

8 September 2023

General Manager
Northern Beaches Council
PO Box 882
MONA VALE NSW 1660

Dear Sir/Madam,

Re: Stormwater Management Plan – 1112-1116 Barrenjoey Road, Palm Beach

With reference to the Development Application for the above property, please find enclosed copies of the site stormwater management plans and details for your perusal. Description of submitted plans as follows:

Sheet 1 contains a plan of the site shows the orientation and extents of proposed surface and building drainage elements collecting & discharging flows into the existing council drainage system located at the front of the site.

Sheet 2 contains a plan of the basement drainage system including the pump and sump which collects basement and subterranean flows before pumping them up to the surface level drainage system at the site frontage.

Sheet 3 contains the details of the various and typical drainage elements proposed around the site.

Note that as the site is classified as flood affected, there has been no on-site detention system provided, in accordance with Council policy. 2 x 6000 litre rainwater storage tanks for non-potable domestic reuse have been provided in accordance with BASIX requirements.

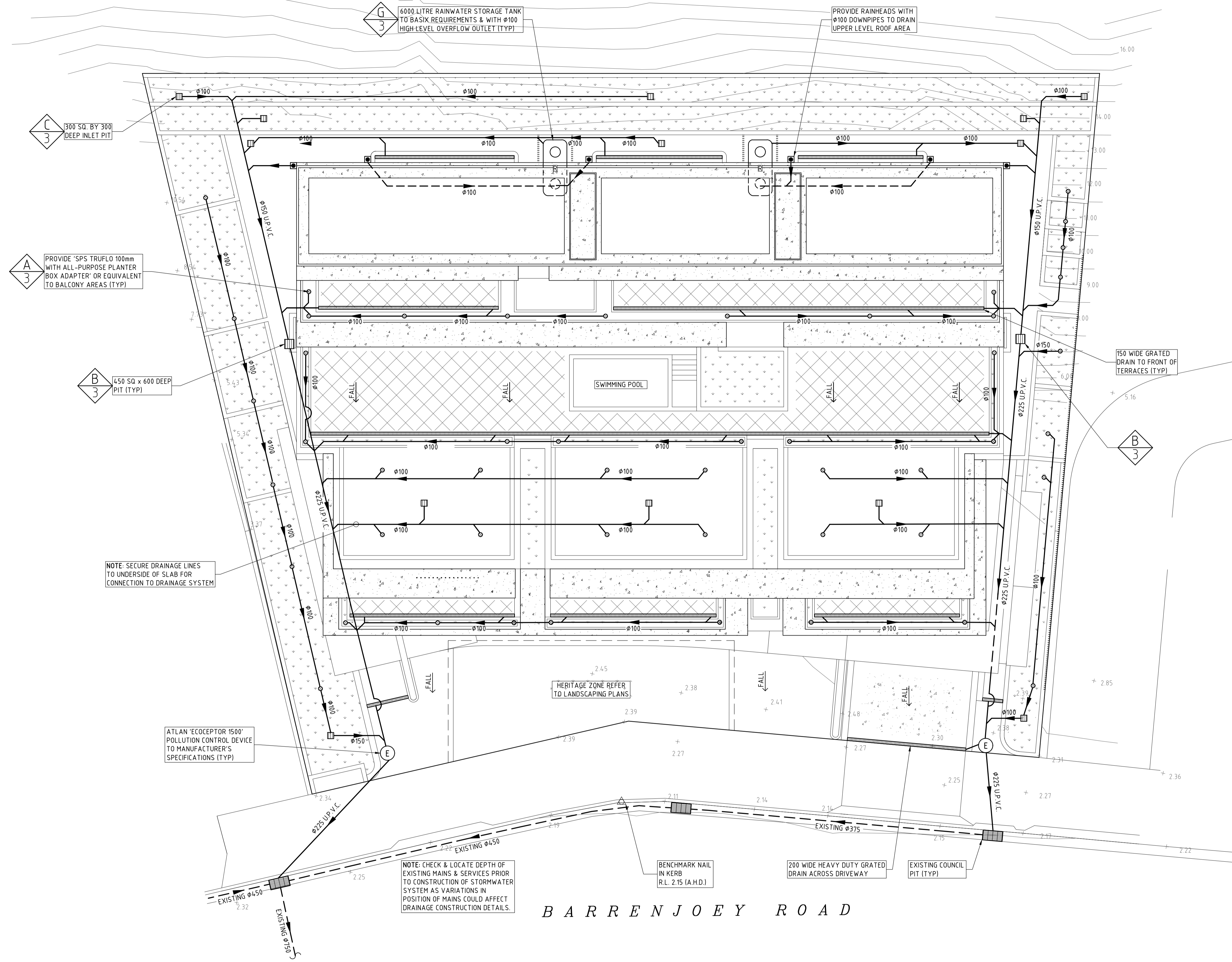
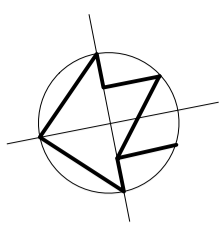
Note also that the MUSIC model used to determine the water quality requirements for the site are also attached for your perusal.

Should you require any further information please contact the undersigned.

Yours faithfully
TAYLOR CONSULTING

D M SCHAEFER - Director
B.E. Civil – Hons. M.I.E. Aust. N.E.R.





BARRENJOEY ROAD

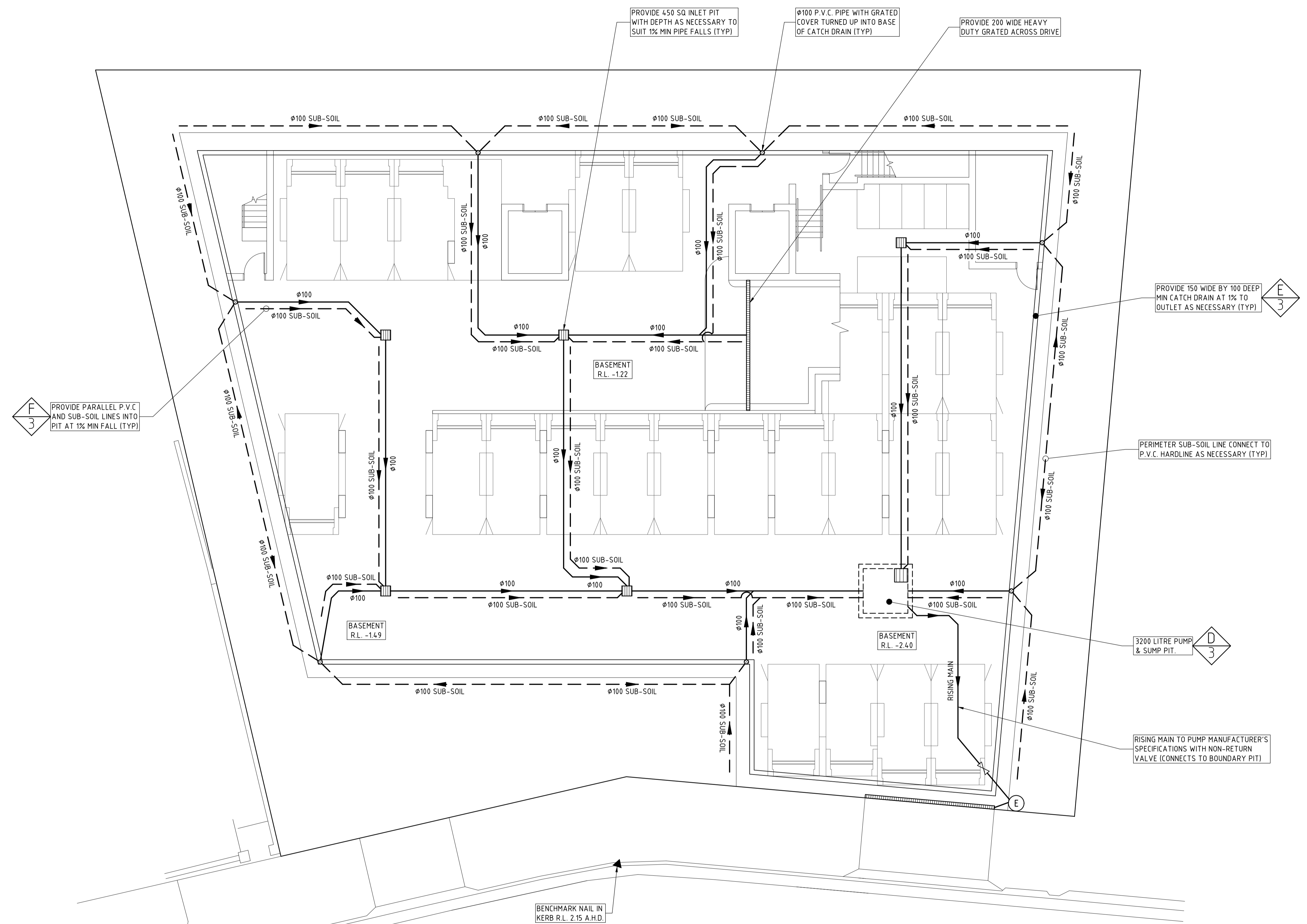
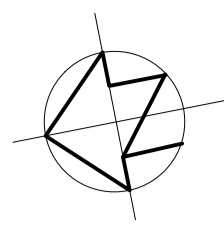
SITE DRAINAGE PLAN
SCALE 1:100

