

Water Management Referral Response

Application Number:	DA2021/2600
Date:	19/05/2022
To:	Lashta Haidari
Land to be developed (Address):	Lot 1 DP 349085 , 49 Warriewood Road WARRIEWOOD NSW 2102 Lot 2 DP 972209 , 43 Warriewood Road WARRIEWOOD NSW 2102 Lot 2 DP 349085 , 45 Warriewood Road WARRIEWOOD NSW 2102

Reasons for referral

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

Officer comments

DRAFT

This application has been assessed against relevant legislation and policy relating to waterways, riparian areas, and groundwater.
The submissions were considered.

There are several relevant controls for water management and creek rehabilitation in the Warriewood Valley:

- Pittwater 21 DCP Appendix C6.1, C6.2, C6.7 and C6.8
- *Warriewood Valley Water Management Specification (2001)*.

In general, the development application does not demonstrate how the water dependent ecosystem will be impacted and protected during the life of the project. Construction and operation stages should be assessed for potential impacts and mitigation measures proposed.

The development application was submitted with discrete technical studies but the proposal is missing an integrated response for the water management and water dependent ecosystem.

A Water Management Report following the WARRIEWOOD VALLEY URBAN LAND RELEASE WATER MANAGEMENT SPECIFICATION (2001) requirements must be submitted.

The water management section (4.0) of the ENGINEERING REPORT (R02192 Rev C) is lacking details and presents some inconsistency (table 12, average rainfall year generating more flow than a wet year). The water quality section is generally oversimplified and requires additional details especially for the water quality modelling nodes setting and treatment chains (roads and proposed rain water tank reuse daily demand).

Groundwater table and water dependent ecosystem

The groundwater table levels are critical to the functioning of the wetland, the groundwater study is indicating groundwater depths between 0.3-0.5m below surface level on the upper section of the existing wetland and intersection with the proposed building basement is likely. The geotechnical study is also confirming the presence of the water table within the proposed infrastructure footprint.

The proposal does not assess the project impacts on the water table and wetland.

Due to the ecological sensitivity of the site, a groundwater monitoring program must be developed (prior, during and after construction) to assess the groundwater level modifications and possible EEC impacts. The monitoring program should lead to an action plan to adjust for the flow coming from the site stormwater system.

As per Pre lodgement meeting advice: Due to past use of the site for market gardening, particularly 49 Warriewood Road where there are large numbers of greenhouses, a groundwater contamination assessment is required. If contaminants are found above ANZECC guidelines, a groundwater management plan should be prepared.

To undertake construction dewatering, the following approvals must be obtained from WaterNSW.

- water supply work approval
- water access licence (WAL) - unless the project qualifies for an exemption, please refer to the exemption aquifer interference activities taking 3ML or less and exemption for excavation dewatering taking greater than 3ML WaterNSW fact sheets for more information
- water use approval -

As part of the documentation a Geotechnical Investigation Reports to WaterNSW requirements is to be supplied.

Stormwater quality system

The proposed stormwater quality system is relying on an infiltration basin. The location of the proposed basin is acceptable.

The engineering documentation is not demonstrating that the hydraulic and water quality sizing is adequate.

While Council is supportive of an infiltration system, the proposed basin appear to be close to ground level. The effect of the high water table on the infiltration rates needs to be modelled and the basin to be sized accordingly. Under the existing scenario the basin is at risk of not infiltrating enough flow with the consequent of activation of the safety weir. This may result in a large fraction of the runoff not receiving water quality treatment. Alternatively, a bioretention system could maintain the water quality objectives.

The basin is only presenting a weir to control the outflow. The basin weir must remain a safety measure; Council is requiring a proper outlet including the use of a linear flow spreader to feed the wetland.

Additional engineering details and the water quality model must be supplied to Council.

The applicant proposes to install litter baskets in all surface inlet pits. Council do not recommend the use of any more than five baskets as they become very labour intensive to maintain and can quickly block pits if not maintained, causing localised flooding. For this size development a gross pollutant trap similar to a CDS unit is required.

The outlet of the proposed new 900mm dia. pipe needs to be designed to maintain integrity of the basin embankments and be stable.

The design should consider a sandstone rock armoured channel and a flow spreader/stilling basin to minimise the hydraulic impacts on the wetland.

The design/ management of the drainage channel located downstream of the proposed 900mm dia. is to be provided.

The Music model should follow Northern Beaches Music guidelines and be supplied to Council as a model file (.sqz) for review.

The proposed infiltration basin is not detailed enough and the hydraulic sizing should be documented. The operation and maintenance manual is to be a stand alone document and is to include all stormwater devices.

The proposal is therefore unsupported.

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

Recommended Water Management Conditions:

Nil.