

STORMWATER MANAGEMENT PLAN

~ 1:200

Proposed new residence refer to plans by Gartner Trovato Architects for details.
Total Site Area - 1878m² Net Site Area - 1276m² (E4 Zone only)

System as per Northern Beaches Councils Water Mangement for Development Policy Section 9.0 On Site Stormwater Management Section 9.3.1 Onsite Stormwater Disposal Requirementst Region 1 - Northern Catchments. Table 7 Requirements for Size and Allowable Discharge from On-Site Detention Systems.

Existing hard surface area 292m² Proposed hard surface area 553m²

250 - 300m² additional hard surface therefore Minimum Capacity of OnSite Detention Tank - 18000l Discharge rate - 9 l/s

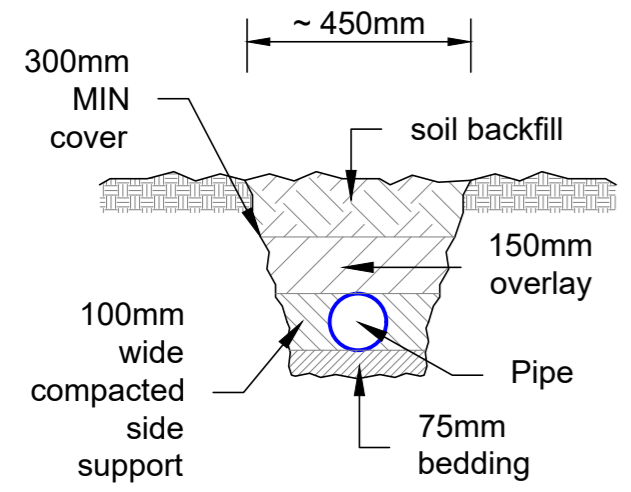
Trunk drainage lines shown above to be 150 dia uPVC, Pits to be 450x450 uPVC.

Complete system design (inc roof drainage) to be detailed in Construction Certificate documentation.

Table 7 Requirements for Size and Allowable Discharge from On-Site Detention Systems

| Additional Hard (Impervious) Surface Area (square metres) | Minimum Capacity of On-Site Detention Tank (Litres) | Discharge Rate (Litres/Sec) |
|---|---|-----------------------------|
| 0 - 50 | Nil | Nil |
| >50 - 75 | 4,500 | 2 |
| >75 - 100 | 6,000 | 3 |
| >100 - 150 | 9,000 | 4 |
| >150 - 200 | 12,000 | 6 |
| >200 - 250 | 15,000 | 7 |
| >250 - 300 | 18,000 | 9 |
| >300 - 400 | 24,000 | 12 |
| >400 - 500 | 30,000 | 15 |
| >500 - 600 | 36,000 | 18 |
| >600 - 700 | 42,000 | 21 |
| >700 - 800 | 48,000 | 24 |
| >800 - 900 | 54,000 | 27 |
| >900 - 1,000 | 60,000 | 30 |
| >1,000* | A minimum storage capacity of 60 litres per m ² of additional hard/impervious surface area, and a discharge rate which replicates the discharge from the site were it to be undeveloped. | |

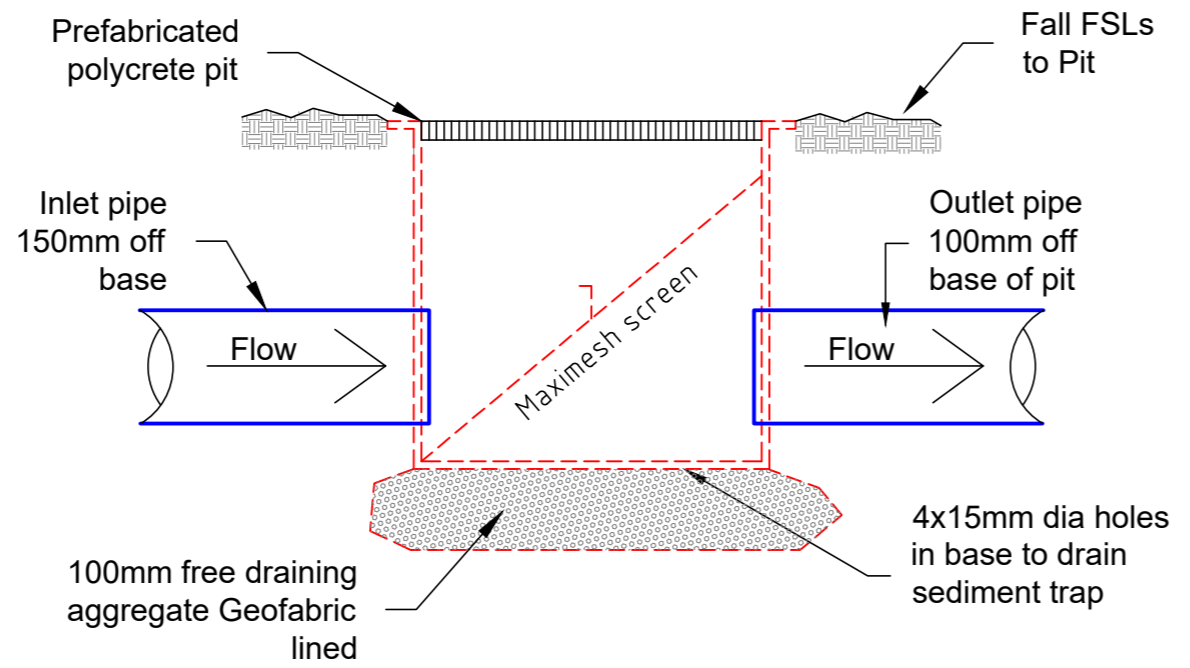
*Developments exceeding 1,000 square metres of additional hard (impervious) surface area must also provide with the Water Management Plan, an Integrated Water Management Strategy prepared by a suitably qualified and experienced Water Engineer. The plan must demonstrate that stormwater flows discharged from the site is to be no greater than what would have occurred predevelopment, and that Water Sensitive Urban Design principles have been practically maximised within the proposed development.



