

Engineering Referral Response

Application Number:	DA2021/0744
Date:	12/11/2021
To:	Rebecca Englund
Land to be developed (Address):	Lot 1 DP 571975 , 50 Lawrence Street 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

The submitted stormwater design including OSD has been reviewed and is satisfactory.

The proposal includes two driveway crossings to gain access to the site, one off Dowling St to the lower parking level and one off Oliver St to the upper parking level. The application has not provided any sections through the driveway crossings from the kerb to the basement to check compliance with Council's standard profile A4/3330/1 Normal and AS/NZS2890.1:2004. In this regard the boundary levels for the vehicular crossings are to remain with any transitions to occur within the site. A review of the two crossings indicates that each proposed crossing lowers the existing ground levels which is not acceptable. Maintaining the boundary levels results in both access driveways not complying with the requirements of AS/NZS2890.1:2004 which requires a maximum of 1 in 20 grade for the first 6 metres from the boundary into the carpark. The proposed driveway off Dowling St appears to conflict with an existing power pole and bus seat which are not shown accurately on the survey or architectural plans. Council's Road Asset Team are to provide comments with respect to the requirements for the relocation of the seat.

The plans indicate outdoor seating, windows that open out into the footpath area, doors for the hydrant booster which also open out onto the footpath and changing the finish on the retaining wall in Oliver St. These issues are to be assessed by Council's Road Asset Team to ensure compliance with their requirements.

The internal parking design and driveway widths are to be assessed by Council's Traffic Engineers. It is unclear how the access from the service vehicle bay to the retail shops can be achieved internal to the building without the use of the lift.

Development Engineers cannot support the application due to insufficient information to address vehicular access in accordance with Clause C2 of Warringah DCP.

Amended plans submitted 8/09/2021

The amended plans have failed to address the previous issues raised with respect to the two driveway crossings in terms of the alteration to the boundary levels and maximum grade of 1 in 20 for the first 6 metres from the boundary into each carpark. In this regard, the proposed levels on either side of the proposed driveway off Dowling St of 28.65 and 28.16 are not supported and the existing levels at these points must be maintained, i.e. 28.37 on the low side and 28.95 on the high side. The internal grades are to be amended to suit the requirements of AS/NZS 2890.1:2004 with a maximum grade of 1 in 20 for the first 6 metres from the boundary. As stated previously, the power pole has been incorrectly shown on the plans and is currently located within the proposed driveway in Dowling St. The revised plans do not state that the pole is to be relocated. Also, it is unclear where the bus stop sign, bus zone signs and seat are proposed to be located on the plans. The footpath will need to be full width paving up to the proposed bus stop location and then transition to 1.5 metre wide concrete centrally located for the remainder of the frontage. In terms of the proposed crossing off Oliver St, it is considered that the existing back of footpath levels must remain and the transition into the carpark can commence from this point. On the high side, the maximum transition is to be 1 in 20 for 6 metres between the back of the existing path and the proposed carpark. As a result of these requirements, both parking levels will need to be altered to suit.

Development Engineers cannot support the application due to insufficient information to address vehicular access and associated footpath design in accordance with Clause C2 of Warringah DCP.

Amended plans submitted 29/10/21 and 10/11/21.

The revised plans have addressed the previous issues with respect to the driveway grade and services conflicts. The proposal has been supported by Council's Traffic and Road Asset Engineers and has received concurrence from TfNSW.

Development Engineering support the proposal, subject to conditions as recommended.

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 \$5,000 as security against any damage to Council's stormwater drainage infrastructure 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 \$75,000 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 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

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 for Development Policy and generally in accordance with the concept drainage plans prepared by KYSU Structural & Civil Engineers, drawing number 1037 SW.01, SW.02, SW.03, SW.04 and SW.05 Issue A, dated 24.03.21. Detailed drainage plans are to be prepared by a suitably qualified Civil Engineer, who has membership to the Institution of Engineers Australia, National Engineers Register (NER) and registered in the General Area of Practice for civil engineering.

The drainage plans must address the following:

1. The surface levels of the OSD tank are to be amended to suit the revised architectural plans.
2. All sub-soil drainage is to be connected to the piped drainage system in Lawrence Street.
3. Step irons are to be provided in OSD tank where the depth exceeds 1.2 metres.
4. The orifice plate is to be sized to ensure the PSD is not exceeded. The size of the orifice plate is to be shown on the plans.
5. Where the base of the OSD tank is on rock, the silt trap is to be deleted.