ISSUE DATE	REVISION

TITLE STORMWATER MANAGEMENT PLAN 1112-1116 BARRENJOEY ROAD, PALM BEACH			
DRAWN MDB	DATE 8 SEPTEMBER 2023	CHECKED <i>[Signature]</i>	SCALE @ A1 1:100
ENGINEER DMS	BE Civil (Hons) MIE Aust.		

TAYLOR CONSULTING
CIVIL & STRUCTURAL ENGINEERS

DRAWING NO.
STORM-1



BARRENJOEY ROAD

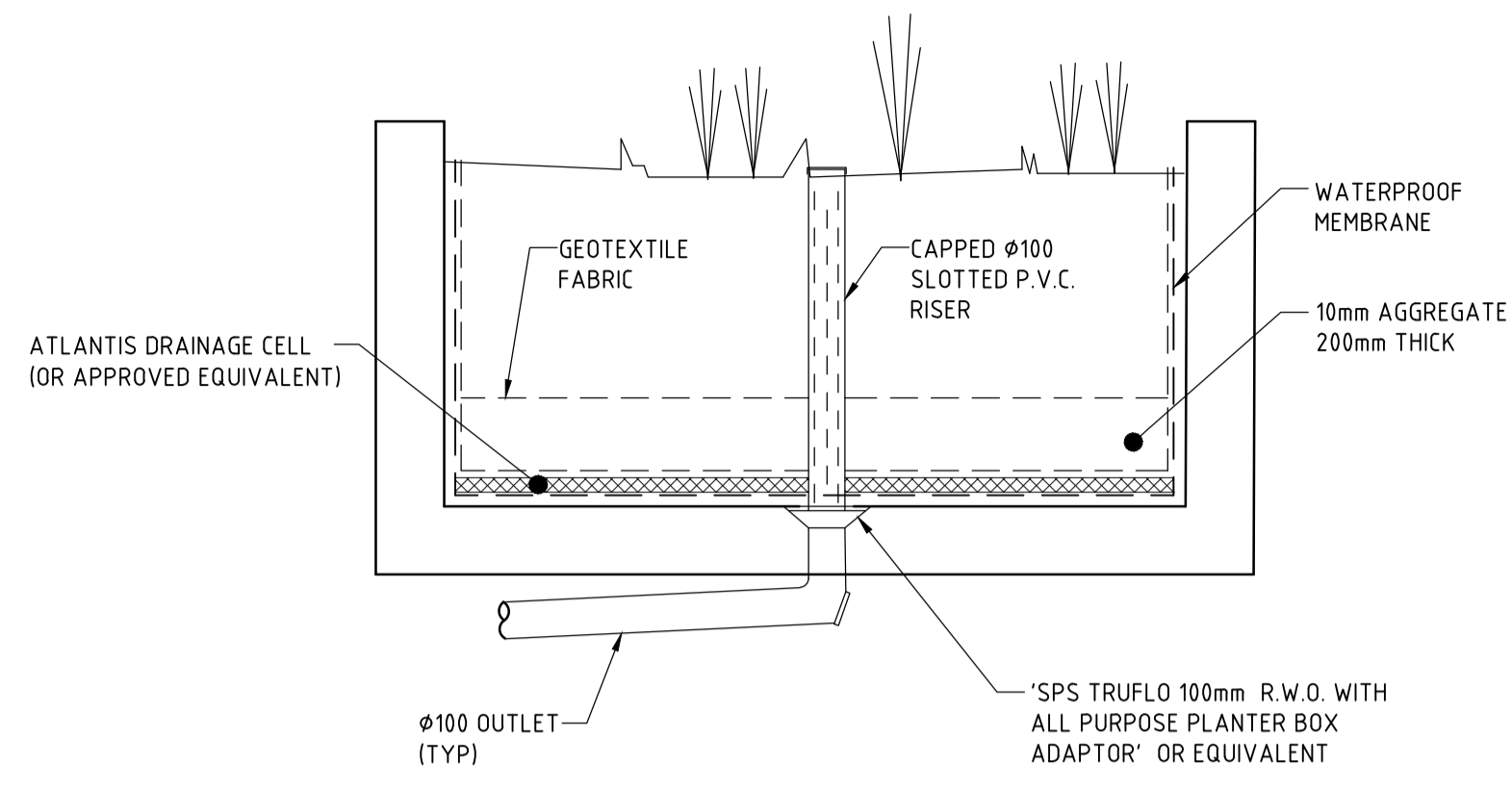
BASEMENT DRAINAGE PLAN
SCALE 1:100

ISSUE DATE	REVISION

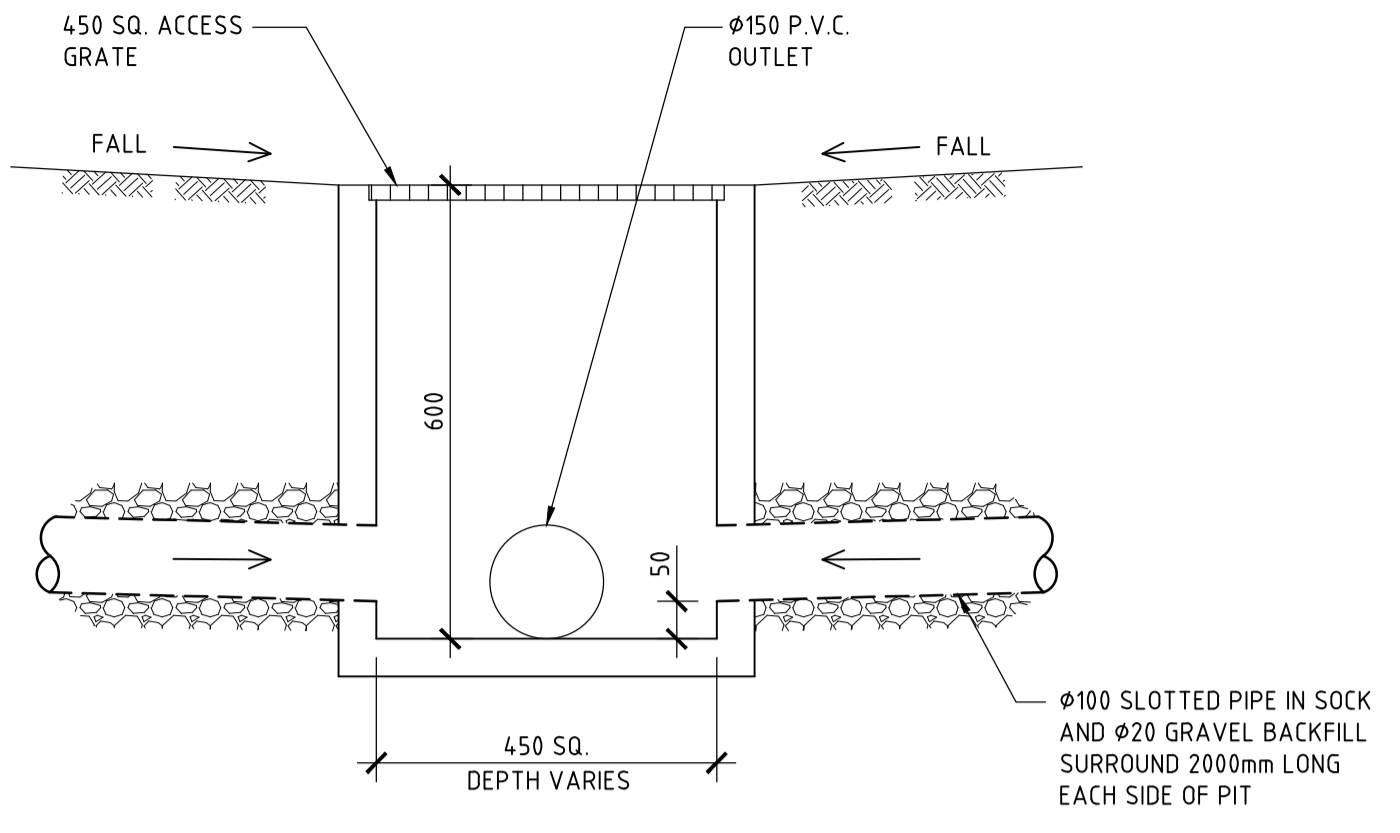
TITLE BASEMENT DRAINAGE DETAILS 1112-1116 BARRENJOEY ROAD, PALM BEACH			
DRAWN MDB	DATE 8 SEPTEMBER 2023	CHECKED <i>[Signature]</i>	SCALE @ A1 1:100
ENGINEER DMS	BE Civil (Hons) MIE Aust.		



