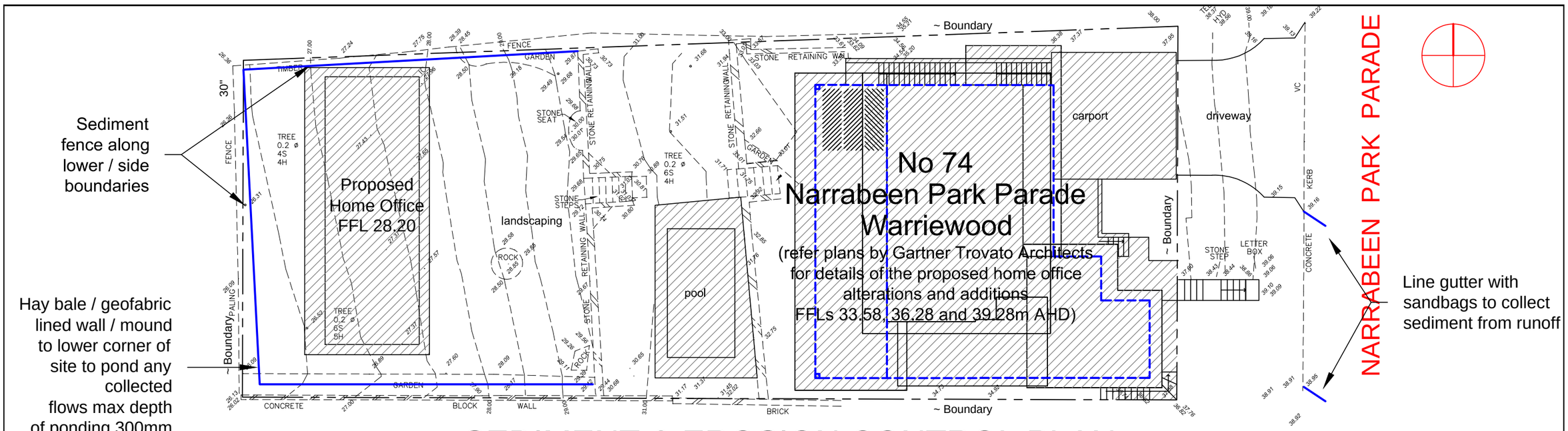
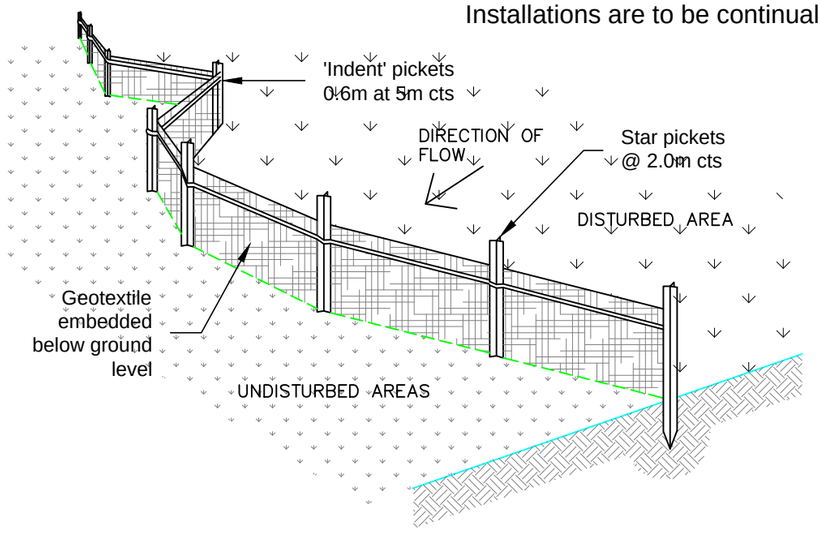



