

Engineering Referral Response

Application Number:	DA2024/1079
Proposed Development:	Community title subdivision into five (5) lots and civil works
Date:	03/06/2025
To:	Adam Richardson
Land to be developed (Address):	Lot 3 DP 1115877 , 53 B Warriewood Road WARRIEWOOD NSW 2102 Lot 3 DP 942319 , 53 Warriewood Road WARRIEWOOD NSW 2102 Lot 2 DP 1115877 , 53 A Warriewood Road WARRIEWOOD NSW 2102

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 3/6/25.

The updated engineering plans and supporting documentation has been reviewed and now is supported ,no objections to the proposed community title subdivision subject to conditions.

The proposed subdivision development is not supported for the following reasons:

1) Lack of information , hydrological/hydraulic details upstream catchment and upgrade of Councils existing stormwater line (53 Warriewood Road).

a) The applicant is required to submit a DRAINS model for the upstream catchment in accordance with Councils Water Management Policy for Development and Auspec One using an initial loss continuing loss Hydrological model as required by Australian Rainfall and Runoff 2019.

The DRAINS model is also to incorporate Climate change increases as recommended in ARR 4.2 and the Warriewood Valley Water Management Specification 2001 to determine peak stormwater flows.

b) The existing 600m RCP Council stormwater line is be upgraded accordingly to a minimum capacity 1/100 AEP plus Climate change . A RCP pipeline is to be specified and Sydney Water cover requirements on their main sewer line are to be incorporated into the design.

c) The stormwater upgrade details are to include an energy dissipator structure at the end of the line

which is compatible with the final creek works design.

d) A stormwater drainage long section incorporating a Hydraulic Grade Line Analysis is to also be provided with the amended engineering plans.

e) Council's stormwater line which crosses Warriewood road is also to be upgraded to a minimum capacity 1/100 AEP plus Climate change capacity and appropriately upgraded /new inlet pits provided in Warriewood road, Pit blockage factors are to be in accordance with Auspec one and used in the DRAINS model.

f) An appropriately sized overland flow path is to be provided over Council's upgraded stormwater line within the site to cater for all flows in excess of the 1/100 AEP storm events. A velocity vrs depth assessment is to be provided in accordance with the NSW Flood Risk Management Guideline.

2) The on site stormwater detention design. (OSD)

a) A DRAINS model is required to be submitted to Council to demonstrate compliance with the requirements of the Warriewood Valley Stormwater Management Specification 2001 and Council's Water Management for Development policy.

b) "Post-development peak flows both from the sector and in the channel at the downstream boundary of each sector are not to exceed the pre-development flows for the full range of durations and frequencies up to the 1%AEP level plus climate change"

c) During the preparation of the Water Management Report for the sector a model is to be established that:

- matches the peak sector outflow discharge to the pre-development condition of the sector within $\pm 5\%$ of the peak reported in Appendix A
- shows the pre-development hydrograph and the developed hydrograph with the tail cut at the duration of the storm
- the developed hydrograph is to be no more than $\pm 10\%$ of the pre-development hydrograph at any location on the rising or falling limb.

All stormwater volume control structures and detention basins are to be above the 1%AEP flood levels. (Note that Water Quality control ponds can be below the 1%AEP flood level, but are to be above the 20%AEP flood level but wholly within the private buffer zone - See Section 4.5, Table 4.3 and Section 4.3.2).

d) A stormwater quantity management assessment of the pipe drainage and OSD measures is to form part of an overall Water Management report and be prepared by a RPEng or NER Civil qualified engineer who has extensive experience in hydrological modelling and hydraulic design.

e) Full engineering plans are to be provided not conceptual minimum on site detention/stormwater drainage details are to be provided in accordance with section 9.7.3 of Council's Water Management for Development Policy.

3) Road and footpath infrastructure design

Please note detailed review of the roads and shared pathway design will be provided by Council's Traffic Coordinator,

However the following comments are provided:

The Lorikeet Grove cross section at the existing southern end does not match the existing road reserve width being approx 16m width. The road cross section is to be amended to match the existing southern road reserve formation.

Cross sections of the proposed Lorikeet Grove extension are to be provided at both the southern and northern ends and mid way.

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:

Upgrade of Councils existing 600mm RCP stormwater line

As security against for failure to complete the upgrade of Councils existing 600mm RCP to twin 900mm RCP pipes within the existing drainage reserve required as part of this consent a bond of \$150,000.

Crossing / Kerb & Gutter / Footpath Works, Stormwater Drainage and Road Works (Warriewood Road and Lorikeet Grove)

As security against any damage or failure to complete the construction of any road and footpath works, vehicular crossings, and removal of any redundant driveways required as part of this consent a bond of \$350,000.

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 \$50000.

