

Water Management Referral Response

Application Number:	Mod2021/0624
Date:	02/11/2021
To:	Phil Lane
Land to be developed (Address):	Lot 100 DP 1023183 Part Lot 1046 DP 752038 Part Lot 1047 DP 752038 Part Lot 1053 DP 752038 Permissive Occupancy 88/31 A/C 174235 Closed Crown Road Licence 199961 , 100 / 0 Meatworks Avenue OXFORD FALLS NSW 2100

Reasons for referral

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

Officer comments

The modification seeks to modify the conditions and requirements for the on-site stormwater detention system and point of discharge.

The proposal was assessed under the current creek and water management legislation framework, the relevant parts of the LEP, DCP and Council Water Management for Development Policy.

The relevant water management Policy principles are:

- Improve the quality of water discharged to our natural areas to protect the ecological and recreational condition of our, beaches, waterways, riparian areas and bushland.
- Water sensitive urban design measures will be integrated into the built form to maximise liveability and reduce the impacts of climate change e.g. urban heat island effect and intensified rainfall events.
- Reduce the consumption of potable water by encouraging water efficiency, the reuse of water and use of alternative water sources.

The proposed development triggers specific water quality requirements to install a filtration device that removes organic matter and coarse sediments from stormwater prior to discharge from the land.

The treatment measures must be designed in accordance with the requirements of this Policy and Northern Beaches Council's WSUD and MUSIC Modelling Guidelines.

Stormwater treatment measures must be part of a unified design for the project and contribute to a positive urban design outcome, visually and physically integrated with the adjacent built and natural environment. Council may approve the use of proprietary devices where alternatives are limited.

Evidence is to be provided to demonstrate the performance of the system.

The project modifications documentation is showing an Alternate Discharge Approach with the creation of 8 stormwater outlets.

The applicant need to demonstrate that the disposal of stormwater is not unreasonably impacting on the downstream environment. All environmental impacts (as a minimum fauna, flora, soils) link to the change of flow path and hydroregime shall be addressed and managed.

Flow spreaders. Diverting flows from one catchment (or sub-catchment) to another catchment (or subcatchment) will not be permitted. Properties must drain in the direction of their natural catchment. The catch drain located at the back of the building is draining a significant area of the upstream catchment, details should be provided on how the water will be conveyed to the downstream receiving environment. The design shall include a naturalised swale system with macrophyte planting.

The MUSIC model supplied is satisfactory.

The proposed swale connecting the stormwater outlets located along the property boundary is satisfactory. The swale will act as a flow spreader when the swale flow capacity is exceeded.

6 SPEL stormsacks 900*900 and 11 SPEL stormsacks 600*600 are to be fitted to the stormwater network.

The proposed treatment chain is satisfactory.

~~The use of stormwater Soil absorption is to be investigated first. Only if the stormwater Soil absorption characteristics and other physical constraints indicate the on-site absorption system is not appropriate for the property the use of a level spreader might be permitted.~~

~~Level spreaders shall have minimal impact on the upon adjoining property. Compliance with any requirements of the affected downstream property owners. The level spreader shall require the creation of a Positive Covenant and Restriction on Use of Land over the system.~~

~~In summary a Stormwater water quality management system is to be developed supported by an adequate flow disposal (infiltration or spreaders).~~

~~Environmental impacts documentations and water quality model (MUSIC or equivalent) is to be supplied. The MUSIC file is to be provided in the native format (.sqz).~~

~~To date the proposal is not demonstrating compliance with Council water policy for development.~~

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

Erosion and Sediment Control Plan

An Erosion and Sediment Control Plan (ESCP) shall be prepared by an appropriately qualified person and implemented onsite prior to commencement. The ESCP must meet the requirements outlined in the Landcom publication Managing Urban Stormwater: Soils and Construction - Volume 1, 4th Edition (2004). The ESCP must include the following as a minimum:

- Site Boundaries and contours
- Approximate location of trees and other vegetation, showing items for removal or retention (consistent with any other plans attached to the application)
- Location of site access, proposed roads and other impervious areas (e.g. parking areas and site facilities)
- Existing and proposed drainage patterns with stormwater discharge points
- Locations and methods of all erosion and sediment controls that must include sediment fences, stabilised site access, materials and waste stockpiles locations, location of any stormwater pits on the site and how they are going to be protected.

- North point and scale.

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.

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 ACCOR **WORK AS EXECUTED DETAIL PLAN rev C (29.10.21) showing the proposed swale along the Northern property boundary** and Council's Water Management for Development Policy.

The detail design shall include 6 SPEL stormsacks 900*900 and 11 SPEL stormsacks 600*600 fitted to the stormwater inlet pits network prior connection to the swale.

The Southern catch drain is to be connected to the proposed stormwater swale/flow spreader or be connected to a vegetated flow spreader (sandstone material) located within the lot. Subject to hydraulics sizing 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 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 be 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 construction certificate detail design plans. 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 Final 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 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.

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 Final 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 Final Occupation Certificate.

Reason: Protection of the receiving environment.

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 Final **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 - 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.