

Engineering Referral Response

Application Number:	DA2019/0393
To:	Claire Ryan
Land to be developed (Address):	Lot 1 DP 202857 , 7 Trentwood Park AVALON BEACH NSW 2107

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

Original Comments:

The proposal has been assessed and the following comments apply:

Subdivision

The proposal does not include a plan of subdivision by a Surveyor and as such the proposed boundary lines do not include the bearings and there is no proposed lot area for the new allotment and remainder of the existing allotment. The plan of subdivision must also include the proposed lot areas excluding the access handles and rights of way including the passing bays. The plan must also include the proposed easements for services and easements for drainage. A draft 88b instrument should also be included to demonstrate which lots will be burdened and benefited as part of the proposal. It is unclear if there will be a revised garbage area provided in the original subdivision for the benefit of the new allotment on existing proposed Lot 1. If this is the case then the area is to be shown on the subdivision plan and reflected in the 88b instrument. It is unclear if a letter box has been shown in the original subdivision. It is considered that this structure must be included on the plans and the relevant easement shown on the subdivision plan and respective 88b instrument.

Drainage

A review of the submitted drainage plan indicates that the proposal will not achieve the required discharge rate of 30 litres per second for the entire site to the kerb. The pre-lodgement advice required the connection of the inter-allotment drainage from the proposal to Council's pit and pipe drainage system in Trentwood Park. A concept design for this system by the applicant's hydraulic Engineer is to be provided including a junction pit adjacent to the kerb and a concrete rubber ring pipeline of sufficient capacity up to the existing inlet pit in Trentwood Park.

Services

It is unclear from the submitted plans where the services for the new allotment are to be located. Once this plan is provided, it may be necessary for the plan to be reviewed by the Hydraulic Engineer and Arborist to ensure there is no conflict with the stormwater design and existing trees.

Driveway Access

The submitted plan is unclear and does not include a long section or cross sections for the proposed access driveway with adequate chainages, any existing levels and road details including any retaining walls or columns where the driveway is to be elevated. The passing bays must be shown with the required concrete areas of 5 metres wide by 10 metres long and any necessary transitioning. It is considered that a plan by a Civil Engineer is to be provided for assessment as detailed in the pre-lodgement advice.

Development Engineers cannot support the application due to insufficient information to assess Clauses B5, B6 and C4.

Updated Comments: Additional Information submitted 28/06/19 and 11/09/19

The revised stormwater management plan addresses the issues raised above and the subdivision plan is also satisfactory. The plan indicates the provision of the passing bay. The extension of the driveway will be located within the proposed right of way to proposed lot 4 which is acceptable.

Provided that this approval is deferred subject to the creation of proposed lot 2 of the original subdivision of the lot into 3 lots, Development Engineers raise 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

Geotechnical Report Recommendations have been Incorporated into Designs and Structural Plans

The recommendations of the risk assessment required to manage the hazards as identified in the Geotechnical Report prepared by White Geotechnical Group dated 31 January 2019 and 15 September 2017 are to be incorporated into the construction plans. Prior to issue of the Construction Certificate, Form 2 of the Geotechnical Risk Management Policy for Pittwater (Appendix 5 of P21 DCP) is to be completed and submitted to the Accredited Certifier. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

Submission of Engineering Plans

Engineering plans are to be submitted to the Certifying Authority for approval. The submission is to include four (4) copies of Civil Engineering plans for the design of the inter-allotment drainage line from proposed lot 4 through proposed lots 2 and 1, drainage collection and connection of the driveway extension through proposed lot 2 up to the boundary of proposed lot 4 and the driveway design for the driveway extension to the boundary of proposed lot 4 which are to be generally in accordance with the civil design approved with the Development Application and Council's specification for engineering works - AUS-SPEC #1 and or Council's Minor Works Policy.

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

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

Vehicle Driveway Gradients

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. Details demonstrating compliance are to be submitted to the Certifying Authority 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, evidence is to be submitted to the Principal Certifying Authority that

- (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 provider, requirements for the development can be provided.

Reason: To ensure that service 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 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.

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

Engineering Details

Civil engineering details of the proposed excavation/landfill are to be submitted to the Accredited Certifier or Council with the Construction Certificate application. Each plan/sheet is to be signed by a qualified practising Civil Engineer who has corporate membership of the Institution 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.

Reason: To ensure excavation and landfill are completed to an appropriate standard and conducted in a safe manner.

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.

Stormwater Connection

Where connection to Council's nearest stormwater drainage system is required, the applicant shall connect the pipeline in accordance with Council's specification for engineering works 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.

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.

Traffic Control During 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 Principal Certifying 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

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.

Temporary Sediment

Temporary sedimentation and erosion controls are to be constructed prior to commencement of any work to eliminate the discharge of sediment from the site.