Maintenance for Civil Works

A maintenance bond of \$100000 for the construction of the road ,drainage and footpath works in Warriewood Road and Lorikeet Grove.. The maintenance bond will only be refunded upon completion of the twelve 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 prior to issuing of practical completion for the road infrastructure works.

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 SUBDIVISION WORKS CERTIFICATE

On-Site Stormwater Detention

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 Enspire Solutions, drawing number 220122-00-DA C05.01 Issue 9,C05.02 Issue 10,C14.01Issue 4, dated 28/3/25 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:

1) Climate change factors are to be included in the design of all drainage infrastructure in accordance with the Warriewood Valley Water Management Specification (February 2001).

Detailed drainage plans, including engineering certification, are to be submitted to the Certifier 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.

Stormwater Drainage Upgrade Works (Council drainage reserve)

The applicant is to submit a stormwater drainage engineering plans to Council for approval. The submission is to include Civil Engineering plans for the design and upgrade of the existing stormwater line within the Council drainage reserve to the twin 900mm RCP stormwater lines as proposed in the Enspire engineering concept plans Plan Nos C 05 02 -10 and C 17 01 -4 . The plans 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 .

The fee associated with the assessment and approval of the application is to be in accordance with Council's Fees and Charges. Details demonstrating compliance are to be submitted to the Principal Certifier prior to the issue of the Subdivision Works Certificate.

Reason: To ensure appropriate provision for disposal and maintenance stormwater management and compliance with the BASIX requirements, arising from the development.

Utilities Services including the Sydney Water main carrier line.

Prior to the issue of the Subdivision Works Certificate, 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 and installation of street lighting poles in Warriewood Road and Lorikeet Grove.
- b) a written response from Sydney Water as to whether the proposed stormwater drainage upgrade works being the installation of twin 900mm RCP stormwater lines would affect any Sydney Water infrastructure including the 1800mm Sydney Water main carrier line , and whether further requirements need to be met. The applicant is to provide confirmation specifically that the proposed construction clearance to the carrier line meets Sydney Water specifications.
- 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 issue of the Subdivision Works Certificate.

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

Submission of Roads Act Application for Civil Works in the Public Road

Engineering plans and specifications for all roads ,drainage ,streetscape and other civil engineering works required by this consent within the existing public road reserve of Warriewood road 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 Civil Engineering plans for the design of the works which are to be generally in accordance with the Council's specification for engineering works - AUS-SPEC #1, The Warriewood Valley Roads Masterplan (WVRMP) June 2018 and Pittwater DCP 21 as relevant to achieve a road design and landscaped effect consistent with the Warriewood Valley Concept Masterplan(Public Domain) dated October 2007. The plans shall be prepared by a Civil Engineer who is RPENG (NSW) or NER qualified.

The design must include the following information:

- a) The works in relation to the full length length of Warriewood Road are to include provision of a bus bay ,indented parking , stormwater drainage up grade works ,half road reconstruction, undergrounding of existing over head power, landscaping works and linemarking/signage. The engineering plans are to be generally in accordance with the concept engineering plans prepared by Enspire Solutions C0 501 -9, C0 502 -10, C0 601 4,C0 701 -4, C0 11 01- 4.
- b) The kerb and gutter (vertical face only) face is to be 10.9m from the existing northern kerb face of Warriewood Road. The shared pedestrian concrete pathway within Warriewood Road frontage is to be 2.1m wide and align with the existing pathway and vehicle crossing on either side of the site.
- c) Road shoulder and road pavement formation design is to be certified by a geotechnical engineer to satisfy the WVRMP for pavements to meet the ESA pavement design of 2×10^6 . The AC seal is to be extended 1000mm past the existing road centre line
- d) Provision of street lighting using Ausgrid standard lights/poles is to be provided in Warriewood Road .
- e) Undergrounding of the existing overhead power infrastructure for the full frontage at no cost to Council.
- f) The existing water main is to be relocated to within the footpath verge area of the frontage . Fire hydrants are to be spaced at appropriate intervals in accordance with the relevant specification.
- g)The existing stormwater water infrastructure in Warriewood Road is to be upgraded to a 5/100 AEP plus climate change. This includes the existing Warriewood Road 675mm pipe crossing and the new lead stormwater line from the southern side of Warriewood Road to the site. The stormwater inlet pit on the northern side of Warriewood road is to be upgraded to feature a 3m wide lintel.
- h) The engineering plans are to detail 2 (no) vehicle crossings in Warriewood servicing proposed lot 26 and 27.