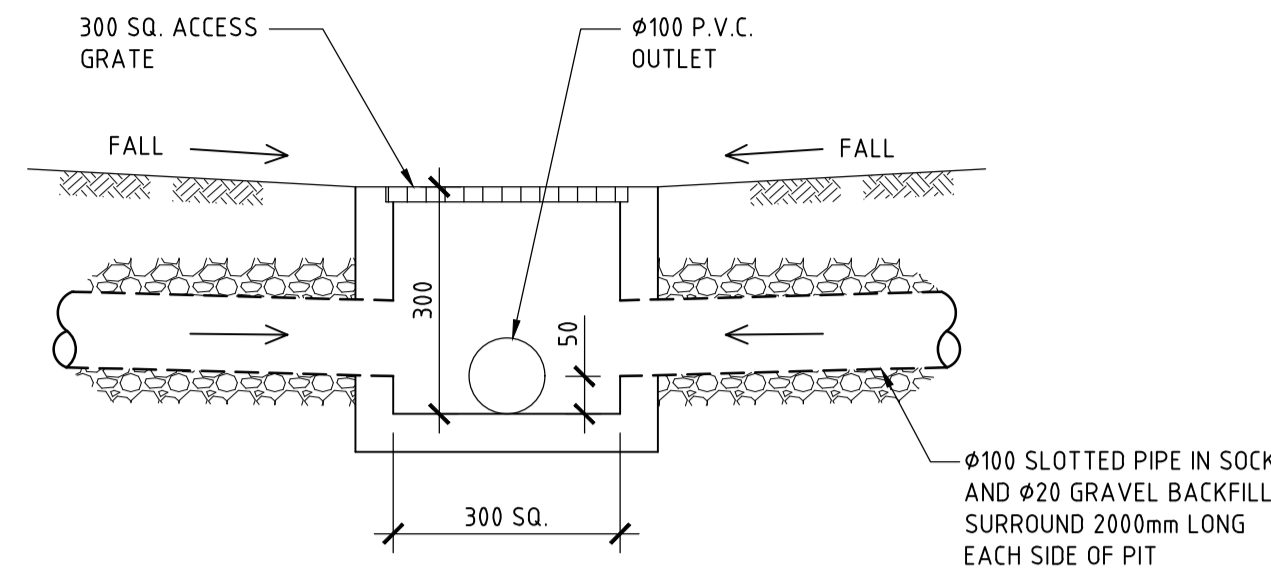
DRAWING NO
STORM-2



DETAIL A
SCALE 1:20
SHOWING TYPICAL PLANTER BOX DETAIL



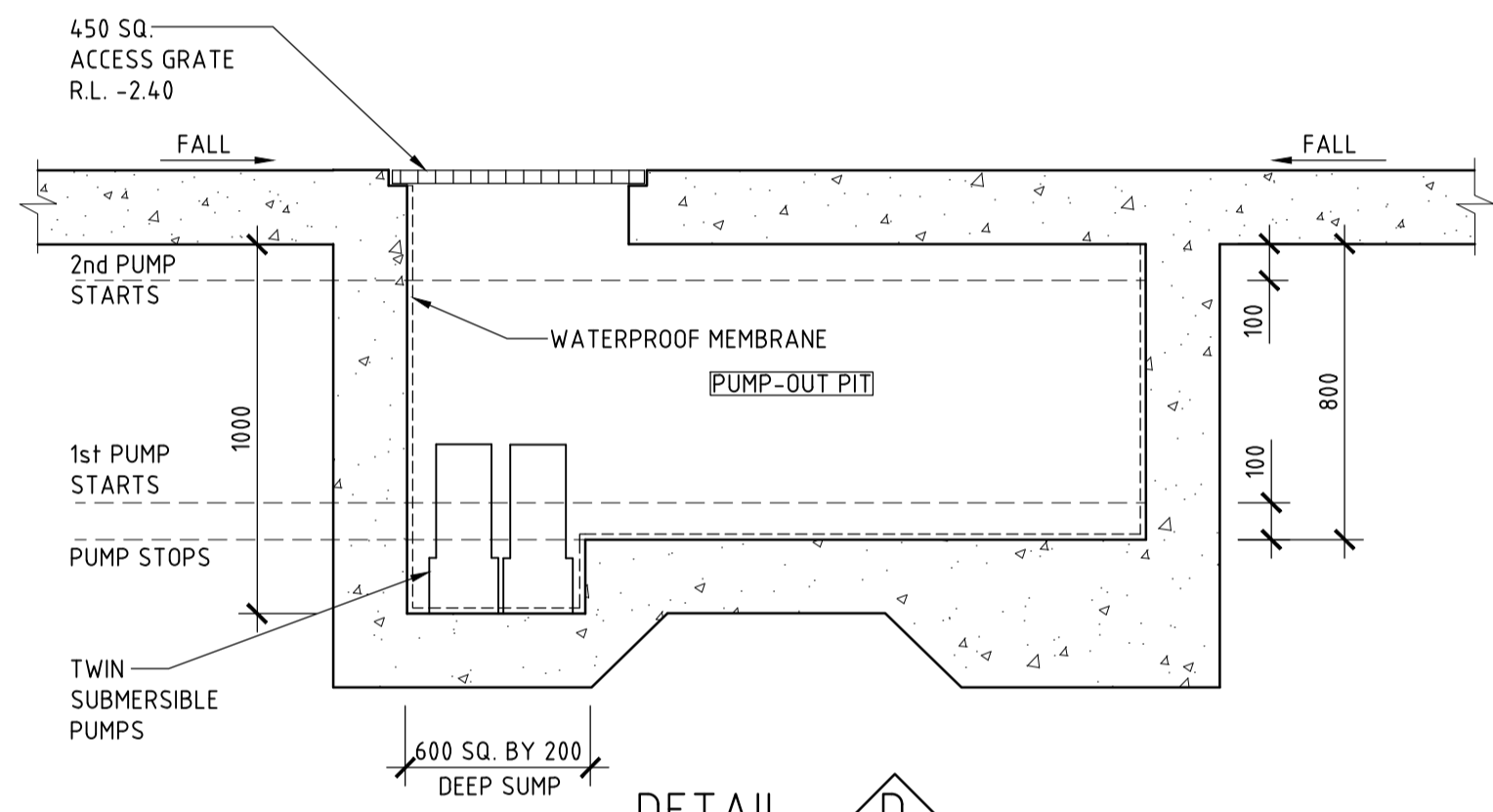
DETAIL B
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL



DETAIL C
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL

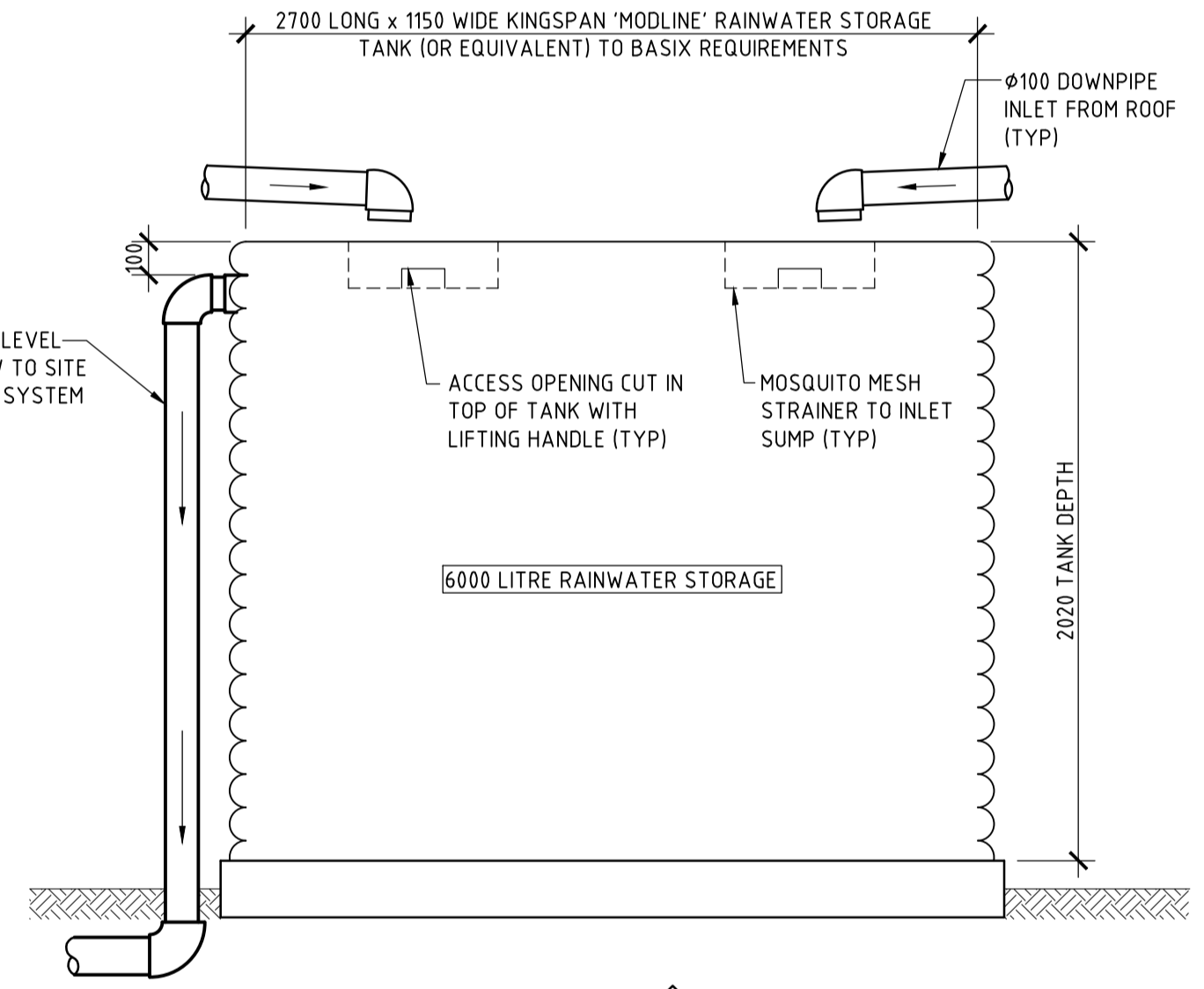
- DRAINAGE NOTES**
- + DENOTES EXISTING GROUND LEVEL
 - FALL STORMWATER PIPES AT 1% MIN. UNLESS OTHERWISE NOTED.
 - SUB-SOIL DRAINAGE TO BE CONNECTED TO THE SITE DRAINAGE SYSTEM AS NECESSARY.
 - SURFACE GRATES 300 SQ. UNLESS OTHERWISE NOTED
 - ALL STORMWATER PIPES TO HAVE SOLVENT CEMENT WATERTIGHT JOINTS.
 - CHECK & LOCATE DEPTH OF EXISTING MAINS & SERVICES PRIOR TO CONSTRUCTION OF STORMWATER SYSTEM AS VARIATIONS IN POSITION OF MAINS COULD AFFECT DRAINAGE CONSTRUCTION DETAILS.
 - INSPECTIONS MUST BE UNDERTAKEN BY THIS OFFICE (BY PRIOR ARRANGEMENT WITH ENGINEER) DURING CONSTRUCTION TO ENABLE FULL CERTIFICATION UPON COMPLETION OF WORKS.
 - ALL CONSTRUCTION OF COUNCIL DRAINAGE WORKS TO COMPLY WITH COUNCIL STANDARD.
 - REMOVE REDUNDANT DRAINAGE PITS AND SEAL PIPES.
 - PIT BENCHING TO BE HALF THE OUTGOING PIPE DIAMETER. CONCRETE FOR BENCHING TO BE 20 MPa MASS CONCRETE.
 - APPROVED PRE-CAST PITS MAY BE USED.
