

Engineering Referral Response

Application Number:	DA2021/0004
Date:	12/04/2021
To:	Anne-Marie Young
Land to be developed (Address):	Lot 1 DP 528546 , 1121 Pittwater Road COLLAROY NSW 2097

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

Comments 9/4/21

The applicant has now submitted a flood study using the TUFLOW model which aligns with Councils Overland Flow study. The study assumes a 100% culvert blockage which is a conservative approach has the adjoining box culvert has a 20 year capacity. The 1 in 100 year AEP Flood level is 4.5m AHD and the consultant recommends a FPL of 5m. The proposed new addition floor level is at 4.92m and will be required to be set a 5.0m AHD via a condition of consent.

Additionally a requirement to install a flood resistant roller door to the basement room will be required together with flood proofing to RL 5m AHD. Also the sub floor is to be used for flood storage and the foundation wall will require sufficient openings to allow for the ingress/egress of flood water.

No objections subject to conditions.

Previous comments

The subject site is affected by stormwater overland flow as such this overland flow will be impacted by the proposed development. The applicant is to submit a overland flow study prepared by a qualified civil engineer (NER or RPENG). The overland flow study is to provide the following information:

- 1) The overland flow extents, velocities and depths for the 1 in 100 year AEP storm event upstream/downstream and for the subject site.
- 2) Demonstration that there are or minimal impacts on the current overland flow path including loss of storage. Please note a Council stormwater box culvert runs along the western boundary under

the existing driveway access.

3) The engineer is to use guidelines and principals as outlined ARR 2019 in preparation of the overland flow study.

In addition to the above requirements the existing rear carpark has an abandoned 900mm stormwater pipe which will need to be removed for the development to proceed .

As the site is impacted by a substantial amount of overland flow to the rear of the site On site stormwater detention is not required.

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)

A bond of \$**20000** 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.

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

Stormwater Disposal

The applicant is to demonstrate how stormwater from the new development within this consent is disposed of to an existing approved system or in accordance with Northern Beaches Council's **WATER MANAGEMENT POLICY FOR DEVELOPMENT**. Details by an appropriately qualified and practicing Civil Engineer demonstrating that the existing approved stormwater system can accommodate the additional flows, or compliance with the Council's specification 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.

Flood storage and Planning Level requirements

In accordance with the recommendations of the TTW Engineers Overland Flow Assessment dated 19 march 2021, the Flood Planning Level of the rear extension is to be RL =5.0m (AHD). Additionally the proposed subfloor area is to be designed to provide for the compensation of the loss of flood storage and is to be designed to allow via suitable openings the ingress/egress of flood water in a 1 in 100 Year AEP Storm Event.

The design plans are to be amended to provide for these requirements and submitted to the certifier for approval prior to the issue of the construction certificate.

Reason: To manage the impacts of overland flow and flood storage.

Building components and Structural Soundness - Flooding

The new addition must be designed to ensure structural integrity up to the Flood Planning Level (required), taking into account the forces of floodwater, flowing water with debris, buoyancy and immersion.

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

Details and documentation of the above requirements are to be approved by the certifier prior to issue of the construction certificate.

Traffic Management and Control

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

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-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 Construction Certificate and the commencement of any works including demolition.

Reason: Protection of Council's infrastructure during construction.

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.

Vehicle Crossings

The Applicant is to construct **one** vehicle crossing **5** 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.

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

Stormwater Disposal

The stormwater drainage works shall be certified as compliant with all relevant Australian Standards and Councils Water Management Policy by the design engineer. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

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

Reinstatement of Kerb

The Applicant shall reinstate all redundant laybacks and vehicular crossings to conventional kerb and gutter, footpath or grassed verge as appropriate with all costs borne by the applicant.

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

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

Post-Construction Dilapidation Report (Major Development)

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

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

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