

Engineering Referral Response

Application Number:	DA2018/1828
To:	Alex Keller
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

Council Stormwater Assets:

The Stormwater Concept Plan proposes the construction of a Kerb Inlet Pit (KIP) over Council's road drainage network. Insufficient detail of this pipeline has been provided for assessment. The applicant shall demonstrate compliance with Council's Building Over or Adjacent to Constructed Drainage Systems and Easements Technical Specification. This consists of accurately locating, confirming dimensions and plotting Council's stormwater pipelines and associated infrastructure in accordance with Section 8.1 of the Technical Specification. Council has public stormwater drainage maps online as a reference for detailed investigation, available under "Stormwater" overlay map:
<https://services.northernbeaches.nsw.gov.au/icongis/index.html>

The proposed KIP within Berith Street shall not be located within the proposed driveway. A minimum clearance of 1 metre from driveways is typically required. The location of the proposed pit may impact on the internal OSD design and location, as tailwater conditions from the receiving drainage system shall be considered. In addition, it shall be demonstrated that there will be no adverse impact on Council's road drainage system.

Note to Planning: the letter relating to stormwater details states that a DRAINS file has been submitted for review, however this cannot be found in TRIM for assessment.

A Geotechnical report has not been provided. Please consider this in Planning assessment.

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

- Detailed information of Council's Stormwater pipeline in accordance with clause C6 Building over or adjacent to Constructed Council Drainage Easements.

Further assessment dated 13/8/2019

Reference is made to the DRAINS computer model submitted by the applicant (trim no. 2019/187781), Council's email (trim no. 2019/187797) and memorandum (trim no. 2019/071683).

The applicant has not fully addressed the matters raised in Council's memorandum, specifically with respect to the Council's stormwater drainage infrastructure and re-location of the proposed kerb inlet pit. In this regard, a revised stormwater drainage plan is to be submitted to Council's Development Engineers for consideration.

Council's Development Engineers will then review the DRAINS computer model along with the revised stormwater drainage plans addressing the above matters.

Note:

A DDA compliant footpath is to be constructed between the development site and footpath in Rose Avenue. An appropriate condition related to construction of the above footpath will be issued once Council's Development Engineers are satisfied with the stormwater drainage proposal.

Planning Comment:

Council's Development Engineers have reviewed the development application and engineering stormwater concept plans, including supplementary information and are generally satisfied with the proposal subject to some minor design changes for final approval. The revisions relate to connection with Council assets in the Road reserve and minor civil design adjustments. Therefore, this information is appropriate to be addressed as a Deferred Commencement condition.

Further assessment dated 22/8/2019

Development Engineers raise no objections to the proposal 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)

A Bond of \$5,000 as security against any damage or failure to complete the construction of Stormwater drainage works in Berith Street as part of this consent.

Reason: Protection of Council's Infrastructure

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

A Bond of \$40,000 as security against any damage or failure to complete the construction of any vehicular crossings, kerb and gutter and any footpath works required as part of this consent.

Reason: Protection of Council's Infrastructure

Construction, Excavation and Associated Works Bond (Failure to Remove Waste)

A bond of \$5,000 as security against damage to Council's road(s) fronting the site caused by the transport and disposal of materials and equipment to and from the site.

Reason: Protection of Council's Infrastructure

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

On-site Stormwater Detention Compliance

Certification of Drainage plans detailing the provision of On-site Stormwater Detention in accordance with Northern Beaches Council's WARRINGAH WATER MANAGEMENT POLICY PL850 and generally in accordance with the concept drawing by Taylor Consulting, drawing number SHEET - 1/A dated 10 September 2018 and SHEET - 2, dated 21 August 2018.

The stormwater drainage is to be re-designed to comply with the following requirement(s):

- 1) Connection point to Council's pipeline in Berith Street must be to the south of the proposed vehicle crossing
- 2) Where there are any conflicts between the proposed stormwater pipeline and any utility services in the road reserve, all costs related to re-locating the affected utility services must shall be borne by the applicant
- 3) Connection to Council's pipeline must be in accordance with Council's standard drawing A2 5476/A and must include a minimum 1.8 m lintel
- 4) Above stormwater inlet pit and lintel must be located minimum 1 metre from the driveway

Details demonstrating compliance are to be submitted to the Principal 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.

