

# PART SITE STORM WATER MANAGEMENT PLAN

~ 1:200

System to collect all carparking roof and turning area run off and be directed to an OSD tank. The OSD is to reduce peak off site flow rates to that of an un developed 'greenfields' site. Tank outlets are to be discharged to Chisholm Ave in a manner to mimic pre developed conditions and as not to adversely effect downstream properties.

Pittwater 21 DCP Section B5 Water Management Compliance -

B5.1 Water Management Plan

- storm water addressed within this plan, rainwater, grey water and waste water details by others as per industry standards

B5.4 Storm Water Harvesting

- refer BASIX certificate by others

B5.5 Rainwater Tanks

- not applicable

B5.6 Rainwater Tanks - Water Supply

- not applicable

B5.7 Storm Water Management Onsite Detention

- approx 206m<sup>2</sup> increase in impervious (hard) surfaces, using DRAINS software 1500l OSD storage required

B5.8 Stormwater Management Water Quality Low Density Residential

- pre screening to BASIX Rainwater Tank and SQID treatment system detailed within 450x450x450 Service Pit

B5.9 Stormwater Management Water Quality Other than Low Density Residential

- not applicable

B5.10 Stormwater Discharge into Public Drainage system

- discharge via dispersion (to mimic existing conditions)

B5.11 Stormwater Discharge into Waterways and Coastal areas

- not applicable

B5.12 Stormwater Drainage systems and Natural watercourse

- not applicable

B5.13 Development on Waterfront land

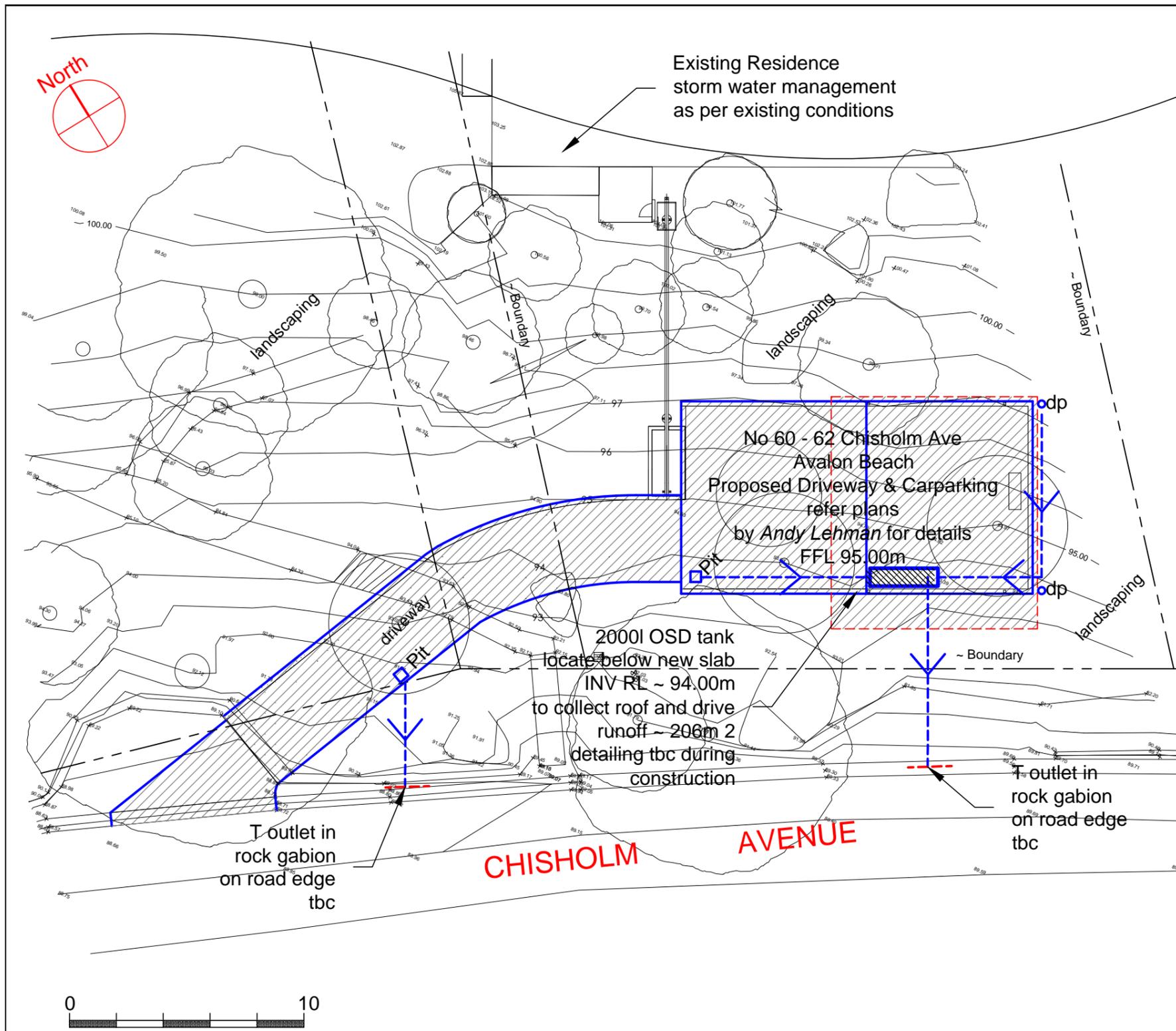
- not applicable

B5.14 Stormwater Drainage Easements

- not applicable

Detailed drainage is to be sized for Construction Certificate submission / Tender documentation by the contracting builder / plumber to NCC and Australian Standards.

Indicates down pipe / rain water head location tbc, Variations to layout to be reviewed and approved by Barrenjoey Consulting Engineers before construction.



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PROJECT:  
**PROPOSED ALTERATIONS & ADDITIONS**  
**60 - 62 CHISHOLM AVE**  
**AVALON BEACH**  
 for ~ N. HERMAN

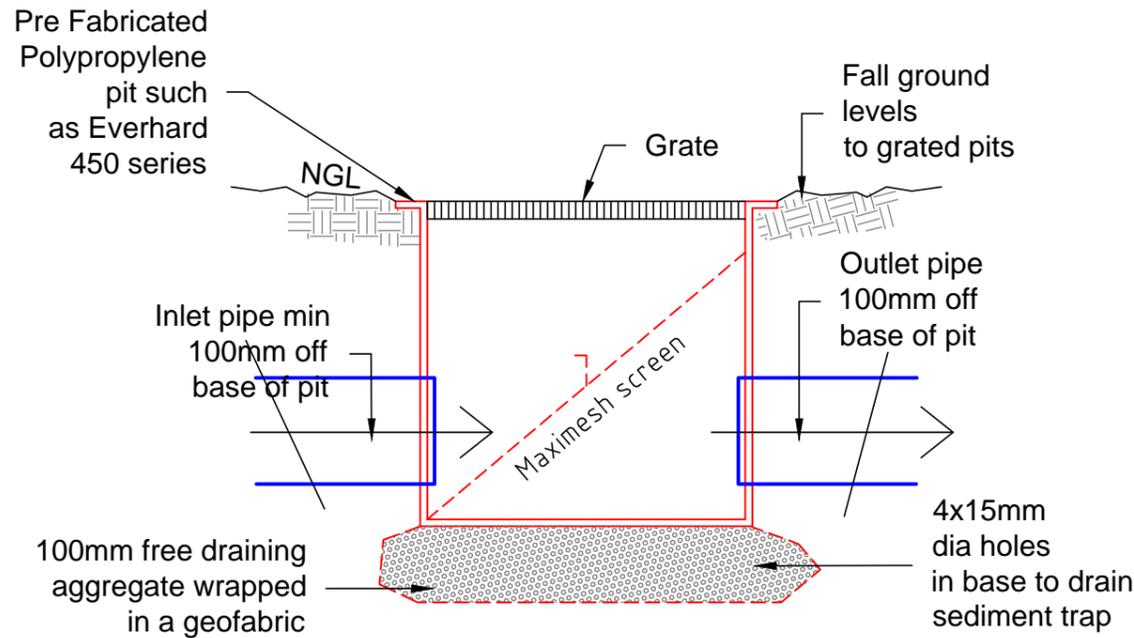
DRAWING :  
**SITE STORM WATER**  
**MANAGEMENT PLAN**

