

Engineering Referral Response

Application Number:	DA2021/0053
Date:	03/08/2021
To:	Jordan Davies
Land to be developed (Address):	<p>Lot 7 DP 1251955 , 121 Dove Lane WARRIEWOOD NSW 2102</p> <p>Lot 1 DP 1266557 , 111 Dove Lane WARRIEWOOD NSW 2102</p> <p>Lot 4 DP 1251955 , 101 Dove Lane WARRIEWOOD NSW 2102</p>

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

UPDATED COMMENTS

The majority of the previous issues have been addressed no objections to the community title and dwelling construction subdivision subject to conditions.

PREVIOUS COMMENTS

The application for the community title 2 stage subdivision was reviewed and cannot be supported for the following reasons:

- 1) The DRAINS model has been reviewed and is generally acceptable however the design engineers certification is to be provided that the model has been prepared in accordance with the Warriewood Valley Water Management Plan and Australian Rainfall and Runoff 2019. Certification is to be prepared by a RPENG or NER qualified Civil Engineer accordingly.
- 2) The design engineer is also to review the 5% AEP storm for the OSD tank 2 catchment as the predeveloped flows appear to exceed the post development flows.
- 3) It is also noted that the previous Section 138A roads act application previously approved by council (S138A 2021/0007) for the Stage One Dove Lane Roads and drainage system provided a comprehensive upstream catchment DRAINS model . All upstream and site flows up to the 1 % AEP storm event plus climate change are contained within the proposed Dove Lane pit and pipe/road drainage system and downstream 1500mm RCP pipe which will be connected to Fern creek.
- 4) The applicant is also to provide a draft community management statement that contains by laws

referencing the maintenance of all community facilities including the Water quality and quantity devices including OSD tanks, swales, filter cartridges etc. A separate operations maintenance manual is to be prepared by the design engineer for all the the water quality and quantity stormwater treatment devices/ OSD tanks. It is noted that the current paragraph in the stormwater management report references Council as having maintenance responsibility.

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 Security Bond (Crossing / Kerb)

The applicant is to lodge a Bond of \$30000 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.

Construction, Excavation and Associated Works (Security Bond)

A bond of \$50000 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.

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 Bond (Maintenance for civil works)

The developer/applicant must lodge with Council a maintenance bond of \$75000 for the construction of road and drainage works. The maintenance bond will only be refunded upon completion of the six month maintenance period, if work has been completed in accordance with the approved plans and to the satisfaction of Council. The maintenance bond is to be paid prior to Council issuing practical completion.

Reason: To ensure adequate protection of Council infrastructure.

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE SUBDIVISION WORKS CERTIFICATE

Subdivision Works Certificate

A Subdivision Works Certificate is to be approved by Certifying Authority for the provision of engineering works.

Engineering plans for the subdivision works within this development consent are to be submitted to the Certifying Authority for approval under Section 6.13 of the Environmental Planning and Assessment Act 1979.

Civil Engineering plans for the subdivision works are to be designed in accordance with the Council's specification for engineering works – AUS-SPEC #1 and the Warriewood Valley Roads Masterplan. The plans shall 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 design must include the following information:

The Subdivision Works Certificate must be supported by engineering plans, calculations, specification or any certification relied upon.

Reason: To ensure engineering works are constructed in accordance with relevant standards and Council's specifications.

Utilities Services

Prior to the issue of the Subdivision Works 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 Subdivision Works Certificate.

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

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 Certifying Authority prior to the issue of the any Subdivision Works Certificate and the commencement of any works including demolition.

Reason: Protection of Council's Infrastructure during construction.

Geotechnical Report Recommendations have been correctly incorporated into designs and structural plans

The Applicant is to submit Form 2 of the Geotechnical Risk Management Policy for Pittwater (Appendix 5 of P21 DCP) and is to be completed and submitted to the Accredited Certifier, prior to issue of the Subdivision Works Certificate.

Reason: To ensure geotechnical risk is managed appropriately.

Water Management Report - Warriewood Valley

The detailed design of all works associated with the water management system must provide for a complete system, which meets the objectives and requirements of the Warriewood Valley Water Management Specification (February 2001).

The system is to be in accordance with the revised Water Management Report in accordance with condition C1.

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

Reason: To ensure water is managed appropriately and in accordance with the requirements of the Warriewood Valley Water Management Specification and Pittwater 21 DCP.

Certification of Water Management Report

A qualified practising 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 is to certify that the Water Management Report and all associated plans and detailed design are in accordance with the Warriewood Valley Water Management Specification (February 2001), and as meeting the requirements of these conditions.

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

Reason: To ensure water is managed appropriately and in accordance with the requirements of the Warriewood Valley Water Management Specification and Pittwater 21 DCP.

Traffic Management and Control

The Applicant is to submit an application for Traffic Management Plan to Council for approval prior to issue of the Subdivision Works Certificate. The Traffic Management Plan shall be prepared to RMS 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.

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

On-site Stormwater Detention Details

The Applicant is to provide certification of drainage plans detailing the provision of on-site stormwater detention in accordance with Northern Beaches Council's **WARRIEWOOD VALLEY URBAN RELEASE AREA WATER MANAGEMENT SPECIFICATION FEBRUARY 2001**, and generally in accordance with the drainage plans prepared by CRAIG and RHODES, drawing number 251-20C -DA -0101 ,DA-0102,DA-0703,DA-0703,DA-0751 and DA-075 all Issue B, dated **25/6/21**. Detailed drainage plans are to be prepared by a registered qualified Civil Engineer, who has membership to the Institution of Engineers Australia, National Professional Engineers Register (NER) or RPENG (Professionals Australia)and registered in the General Area of Practice for civil engineering.

