

Engineering Referral Response

Application Number:	DA2023/0172
Proposed Development:	Demolition works and construction of a multi-dwelling housing development comprising of 30 townhouses and basement car parking
Date:	08/05/2024
To:	Adam Croft
Land to be developed (Address):	Lot 16 DP 25713 , 7 Gladys Avenue FRENCHS FOREST NSW 2086 Lot 171 DP 849591 , 5 Gladys Avenue FRENCHS FOREST NSW 2086 Lot 172 DP 849591 , 5 A Gladys Avenue FRENCHS FOREST NSW 2086 Lot 19 DP 25713 , 1 Gladys Avenue FRENCHS FOREST NSW 2086

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 following amendments are required:

1. Council does not support PVC pipes under roads. Amended design needs to specify a concrete pipe as per Section 5.1 of the Warringah Council - Development Engineering Minor Works Specification, April 2010.
2. Provide a drainage longitudinal section of the proposed stormwater line from OSD basin to existing pit. Include levels of proposed pipes as well as crossing underground services.
3. Stormwater plans by Smart Structures Australia Sheet No. D02 rev B dated 20.02.23
 - (i) Provide top of grate levels for all grated pits on OSD tank.
 - (ii) All inlet pipes should be connected to the OSD tank at a grated pit.
 - (iii) Provide OSD inlet pipe levels at all connections with OSD tank. Inlet levels should all be at or above the 1% AEP level of TWL 155.00.

- (iv) Provide safe overland flow path in the event of full blockage of OSD outlet orifice.
4. Stormwater plans by Smart Structures Australia Sheet No. D16 rev B dated 20.02.23
- (i) On OSD sections, show all inlet pipes with levels above the 1% AEP.
- (ii) Show top of grate levels.
5. Overland flows. Based on supplied survey information and Councils GIS, the design proposes considerable cut, particularly on the south-east corner of site. This will result in overland flows from upstream properties being trapped on site and channeled in to the OSD tank. Flows from upstream properties should not drain in to the OSD system. Amended plans need to address overland flows and how they will avoid the OSD system, not be concentrated and not impact on downstream properties.

Engineering Comments 08.05.24

DRAFT Conditions of consent provided for information only.

Comments/ Conditions based on Stormwater Management plans by Smart Structures Australia rev B dated 20.02.23

The proposal is therefore unsupported.

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 Security Bond(s)

The applicant is to lodge a bond with Council for the following:

Drainage Works

As security against any damage or failure to complete the construction of stormwater drainage works required as part of this consent a bond of **\$50,000.00**.

Crossing / Kerb & Gutter / Footpath Works

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 a bond of **\$90,000.00**.

Road Works

As security against any damage or failure to complete the construction of road pavement/shoulder reconstruction works required as part of this consent a bond of **\$40,000.00**.

Security Bond

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 a bond of **\$20,000.00**.

Details confirming payment of the bond(s) are to be submitted to the Principal Certifier 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 Smart Structures Australia, project number 230023, dated 20.02.23. Detailed drainage plans are to be prepared by a suitably qualified Civil Engineer, who has membership to Engineers Australia, National Engineers Register (NER) or Professionals Australia (RPENG) and registered in the General Area of Practice for civil engineering.

The drainage plans must address the following:

- i. **The top water level of storage and any emergency overflow paths from the basin are to be a minimum of 300 mm below the habitable floor levels.**
- ii. **The On-site detention basin shall NOT be located below any habitable areas.**
- iii. **All overland flows from upstream properties shall by-pass the basin and be directed to Council's kerb and gutter without negative impact on neighbouring properties.**

Detailed drainage plans, including engineering certification, are to be submitted to the Certifier for approval prior to the issue of the Construction Certificate.

Traffic Management and Control

The Applicant is to submit an application for Traffic Management Plan to Council for approval prior to issue of the Construction Certificate. The Traffic Management Plan shall be prepared to TfNSW standards by an appropriately certified person.

