

## Engineering Referral Response

Application Number:	DA2019/0645
To:	Claire Ryan
Land to be developed (Address):	Lot CP SP 15752 , 26 Whistler Street MANLY NSW 2095

### Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m<sup>2</sup> 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

#### Original Comments:

The applicant proposed an absorption tank to discharge the on site stormwater into underground.

The consultant stated that the absorption tank was designed in accordance with a infiltration rate from the submitted geotechnical report.

In the report, the suggested infiltration rate is between 0.001 to 0.0001 m/s which is vary by factor of 10 time.

And the consultant did not specific the infiltration rate which governed the design.

It means the volume of the tank may be 10 times bigger than the proposed design when applying a different filtration rate.

It impacts the basement structures of the proposed building.

Secondly, the ground water table level RL 1.1 m to 1.3 m is only an estimation.

The ground water table level must be identified based on an on site infiltration testing/ monitoring.

It is because the ground water level is the one of the critical factors in the design of the absorption system and the building.

Furthermore, the additional water discharge from the proposed absorption tank into the underground may cause an significant impact and change to the ground water table level.

It means the surrounding buildings and infrastructures may be influenced by the changing of the ground water level.

A geotechnical report must investigate the possible impact on the surrounding properties and infrastructures due to the possible change on ground water level and recommend an appropriate methodology in design and construction of the building with protection on these surrounding properties and infrastructure.

As such, Development Engineering cannot support the application with insufficient information on ground water issue in accordance with Section 6.4 of Council's Manly DCP 2013.

An amended geotechnical report and absorption design with supportive information must be submitted for assessment.

**Updated Comments - Amended Plans:**

Additional supporting information of the absorption system has been provided.

Development Engineering has no objection to the application subject to conditions of consent.

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**

**Geo Technical Report**

**Geo-Technical Report**

A Geo-Technical Report and certificate shall be prepared by an appropriately qualified Geo-technical Engineer certifying that the existing and substrate on the site are capable of withstanding:

- the proposed loads to be imposed;
- the extent of the proposed excavation, including any recommendations for shoring works that may be required to ensure the stability of the excavation;
- protection of adjoining properties;
- the provision of appropriate subsoil drainage during and upon completion of construction works.

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

**Reason:** To ensure the structural integrity of the subject site and adjoining sites during the excavation process.

**On-site Stormwater Disposal System**

An On-site Stormwater Disposal system must be designed and constructed in accordance with Northern Beaches Council's current MANLY SPECIFICATION FOR ON-SITE STORMWATER MANAGEMENT 2003 and generally in accordance with the concept drainage plans prepared by Wood & Grieve Engineers, project number 41483 and dated 18/6/2019. Detailed drainage plans are to be prepared by a qualified experienced practicing Civil Engineer. The drainage plans must address the following:

- i) A fail safe overflow outlet must be installed to ensure that any overflow will be directed from the basement

Detailed drainage plans, including engineering certification confirming the above requirements have

been satisfied and complying with Council's requirements, are to be submitted to the Principal 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.

### **Sub-Soil Seepage**

All sub-soil seepage drainage shall be discharged via a suitable silt arrester pit, directly to Council's nearest stormwater drainage line being Whistler Street 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 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.

### **Construction Management Program**

An application for Traffic Management Plan is to be submitted to Council for approval. The Traffic Management Plan shall be prepared to RMS standard by an appropriately certified person. An approval is to be submitted to the Principal 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

### **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 and private properties 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.

Reason: Protection of Council and private party 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 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.

### **Property Boundary Levels**

The property boundary levels shall match the existing levels except where modified for the vehicular crossing. The applicant shall design and construct having regard for the existing levels. No approval is granted for any change to existing property alignment levels to accommodate the development. Details demonstrating compliance are to be submitted to the Principal Certifying Authority.

Reason: To maintain the existing profile of the nature strip/road reserve.

**Vehicle Crossings**

The provision of one vehicle crossing 6.2 metres wide in accordance with approved plans and Northern Beaches Council Drawing No A4-3330/ 1 N 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.

**Maintenance of Sediment**

Sedimentation and erosion controls are to be effectively maintained at all times during the course of construction and shall not be removed until the site has been stabilised or landscaped to the Principal Certifying Authority's satisfaction.

Reason: To ensure sediment controls are effective

**Protection of Adjoining Property - Excavation**

Where excavations extend below the level of the base of the footings of a building on an adjoining allotment of land, an appropriately qualified and practising Civil Engineer must supervise the works.

An person causing the excavation must preserve and protect the building from damage and, if necessary, underpin and support the adjoining building in an approved manner in the consent.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority.

Reason: To ensure private and public safety

**CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE  
OCCUPATION CERTIFICATE****Authorisation of Legal Documentation Required for Onsite Disposal System**

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 Disposal System**

A copy of the certificate of title demonstrating the creation of the positive covenant and restriction for on-site storm water disposal system 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.

**Reinstatement of Kerb**

All redundant laybacks and vehicular crossings shall be reinstated to conventional kerb and gutter, footpath or grassed verge as appropriate with all costs borne by the applicant. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim /

final Occupation Certificate.

Reason: To facilitate the preservation of on street parking spaces

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

A positive covenant shall be created on the title of the land requiring the proprietor of the land to maintain the on-site stormwater disposal 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 disposal 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 stormwater disposal and/or pump system is maintained to an appropriate operational standard.

**Post-Construction Dilapidation Report**

The applicant must prepare and submit a post-construction dilapidation report. The report must clearly detail the final condition of all 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 and the owners of adjoining and affected private properties

Reason: To ensure security against possible damage to Council and private property.