

Water Management Referral Response

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| Application Number: | DA2019/1505 |
| To: | Lashta Haidari |
| Land to be developed (Address): | Lot 1 DP 11545 , 84 Avalon Parade AVALON BEACH NSW 2107 Lot 2 DP 11545 , 84 Avalon Parade AVALON BEACH NSW 2107 |

Reasons for referral

Council's Water Management Officers are required to consider the likely impacts.

Officer comments

This application was assessed under:

Pittwater 21 DCP B5.9 – Water Quality

B8.2 – Erosion and Sediment Management

SEPP (Housing for Seniors or People with a Disability) 2004 (36) Stormwater “*minimise impacts of stormwater runoff on receiving waters*”

The proposed water treatment train meets the requirements of B5.9 and the Seniors SEPP. Please note that the MUSIC model had unacceptable parameters for exfiltration (90mm/hr) in the bio-retention basin. These were corrected to 0mm/hr as recommended by the Northern Beaches Council's MUSIC Modelling Guidelines, which reduced the pollutant reduction outcomes to a level that was still above our targets; therefore the treatment train is acceptable. The junction pit immediately prior to the bioretention basin must have a filter screen or basket added to remove coarse sediments, gross pollutants and organic matter that is accessible/removable for cleaning. This will reduce the maintenance load to the bioretention basin.

Sediment and erosion controls must be installed prior to any work on site and maintained until all work is complete and groundcover re-established.

The development is not expected to impact Careel Creek, as it is piped in this vicinity.

The proposal is therefore supported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Water Management Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION

CERTIFICATE

Detailed Design of Stormwater Treatment Measures

A certificate from a Civil Engineer, stating that the stormwater treatment measures have been designed in accordance with the plans by Stellen Consulting dated 20 November 2019 (including the conditioned screen/basket).

The certificate shall be submitted to the Certifying Authority prior to the release of the Construction Certificate.

Reason: Protection of the receiving environment

Water Quality Management

The applicant must install a filtration device such as a screen or basket in the junction pit prior to stormwater discharging into the bioretention basin. The device must capture organic matter, coarse sediments and gross pollutants. All stormwater treatment measures must make provision for convenient and safe regular inspection, periodic cleaning, and maintenance.

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

Reason: Protection of the receiving environment

CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

Substitution of Stormwater Treatment Measure

The substitution of an "equivalent" device for the stormwater treatment measure approved in the Development Application process must first be approved by the Principal Certifying Authority.

Details must be submitted to the Principal Certifying Authority for approval prior to installation.

Reason: To ensure stormwater is appropriately managed.

Installation and Maintenance of Sediment and Erosion Control

Sediment and erosion controls must be installed in accordance with Landcom's 'Managing Urban Stormwater: Soils and Construction' (2004) and the Erosion and Sediment Control Plan prepared by Stellen Consulting 20 November 2019 prior to commencement of any other works on site.

Erosion and sediment controls are to be adequately maintained and monitored at all times, particularly after periods of rain, and shall remain in proper operation until all development activities have been completed and vegetation cover has been re-established across 70 percent of the site, and the remaining areas have been stabilised with ongoing measures such as jute mesh or matting.

Reason: Protection of the receiving environment

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

Certification for the Installation of Stormwater Treatment Measures

A certificate from a Civil Engineer, who has membership to Engineers Australia and the National Engineers Register must be provided, stating that the stormwater treatment measures have been installed in accordance with the plans prepared by Stellen Consulting dated 20 November 2019. The certificate must confirm that stormwater treatment measures are completed, online, in good condition and are not impacted by sediment. Vegetated measures must have four live plants per square metre in the planted zone.

The certificate shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: Protection of the receiving environment

Stormwater Treatment Measure Operation and Maintenance Plan

An Operation and Maintenance Plan is to be prepared to ensure the proposed stormwater treatment measures remain effective.

The Plan must be attached to the Positive Covenant (and the community or strata management statement if applicable) and contain the following:

1. Detail on the stormwater treatment measures:
 - a) Work as executed drawings
 - b) Intent of the stormwater treatment measures including modelled pollutant removal rates
 - c) Site detail showing catchment for each device
 - d) Vegetation species list associated with each type of vegetated stormwater treatment measure
 - e) Impervious area restrictions to maintain the water balance for the site
 - f) Funding arrangements for the maintenance of all stormwater treatment measures
 - g) Identification of maintenance and management responsibilities
 - h) Maintenance and emergency contact information
2. Maintenance schedule and procedure - establishment period of one year following commissioning of the stormwater treatment measure
 - a) Activity description, and duration and frequency of visitsAdditionally for vegetated devices:
 - b) Monitoring and assessment to achieve an 80 percent survival rate for plantings
 - c) Management of weeds, pests and erosion, with weed and sediment cover limited to a maximum of 5 percent of the total area of the stormwater treatment measure
3. Maintenance schedule and procedure - ongoing
 - a) Activity description, and duration and frequency of visits
 - b) Routine maintenance requirements
 - c) Work Health and Safety requirements
 - d) Waste management and disposal
 - e) Traffic control (if required)
 - f) Renewal, decommissioning and replacement timelines and activities of all stormwater treatment measures (please note that a DA may be required if an alternative stormwater treatment measure is proposed)
 - g) Requirements for inspection and maintenance records, noting that these records are required to be maintained and made available to Council upon request.

Details demonstrating compliance shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: Protection of the receiving environment

Works as Executed Drawings - Stormwater Quality System

Works as Executed Drawings for the stormwater treatment measures must be prepared in accordance with Council's Guideline for Preparing Works as Executed Data for Council Stormwater Assets.

The drawings shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: Protection of the receiving environment

Positive Covenant, Restriction as to User and Registration of Encumbrances for Stormwater Treatment Measures

A positive covenant shall be created on the title of the land requiring the proprietor of the land to maintain the stormwater treatment measures in accordance with the standard requirements of Council, the manufacturer and as required by the Stormwater Treatment Measures Operation and Maintenance Plan.

A restriction as to user shall be created on the title over the stormwater treatment measures, restricting any alteration to the measures.

The terms of the positive covenant and restriction as to user are to be prepared to Council's standard requirements (available from Council) at the applicant's expense and endorsed by the Northern Beaches Council's delegate prior to lodgement with the Department of Lands. 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 is to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate.

Reason: To identify encumbrances on land, ensure ongoing maintenance, and ensure modification to the stormwater treatment measures is not carried out without Council's approval.

Strata Management Statement

The Strata Management Statement must specifically list the stormwater treatment measures that will be maintained under strata title. The statement must also include the Stormwater Treatment Measure Operation and Maintenance Plan.

Details demonstrating compliance shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: To ensure maintenance of all stormwater management assets and protection of the receiving environment.

ON-GOING CONDITIONS THAT MUST BE COMPLIED WITH AT ALL TIMES**Maintenance of Stormwater Treatment Measures**

Stormwater treatment measures must be maintained at all times in accordance with the Stormwater Treatment Measure Operation and Maintenance Plan, manufacturer's specifications and as necessary to achieve the required stormwater quality targets for the development.

Vegetated stormwater treatment measures must maintain an 80 percent survival rate of plantings and limit weed cover to no more than 10 percent of the total area of the stormwater treatment measure.

Northern Beaches Council reserves the right to enter the property and carry out appropriate maintenance of the device at the cost of the property owner.

Reason: Protection of the receiving environment