# SEDIMENT & EROSION CONTROL PLAN

~ 1:100

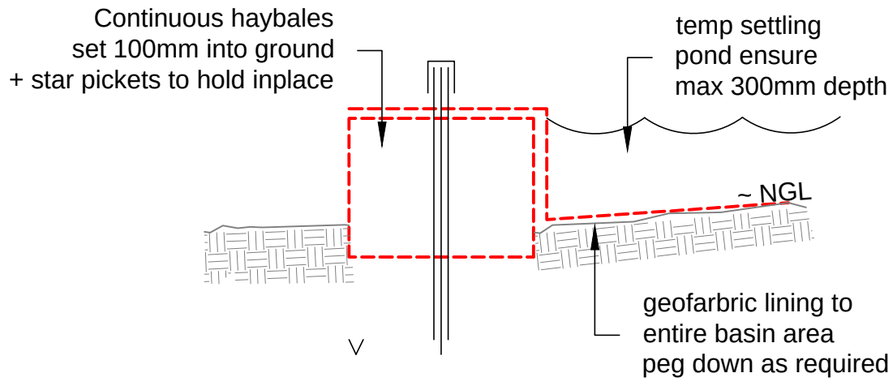
Sediment and erosion control measures are to be installed prior to any excavation works are carried out on site.
Installations are to be continually reviewed, maintained, upgraded to ensure satisfactory control of sediment and erosion.




SEDIMENT FENCE

SEDIMENT FENCE CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.




HAY BALE / SETTLING POND DETAIL

Barrenjoey Consulting Engineers pty ltd
Stormwater Structural Civil
PO Box 672
Avalon NSW 2107
P: 9918 6264 F: 9918 5841
M: 0418 620 330
E: lucasbce@bigpond.com
ABN: 13124694917
ACN: 124694917

PROJECT:

PROPOSED
ALTERATIONS & ADDITIONS
74 NARRABEEN PARK PARADE
WARRIEWOOD
for ~ HARLEY FAMILY

DRAWING :

SEDIMENT & EROSION
CONTROL PLAN

Job No : 150310A

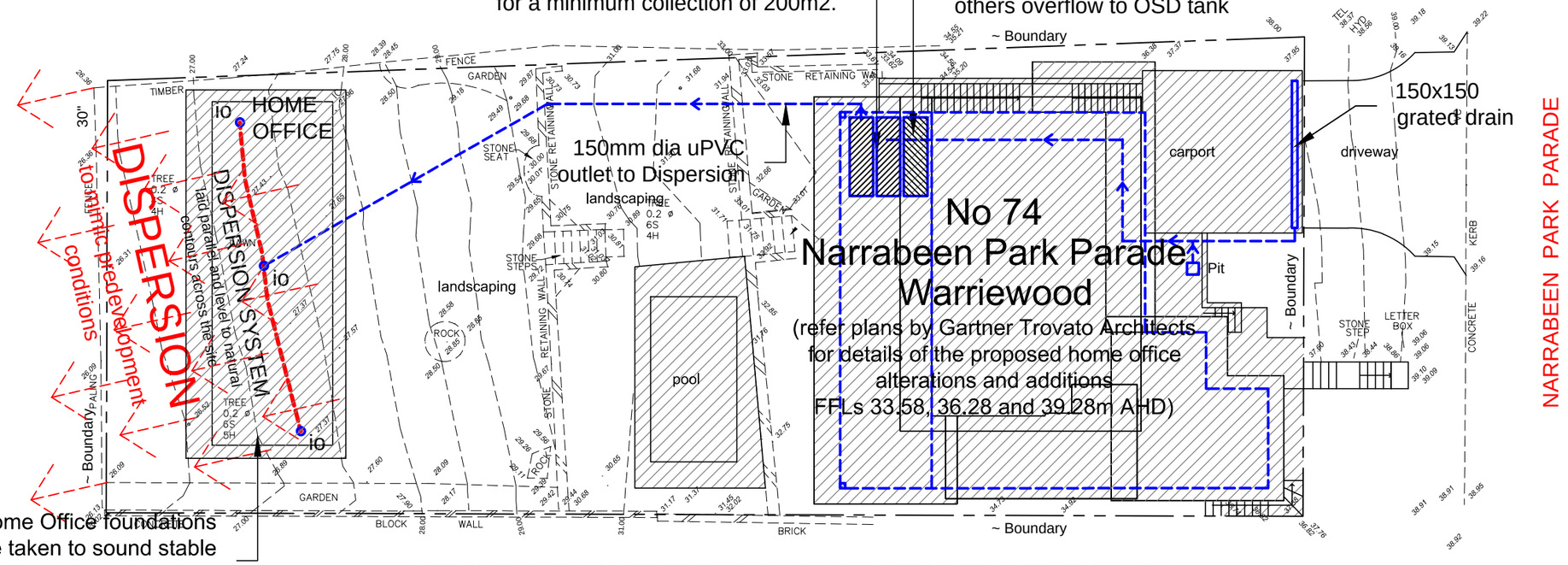
Drawing No : CIV1

Document Certification
Barrenjoey Consulting Engineers pty ltd
per
Lucas Molloy MIEA CPEng NPER Director

North

12000l OSD tank to collect BASIX tank over flow, other roof runoff and surface run-off from front of site for a minimum collection of 200m2.