 - ALL PIPES TO BE LAID ON COMPACTED FINE CRUSHED ROCK OR SAND BEDDING 75mm THICK & PIPES BACKFILLED WITH COMPACTED SAND TO 300mm ABOVE TOP OF PIPE. ELSE ATTACHED TO UNDERSIDE OF STRUCTURE AT 600mm c/c AS NECESSARY
 - PIPE ROUTES SHOWN ARE INDICATIVE ONLY AND SHOULD BE AS NECESSARY ACCORDING TO SITE CONDITIONS, TREE POSITIONS ETC. CONFIRM SIGNIFICANT CHANGES IN PIPES SYSTEM DETAILS WITH SUPERVISING ENGINEER PRIOR TO COMMENCEMENT OF DRAINAGE CONSTRUCTION WORKS.
 - CONTRACTOR SHALL ENSURE THAT SERVICES TO BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS WHERE REQUIRED. ONCE WORKS ARE COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SERVICES AND MAKE GOOD ALL DISTURBED AREAS.
 - STORMWATER SYSTEM REQUIRES SIGNIFICANT MAINTENANCE DUE TO POTENTIAL HIGH POLLUTANT LOAD. FILTERS AND POLLUTANT TRAPS SHOULD BE CHECKED AFTER LARGE STORM EVENTS AND CLEANED EVERY 6 MONTHS.
 - PLUMBING AND DRAINAGE WORKS TO COMPLY WITH AS-3500, THE NATIONAL DRAINAGE & PLUMBING CODE.
 - WHERE POSSIBLE DRAINAGE LINES SHALL BE LAID IN AREAS PREVIOUSLY DISTURBED BY OTHER SITE WORKS AND FOLLOW TOPOGRAPHICAL FEATURES TO REDUCE IMPACT AND AVOID TREE ROOTS.
 - THIS STORMWATER MANAGEMENT PLAN HAS BEEN PREPARED FOR SUBMISSION TO COUNCIL/CERTIFIER AND DOES NOT NECESSARILY CONTAIN ALL APPROPRIATE INFORMATION TO ENABLE FOR ISSUE TO PLUMBER/BUILDER FOR CONSTRUCTION. CONTACT TAYLOR CONSULTING FOR MORE INFORMATION.