Job No :  
**201206**

Drawing No :  
**SW1**

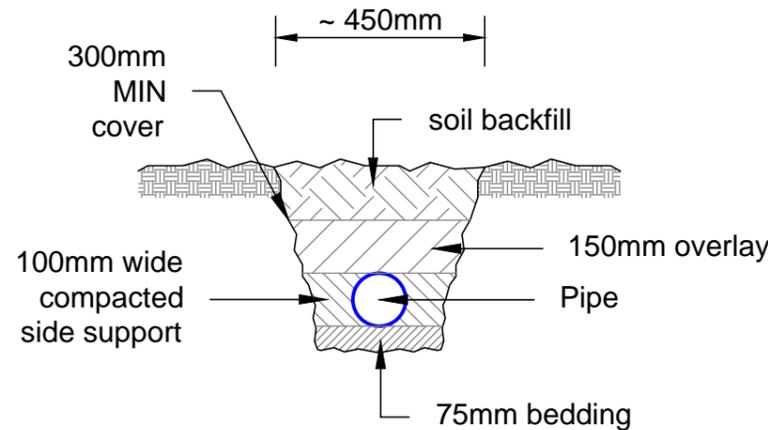
Document Certification  
 Barrenjoey Consulting Engineers ptj ltd  
 per  
 Lucas Molloy MIEA CPEng NER Director  
 MARCH 2021

# STORMWATER NOTES



## TYPICAL PIT DETAIL

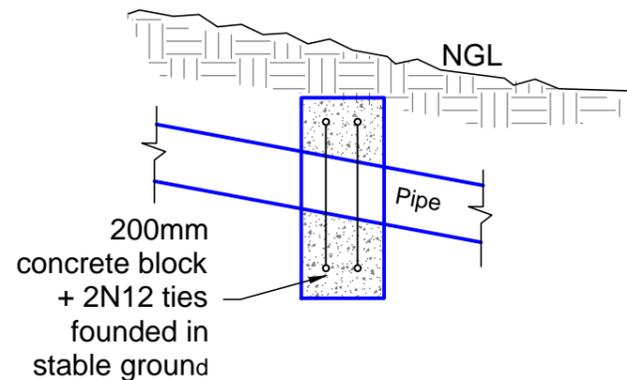
NTS



## TYPICAL PIPE & TRENCH DETAIL

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Note -  
Bedding / overlay to be -  
a) sand, free from rock, hard or sharp objects  
b) max 14mm crushed rock or gravel  
c) the excavated material free of rock, hard or sharp objects and broken up with no soil lumps > 75mm dia



## ANCHOR BLOCK DETAIL

TO BE INSTALLED AT 6m CTS  
IF PIPE SLOPE > 1V TO 5H

1. All roof collection components (ie gutters / DPs etc) are to be located / sized by the Developments contracting Plumber for a **5% AEP** event capacity.
2. Trunk lines shown on plan to be 150mm dia uPVC.
3. All pipes to be uPVC to AS 1254:2002.
4. All pipes to be laid at the grade required to match pit invert levels.
5. All pipes to be installed and laid in accordance with AS 3500.3:2003.
6. All roof guttering/ down pipes / valley gutters / box gutters etc are to be sized and installed in accordance with AS 3500.3:2003.
7. All pits are to be proprietary uv resistant polypropylene or similar unless noted (approved by the Engineer) and are to include a min 50mm sediment trap in the base and a maximesh screen laid at 45° across the pit to protect the outlet pipe.
8. All pits greater than 600mm in depth are to be proprietary precast concrete (approved by the Engineer).
9. All pits greater than 1000mm in depth are to have adequate access requirements in accordance with OH&S/Workcover requirements (ie; minimum dimensions 900x900mm with step irons).
10. All works are to be inspected and certified by the Principle Certifying Authority prior to backfilling.
11. All works requiring certification by the Engineer will require a works as executed survey prepared by a registered Surveyor detailing all levels etc as on the Engineering plans.
12. The system is to be flushed and cleaned of all sediment and debris annually.
13. The system will require regular cleaning and maintenance to ensure its ability to function is maintained.
14. To ensure the system's ability to function is maintained it is to be inspected and certified as operating effectively by a licensed plumber every 5 years, and an engineer every 20 years.
15. All existing predevelopment catchment area run-off conditions exiting the site are to be maintained with no run-off flows being diverted from the predevelopment condition.
16. Flows from upstream properties entering the site are to be monitored during construction and diverted about the OSD system / residence etc as required.

