

Engineering Referral Response

Application Number:	DA2023/0379
Proposed Development:	Torrens Subdivision of one lot into four lots
Date:	01/09/2023
To:	Jordan Howard
Land to be developed (Address):	Lot 18 DP 19022 , 107 Iris Street BEACON HILL NSW 2100

Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m² or
- Alterations to existing or new driveways or
- Where proposals affect or are adjacent to Council drainage infrastructure incl. watercourses and drainage channels or
- Torrens, Stratum and Community Title Subdivisions or
- All new Commercial and Industrial and RFB Development with the exception of signage or
- Works/uses in flood affected areas

And as such, Council's development engineers are required to consider the likely impacts on drainage regimes.

Officer comments

The following amendments are required:

Subdivision Plan

1. Show a 3.0 m wide drainage easement on eastern boundary benefitting Council as per PLM notes.
2. Show a drainage easement benefitting/ burdening proposed lots as required in co-ordination with amended stormwater plans. As per previous advice, a single connection point to Council pit SPP04716 is required.
3. Show a right of way composed of straight segments. The Right of Way should be 3.5 m wide on straight sections and widened as required.

Right of Way

1. Provide a longitudinal section and cross sections of proposed Right of Way/ driveway.

Stormwater Plans by TCP

1. The locations of the proposed on site detention systems means that a large percentage of proposed driveways will by-pass the system. The OSD systems should be located to capture 100% of internal driveways and 100% of roof areas. Show size, invert levels of pits capturing driveway run off and stubs in the OSD tanks that will connect to future dwellings. Show all proposed surface levels to justify design.
2. As advised by the Stormwater unit in the PLM notes, the internal system should connect to Council pit SPP04716. This will necessitate a drainage easement at the front of property burdening/ benefitting

relevant lots as required.

3. Provide longitudinal section of proposed internal drainage system including details of connection to Council pit SPP04716

4. The on site detention system must be designed in accordance with Section 9.3.2.5 of the *Water Management for Development Policy Version 2 dated 26 February 2021*. As per advice in this section the pre-development site conditions are to be modelled as 100% pervious. The impervious fraction of the proposed development is to be estimated based on the likely building footprint and other impervious areas. The impervious fraction of the proposed development must be a minimum of 60% however. The OSD system is to attenuate post development flows to pre development levels for all storm events from the 20% to the 1% AEP. Provide DRAINS model to Council for perusal.

5. DRAINS modelling requirements are as follows:

(i) Use ARR Data Hub and BOM data.

(ii) Use Initial loss - Continuing loss model

(iii) Provide pre and post models for the 20%, 5% and 1% AEP events.

5. Approval from Sydney Water is required for building over or in the vicinity of Sydney Water assets.

Engineering Comments 07.08.23

1. Subdivision Staging.

A. The submitted Statement of Environmental Effects states that it is proposed to develop the site in stages with Lots 1 and 2 to be developed first. Upon the development of Lots 1 & 2 it is proposed to demolish the existing dwelling straddling proposed Lots 3 & 4.

The applicant is advised to submit separate Plans of Subdivision which outline the requested Council approvals for Stage 1 and Stage 2. Please note, that the stormwater works for the ultimate subdivision will need to be constructed as part of Stage 1 works,

2. Drawing Sw-01 rev R4 by TPC.

A. The on site detention tank needs to be contained entirely within a drainage easement.

B. Show all pits on OSD tank.

C. The building footprint cannot be within Council's drainage easement.

D. No pit construction is permitted on Council's drainage easement. As per previous advice the private connection is to be made to Council pit SPP04716. No encroachment onto Council's drainage easement is permitted.

E. Provide an easement over private property for the pipe connection to Council's pit for burdened lots.

F. A 375 dia pipe connection to Council's pit is not supported. Provide smaller pipe to convey calculated discharge from on site detention tank.

G. Provide indicative Finished Floor Levels for future dwellings.

H. Provide drainage longitudinal sections for each proposed pipe.

I. Provide pipe sizes.

J. Pits 3 & 4 cannot have the same invert levels.

3. Drawing Sw-02 rev R4 by TPC

A. Check stated OSD tank volume as it does not match the volume calculated from the tank dimensions

4. Drawing Sw-04 rev R4 by TPC.

A. Confirm whether the design intent is to provide for a High Early Discharge (HED) arrangement.

B. All flows are to be discharged through the control orifice for flows up to the 1% AEP.

C. The top of water level is to be set at the top of emergency overflow level. Amend tank size accordingly.

- D. Provide levels for all overflow structures.
- E. Show all inlet pipe levels. Inlet pipes should be above storage levels.
- 5. The internal driveway shall be 3.5m wide and widened to 4.0m where the driveway is combined with an easement for services or drainage
- 6. Provide DRAINS model of proposed OSD basin for Council perusal.
- 7. Show all gradients for proposed vehicle crossing and internal driveway design on driveway longitudinal sections.
- 8. Amend Plan of Subdivision by registered surveyor to reflect requested amendments.

Engineering Comments 01.09.23

1. Subdivision Staging.

A. The submitted Statement of Environmental Effects states that it is proposed to develop the site in stages with Lots 1 and 2 to be developed first. Upon the development of Lots 1 & 2 it is proposed to demolish the existing dwelling straddling proposed Lots 3 & 4.

The applicant is advised to submit separate Plans of Subdivision which outline the requested Council approvals for Stage 1 and Stage 2. Please note, that the stormwater works for the ultimate subdivision will need to be constructed as part of Stage 1 works,

2. Drawing Sw-01 rev R6 by TPC.

C. The building footprint cannot be within Council's drainage easement.

D. No pit construction is permitted on Council's drainage easement. As per previous advice the private connection is to be made to Council pit SPP04716. No encroachment onto Council's drainage easement is permitted.

F. A 375 dia pipe connection to Council's pit is not supported. Provide a 150 or 225 dia pipe to convey calculated discharge from on site detention tank.

G. Provide indicative Finished Floor Levels for future dwellings.

H. Provide drainage longitudinal sections for each proposed pipe.

AA. All pipes benefitting one lot and burdening another need to be within a drainage easement. One of the Pit 7's and connecting pipe appears to be outside an easement. The pipe connection from the raingarden on Lot 2 to Lot 1 is outside the easement.

3. Drawing Sw-02 rev R6 by TPC

AA. Label sections X & X correctly.

4. A High Early Discharge design for the on site detention system is not supported.

5. Discharge control should be on the downstream end of the OSD basin.

6. The internal driveway shall be 3.5m wide and widened to 4.0m where the driveway is combined with an easement for services or drainage

7. Show all gradients for proposed vehicle crossing and internal driveway design on driveway longitudinal sections.

6. Amend Plan of Subdivision by registered surveyor to reflect requested amendments.

The proposal is therefore unsupported.

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

Recommended Engineering Conditions:

Nil.