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.

Stormwater Disposal

The applicant is to submit Stormwater Engineering Plans for the new development within this development consent in accordance with AS/NZS 3500 and Council's Water Management for Development Policy, prepared by an appropriately qualified and practicing Civil or Hydraulic Engineer who has membership to Engineers Australia, National Engineers Register (NER) or Professionals Australia (RPENG), indicating all details relevant to the collection and disposal of stormwater from the site, buildings, paved areas and where appropriate adjacent catchments. Stormwater shall be conveyed from the site to the street via a sub-surface connection to a new stormwater pit on the property frontage.

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

Reason: To ensure appropriate provision for disposal of stormwater management arising from the development.

Geotechnical Report Recommendations have been Incorporated into Designs and Structural Plans

The recommendations identified in the Geotechnical Report referenced in Condition 1 of this consent are to be incorporated into the construction plans. Details demonstrating compliance are to be submitted to the Certifier prior to the issue of the construction certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

Vehicle Crossings Application

The Applicant is to submit an application with Council for driveway levels to construct one vehicle crossing 6.0 to 9.0 metres wide in accordance with Northern Beaches Council Standard Drawing A4 3330/1 N in accordance with Section 138 of the Roads Act 1993.

Note, driveways are to be in plain concrete only.

The fee associated with the assessment and approval of the application is to be in accordance with Council's Fee and Charges.

A Council approval is to be submitted to the Certifier prior to the issue of the Construction Certificate.

Reason: To facilitate suitable vehicular access to private property.

Off Street Parking Design

The Applicant shall submit a design for the parking facility in accordance with the relevant provisions of Australian/New Zealand Standard AS/NZS 2890.1:2004 parking facilities - Off-street car parking, in particular Section 2.4.5 Physical Controls and Section 2.6 Design of Domestic Driveways.

Details demonstrating compliance are to be submitted to the Principal Certifier prior to the issue of the Construction Certificate.

Reason: Compliance with this consent.

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 stormwater, kerb & gutter, footpath and remediation works, which are to be generally in accordance with the Council's specification for engineering works - AUS-SPEC #1. The plan shall be prepared by a qualified civil engineer. The design must include the following information:

1. Stormwater drainage design for connection from On-site detention system to Pit SPP04636. The design is required to address the following matters.
 - (i) Connection from OSD to proposed pit on property frontage may be a PVC or concrete pipe.
 - (ii) Connection from proposed pit on property frontage to Pit SPP04636 shall be Class 4 RCP.
 - (iii) Provide FOR CONSTRUCTION standard drawings with longitudinal sections showing all crossing services.
 - (iv) Existing Pit SPP04636 shall be replaced with a 2.4 m "curved" lintel and grate.
2. Provision of 150 mm kerb & gutter to replace the roll kerb on the frontage of 7, 5A, 5, 3, 1 Gladys Avenue and the Gladys Avenue frontage of 126A Frenchs Forest Road West.
3. Provision of a 1.5 metre wide footpath on the frontage of 7, 5A, 5, 3, 1 Gladys Avenue and the Gladys Avenue frontage of 126A Frenchs Forest Road West. The footpath design shall avoid all street trees.

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 Certifier 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 not to exceed a gradient of 1 in 4 (25%) with a transition gradient of 1 in 10 (10%) for 1.5 metres prior to a level parking facility. 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 Certifier for approval prior to the issue of the Construction Certificate.

Reason: To ensure suitable vehicular access to private property.

Tanking of Basement Level

The basement area is to be permanently tanked. The Applicant is to submit structural details of the tanking, prepared by a suitably qualified Engineer. Where temporary dewatering works are required on the development site during construction, the developer/applicant must apply for and obtain a bore license from the NSW Office of Environment and Heritage. The bore license must be obtained prior to commencement of dewatering works. All requirements of the Water NSW are to be complied with and a copy of the approval must be submitted to the Certifier.

