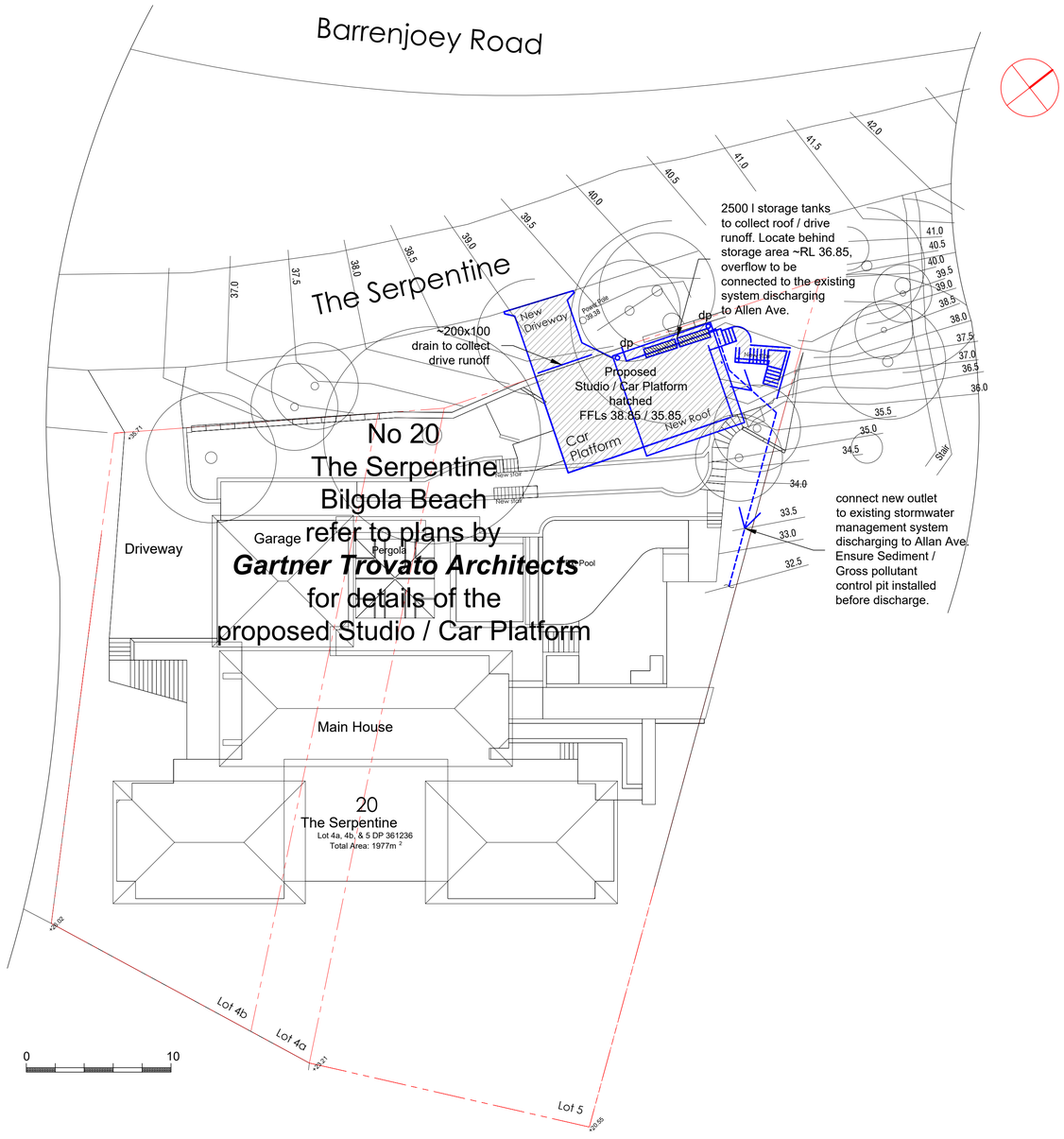
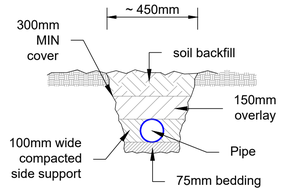


