

Engineering Referral Response

Application Number:	DA2018/1774
To:	Phil Lane
Land to be developed (Address):	Lot 3 DP 238245 , 2 Jenna Close ALLAMBIE HEIGHTS NSW 2100

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

Reference is made to Development Engineering Referral Response dated 23/01/19 and additional information provided by the Applicant.

Council's Stormwater Assets:

It is noted that the survey of Council's pipe was abandoned due to blockage.

No objections are raised to the proposed development, subject to conditions.

Referral Body Recommendation

Recommended for approval, subject to conditions

Refusal comments

Recommended Engineering Conditions:

FEES / CHARGES / CONTRIBUTIONS

Construction, Excavation and Associated Works Bond (Drainage)

The applicant is to lodge a Bond of \$19,000 as security against any damage to Council's Stormwater assets as part of this consent. Details demonstrating payment of the bond are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

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

Stormwater Disposal from Low Level Property

The Applicant is to demonstrate stormwater from the new development within this consent shall be disposed of to an existing approved system or in accordance with Northern Beaches Council's Warringah Water Management Policy PL 850 in particular the Stormwater Drainage from Low Level Properties Technical Specification. Details demonstrating that the existing approved system can accommodate the additional flows or compliance with the Northern Beaches Council's Warringah Water Management Policy PL 850 are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

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

Overland Flow

In order to protect property and occupants from flood risk the following is required:

Building Components and Structural Soundness – C1

All development adjacent the overland flow path shall be flood compatible buildings up to the relevant Flood Planning Level in accordance with Reducing Vulnerability of Buildings to Flood Damage: Guidance on Building in Flood Prone Areas, Hawkesbury-Nepean Floodplain Management Steering Committee (2006).

Building Components and Structural Soundness – C2

All new development must be designed and constructed to ensure structural integrity up to the relevant Flood Planning Level taking into account the forces of floodwater, wave action, flowing water with debris, buoyancy and immersion. Structural certification shall be provided confirming the above.

Building Components and Structural Soundness – C3

All new electrical equipment, power points, wiring, fuel lines, sewerage systems or any other service pipes and connections must be waterproofed and/or located above the relevant Flood Planning Level. All existing electrical equipment and power points located below the relevant Flood Planning Level must have residual current devices installed cut electricity supply during flood events.

Car parking – G5

The floor level of the proposed car port shall be set at or above RL21.32.

Fencing – H1

Fencing (including pool fencing, boundary fencing, balcony balustrades and accessway balustrades) shall be open for passage of flow within the extent of the overland flow path. All new fencing on the property must be design with a minimum of 50% open area between the 1% flood level and natural ground level, to allow flood waters to pass through.

Recommendations

The development must comply with all recommendations outlined in the Overland Flow Flood Study prepared by Northern Beaches Consulting Engineers, project number 171272, revision E, dated 10/05/19.

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

Reason: To reduce the impact of overland flow flooding and flood liability on owners and occupiers of flood-prone property and reduce public and private losses in accordance with Council and NSW Government policy.

Structures Located Adjacent to Council Pipeline or Council Easement

All structures are to be located clear of any Council pipeline or easement. The Applicant is to ensure footings of any new development within this development consent adjacent to an easement or pipeline are to be designed in accordance with Northern Beaches Council's Warringah Water Management Policy PL850. Details and certification prepared by a suitably qualified Civil Engineer demonstrating compliance are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

Submission of Engineering Plans

Engineering plans detailing overland flow mitigation measures are to be submitted to the Certifying Authority for approval. The plans are to be generally in accordance with the recommendations outlined in the Overland Flow Assessment Report prepared by Northern Beaches Consulting Engineers, project number 171212, revision E, dated 10/05/19.

Overland flow mitigation measures are to include, but not be limited to, the following:

- i. Provision of flood walls to the relevant Flood Planning Level (overland flow flood level + 0.5m freeboard).
- ii. The invert of all windows above the relevant Flood Planning Level.
- iii. Flood proofing of the existing dwelling to the relevant Flood Planning Level.

iv.

Lowering of the natural ground levels within the flow path extent.

Certification by a suitably qualified Civil Engineer, who has membership to the Institution of Engineers Australia, National Engineers Register (NER) and registered in the General Area of Practice for civil engineering stating the overland flow mitigation measures design and plans are in accordance with the recommendations of the flood report and all requirements of the consent, must be submitted to the Certifying Authority prior to issue of the Construction Certificate.

Reason: Overland flow protection of 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.

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 written approval and the written approval is then to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO ANY COMMENCEMENT

Public Liability Insurance - Works on Public Land

Any person or contractor undertaking works on public land must take out Public Risk Insurance with a minimum cover of \$20 million in relation to the occupation of, and approved works within Council's road reserve or public land, as approved in this consent. The Policy is to note, and provide protection for Northern Beaches Council, as an interested party and a copy of the Policy must be submitted to

Council prior to commencement of the works. The Policy must be valid for the entire period that the works are being undertaken on public land.

Reason: To ensure the community is protected from the cost of any claim for damages arising from works on public land.

CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

Road Reserve

The applicant shall ensure the public footways and roadways adjacent to the site are maintained in a safe condition at all times during the course of the work.

Reason: Public Safety.

Vehicle Crossings

The Applicant is to construct one normal standard vehicle crossing 3.5 metres wide at the kerb in accordance with Northern Beaches Council Drawing No A4-3330/1 N 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.

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

Stormwater Disposal

The Applicant shall submit a certificate from a suitably qualified person that the stormwater drainage works have been constructed/installed in accordance with all relevant Australian Standards and Codes. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

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

Certification of Overland Flow Path Works

Upon completion of the overland flow mitigation measures, certification from a consulting engineer and a "work as executed" (WAE) drawing certified by a registered surveyor and overdrawn in red on a copy of the approved Engineering plans are to be provided to the Principal Certifying Authority. Certification is to be issued by a suitably qualified Civil Engineer registered with the Institute of Engineers Australia, stating that the works are in accordance with the approved plans.

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

Reason: Overland flow protection of the development.

Certification of Structures Located Adjacent to Council Pipeline or Council Easement

The Applicant shall submit a suitably qualified Civil Engineer's certification that the completed footing works have been constructed in accordance with this consent, Northern Beaches Council's Warringah Water Management Policy PL850 and the approved Construction Certificate plans. Civil Engineer demonstrating compliance is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: Protection of Council's Infrastructure.

Creation of Positive Covenant and Restriction as a User for Overland Flows

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 over the extent of the 100-year ARI overland flow path, restricting any alteration to the levels and/or any construction on the land. The terms of the positive covenant and restriction are to be prepared to the satisfaction of Council, 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 as to user for overland flows 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 overland flow path is maintained.

Post-Construction Dilapidation Report

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/2009084729guidelineforpreparingadilapidationsurveyofcouncilstormwaterassets2.pdf>

The post-construction / demolition dilapidation report must be submitted to Council for review Any damage to Council's stormwater infrastructure is to be rectified prior to the release of any Drainage security bonds.



Reason: Protection of Council's infrastructure.