- RAINWATER RE-USE NOTES AND SPECIFICATIONS**
- ROOF WATER ONLY TO BE DRAINED TO THE RAINWATER STORAGE TANK.
 - THE RAINWATER STORAGE TANK NEEDS TO BE CONNECTED FOR RE-USE AS REQUIRED BY THE OWNER.
 - RAINWATER STORAGE TANK TO BE CONFIGURED IN ACCORDANCE WITH SYDNEY WATER SPECIFICATIONS GUIDELINES FOR RAINWATER TANK ON RESIDENTIAL PROPERTIES.
 - PROVIDE MAINS 'TOP-UP' SUPPLY TO RAINWATER TANK. MAINS TOP-UP ZONE TO BE BASED ON THE DAILY NON-POTABLE USAGE THAT MAY BE EXPECTED FROM THE TANK.
 - PROVIDE A MECHANICAL PUMPING ARRANGEMENT (IN SOUND-PROOF HOUSING) TO PUMP SUPPLIER'S SPECIFICATION TO SUIT INTENDED USAGE OF RAINWATER STORAGE. PUMPING ARRANGEMENTS MUST COMPLY WITH EPA GUIDELINES.
 - INLETS TO RAINWATER TANK MUST BE SCREENED TO PREVENT THE ENTRY OF FOREIGN MATTER, ANIMALS OR INSECTS.
 - A SIGN MUST BE AFFIXED TO THE RAINWATER TANK CLEARLY STATING THAT THE WATER IN THE TANK IS RAINWATER AND IS NOT TO BE USED FOR HUMAN CONSUMPTION.
 - RAINWATER TANK TO BE PLACED ON A STRUCTURALLY ADEQUATE BASE IN ACCORDANCE WITH THE MANUFACTURER'S OR STRUCTURAL ENGINEER'S DETAILS.
 - THE TANK MUST NOT BE INSTALLED OVER ANY MAINTENANCE STRUCTURE OR FITTINGS USED BY A PUBLIC AUTHORITY.
 - RAINWATER TANK AND ASSOCIATED PLUMBING WORKS TO BE INSTALLED AND CONFIGURED BY A LICENSED PLUMBER. PUMP TO BE INSTALLED BY A LICENSED ELECTRICIAN.