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

Reason: To prevent ingress of sub-surface flows into the basement area and to comply with State Government Requirements.

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 Certifier prior to the issue of the Construction Certificate.

Reason: To provide public and private safety.

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 at: <https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/general-information/engineering-specifications/2009084729guidelineforpreparingadilapidationsurveyofcouncilstormwaterassets2.pdf>

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

Reason: Protection of Council's infrastructure.

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 property 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.

The pre-construction / demolition dilapidation report must be submitted to Council for written approval and the written approval is then to be submitted to the Certifier prior to the issue of the any Construction Certificate and the commencement of any works including demolition.

Reason: Protection of Council's infrastructure during construction.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO ANY COMMENCEMENT

Utilities Services

Prior to the commencement of demolition works, written evidence of the following service provider requirements must be provided to the Principal Certifier:

- a) a letter from Ausgrid demonstrating that satisfactory arrangements can be made for the installation and supply of electricity,
- b) a response from Sydney Water as to whether the proposed works subject to this consent would affect any Sydney Water infrastructure, and whether further requirements need to be met, and
- c) other relevant utilities or services - that the development as proposed to be carried out is satisfactory to those other service providers, or if it is not, the changes that are required to make the development satisfactory to them.

Details demonstrating compliance are to be submitted to the Principal Certifier prior to the commencement of demolition works.

Reason: To ensure relevant utility and service providers' requirements are provided to the Principal Certifier.

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.

Property Boundary Levels

The Applicant is to maintain the property boundary 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 Certifier.

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

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.

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

Post- Construction Stormwater Assets Dilapidation Report (Council stormwater assets)

The Applicant shall submit 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 at <https://files.northernbeaches.nsw.gov.au/sites/default/files/documents/general-information/engineering-specifications/preparingdilapidationsurveyforcouncilstormwaterassets.pdf>

The post-construction / demolition dilapidation report must be submitted to Council for review and approval. Any damage to Council's stormwater infrastructure is to be rectified prior to the release of any Drainage security bonds. Council's acceptance of the Dilapidation Survey is to be submitted to the Principal Certifier prior to the issue of the Occupation Certificate.

Reason: Protection of Council's infrastructure.

Certification of Civil Works and Works as Executed Data in accordance with Road Act Approval

The Applicant shall submit a certification by a suitably qualified Civil Engineer, who has membership to Engineers Australia, National Engineers Register (NER) or Professionals Australia (RPENG) that the completed works have been constructed in accordance with this consent and the approved Section

138 and/or Construction Certificate 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 the Principal Certifier for approval prior to the issue of the Occupation Certificate.

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

Stormwater Disposal

The stormwater drainage works shall be certified as compliant with all relevant Australian Standards and Codes by a suitably qualified person. Details demonstrating compliance are to be submitted to the Principal Certifier prior to the issue of an Occupation Certificate.

Reason: To ensure appropriate provision for the disposal of stormwater arising from the development.

Reinstatement of Kerb

The Applicant shall reinstate all redundant laybacks and vehicular crossings 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 Certifier prior to the issue of an Occupation Certificate.

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

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 Certifier prior to the issue of an 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 Certifier prior to the issue of an 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 Certifier prior to the issue of an Occupation Certificate.

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

Post-Construction Dilapidation Report

The applicant must bear the cost of all restoration works to Council's road, footpath and drainage assets damaged during the course of this development.

A Post Construction Dilapidation Report after the completion of all building works is to demonstrate that there is no damage to Council infrastructure prior to the refund of any security deposits.

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

Certification of Off Street Parking Works

The Applicant shall submit a certificate from a suitably qualified person certifying that the parking facility was constructed in accordance within this development consent and the relevant provisions of Australian/New Zealand Standard AS/NZS 2890.1:2004 parking facilities - Off-street car parking, in particular Section 2.4.5 Physical Controls and Section 2.6 Design of Domestic Driveways.

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

Reason: Compliance with this consent.