

02/07/2021

Our Ref: 251-20

Northern Beaches Council
725 Pittwater Road,
Dee Why, 2099, NSW, Australia

Attention: Jordan Davies

Dear Jordan

Re: Development Application No: DA2021/0053 for Subdivision of land and construction of dwelling houses semi-detached dwellings and attached dwellings at 101, 111 & 121 Dove Lane WARRIEWOOD.

Reference is made to advice received from Northern Beaches Council requesting for further information to assist with Council's assessment of application **DA2021/0053** at 101, 111 & 121 Dove Lane, Warriewood.

Please refer to our response in **red** to Council Items:

1. A water management report and engineering plans and a MUSIC model that all agree with each other, particularly in relation to the defined lots.

Refer to attached updated water management report and MUSIC models.

2. The above reports must clearly differentiate/separate the water management for each DA, so they can be approved and conditioned as separate pieces.

There were two separate water management reports submitted for each DA:

1. **Water Management Letter for the Two Lot Subdivision**
2. **Water Management Report for Community Title Subdivision**

Refer to attached for both the letter and report.

3. I need to understand how they will be managed: ie. I'm assuming that the large eastern block east of Fern Creek Road will be managed by one community title association, the large lot immediately west of Fern Creek Road (subject to a future DA) will be managed by a second community title association and then there will be 2 or 3?? Individual house Torrens lots managing their own devices. Or is there one community title association for the entire subdivision for 121, 111 and 101 Dove Lane?

- **Refer to attached drawing SK-0008 to assist with understanding of staging.**
- **The Fern Creek Rd and Dove Lane; Road and Drainage is delivered under an existing approved DA2018/1044 and S138A 2021/0007.**



- DA01 will be delivered as a Torrens Title Subdivision
 - DA02 will be managed by under one Community Association
 - DA03 will be managed by under one Community Association
4. I need the engineering plan to show me where the filter cartridges and pit baskets will be located on the lots they refer to in the MUSIC model as lots 1-3. I'm assuming these are covered by the area of DA2020/1727. This is particularly relevant to ensure they are located in a way that will make them accessible for maintenance.
- Refer to attached Engineering Plans.
 - Refer to Sheet 0751 and 0752 for filter cartridges locations.
 - Refer to Sheet 0101 and 0102 for pit baskets located in pits. On Sheet 0101 there is a general note stating all pits within the accessways will have Ocean Guard Pit insert.
5. I want to know why an entire block of housing has been modelled without rainwater tanks and reuse (lot immediately west of Fern Creek Road), as this has a significant impact on rainwater reuse.
- Refer to attached updated MUSIC models modeled with rainwater tanks.
6. The MUSIC model needs to have the rainwater tanks broken down. Currently they have modelled (for example) three individual rainwater tanks as one tank, which has an impact on the results of the model. We have tested it separated and nowhere near the same reduction in runoff is achieved, which has implications for the overall water balance results for the site.
- Refer to attached updated MUSIC models modeled with rainwater tanks.
7. The cross section for the swale at the rear of the western house lots does not indicate whether it is lined. It was not included in the MUSIC model as contributing to water quality. The drain will be very difficult to access for maintenance given it is located at the rear boundary of the house lots.
- The swale at the rear western boundary is a turfed base swale. Refer to engineer Sheet 0751 for typical detail. In relation to maintenance, we can provide a typical easement for the drainage line.
8. There is a small discrepancy between the water management report that says it uses Ku-Ring-Gai council's reuse figures (50KL/Year) and the MUSIC model which has used Blacktown Council's reuse figures (25KL/year). These are significantly different estimates and have a major impact on projected runoff. We prefer the more conservative Blacktown figures, as the proposed lots are much smaller at less than 250sqm than those in Ku-Ring-Gai that are more like 350-500sqm.
- Refer to updated MUSIC model. We have adopted the Blacktown's figures at 25KL/year.
9. The water management treatment train doesn't allow for infiltration. Justification for exclusion of infiltration must be included.



Refer to updated MUSIC model which allows for infiltration.

10. An updated MUSIC model, plans and a report must be provided to address the above.

Refer to updated MUSIC model and enclosed reports.

If there are any questions, please do not hesitate to contact Stanley Lu.

Yours faithfully,

Stanley Lu – Project Manager

CRAIG & RHODES PTY LTD