



CIVIL

Concept Stormwater Management Plan

for

1803A Pittwater Road, Mona Vale

for Capital One Funds Management

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		Date
Prepared by	RDU	21/10/2025
Checked by	CP	21/10/2025
Admin	HB	21/10/2025

1. Introduction

1.1. General

Northrop Consulting Engineers have been engaged by Capital One Funds Management to prepare a Stormwater Management Plan for the proposed development at 1803/1803A Pittwater Road, Mona Vale. The development proposes the construction of an 6-storey commercial building, including two levels of basement car parking below the ground floor.

1.2. Site Description

The proposal encompasses the development of Lot 11 and 12 DP588908 herein known as 'the site'. The site has a total area of 1,560 m² and is moderately steep, falling to the south east with an average grade of approximately 6%. The site currently features a two-storey brick residence on the western corner with a driveway providing access to Pittwater Road. The site has two easements running through the site. A 1.2 m wide stormwater easement conveys upstream stormwater through a 225mm diameter earthenware pipe located along southern boundary of the site before discharging to the existing kerb and gutter along Pittwater Road. The easement is in favour of Lot 11. Site survey shows a 1 m easement located on Lot 11 to convey upstream surface flow through the site before discharging to the kerb and gutter.

We understand that the site sits within Region 1 – Northern Catchments.

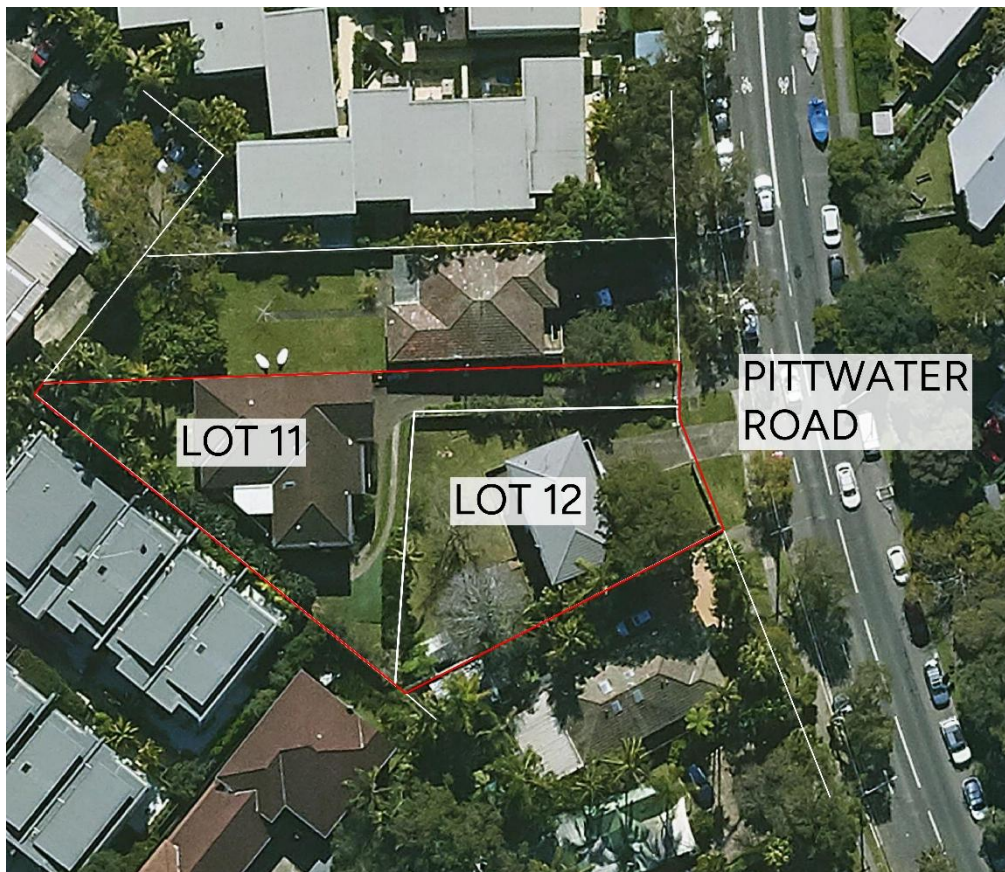


Figure 1 – Development Site

2. Stormwater Management Strategy

2.1. General Requirements

The stormwater management system to be adopted on site has been developed in consideration of the following:

- Pittwater 2014 Development Control Plan (DCP), in particular:
 - Section B5.15 Stormwater.
- Northern Beaches Council Water Management for Development Policy
- The relevant Australian Standards.
- NSW Music Modelling Guidelines.

