

## Water Management Referral Response

<b>Application Number:</b>	DA2021/0199
<b>Date:</b>	13/05/2021
<b>To:</b>	Lashta Haidari
<b>Land to be developed (Address):</b>	<p>Lot B DP 402309 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 1 DP 595298 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 7 DP 455967 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 6 DP 8561 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 5 DP 8561 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 4 DP 654321 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 6 DP 737137 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 8 DP 455967 , 4 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 3 DP 8561 , 2 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 2 DP 8561 , 2 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 1 DP 8561 , 2 Jacksons Road WARRIEWOOD NSW 2102</p> <p>Lot 15 DP 26902 , 2 Jacksons Road WARRIEWOOD NSW 2102</p>

### Reasons for referral

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

### Officer comments

Revised comments 05/05/21

The stormwater plan has been revised. Conditions apply.

Initial comments 15/04/21

Council does not support the inclusion of proprietary filters in the stormwater treatment train for a number of reasons:

1. We don't currently have this type of asset, so management would require additional capacity in terms of systems/knowledge etc.
2. They are a very high-cost item to maintain because they must be maintained by the manufacturer and it's not possible to seek other providers in a competitive procurement process. For instance, the Filterra device uses an engineered filter media that is only available through Ocean Protect.
3. It would not be possible to use our own staff to maintain the devices.
4. Drainage from the area is poor due to the lack of fall to discharge points, and these filter devices automatically go into bypass if they are submerged at all.

The solution also makes use of 14 Enviropods (pit inserts to capture gross pollutants). This is an excessive number to maintain and the size of the site warrants a CDS unit. Enviropods that are not maintained/cleaned create a blockage and contribute to localised flooding.

While the reports discuss rainwater tanks they are not shown on the engineering plans. The plans MUST include the tanks and show how reuse will be achieved, because when details are left off DA approved plans they are not built.

Please refer to the stormwater team's advice relating to drainage. If a pipe is required, it may be difficult to discharge to the creek above the waterline, resulting in a submerged pipe in a tidal section of the creek that is very susceptible to sediment accumulation.

I question the need to include OSD, as it will do little to prevent flooding given the position of the site in the floodplain, and usually at this point in the catchment, it is preferable to remove water as quickly as possible to reduce held water when the upper catchment flows arrive.

With the removal of the OSD, you have clear options for placement of bio-swales to treat stormwater. Consideration should be given to a bio-swale along the boundary of the site with the playing field (if Parks and Reserve are agreeable). A grassed swale would possibly need to be three metres wide, with graded banks that don't present a risk so close to the cycle path, and water should not be retained to over 300mm depth as a fence is not suitable on the floodplain. The best bet is to use as much roof water as possible to minimise the runoff that needs to be dealt with.

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 - Major**

A certificate from a Civil Engineer, stating that the stormwater treatment measures have been designed in accordance with the plans by Warren Smith and Partners and Council's Water Management for Development Policy.

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

Reason: Protection of the receiving environment.

### **CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK**

#### **Installation and Maintenance of Sediment and Erosion Controls**

Council proactively regulates construction sites for sediment management.

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 Warren Smith & Partners 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.

#### **Substitution of Stormwater Treatment Measures**

The substitution of an "equivalent" device for the stormwater treatment measure approved under the Development Consent must submitted to the Principal Certifying Authority for approval prior to installation.

Reason: To ensure stormwater is appropriately managed and in accordance with the Water Management for Development Policy.

### **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 Warren Smith & Partners. The certificate must confirm that stormwater treatment measures are completed, online, in good condition and are not impacted by sediment. Vegetated measures must exhibit an 80 percent survival rate of plantings.

The certificate 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 the 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.

#### **Stormwater Treatment Measures 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 visits

Additionally 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 Treatment Measures**

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.

## **ON-GOING CONDITIONS THAT MUST BE COMPLIED WITH AT ALL TIMES**

### **Maintenance of Stormwater Treatment Measures - Major**

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.

Where replacement cartridges or other necessary components for the system become unavailable, an alternative system is required to be retrofitted into the development to achieve an equivalent pollutant reduction outcome. Evidence supporting the replacement must be retained on site and made available to Council as required.

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.