Detailed drainage plans, including engineering certification, 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 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. Engineering plans for the new development works within the road reserve and 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 the civil works along the frontage of the site which are to be generally in accordance with Council's specification for engineering works - AUS-SPEC #1. The plans shall be prepared by a qualified Civil Engineer. The design must include the following information:

1. The provision of two new driveway crossings. One 5.5 metres wide off Dowling Street and one 7.1 metres wide off Oliver St. The Oliver St driveway is to include a splitter island and separation at the kerb alignment to ensure left in and left out. Each driveway crossing is to be in

- accordance with Council's standard drawing A4/3330/1 Normal.
2. Details of the reconstruction of the existing kerb and gutter along the Dowling St frontage. The kerb is to be 150mm high in accordance with Council standard drawing A4/2276/A. The existing asphalt is to be adjusted to suit.
 3. The provision of a new 1.5 metre wide concrete footpath in accordance with Council standard drawing A4/10536 (typ.), along the Dowling St frontage up to the proposed Hydrant Booster Box. Turf is to be provided on either side of the new path between the site boundary and the kerb to suit the levels.
 4. The provision of full width concrete paving (matching the existing paving), along the Dowling St frontage between the proposed Hydrant Booster box and the existing full width paving.
 5. The provision of a new 1.5 metre width concrete footpath along the Oliver St frontage between the existing retaining wall defining the outdoor seating area and the southern boundary of the site. Turf is to be provided on either side of the new path between the site boundary and the kerb to suit the levels.
 6. The provision of full width concrete paving (matching the existing paving) along the Oliver St frontage between the start of the retaining wall and the existing full width paving.
 7. Details of the reinstatement of all existing driveway crossings to kerb, footpath and turf.
 8. Details of the surface finish to the existing retaining wall along the Oliver St frontage.
 9. Details of the relocation of the existing power pole along Dowling St with written approval from the relevant service authority.
 10. Details of any other service pit relocation required for the construction of the driveways with written approval from the relevant service authority.
 11. Sign posting plan as required from Council's Traffic Committee.
 12. Details of the proposed street tree planting.
 13. Details of the relocation of the bus stop signs and seat.

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.

Vehicle Driveway Gradients

The Applicant is to ensure driveway gradients within the private property are in accordance with the requirements of AS/NZS 2890.1:2004. Access levels across the road reserve are to comply with the allocated vehicle profile detailed in this consent.

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

Reason: To ensure suitable vehicular access to private property.

Utilities Services

Prior to the issue of the Construction Certificate, the Applicant is to obtain the following:

- (a) A letter from the utility provider confirming that satisfactory arrangements have been made for the approved development have been made; and

(b) Evidence that notification has been received from a utility authority that, requirements for the development can be provided.

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

Reason: To ensure that services have been provided as required by this Consent.

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 Council's Road Reserve (Temporary road anchors)

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

Written approval from Council under Section 138 of the Roads Act 1993 is required if temporary ground anchors are to be used within Council's road reserve. The 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.

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.

Progress Certification (Road & Subdivision)

The applicant shall provide written certification is to be provided by a suitably qualified engineer upon completion and/or as and when requested by the Roads Authority for the following stages of works:

- (a) Silt and sediment control facilities
- (b) Laying of stormwater pipes and construction of pits
- (c) Proof Roll
- (d) Sub-grade trimmed and compacted **
- (e) Base-course laid and compacted **
- (f) Kerb and gutter construction
- (g) Pavement
- (h) Landscaping and vegetation
- (i) Clean-up of site, and of adjoining Council roadway and drainage system.

(**To be tested by a recognised N.A.T.A. approved laboratory).

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.

Civil Works Supervision

The Applicant shall ensure all civil works approved in the Section 138 approval are supervised by an appropriately qualified and practicing 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 reconstruct the footpath along the Oliver St and Dowling St frontages of the site. The works shall be in accordance with the following:

- (a) All footpath works are to be constructed in accordance with the Section 138 Road Act approval.
- (b) Council is to inspect the formwork prior to pouring of concrete to ensure the works are in accordance with the Section 138 Road Act approval 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, footpath
- (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.

Vehicle Crossings

The Applicant is to construct two vehicle crossings, 5.5 metres wide off Dowling St and 7.1 metres wide (including a splitter island) off Oliver St in accordance with Northern Beaches Council Drawing No A4-3330/1 N and the Section 138 Roads Act application approval and approved consent plans. 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 kerb, footpath and 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.

Kerb and Gutter Construction

The Applicant is to construct kerb and gutter and associated works along the entire frontage of the site in accordance with Northern Beaches Council Drawing No. A4 2276/A. Prior to the pouring of concrete, the works are to be inspected by Council and an approval issued.

The approval is to be submitted to the Principal Certifying Authority.

Reason: To facilitate the preservation of on street parking spaces.

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

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

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

The Applicant shall create on the Title a positive covenant in respect to the ongoing maintenance and restriction as to user over the on-site stormwater disposal structures within this development consent. The terms of the positive covenant and restriction as to user are to be prepared to Council's standard requirements at the applicant's expense and endorsed by Northern Beaches Council's delegate prior to lodgment 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 as to user is to be submitted.

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

Reason: To ensure the on-site stormwater disposal system is maintained to an appropriate operational standard.

Retaining wall in Road Reserve

The retaining wall works shall be certified as compliant with all relevant Australian Standards and Codes by a Structural Engineer.

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

Reason: Public and Private Safety

ON-GOING CONDITIONS THAT MUST BE COMPLIED WITH AT ALL TIMES

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 plans. Works as Executed data certified by a registered surveyor in relation to boundaries and/or relevant easements, 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 for acceptance and Council's acceptance is to be issued to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

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