5000l BASIX tank to collect roof area run-off detailing by others overflow to OSD tank




Home Office foundations to be taken to sound stable rock and designed to resist ground and surface water flow effects

# STORMWATER MANAGEMENT PLAN

~ 1:200

All drainage including gutters, dps, pipes etc are to be installed by a licensed plumber in accordance with industry standards. Roof area run-off is to be directed to the 5000l BASIX tank located on the Basement Level, operational details by others. Overflow from the BASIX tank, all other roof area run-off and collected surface run-off from the front of the site for a total of 200m2 is to be directed to the 12000l OSD Tank located on the Basement Level. The OSD system has been designed/modeled in accordance with Pittwaer 21DCP Section B5.7 for an icrease in impervious area of 200m2. The OSD outlet is to be directed to the onsite dispersion system to be located and laid in accordance with the Geotechnical and Civil consultants recommendation which are to be assessed during construction during rainfall events.The proposed Home Office foundations are to be taken to sound stable rock and designed to resist the effects of ground / surface water flows . Trunk drainage lines shown on this plan to be 150mm dia uPVC. Roof drainage to be sized during construction by the contracting plumber for the 1% AEP design storm event.

0 1 2 3 4 5


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
ALTERATIONS & ADDITIONS
74 NARRABEEN PARK PARADE
WARRIEWOOD
for ~ HARLEY FAMILY

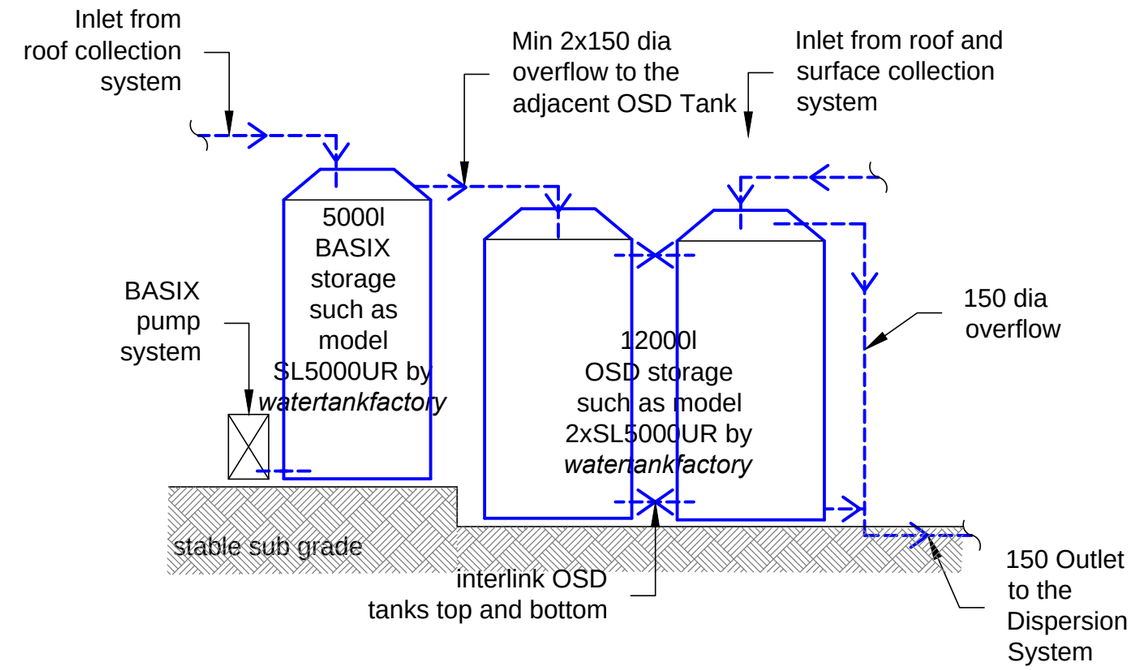
DRAWING :