TYPICAL PIPE & TRENCH DETAIL

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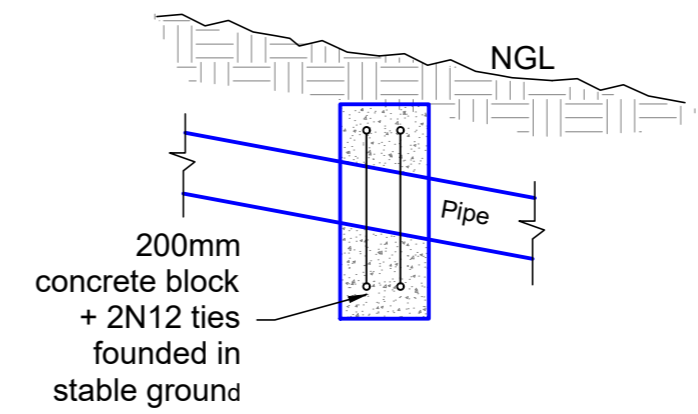
Note -
Bedding / overlay to be -
a) sand, free from rock, hard or sharp objects
b) max 14mm crushed rock or gravel
c) the excavated material free of rock, hard or sharp objects and broken up with no soil lumps > 75mm dia



TYPICAL STORMWATER FILTRATION DEVICE / POLLUTANT / SEDIMENT CONTROL PIT DETAIL

NTS

NOTE - 100mm Sediment trap and maximesh screen to collect organic matter and coarse sediments