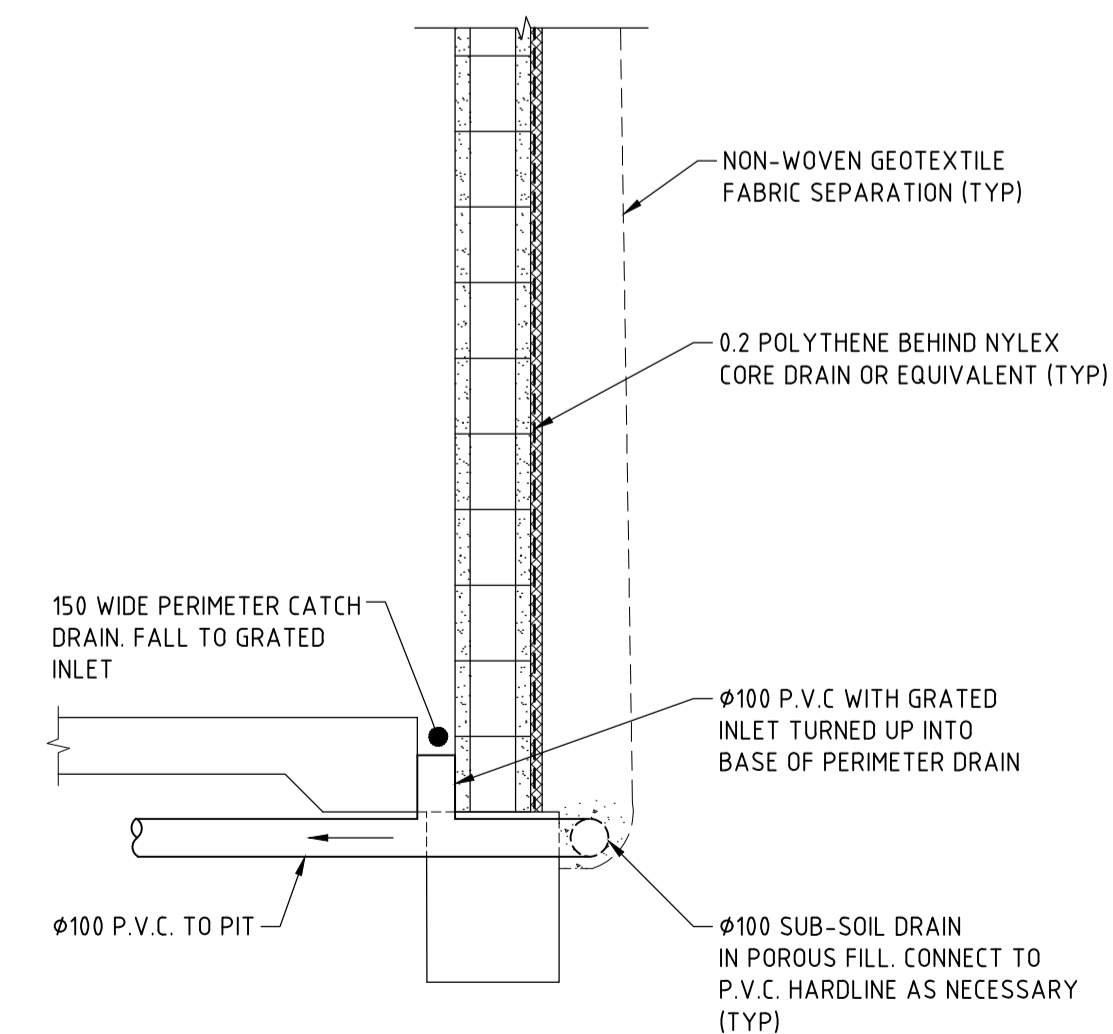


DETAIL D
SCALE 1:20
SHOWING PUMP AND SUMP CONFIGURATION
NOTE: SUMP MAY BE A PROPRIETARY PRODUCT AS PREFERRED BY DEVELOPER

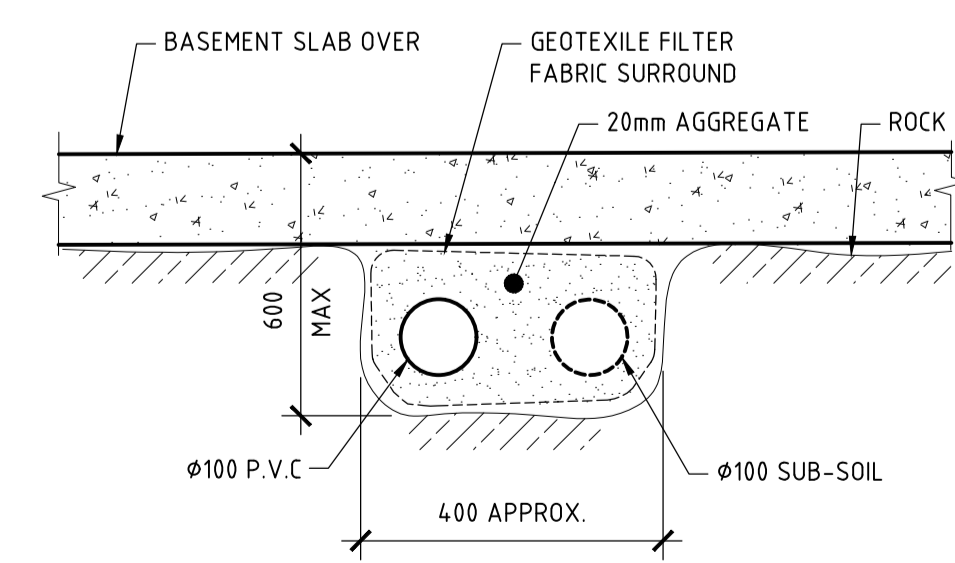
- PUMP NOTES**
- TWIN SUBMERSIBLE PUMPS TO BE PROVIDED IN PUMP PIT.
 - PUMPS TO OPERATE ALTERNATELY AT LOW INLET FLOWRATE & CONCURRENTLY AT HIGH INLET FLOWRATE.
 - PUMP CAPACITY TO BE 2.0 l/s EACH FOR STATIC HEAD = 6.0m (EXCLUDES OUTLET PIPE LOSSES).
 - PROVIDE EXTERNAL CONTROL PANEL WITH AUDIO, VISUAL ALARMS & BATTERY POWER BACK-UP.
 - INLET PIPE TO BE LOCATED CLEAR OF THE HIGH LEVEL FLOAT SWITCH TO PREVENT FALSE ALARMS.



DETAIL G
SCALE 1:20



DETAIL E
SCALE 1:20



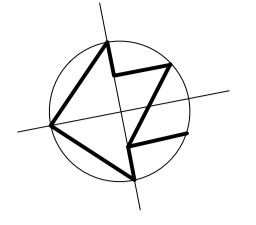
DETAIL F
SCALE 1:10

ISSUE DATE	REVISION

TITLE STORMWATER MANAGEMENT DETAILS 1112-1116 BARRENJOEY ROAD, PALM BEACH			
DRAWN MDB	DATE 8 SEPTEMBER 2023	CHECKED <i>[Signature]</i>	SCALE @ A1 1:20 1:10
ENGINEER DMS	BY Civil (Hons) MIE Aust.		

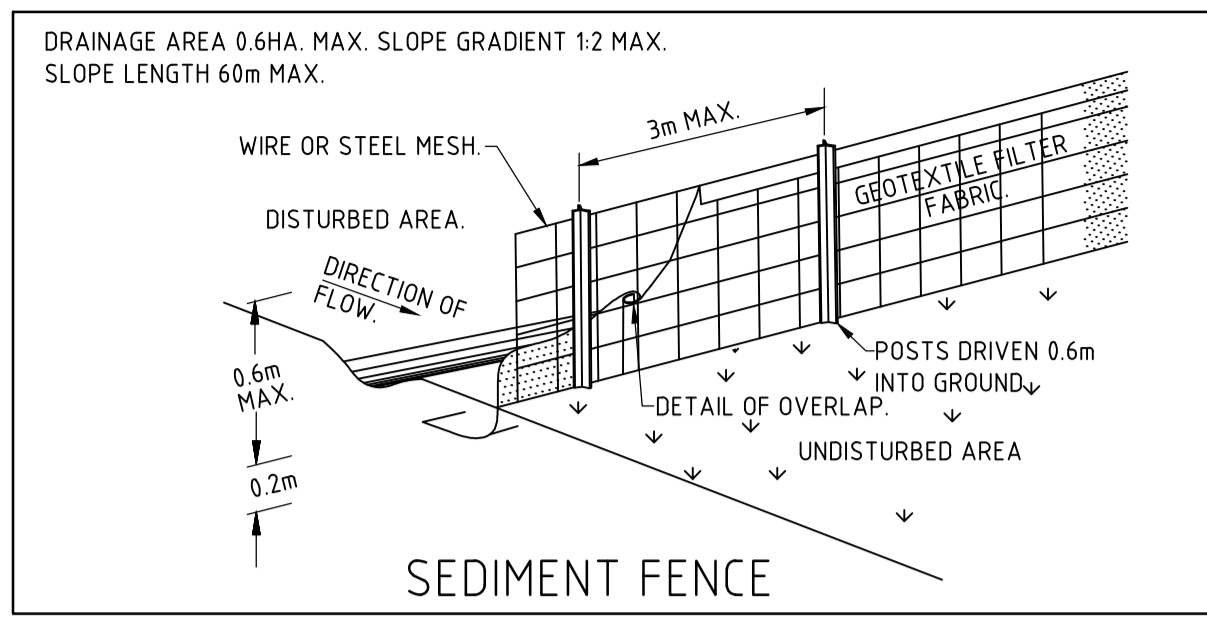
TAYLOR CONSULTING
CIVIL & STRUCTURAL ENGINEERS

STORM-3



D
TEMPORARY EARTH DRAIN
DURING BULK EXCAVATION
AND MAIN WORKS

C
INLET PITS WITH FILTER
FABRIC SURROUNDS TO
STORM-1 SPECIFICATION
(450 MIN DEEP)



DETAIL A
NOT TO SCALE

SCHEDULE OF WORKS

DESCRIPTION
THE PROJECT IS THE PROVISION OF A NEW RESIDENTIAL DWELLING. THE TOTAL SITE AREA IS APPROXIMATELY 13615 m².