STORMWATER MANAGEMENT PLAN

Job No : 150310A

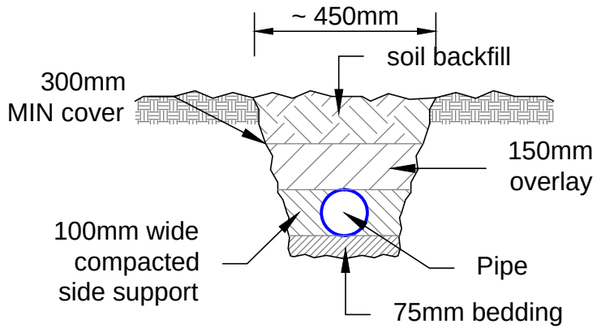
Drawing No : SW1

Document Certification
Barrenjoey Consulting Engineers pty ltd
per
Lucas Molloy MIEA CPEng NPER Director




# INDICATIVE BASIX / OSD SYSTEM LAYOUT

~ 1:50




# TYPICAL PIPE & TRENCH DETAIL

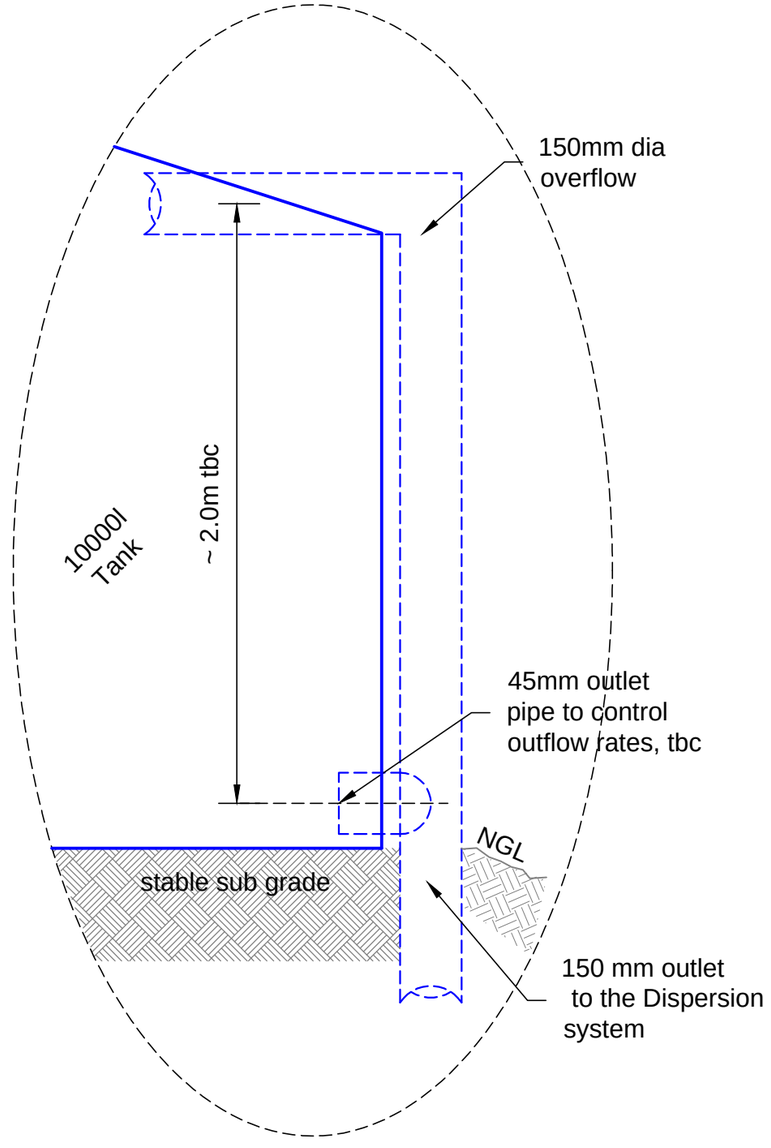
~ 1 : 20

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




# OSD CONTROL SYSTEM DETAIL

1:10

Barrenjoey Consulting Engineers pty ltd
Stormwater Structural Civil
PO Box 672
Avalon NSW 2107
P: 9918 6264 F: 9918 5841
M: 0418 620 330
E: lucasbce@bigpond.com
ABN: 13124694917
ACN: 124694917

PROJECT:

PROPOSED
ALTERATIONS & ADDITIONS
74 NARRABEEN PARK PARADE
WARRIEWOOD
for ~ HARLEY FAMILY

DRAWING :