2.2. Point of Discharge

Stormwater runoff from majority of the site will connect into the existing pit and pipe network within the 1.2 m stormwater easement running along the southern boundary of Lot 12. The easement contains a 200 mm diameter earthenware pipe and discharges straight to the kerb on Pittwater Road.

2.3. Proposed Development Stormwater Philosophy

The stormwater philosophy adopted onsite for the proposed development can be summarised as follows:

- Roof runoff is to be directed to a below ground rainwater tank with a minimum volume of 6kL. Harvested rainwater is to be reused on site. Tank overflows are to be directed to the proposed below-ground 24kL detention tank via the pit and pipe network.
- Below ground detention tank to be conveyed into a stormwater pit containing filter cartridges to treat minor flows, stormwater to exit pit via a false floor. Major flows will spill over the proprietary weir to the outlet point.
- Basement carpark runoff and groundwater seepage to be conveyed via a pump out system to a below-ground detention tank. A minimum detention volume of 3 m³ is proposed subject to detailed design of basement inflows.
- Landscape runoff to be directed to the below-ground detention tank.
- Landscape runoff from the northwest corner of the site to be directed into the basement pump out system before discharging into the below-ground detention tank.
- Overflow from the onsite 24kL detention tank is to connect to the existing easement on the southern boundary of Lot 12 pit in Pittwater Road before discharging to kerb on Pittwater Road.
- A small portion of the site will bypass the treatment train and detention storage, consisting of 7.5m² impervious and 118.4m² total, or approximately 9% which are both less than Council's requirements.

2.4. Site Area Summary

- Total site area = 1,560 m²
- Existing Site Area
 - Total Impervious Area = 740m²
 - Pervious Area = 820m²
- Proposed Site Area
 - Total Impervious Fraction = 68% (1,055 m²) – 315m² increase
 - Total roof area = 605 m²
 - Total hardstand area = 432 m²
 - Total Pervious Fraction = 32% (505 m²)
- Developed Case Treated Catchment Area
 - Roof area = 432m²
 - Impervious Area = 614m²
 - Pervious Area = 388m²
- Developed Case Bypassing Catchment Area
 - 7.5 m² impervious (max 30m² allowable)
 - 118.4 m² total being 9% (max 20% allowable)

2.5. Onsite Stormwater Detention

As identified above, an increase of 315m² is proposed as part of the development. Based on Table 7 of Northern Beaches Council Water Management for Development Policy, an OSD volume of 24,000m³ is required with max PSD of 12l/s. This is proposed to be located as shown on the Civil plans included in Appendix A. The proposed orifice plate control has been sized based on Appendix 9 of Northern Beaches Council Water Management for Development Policy., requiring a 76mm orifice and minimum 150mm outlet pipe.

2.6. Stormwater Quality

In order to minimise any adverse impacts upon the surrounding ecology, stormwater a stormwater quality treatment train is proposed for the development. The treatment train will include the following:

- Rainwater reuse tank to remove pollutants captured in roof areas by reusing on site
- Proprietary treatment system in the form of PSORB treatment filters incorporated into the stormwater pit immediately downstream of the rainwater tank.

The proposed treatment system is to be designed to achieve pollutant reduction targets as identified in Northern Beaches Council Water Management for Development Policy.

3. Conclusion

Based on the concept design, it is justified that the proposed Stormwater Management Strategy can satisfy the stormwater management objectives of Pittwater DCP.

We trust this meets your expectations, however, should you have any queries, please feel free to contact the undersigned on (02) 4943 1777.

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Appendix A – Engineering Drawings

Provided separately due to size