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 Subdivision Works Certificate

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

Pre-Commencement Dilapidation Report

The applicant must prepare and submit a 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 dilapidation report must be submitted to Council for written approval and the written approval is then to be submitted to the Principal Certifier 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 recommendations of the risk assessment required to manage the hazards as identified in the Geotechnical Report prepared by Crozier Geotechnical dated July 2024 are to be incorporated into the construction plans. Prior to issue of the Subdivision Works 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 Certifier prior to the issue of the Subdivision Works Certificate.

Reason: To ensure geotechnical risk is mitigated appropriately.

Certification of Water Management Report

The Applicant shall submit a certificate from a suitably qualified Civil Engineer, who has membership to Engineers Australia, National Engineers Register (NER) or Professionals Australia (RPENG) that the Water Management Report and all associated engineering plans as referred to in this consent 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 Principal Certifier 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 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.

Submission of Engineering plans for the construction of Lorikeet Grove and widening of Pheasant Way.

Engineering plans and specifications for all roads ,drainage ,streetscape and other civil engineering works required by this consent for the new Lorikeet Road extension and Pheasant Way Road widening are to be submitted to the Certifier for approval.

The application is to include Civil Engineering plans for the design of the works which are to be generally in accordance with the Council's specification for engineering works - AUS-SPEC #1, The Warriewood Valley Roads Masterplan (WVRMP) June 2018 and Pittwater DCP 21 as relevant to achieve a road design and landscaped effect consistent with the Warriewood Valley Concept Masterplan(Public Domain) dated October 2007. The plans shall be prepared by a Civil Engineer who is RPENG (NSW) or NER qualified.

The design must include the following information:

a) The works in relation to the full length length of Lorikeet Grove to include stormwater drainage works ,full width road construction to match the existing western and eastern side constructed road widths of Lorikeet Grove, footpath works , landscaping works and line marking/signage. The engineering plans are to be generally in accordance with the concept engineering plans prepared by

Enspire Solutions 220122-00 DA ,C0 501 - Rev 9, C05.02 Rev 10,
C0 601 Rev 4,C0 701 - Rev 4., C11.01 Rev 5,C17.01 Rev 4, C14.01 Rev4.

- b) Road shoulder and road pavement formation design is to be certified by a geotechnical engineer to satisfy the WVRMP for pavements to meet the ESA pavement design of 2×10^{-6} .
 - c) Provision of street lighting using Ausgrid standard lights/poles is to be provided in Lorikeet Grove and Pheasant Place.
 - d) Undergrounding of power infrastructure for the full frontage at no cost to Council.
 - e) . Fire hydrants are to be spaced at appropriate intervals in accordance with the relevant specification.
 - f) Stormwater drainage works as detailed on the Enspire Plan No 220122-00- DA C05.01 Revision 9 , DA-C05.02 Rev 10, DA-C06.01 Revision 4, DA-C07.01 Revision 4, DA-C14.01 Rev 4.
 - g) Details of the 2.5m shared pedestrian path which is to start at the existing approved alignment at Lot 10 DP 270946 Warriewood Road (denoted as F -Right of Footway 2.5m wide) and connect to the existing concrete footpath to the existing western formation of Lorikeet Grove. (adjacent to No 21 Lorikeet Grove Lot 12 DP 270730).
- The engineering plans are to be amended to deleted the 2.5m shared pedestrian path within the proposed Lorikeet Grove Road Reserve.
- h) The road reserve width of Lorikeet Grove is to be 16m.

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

The engineering plans are to be approved by the Certifier prior to the issue of the Subdivision Works Certificate.

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

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

Submission of Engineering plans for the construction of Lorikeet Grove and widening of Pheasant Way.

Engineering plans and specifications for all roads ,drainage ,streetscape and other civil engineering works required by this consent for the new Lorikeet Road extension and Pheasant Way Road widening are to be submitted to the Certifier for approval.

The application is to include Civil Engineering plans for the design of the works which are to be generally in accordance with the Council's specification for engineering works - AUS-SPEC #1, The Warriewood Valley Roads Masterplan (WVRMP) June 2018 and Pittwater DCP 21 as relevant to achieve a road design and landscaped effect consistent with the Warriewood Valley Concept Masterplan(Public Domain) dated October 2007. The plans shall be prepared by a Civil Engineer who is RPENG (NSW) or NER qualified.

The design must include the following information:

- a) The works in relation to the full length length of Lorikeet Grove to include stormwater drainage works ,full width road construction to match the existing western and eastern side constructed road widths of Lorikeet Grove, footpath works , landscaping works and line marking/signage. The engineering plans are to be generally in accordance with the concept engineering plans prepared by Enspire Solutions 220122-00 DA ,C0 501 - Rev 9, C05.02 Rev 10, C0 601 Rev 4,C0 701 - Rev 4., C11.01 Rev 5,C17.01 Rev 4, C14.01 Rev4.