SITE STORMWATER MANAGEMENT PLAN

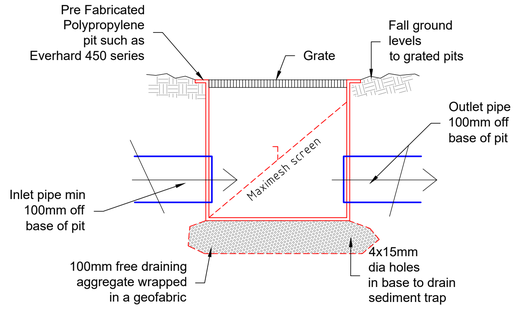
~1:200

Proposed Studio / Car Platform refer to plans by Gartner Trovato Architects for details. Site Area - 1977m2
On Site Stormwater Detention as per Northern Beaches Councils - *Water Management For Development Policy*
9.3.1 Onsite Stormwater Disposal Requirements Region 2 – Northern Catchments
independent assessment of the water management ensuring the general requirement of the policy is to ensure that the site's stormwater runoff after any development does not exceed the runoff prior to the development, refer DRAINS analysis for assessment. 2500l storage tank specified with 25% of the 2000l excess storage volume credited towards the OSD tank capacity. The storage tank overflow is to be connected to the existing stormwater management system discharging to Allen Ave. Ensure Sediment / Gross pollutant control pit installed before discharge. BASIX (if required) system operation etc by others.
All works (ie gutters/dps etc) are to be sized (for a 5% AEP event) and installed by a licensed plumber in accordance with NCC requirements and AS3500.3 specifications. All Trunk Drainage pipes, as shown on this plan are to be minimum of 90mm dia uno.
Variations to layout to be reviewed and approved by Barrenjoey Consulting Engineers before construction.



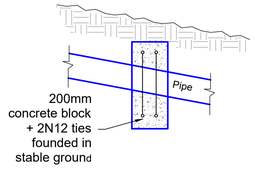
TYPICAL PIPE & TRENCH DETAIL

~ 1 : 20



SEDIMENT / GROSS POLLUTANT CONTROL PIT DETAIL

NTS



ANCHOR BLOCK DETAIL

TO BE INSTALLED AT 6m CTS
IF PIPE SLOPE > 1V TO 5H
AND AT CHANGE IN GRADE OF PIPE
ALT SOUNDLY FIX PIPE
TO ROCK / CONCRETE STRUCTURE

STORMWATER NOTES

1. All roof collection components (ie gutters / DPs etc)are to be located / sized by the Developments Hydraulic Consultant for a 5% AEP event capacity.
2. All Trunk Drainage pipes, as shown on this plan are to be minimum of 90mm dia uno.
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. Thrust blocks to be installed to the trunk drainage pipes in accordance with AS 3500.3:2003.
7. All roof guttering/ down pipes / valley gutters / box gutters etc are to be sized and installed in accordance with AS 3500.3:2003.
8. 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 oulet pipe .
9. All pits greater than 600mm in depth are to be proprietary precast concrete (approved by the Engineer).
10. All pits greater than 1000mm in depth are to have adequate access requirements in accordance with OH&S/Workcover requirements (ie; minimum dimensions 900x600mm with step irons).
11. All works are to be inspected and certified by the Principle Certifying Authority prioir to backfilling.
12. 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.
13. The system is too be flushed and cleaned of all sediment and debris annually.
14. The system will require regular cleaning and maintenance to ensure its ability to function is maintained.
15. 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 a engineer every 20yrs.

INDEPENDENT ASSESSMENT OF WATER MANAGEMENT (*DRAINS* ANALYSIS)

Site area	- 1799m2
Existing impervious area	- 750 m2 (690m2 / 35% modeled)
Proposed impervious area	- 850 m2
Detention Volume modeled	- 500l
Existing Site Discharge	
5yr ARI Storm	- 89 l/s
100yr ARI Storm	- 142 l/s
Post Development Site Discharge	
5yr ARI Storm	- 89 l/s (85 existing, 4 via OSD)
100yr ARI Storm	- 140 l/s (135 existing, 5 via OSD)
Note	- 2500l storage tank specified with 25% of the 2000l excess storage volume can be credited towards the OSD tank capacity

A1

ISSUE:		
Prelim	23. 02. 2023	Issued for comment
DA	24. 02. 2023	Issued for DA submission

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PROJECT:
PROPOSED
ALTERATIONS & ADDITIONS
20 THE SERPENTINE
BILGOLA BEACH
~for MILLER FAMILY

DRAWING :
SITE
STORMWATER
MANAGEMENT
PLAN

Job No : 230104

Drawing No SW1 DA

Document Certification
Barrenjoey Consulting Engineers pty ltd
per
Lucas Molloy MIEA CPEng NER Director
FEB 2023