Reason: To reduce erosion and prevent sediment runoff into public assets

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

Erosion and Sedimentation Responsibilities

Personnel with appropriate training, or demonstrated knowledge and experience in erosion and sediment control shall be responsible for supervising the installation and maintenance of approved erosion and sediment control measures – during and after construction and until the site has been restored to the satisfaction of council.

Reason: To ensure sediment and erosion controls comply with standards

Site Entry Access way

An all-weather access way at the front of the property consisting of 50-75mm aggregate or similar material at a minimum thickness of 200mm and 15metres long laid over geotechnical fabric is to be constructed prior to commencement of works and maintenance over the works period.

Reason: To reduce sediment being taken offsite

Cleaning of Vehicles Leaving Site

Adequate measures shall be undertaken to remove clay from vehicles leaving the site so as to maintain public roads in a clean condition.

Reason: To reduce sediment being taken offsite

Noise and Vibration

The construction of the development and preparation of the site, including operation of vehicles, must be conducted so as to avoid unreasonable noise or vibration and not cause interference to adjoining or nearby occupations

Reason: To ensure the amenity of the surrounding area for residents

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, the 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.

Reason: To ensure private and public safety

CONDITIONS THAT MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF ANY STRATA SUBDIVISION OR SUBDIVISION CERTIFICATE

Provision of Services for Subdivision

The applicant is to ensure all services including, water, electricity, telephone and gas are provided, located and certified by a registered surveyor on a copy of the final plan. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: To ensure that utility services have been provided to the newly created lots

Right of Carriageway

A right of carriageway (under the provisions of Section 88B of the Conveyancing Act) is to be created on the final plan of subdivision and accompanying 88B instrument to include all vehicular access and manoeuvring areas. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: Council's subdivision standards and the statutory requirements of the Conveyancing Act 1919

Certification of Civil Works

A Certificate is to be submitted 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 confirming to the satisfaction of the Principal Certifying Authority that the stormwater drainage system and driveway access for the subdivision have been constructed in accordance with the plans nominated on the Development Consent, relevant conditions of Development Consent and approved Construction Certificate. The Subdivision Certificate will not be released until this certification has been submitted and accepted by the Principal Certifying Authority.

Reason: To ensure the Civil Works have been built to the appropriate standards

Stormwater Drainage and Utility Services Plan

A plan of subdivision identifying the location of water, gas, telephone, electricity and stormwater drainage in relation to boundaries and/or relevant easements, prepared by a registered surveyor is to be submitted to Council. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: To ensure that services have been provided with appropriate easements as required by the Conveyancing Act 1919

Sydney Water Compliance Certification

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. Application must be made through an authorised Water Servicing Co-ordinator. Please refer to the Building Developing and Plumbing section of the web site www.sydneywater.com.au <<http://www.sydneywater.com.au>> then refer to “Water Servicing Coordinator” under “Developing Your Land” or telephone 13 20 92 for assistance. Following application a “Notice of Requirements” will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: To ensure compliance with the statutory requirements of Sydney Water

Certification of Utility Services

The provision of all utilities/services and/or street lighting are to be certified by the relevant authority(s) and/or authorised contractor. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: To ensure services have been provided in accordance with the relevant authorities requirements

Easement for Drainage

An easement for drainage (under the provisions of Section 88B of the Conveyancing Act) is to be created on the final plan of subdivision the accompanying 88B instrument to ensure all drainage infrastructure is located within the appropriate easement(s). Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

Reason: Council’s Subdivision standards and statutory requirements of the Conveyancing Act 1919

Easement for Services

An easement for services (under the provisions of Section 88B of the Conveyancing Act) is to be created on the final plan of subdivision and the accompanying 88B instrument to ensure all utility services are located within the appropriate easement(s). Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate

Reason: Council’s Subdivision standards and statutory requirements of the Conveyancing Act 1919

Subdivision Certificate Application

Prior to the issue of the Subdivision Certificate, a completed Subdivision Certificate form, a final plan of subdivision prepared in accordance with the requirements of the Conveyancing Act 1919 are to be submitted to Council. Nine copies of the final plan of subdivision are to be submitted. All plans of survey are to show connections to at least two Survey Co-ordination Permanent Marks. The fee payable is to be in accordance with Council’s fees and charges

Reason: Statutory requirement of the Conveyancing Act 1919

Geotechnical Certification Prior to Subdivision Certificate

Prior to issue of the Subdivision Certificate, Form 3 of the Geotechnical Risk Management Policy is to be completed and submitted to the Principal Certifying Authority.

Reason: To ensure geotechnical risk is mitigated appropriately.

Title Encumbrances

All easements, rights of carriageway, positive covenants and restrictions as to user as indicated on the



plans and required by this consent are to be created on the title naming Northern Beaches Council as the sole authority empowered to release or modify. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate

Reason: To ensure proper management of land