- b) Road shoulder and road pavement formation design is to be certified by a geotechnical engineer to satisfy the WVRMP for pavements to meet the ESA pavement design of 2x10⁶.
- c) Provision of street lighting using Ausgrid standard lights/poles is to be provided in Lorikeet Grove and Pheasant Place.
- d) Undergrounding of power infrastructure for the full frontage at no cost to Council.
- e) Fire hydrants are to be spaced at appropriate intervals in accordance with the relevant specification.
- f) Stormwater drainage works as detailed on the Enspire Plan No 220122-00- DA C05.01 Revision 9 , DA-C05.02 Rev 10, DA-C06.01 Revision 4, DA-C07.01 Revision 4, DA-C14.01 Rev 4.
- g) Details of the 2.5m shared pedestrian path which is to start at the existing approved alignment at Lot 10 DP 270946 Warriewood Road (denoted as F -Right of Footway 2.5m wide) and connect to the existing concrete footpath to the existing western formation of Lorikeet Grove. (adjacent to No 21 Lorikeet Grove Lot 12 DP 270730).
The engineering plans are to be amended to delete the 2.5m shared pedestrian path within the proposed Lorikeet Grove Road Reserve.
- h) The road reserve width of Lorikeet Grove is to be 16m.

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

The engineering plans are to be approved by the Certifier prior to the issue of the Subdivision Works Certificate.

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

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) Electrical and telecommunications supply is to be undergrounded to all the lots. The undergrounding of utility services and pad mounted substations are to be located to minimise impacts public domain landscaping. A letter from Ausgrid demonstrating that satisfactory arrangements can be made for the installation and supply of electricity.
- b) Street Facilities lighting is to be provided to all new and existing roads in accordance with the requirements of Ausgrid.
- c)

All existing overhead electrical infrastructure is to be undergrounded for the Warriewood Road road reserve site frontage to the nearest power poles fronting adjoining properties in accordance with Ausgrid requirements.

- d) a written response from Sydney Water as to whether the proposed installation of the twin 900mm RCP stormwater line works subject to this consent would affect Sydney Water 1800mm main carrier line infrastructure, and whether further requirements need to be met in accordance with Sydney Water specifications.
- e) 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.

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.

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.

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.

The Applicant shall provide certification by a N.A.T.A. approved laboratory to the Principal Certifier for approval prior to importation of material.

Reason: To ensure protection of the natural environment.

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 in accordance with Local Government S68 Approval

The Applicant shall submit 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 68 approved 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 Certifier 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 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 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 Certifier for approval prior to the issue of the Subdivision Certificate.

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

Easement Creation

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). The stormwater drainage easement for the twin 900mm RCP stormwater lines located within the former Council drainage reserve is to be a minimum of 3.5m wide.

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).

The Applicant shall create an easement for stormwater drain water in favor 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 Certifier prior to the issue of the Subdivision Certificate.

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

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 Drainage Structures

The Applicant shall submit a positive covenant (under the provisions of Section 88B of the Conveyancing Act) to be created on the final plan of subdivision and accompanying 88B instrument. The covenant will require the proprietor of the land to maintain the twin 900mm RCP stormwater line which is to be handed over to Council 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 Certifier prior to the issue of the Subdivision Certificate.

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

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 structures and water quality systems 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 Certifier 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 Certifier prior to the issue of the Subdivision Certificate.

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

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 and water quality systems, 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 Certifier 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 Certifier 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 Certificate is to be submitted by a suitably qualified Civil Engineer, who has membership to Engineers Australia, National Engineers Register (NER) or Professionals Australia (RPENG) and has appropriate experience and competence in the related field confirming to the satisfaction of the Principal Certifier that the on-site stormwater detention system has been constructed in accordance with the approved subdivision works certificate and relevant conditions of Development Consent. The Subdivision Certificate will not be released until this certification has been submitted and the Principal Certifier 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 Certifier prior to the issue of the Subdivision Certificate.

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

Electrical Substations

The applicant shall dedicate the land required for an electricity sub-station as a public road. The dedication is to be detailed on the final plan of subdivision, to be submitted to Council with the application for a Subdivision Certificate.

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

Reason: To comply with statutory requirements of the energy authority.

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, 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.

Neighbourhood Management Statement Stormwater and private road infrastructure management

A Neighborhood management statement is to accompany the Community Management Plan and the

Management Statement shall include wording in relation to the on going maintenance and renewal of :

- 1) The Stormwater management system including the on site stormwater detention tanks and water quality control devices. A maintenance and operation manual is also to be prepared for the stormwater management system and referred to in the management statement.
- 2) The private internal road infrastructure including street lighting , concrete footpaths, signage and services.

Reason: To ensure ongoing access for servicing of waste facilities

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 Certifier prior to the issue of the Subdivision Certificate.

Reason: To ensure proper management of land.