

Engineering Referral Response

Application Number:	DA2019/0807
To:	Lashta Haidari
Land to be developed (Address):	Lot 16 DP 7022 , 19 Kooloorra Avenue FRESHWATER NSW 2096

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 have assessed the application and cannot support it due to the following reason.

A self closing flood barrier instead of a manual flood barrier shall be provided for flood protection. Details shall be provided to show how the proposed self closing flood barrier will effectively operate during major floods. The entry gate for pedestrian access shall be removed or relocated to provide enough freeboard, which is at least 500 mm above the 100 year flood level. Amended plans are required to show the proposed self closing flood barrier as well as the solid barrier around the property where enough freeboard needs to be provided by solid barrier to prevent floodwater from entering the property.

Failure to comply with clause C4 of Warringah DCP 2011.

17/10/2019

The proposed automatic gate and entry steps seem to be satisfactory. No objection to approval, subject to conditions as recommended.

Referral Body Recommendation

Recommended for approval, subject to conditions

Refusal comments

Recommended Engineering Conditions:

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

Flood Barrier Walls & Steps and Flood Gate

The following designs to ensure that flood water up to the flood planning level of RL 5.02 AHD does not enter the building, and generally in accordance with the design provided by Stellen Consulting, dated October 2019 are to be prepared and certified by a suitably qualified Hydraulic Engineer.

1. The design of the sealed masonry wall and steps & blade walls around and inside the development site.
2. The design and details of operation of the flood gate.

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

Reason: To ensure flood water does not enter the building.

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. 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.

On-site Stormwater Detention

An On-site Stormwater Detention system must be designed and constructed in accordance with Northern Beaches Council's WATER MANAGEMENT POLICY PL850 and On-site Stormwater Detention Technical Specification.

Detailed drainage plans are to be prepared by a qualified experienced practicing Civil Engineer, with Corporate membership of the Institute of Engineers Australia (M.I.E.) or who is eligible to become a Corporate member and has appropriate experience and competence in the related field.

Detailed drainage plans 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 storm water and storm water management arising from the development.

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.

Vehicle Crossings Application

A Driveway Levels and Formwork Inspections Application shall be made with Council subject to the payment of the fee in accordance with Council's Fees and Charges. The fee includes all Council inspections relating to the driveway construction and must be paid.

Approval of the application by Council is to be submitted to the Principal 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

Maintenance of 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.

Vehicle Crossing

The provision of one vehicle crossing 3 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/3 NL 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.

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

Authorisation of Legal Documentation Required for Onsite Detention

An application for the authorization of legal documents is to be submitted to Council for approval. The application is to include the original completed request forms (NSW Land Registry standard forms 13PC and/or 13RPA) with a copy of the Works-as-Executed plan(details overdrawn on the copy of the approved drainage plan), hydraulic engineers certification and photographs of the completed system.

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.

Positive Covenant for the Maintenance of Stormwater Pump-out Facilities

A Positive Covenant (under the provisions of Section 88B of the Conveyancing Act 1919) is to be created on the property title to ensure the on-going maintenance of the stormwater pump-out facilities 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 NSW Land Registry Services.

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 adequate provision is made for the stormwater pump out system to be maintained to an appropriate operational standard. (DACENF11)

Positive Covenant and Operation Manual for Flood Barrier Walls & Steps and Flood Gate

A positive covenant shall be created on the title of the land requiring the proprietor of the land to maintain the flood barrier walls & steps and flood Gate to Council's satisfaction. The terms of the positive covenant are to be prepared to Council's standard requirements, (available from Northern Beaches Council), at the applicant's expense and endorsed by Northern Beaches Council's delegate prior to lodgement with the Department of Lands. Northern Beaches Council shall be nominated as the party to release, vary or modify such covenant.

The applicant must provide an Operation Manual for the building to advise owners of the operation of the flood gate and any other measures required to protect the building during and after a flood event. The Operation Manual shall be created on the title of the land and must be made available to the owners and occupiers. The manual must be included with the contract of sale of the property.

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 ongoing maintenance of the flood barrier walls & steps and flood gate.

Flood Barrier Walls & Steps and Flood Gate Compliance Certification

Upon completion of the flood barrier walls & steps and flood gate constructed to prevent flood water from entering the building, certification from a consulting hydraulic engineer and a “work as executed” (WAE) drawing certified by a registered surveyor are to be provided to Council.

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 flood protection measures are constructed to Council's satisfaction.

On-Site Stormwater Detention and Pump-out System Compliance Certification

Upon completion of the on-site stormwater detention (OSD) system and Pump-out 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 and Pump-out System plans are to be provided to Council.

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.

Restriction as to User for Flood Barrier Walls & Steps and Flood Gate

A restriction as to user shall be created on the title over the flood barrier walls & steps and flood Gate, 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 satisfaction at the applicant's expense and endorsed by Council prior to lodgement with the Department of Lands. 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 modification to the flood barrier walls & steps and flood gate are not carried out without Council's approval.

Registration of Encumbrances for On-site Stormwater Detention and Flood Barrier Walls & Steps and Flood Gate

A copy of the certificate of title demonstrating the creation of the positive covenant and restriction as to user for the on-site stormwater system and flood barrier walls & steps and flood gate 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. (DACENF02)

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 is maintained to an appropriate operational standard and an Operation Manual is available.