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AVALON BEACH  
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DRAWING :  
**SITE STORM WATER  
MANAGEMENT  
DETAILING 1**

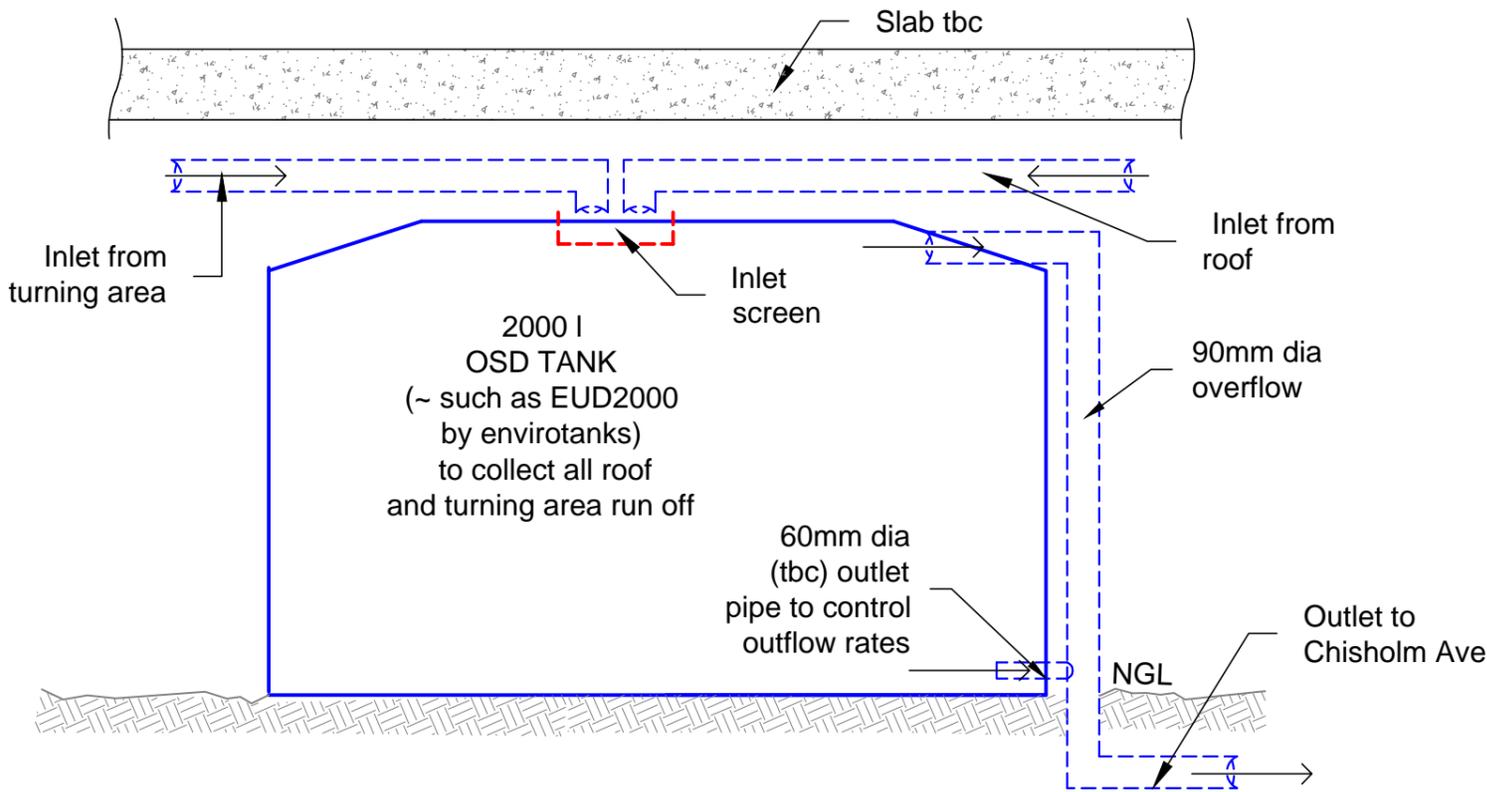
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Drawing No :  
**SW2**

Document Certification  
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per  
Lucas Molloy MIEA CPEng NER Director

# ONSITE DETENTION REPORT (DRAINS ANALYSIS)

Development area	- 206 m <sup>2</sup>
Existing impervious area	- 0 m <sup>2</sup>
Proposed impervious area	- 206 m <sup>2</sup>
Area modeled to OSD	- 106 m <sup>2</sup>
Detention Volume modeled	- 1500l
Existing Site Discharge	
5yr ARI Storm	- 9 l/s
100yr ARI Storm	- 14 l/s
Post Development Site Discharge	
5yr ARI Storm	- 9 l/s TOTAL (4 l/s via OSD, 5 l/s driveway)
100yr ARI Storm	- 13 l/s TOTAL (6 l/s via OSD, 7 l/s driveway)



## OSD / STORAGE TANK SYSTEM / CONTROL DETAIL

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MANAGEMENT  
DETAILING 2**

Job No :  
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Drawing No :  
**SW3**

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