts between the proposed stormwater drainage pipeline from the site and any utility services within the road reserve, all costs related to a potential re-location or lowering of affected utility services shall be borne by the applicant;

Details demonstrating compliance are to be to the Certifying Authority prior to the issue of any 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, including engineering design plans shall 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 design plans for the design of civil works required for the development (as outlined below) which are to be generally in accordance with the approved consent and Council's specification for engineering works as per Council's AUSPEC and Minor Works Policy. The design plan shall be prepared by a qualified structural engineer.

The civil design must include the following information:

- 1) Detail design for a 1.5 m wide concrete footpath along the full frontage of the development site on Berith Street and must extend to the existing footpath in Rose Avenue. The design shall include a longitudinal section and cross sections taken at every few meters. The sections shall show all existing, proposed levels and if necessary transition works designed in accordance with Council requirements;
- 2) Detail design for a 5.5 m wide vehicular crossing incorporating Council's standard 'Normal' driveway profile. The crossing shall be placed for a minimum of 1.0 m away from the existing Power Pole/Street light. A minimum of three long sections shall be presented on the plans showing all existing, proposed levels and if necessary transition works designed in accordance with Council requirements. The long sections shall be taken from the center line of the road through the end of the parking area. A long section of the new footpath shall have clearly indicated intersection points with long sections taken through the crossing; and
- 3) Detail design for a new stormwater pit with a 1.8m long lintel, shall be in accordance with Council's standard drawing A2 5476/A. The pit must be located to the south of the new layback, with implemented a minimum of 1.0 m distance between the new layback wing and the lintel.

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 any Construction Certificate.

Reason: To provide public and private safety.

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 being **[INSERT]** 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 Principal 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 private property or Council's land, owner's consent for the encroachment onto the affected property shall be provided with the engineering drawings. Council approval is required if any temporary ground anchors are proposed to be installed within the Council's land/road reserve.

A Temporary Ground Anchors Application is to be submitted with Council for assessment and approval subject to Council's Fees and Charges. Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of any Construction Certificate.

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

Pre-Construction Stormwater Assets Dilapidation Report

The Applicant is to submit a pre-construction / demolition Dilapidation Survey of Council's Stormwater Assets is to be prepared by a suitably qualified person in accordance with Council's Guidelines for Preparing a Dilapidation Survey of Council Stormwater Asset, to record the existing condition of the asset prior to the commencement of works. Council's Guidelines are available on our web site.

The pre-construction / demolition dilapidation report must be submitted to Council for approval and the Principal Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's Infrastructure.

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 Construction Certificate 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.

Footpath Construction

The applicant shall construct a 1.5 m wide footpath for the purpose of providing an access of the subject site to Rose Avenue. The works shall be in accordance with the following:

- (a) All footpath works are to be constructed in accordance with Council's Specification for an access appropriate to Seniors Living development and include widening of the existing connection to the bus (shelter) stops in Wheelers Parade within 400m of the site, and Clauses 26(2) and 38 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004;
- (b) Council is to inspect the formwork prior to pouring of concrete to ensure the works are to be completed in accordance with the Council's specification for footpath. Details demonstrating compliance are to be submitted to the Principal Certifying Authority.

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

Notification of Inspections (Infrastructure works to be handed over to Council)

Council's Development Engineer is to be given 48 hours 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) 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.

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 5.5 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/1 N 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.

Stormwater Pipeline Construction/Connection

Where connection to Council's nearest stormwater drainage system is required, being in Berith Street fronting the site, the applicant shall construct the pipeline in accordance with AUSPEC specification and Council's Minor Works Policy for engineering works (see www.northernbeaches.nsw.gov.au), including reconstruction of all affected kerb and gutter, bitumen reinstatements, adjustments of any vehicular crossings for paths, grass verges and household stormwater connections to suit the kerb and gutter levels. All works shall be undertaken at the applicant's cost, and upon completion shall be certified by an appropriately qualified and practicing Civil Engineer. Details demonstrating compliance are to be submitted to the Principal Certifying Authority.

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

A post-construction Dilapidation Survey of Council's Stormwater Assets

A post-construction Dilapidation Survey of Council's Stormwater Assets is to be prepared by a suitably qualified person in accordance with Council's Guidelines for Preparing a Dilapidation Survey of Council Stormwater Asset in order to determine if the asset has been damaged by the works. Council's Guidelines are available on our web site.

The post construction dilapidation report must be submitted to the Council for review and the Certifying Authority prior to the issue of the Occupation Certificate. Any damaged to Council's stormwater infrastructure is to be rectified in accordance with Council's technical specifications prior to the release of the security bond.

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.

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

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 restriction on the use of land and a positive covenant in respect to the ongoing maintenance and restriction of the on-site stormwater disposal structures 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 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 the on-site stormwater disposal system is maintained to an appropriate operational standard.

Geotechnical and structural Certification

All civil works approved in this Development Consent shall be certified as compliant with all relevant Australian Standards and Codes by an appropriately qualified and practising Civil 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

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. Works as Executed data certified by a registered surveyor in relation to boundaries, prepared in accordance with Council's 'Guideline for preparing Works as Executed data for Council Assets' in an approved format shall be submitted to Council and the Principal Certifying Authority for approval prior to the issue of the Occupation Certificate.

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