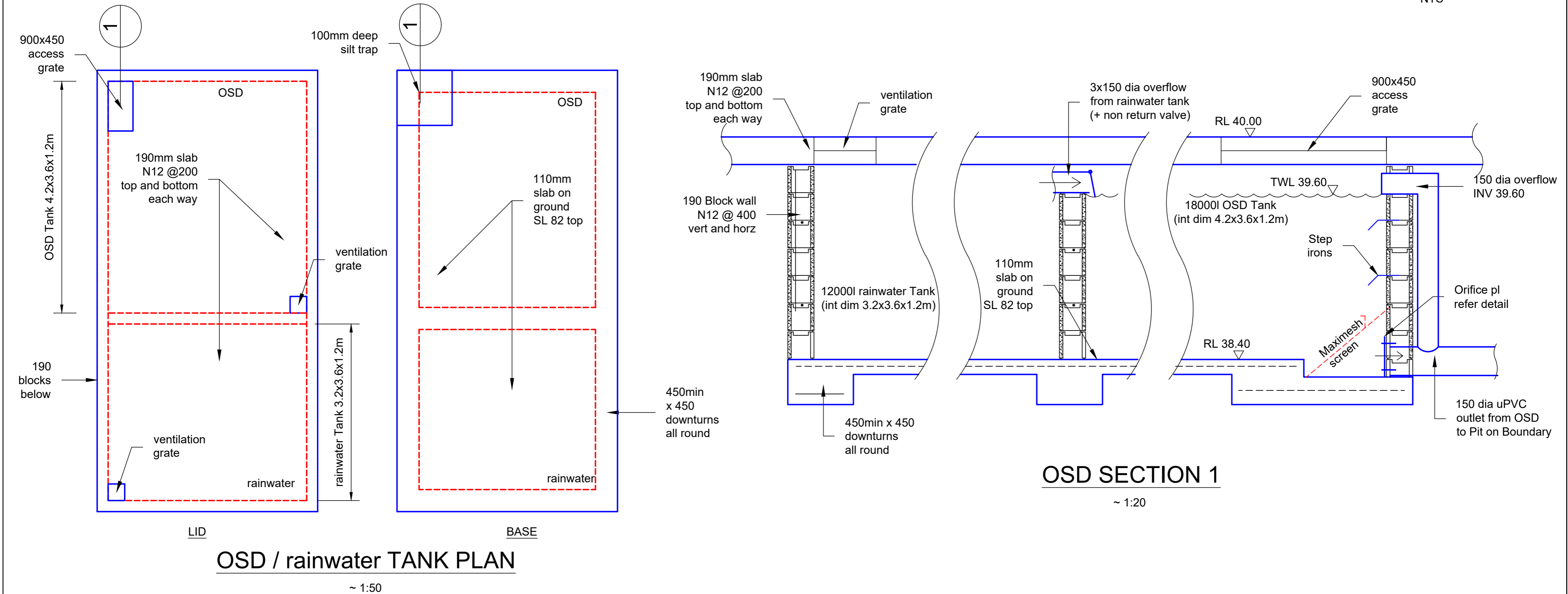
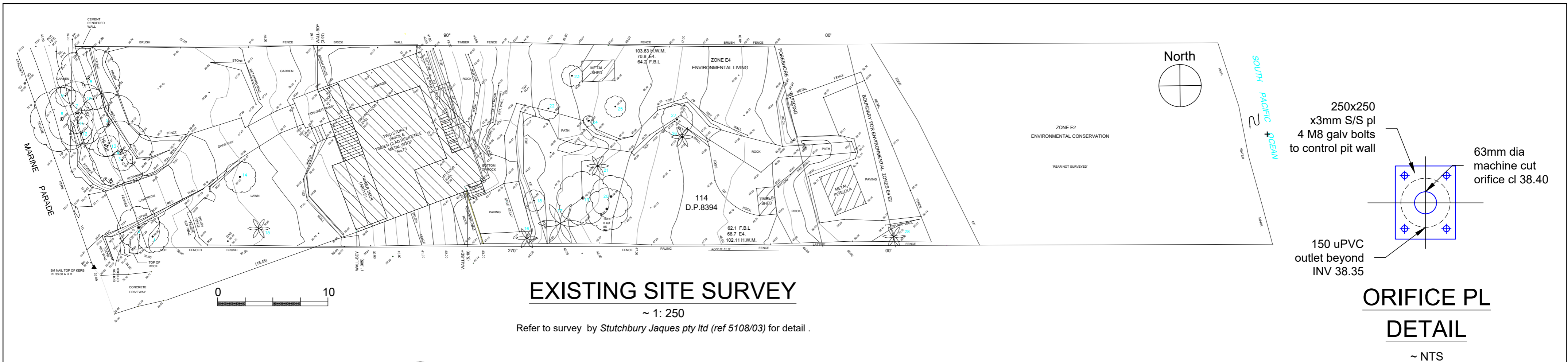



ANCHOR BLOCK DETAIL

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

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| ISSUE: | | Barrenjoey Consulting Engineers Pty Ltd Stormwater Structural Civil PO Box 672 Avalon NSW 2107 M: 0418 620330 E: lucasbce@bigpond.com ABN: 13124694917 ACN: 124694917 | PROJECT: PROPOSED NEW RESIDENCE 73 MARINE PDE AVALON BEACH for ~ COURTNEY FAMILY | DRAWING : SITE STORMWATER MANAGEMENT PLAN | Job No : 211105 | Drawing No : SW1DA-C |
| 14. 12. 2021 | Prelim issued for comment | | | | Document Certification Barrenjoey Consulting Engineers Pty Ltd per Lucas Molloy MIEA CPENG NER Director | |
| 16. 12. 2021 | Prelim issued for DA submission | | | | | |
| 31. 03. 2022 | DA-A Revised for DA submission, BASIX volume clarified | | | | | |
| 27. 04. 2022 | DA-B Revised for DA submission, OSD added | | | | | |
| 01. 06. 2022 | DA-C Revised for DA submission, drive relocated | | | | | |

JUNE 2022



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| ISSUE: 27. 04. 2022 Prelim issued for DA submission | | Barrenjoey Consulting Engineers Pty Ltd Stormwater Structural Civil PO Box 672 Avalon NSW 2107 M: 0418 620 330 E: lucasbce@bigpond.com ABN: 13124694917 ACN: 124694917 | PROJECT: PROPOSED NEW RESIDENCE 73 MARINE PDE AVALON BEACH for ~ COURTNEY FAMILY | | DRAWING : SITE STORMWATER MANAGEMENT DETAILING 1 | | Job No : 211105 Drawing No : SW2 _{DA} | |
| | | | | | | | Document Certification Barrenjoey Consulting Engineers Pty Ltd per Lucas Molloy MIEA CPEng NER Director | |
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