

## Water Management Referral Response

<b>Application Number:</b>	DA2020/1480
<b>Date:</b>	17/03/2021
<b>To:</b>	Anne-Marie Young
<b>Land to be developed (Address):</b>	Lot 1 DP 5055 , 8 Forest Road WARRIEWOOD NSW 2102

### Reasons for referral

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

### Officer comments

Review 11/3/21

**Groundwater:** Appears to be low risk for groundwater. Some concerns about the area of the development and basement, which has a significant impact on infiltration to groundwater, which is particularly important to maintain the base flows of Fern Creek. It does appear however, that the groundwater is typically lower than the basement, reducing the risk of the basement causing 'humping' and redirection of groundwater flows. Satisfactory. Dewatering conditions would apply in the instance that groundwater or tailwater needed to be dewatered from the excavation during construction.

**Floodwater diversion:** The diversion of the upstream overland flows via a 1500 pipe directly to the creek is not ideal, but will be accepted with sufficient reinforcement and stabilisation of the creek including on the opposite (northern) bank, which is owned by Council. We ask that the following be carried out prior to approval of the DA:

1. Provide detailed design of the outlet into the creek and stabilisation work on the opposite bank on Council's land (as Council does not review the Construction Certificate)
2. The headwall should be drawn back quite high on the creek bank with a rock lined channel on the bank to prevent it discharging straight into the creek channel.

Please note that the applicant will need to obtain approval to conduct works on Council's land (the northern creek bank), which could include accessing the location through Council's reserve at 4 Jubilee.

**Stormwater:** The applicant has provided a comprehensive Water Sensitive Urban Design approach to stormwater management and has sufficiently justified their approach. There are a number of design issues and concerns that need to be resolved prior to approving the DA. Some of those relate to the location of inlets and outlets (which are too close to each other), and to ownership of the basins.

1. The outlet for the western basin should be moved to the middle of the northern edge of the basin. This will increase the distance from the inlet. There is no need to change the point at which it connects to the main 1500 stormwater pipe.
2. Basins do not work particularly well when they are long and narrow, but function and circulation will be improved by created three outlets into the basin from the three stormwater pipes on the southern edge (off the roads). This will prevent water leaving the inlet and going straight into the outlet.
3. We also would like to see the outlet for the eastern basin moved to the northernmost point of the basin closest to the creek. The outlet drainage should discharge to a similar location on the creek bank as shown on the plans to maintain the discharge of flow in the same direction as creek flow.

It is not clear from the application how ownership and maintenance of the basins will be managed. Will the two basins, the OSD and the Stormfilter cartridges all be managed under Lot 1 of Community title land? It would not be appropriate for the house lots on the eastern boundary to be responsible for the stormfilter cartridges alone and the remaining houses and the strata be responsible for the basins, as

the eastern row of lots benefit from the drainage on the private roads that drain to the basin.

The plans vaguely refer to future development, but there is no further space for stormwater management, so any increase on the proposed lots in these plans may be problematic. It would be good to have an indication of future intentions to understand whether the stormwater arrangements are sufficient.

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.