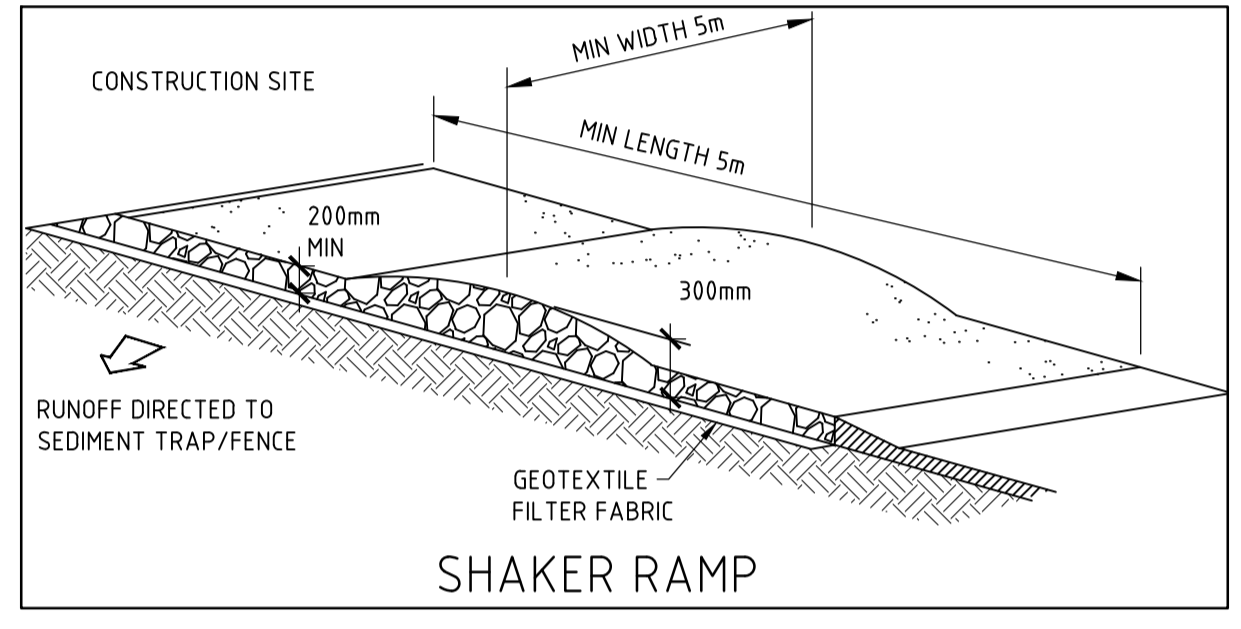
EROSION
NO AREA IS TO BE DISTURBED OTHER THAN THAT DIRECTLY AFFECTED BY ACCESS, SITE REGRADING, SERVICING, ROAD WORKS AND DRAINAGE WORKS. FOR ALL OTHER AREAS ENTRY IS PROHIBITED AND IS TO BE CLEARLY DEFINED WITH THE INSTALLATION OF BARRIER FENCING. UPSTREAM WATER IS TO BE DIRECTED AROUND THE SITE WITHOUT CONTAMINATION.

SEDIMENT CONTROL
CONTROL WILL BE VIA THE INSTALLATION OF SILT FENCES AS SHOWN ON PLAN. STOCK PILES ARE TO BE LOCATED IN AREAS SHOWN ON THE PLAN (CLEAR OF SERVICING, WATERCOURSES, ROAD AND DRAINAGE WORKS) AND PROVIDED WITH SILT FENCES ON THEIR DOWNSTREAM SIDE.

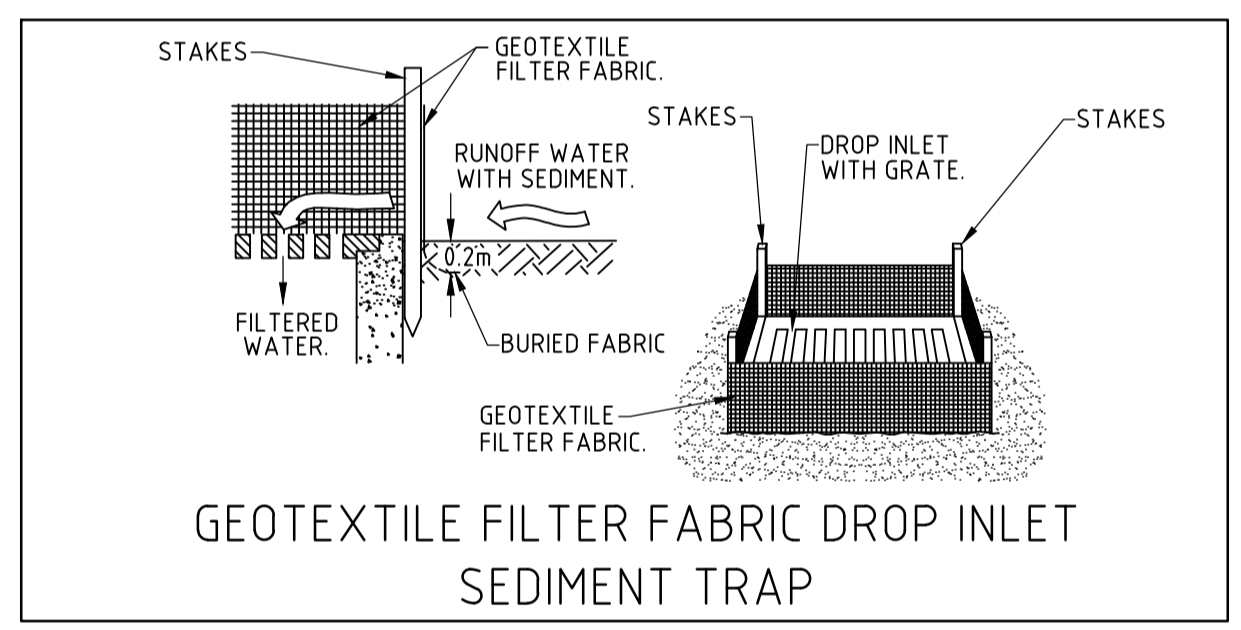
PHASING OF WORKS

1. INSTALL ALL BARRIER AND SILT FENCING. BARRIER FENCING MAY BE ERECTED AND REMOVED AS NECESSARY TO SUIT STAGING OF WORKS.
2. INSTALL ALL TEMPORARY DRAINAGE STRUCTURES AS NECESSARY.
3. STRIP & STOCKPILE TOPSOIL.
4. UNDERTAKE SITE DEVELOPMENT.
5. AS EARTHWORKS ARE COMPLETED THESE AREAS ARE TO BE TOPSOILED, SEEDED AND MULCHED OR PAVED WITHIN 20 WORKING DAYS.
6. ONLY AT THE COMPLETION OF WORKS AND STABILIZATION OF AREAS UPSTREAM ANY CONTROL DEVICES TO BE REMOVED.