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.

Vehicle Crossings Application

The Applicant is to submit an application for driveway levels with Council in accordance with Section 138 of the Roads Act 1993. 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 facilitate suitable vehicular access to private property.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO ANY COMMENCEMENT

No Access Through Adjoining Park/Reserves

Access to the site through an adjoining park/reserve is prohibited without the written approval of the Council.

Reason: To ensure protection of council parks/reserves.

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 **Principal Certifying 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.

Notification of Inspections (Road and Drainage infrastructure)

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
- (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.

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.

Vehicle Crossings

The Applicant is to construct 4 vehicle crossing 6 metres wide in accordance with Northern Beaches Council Drawing No A4-3330/ Normal and the driveway levels application approval. 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.

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.

Site filling - Virgin Excavated Natural Material (VENM)

Where site fill material is necessary, fill materials must:

1. Be Virgin Excavated Natural Material (VENM) only, as defined in: The Protection of the Environment Operations Act 1997
2. Be free of slag, hazardous, contaminated, putrescibles, toxic or radioactive excavated material and soil, rock or similar material. Putrescibles and non-putrescibles solid waste (including demolition material) is not permitted.
3. The Applicant shall provide certification by a N.A.T.A. approved laboratory to the Principal Certifying

Authority for approval prior to importation of material.

Reason: To ensure protection of the natural environment.

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 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 Certifying Authority prior to the issue of final Occupation Certificate.

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

Geotechnical Certification Prior to Occupation Certificate

The Applicant is to submit the completed Form 3 of the Geotechnical Risk Management Policy (Appendix 5 of P21 DCP) to the Principal Certifying Authority prior to issue of the Occupation Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

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

Certification of Council Drainage Works and Works as Executed Data within Private 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 Subdivision Works Certificate plans. Works as Executed data (details overdrawn on a copy of the approved drainage plan) 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 Stormwater Assets' within the subject site, shall be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate.

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

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 Subdivision Works 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 Certifying Authority for approval prior to the issue of the Subdivision Certificate.

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

Landfill

Where it is intended to place filling on the allotments to a depth greater than 0.5m, the fill shall be compacted in accordance with AS 3798-2007. Certification from a Geotechnical Engineer for the fill and compaction shall be submitted to Council for approval prior to the issue of the Subdivision Certificate.

Reason: To ensure landfill is managed appropriately.

Positive Covenant for On-site Stormwater Detention

A positive covenant (under the provisions of Section 88B of the Conveyancing Act 1919) is to be created on the final plan of subdivision and accompanying 88B instrument, 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, which are available from Northern Beaches Council. Northern Beaches Council shall be nominated as the sole authority empowered to release, vary or modify such covenant. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Subdivision Certificate

Reason: To ensure ongoing maintenance of the on-site detention system.

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 of subdivision. 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

The Applicant shall create a right of carriageway (under the provisions of Section 88B of the Conveyancing Act) 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.

Restriction as to User (On-site Stormwater Detention)

The Applicant shall create a restriction as to user (under the provisions of Section 88B of the Conveyancing Act) on the final plan of subdivision and accompanying 88B instrument for the on-site stormwater detention system, restricting any alteration or additions to the system. The terms of such restriction are to be prepared to Council's standard requirements. 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 the Subdivision Certificate.

Reason: To ensure no modification to the on-site stormwater detention structure without Council's

approval.

Services

The Applicant shall ensure all utilities/services and street lighting is installed. The Applicant is to submit a Certification stating the above requirement has been complied with 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.

Certification of On-site Detention System (New Subdivision)

A Compliance Certificate is to be submitted by a qualified experienced practicing Civil Engineer with RPENG or NER qualifications and has appropriate experience and competence in the related field confirming to the satisfaction of the Principal Certifying Authority that the on-site stormwater detention has been constructed in accordance with the plans nominated on the Development Consent and relevant conditions of Development Consent. The Subdivision Certificate will not be released until this certification has been submitted and the Principal Certifying Authority has confirmed that this condition has been satisfied.

Reason: To ensure the On-site Detention System has been built to the appropriate standard

Sydney Water Compliance Certification

The Applicant shall submit a Section 73 Compliance Certificate under the Sydney Water Act 1994 issued by 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 fees to be paid. Please make early contact with the coordinator, 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.

Easement for Drainage

The Applicant shall create an easement for drainage (under the provisions of Section 88B of the Conveyancing Act) on the final plan of subdivision, to accompany the Section 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 to Drain Water - Channel/Floodways

The Applicant shall create an easement to drain water in favour of Council over the channel/floodway to

encompass the 1 in 100 year recurrence frequency predicted water surface level, including a 500mm freeboard and a 500mm minimum margin in plan. The easements are to be detailed on the final plan of subdivision.

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

Reason: To identify flood affected areas on the property title.

Easement for Services

The Applicant shall create an easement for services (under the provisions of Section 88B of the Conveyancing Act) on the final plan of subdivision, to accompany the Section 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.

Release of Subdivision Certificate

The final plan of subdivision will not be issued by Council until the development has been completed in accordance with terms and conditions of the development consent.

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

Subdivision Certificate Application

The Applicant shall submit a Subdivision Certificate Application to Council, which is to include a completed Subdivision Certificate form and checklist, a final plan of subdivision prepared in accordance with the requirements of the Conveyancing Act 1919, four copies of the final plan of subdivision and all relevant documents including electronic copies. This documentation is to be submitted to Council prior to the issue of the Subdivision Certificate. 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.

Title Encumbrances

The Applicant shall ensure all easements, rights of carriageway, positive covenants and restrictions as to user as detailed on the plans and required by the development consent are to be created on the title naming 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.