

## Engineering Referral Response

<b>Application Number:</b>	DA2020/1588
<b>Date:</b>	22/02/2021
<b>To:</b>	Clare Costanzo
<b>Land to be developed (Address):</b>	Lot 1 DP 241941 , 30 Churchill Crescent 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

The subject site is burdened by a Council drainage easement and pipeline which may be impacted as part of the proposed works. In this regard, the applicant is required to demonstrate compliance with Council's Water Management Policy Clause 6.1. This consists of accurately locating, confirming dimensions and plotting Council's stormwater pipelines and associated infrastructure to scale on the DA plans which show the proposed works. This should be carried out by a service locating contractor and registered surveyor. (The applicant will need to provide evidence of the methodology used for locating). A plan outlining the indicative locations of Council's stormwater infrastructure is available from Council's website. Northern Beaches Council has public stormwater drainage maps online. Please follow the relevant link below and select the 'Stormwater' map from the 'No Overlay Map' drop down menu. You can then search by address and use the zoom functionality to see pipe diameters and asset id numbers.

<https://services.northernbeaches.nsw.gov.au/icongis/index.html>

The subject site may be affected by overland flow. In this regard the applicant is to submit a hydraulic report and model like HEC-RAS showing the 1% AEP stormwater flow over the subject site, prepared by a Chartered Professional Civil Engineer of Engineers Australia. All calculations are to be carried out in accordance with the guidelines provided in "Australian Rainfall and Run Off", a publication of the Institution of Engineers, Australia. All levels are to be shown in Australian Height Datum (AHD). It is to be noted that no development is permitted over Council's drainage system which includes the established 1 in 100 ARI storm water overland flow path for the subject site. The flood study must be taken upstream and downstream beyond the subject site (at least 15-20 metres from the common boundaries affected by the overland flow and including the street frontage of Churchill Crescent). The 1% AEP flood flow level must be established in AHD for the proposed future floor levels of the

extension which shall be a minimum of 500 mm above the 100 year flood level. This is to ensure that the proposed future alterations are protected in major storm events. Any overland flow mitigation measures to protect the proposed extensions from stormwater inundation must not exacerbate flooding for adjoining properties by diverting more flows to adjoining properties.

Development Engineers cannot support the application due to insufficient information to assess Clause C6 of Warringah DCP.

#### **Additional Information Received on 1/02/2021**

The overland flood report has been reviewed. Based on the recommendation provided in the report by NB Consulting Engineers the entry landing on the northern boundary is to be 100mm above natural ground level to prevent flows entering the site at this location. The architectural plans shall be amended to reflect the recommendations specified in the Overland Flood Report by NB consulting Engineers.

#### **Additional Information Received on 15/02/2021**

The recommendation in the Overland Flow Assessment Report by NB Consulting Engineers has been incorporated in the architectural plans. The recommendations from the flood report are to be incorporated in the stormwater management plan as conditioned.

No objections to approval subject to conditions as recommended.

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 Bond (Drainage works)**

The applicant is to lodge a bond of \$10,000 as security against any damage or failure to complete the construction of stormwater drainage works 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.

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

#### **Stormwater Disposal**

The applicant is to submit Stormwater Engineering Plans for the new development within this development consent, prepared by an appropriately qualified and practicing Civil Engineer, indicating all details relevant to the collection and disposal of stormwater from the site, buildings, paved areas and where appropriate adjacent catchments. Stormwater shall be conveyed from the site in accordance with Northern Beaches Council's Water Management for Development Policy and generally in accordance with the concept plans by NB Consulting Engineers, , drawing no.201170 Sheet D01 to D04, dated

20/11/2020.

The drainage plans must address the following:

- i. 300mm wide grated drain shall be installed along the driveway entrance to the site on the northern boundary as recommended in the Overland Flow Assessment Report by NB consulting Engineers dated 1/2/2021
- ii. 200mm wide grated drain shall be installed at the garage entrance.

Details demonstrating compliance 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 the development.

### **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 Water Management for Development Policy. Details and certification prepared by a suitably qualified Structural Engineer demonstrating compliance are to be submitted to Council for approval. Council's approval is to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

### **Stormwater Drainage Application**

The applicant is to provide a stormwater drainage application under Section 68 of the Local Government Act 1993 to Council for approval. The submission is to include four (4) copies of Civil Engineering plans for the design of the Council's stormwater pipe located along the western boundary 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. The form can be found on Council's website at [www.northernbeaches.nsw.gov.au](http://www.northernbeaches.nsw.gov.au) > Council Forms > Stormwater Drainage Application Form.

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 Certifying Authority prior to the issue of the Construction Certificate.

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

### **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 approval and the Principal Certifying Authority prior to the issue of the Construction Certificate.

Reason: Protection of Council's infrastructure.

## **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.

### **Civil Works Supervision**

The Applicant shall ensure all civil works approved in the Section 68 are supervised by an appropriately qualified and practising Civil Engineer.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority and/or Roads Authority.

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

## **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 Codes by a suitably qualified Civil Engineer. Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate.

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

### **Certification of Structures Located Adjacent to Council Pipeline or Council Easement**

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

Reason: Protection of Council's Infrastructure.

### **Post- Construction Stormwater Assets Dilapidation Report (Council stormwater assets)**

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/preparingdilapidationsurveyforcouncilstormwaterassets.pdf>

The post-construction / demolition dilapidation report must be submitted to Council for review and approval. Any damage to Council's stormwater infrastructure is to be rectified prior to the release of any Drainage security bonds. Council's acceptance of the Dilapidation Survey is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: Protection of Council's infrastructure.