STORMWATER MANAGEMENT
DETAILING 1

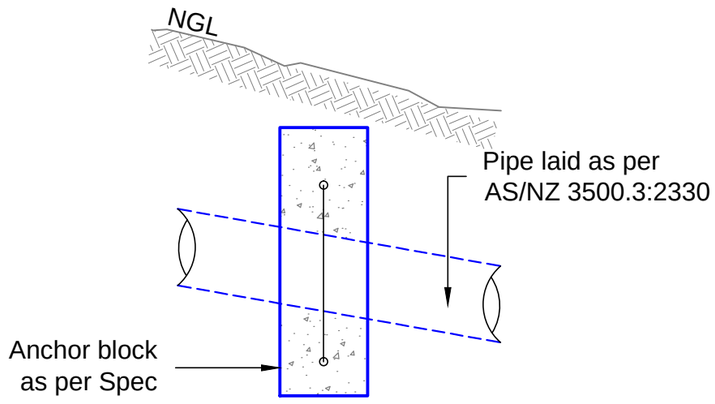
Job No : 150310A

Drawing No : SW2

Document Certification
Barrenjoey Consulting Engineers pty ltd
per
Lucas Molloy MIEA CPEng NPER Director

# STORMWATER NOTES

1. All roof collection components (ie gutters / DPs etc)are to be located / sized by the Developments contracting Plumber for a **1% AEP** event capacity.
2. IO indicates inspection opening.
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 oulet 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 prioir 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 too 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 a engineer every 20yrs.
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.

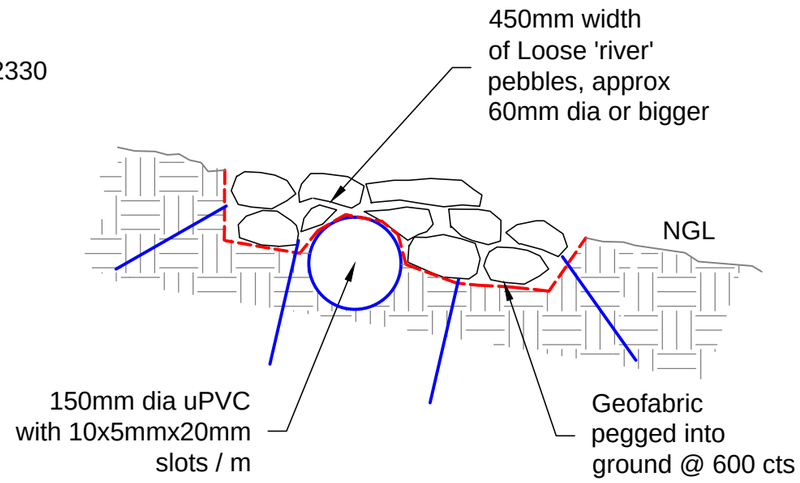



## ANCHOR BLOCK DETAIL

nts

AS/NZ3500.3:2003 Excerpt
8.10 ANCHOR BLOCKS
Where the gradient of a site stormwater drain exceeds 1:5, anchor blocks shall be installed—
(a) at the bend or junction at the top and bottom of the inclined site stormwater drain (see
Figure 8.10); and
(b) at intervals not exceeding 3 m.

Anchor blocks for such drains shall be of reinforced concrete—
(i) with a thickness of not less than 150 mm;
(ii) with steel reinforcement for such drains of nominal sizes—
(A) DN 100 or DN 150, two bars of not less than 10 mm diameter bent to a radius
of about 200 mm or 250 mm, respectively and placed as shown in Figure 8.10.
(B) greater than DN 150, shall be designed by a suitably qualified competent person;




## DISPERSION SYSTEM DETAIL

NTS

NOTE - TO BE LAID HORIZONTALLY (add 50mm fall to pipe from center io to end/edge io) ALONG THE NATURAL CONTOUR OF THE SITE WITH THE LOCATION, DEPTH AND EXTENT TO BE APPROVED BY THE GEOTECHNICAL CONSULTANT. ENCASE PIPE WITH MASS CONCRETE THRUST / STABILIZING BLOCKS ALONG LENGTH AT 5m CTS


Barrenjoey Consulting Engineers pty ltd
Stormwater Structural Civil
PO Box 672
Avalon NSW 2107
P: 9918 6264 F: 9918 5841
M: 0418 620 330
E: lucasbce@bigpond.com
ABN: 13124694917
ACN: 124694917


PROJECT:

PROPOSED
ALTERATIONS & ADDITIONS
74 NARRABEEN PARK PARADE
WARRIEWOOD
for ~ HARLEY FAMILY

DRAWING :

STORMWATER MANAGEMENT
DETAILING 2

Job No : 150310A

Drawing No : SW3

Document Certification
Barrenjoey Consulting Engineers pty ltd
per
Lucas Molloy MIEA CPEng NPER Director