Submission Roads Act Application for Civil Works in the Public Road

An Application for Works to be approved within Council Roadway, including engineering plans is 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 required for the development (as outlined below) which are to be generally in accordance with the Development Application and Council's specification for engineering works - AUS-SPEC #1 and/ or Council's Minor Works Policy. The plan shall be prepared by a qualified structural engineer.

The design must include the following information:

- 1) 1.5 metre wide concrete footpath along the full frontage of the development site on Berith Street and must extend to the existing footpath in Rose Avenue,
- 2) 5.5 metre wide vehicle crossing incorporating Council's standard 'Normal' driveway profile
- 3) Stormwater inlet pit with 1.8m lintel on the south side of the vehicle crossing in Berith Street in accordance with Council's standard drawing A2 5476/A

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 Principal Certifying Authority prior to the issue of the 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.

Shoring of Adjoining Property

Should the proposal require shoring to support an adjoining property or Council land, owner's consent for the encroachment onto the affected property owner shall be provided with the engineering drawings.

Council approval is required if temporary ground anchors are to be used within Council land. A Temporary Ground Anchors (Road Reserve) 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 Principal 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.

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

Reason: Public Safety.

Civil Works Supervision

All civil works approved in the Construction Certificate are to be supervised by an appropriately qualified and practising Civil Engineer. Details demonstrating compliance are to be submitted to the Principal Certifying 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 to connect 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 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 in accordance with 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

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. Council approval or acceptance of any stage of the work must be obtained in writing, and will only be issued after completion of the work to the satisfaction of Council and receipt of the required certification

Reason: To ensure new Council infrastructure is constructed to Council's requirements.

Vehicle Crossings

The provision of one vehicle crossing 5.5 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/1 Normal and specifications. 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.

Details demonstrating compliance are 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, the applicant shall construct the pipeline in accordance with AUSPEC specification for engineering works (see www.northernbeaches.nsw.gov.au) and shall reconstruct all affected kerb and gutter, bitumen reinstatements, adjust all 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 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.

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

Authorisation of Legal Documentation Required for Onsite Detention

The original completed request forms (NSW Land Registry standard forms 13PC and/or 13RPA) must be submitted to Council, with a copy of the Works-as-Executed plan (details overdrawn on a copy of the approved drainage plan), hydraulic engineers certification and Compliance Certificate issued by an Accredited Certifier in Civil Works. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate.

Reason: To create encumbrances on the land.

Registration of Encumbrances for On-site Stormwater Detention

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 any interim / final Occupation Certificate.

Reason: To identify encumbrances on land.

On-Site Stormwater Detention Compliance Certification

Upon completion of the on-site stormwater detention (OSD) system, certification from a consulting engineer and a "work as executed" (WAE) drawing certified by a registered surveyor and overdrawn in red on a copy of the approved OSD system plans are to be provided to Council. Additionally a Compliance Certificate is to be issued by an Accredited Certifier in Civil Works registered with the Institute of Engineers Australia, stating that the works are in accordance with the approved plans.

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

Reason: To ensure stormwater disposal is constructed to Council's satisfaction. (DACENF10)

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

A positive covenant shall be created on the title of the land requiring the proprietor of the land to maintain the on-site stormwater detention structure in accordance with the standard requirements of Council. The terms of the positive covenant 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 NSW Land Registry Services. Northern Beaches Council shall be nominated as the party to release, vary or modify such covenant.

A restriction as to user shall be created on the title over the on-site stormwater detention system, restricting any alteration to the levels and/or any construction on the land. The terms of such restriction are to be prepared to Council's standard requirements at the applicant's expense and endorsed by Council prior to lodgement with NSW Land Registry Services. Northern Beaches Council shall be nominated as the party to release, vary or modify such restriction.

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

Reason: To ensure the on-site detention and/or pump system is maintained to an appropriate operational standard.