PROPOSED BUILDING ENVELOPE

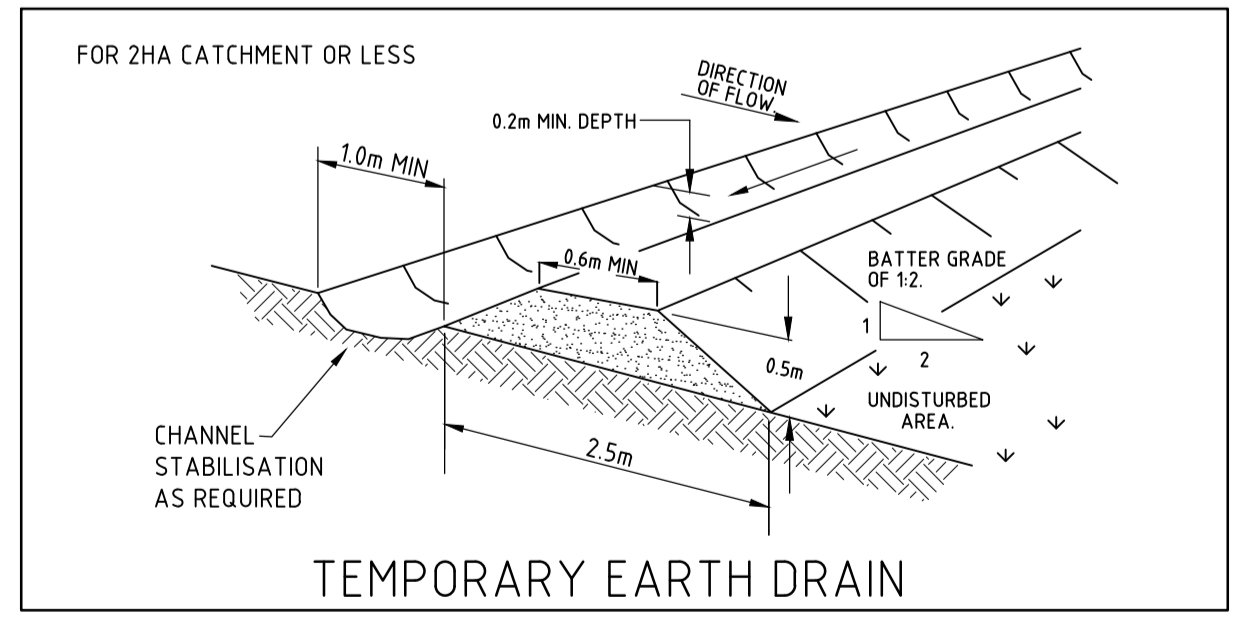


DETAIL B
NOT TO SCALE



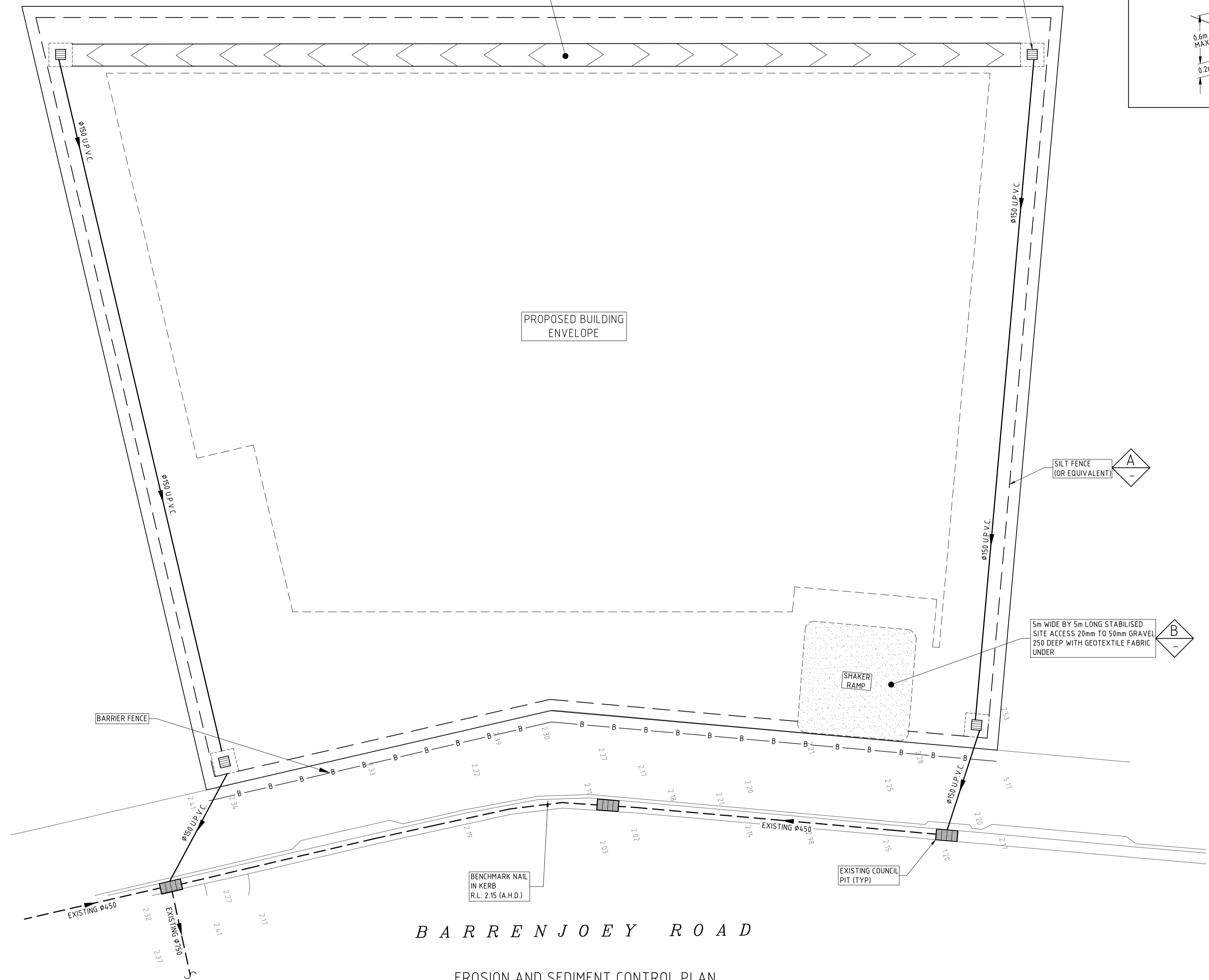
GEOTEXTILE FILTER FABRIC DROP INLET
SEDIMENT TRAP

DETAIL C
NOT TO SCALE



TEMPORARY EARTH DRAIN

DETAIL D
NOT TO SCALE



BARRENJOEY ROAD

EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:100

ISSUE DATE	REVISION

TITLE EROSION AND SEDIMENT CONTROL PLAN 1112-1116 BARRENJOEY ROAD, PALM BEACH			
DRAWN MDB	DATE 8 SEPTEMBER 2023	CHECKED <i>[Signature]</i>	SCALE @ A1 1:100
BE Civil (Hons) MIE Aust.			

TAYLOR CONSULTING
CIVIL & STRUCTURAL ENGINEERS

STORM-4