

30 August 2021

General Manager
Northern Beaches Council
725 Pittwater Road
DEE WHY NSW 2099

Dear Sir/Madam

Re: Stormwater Management Plan – 7 Crown Road, Queensclif

With reference to the Development Application for the above property, please find attached a copy of the site Stormwater Management Plan, Sheet-1/A and Sheet-2, for your perusal.

The collected flows from the site are to be discharged via a level spreader. The rate of discharge for the developed site was determined to not create downstream scour and therefore no On Site Detention is required. The level spreader discharges collected runoff as uniform sheet flow across the rear boundary.

Note that it is also proposed to provide a rainwater storage tank for non-potable, domestic re-use.

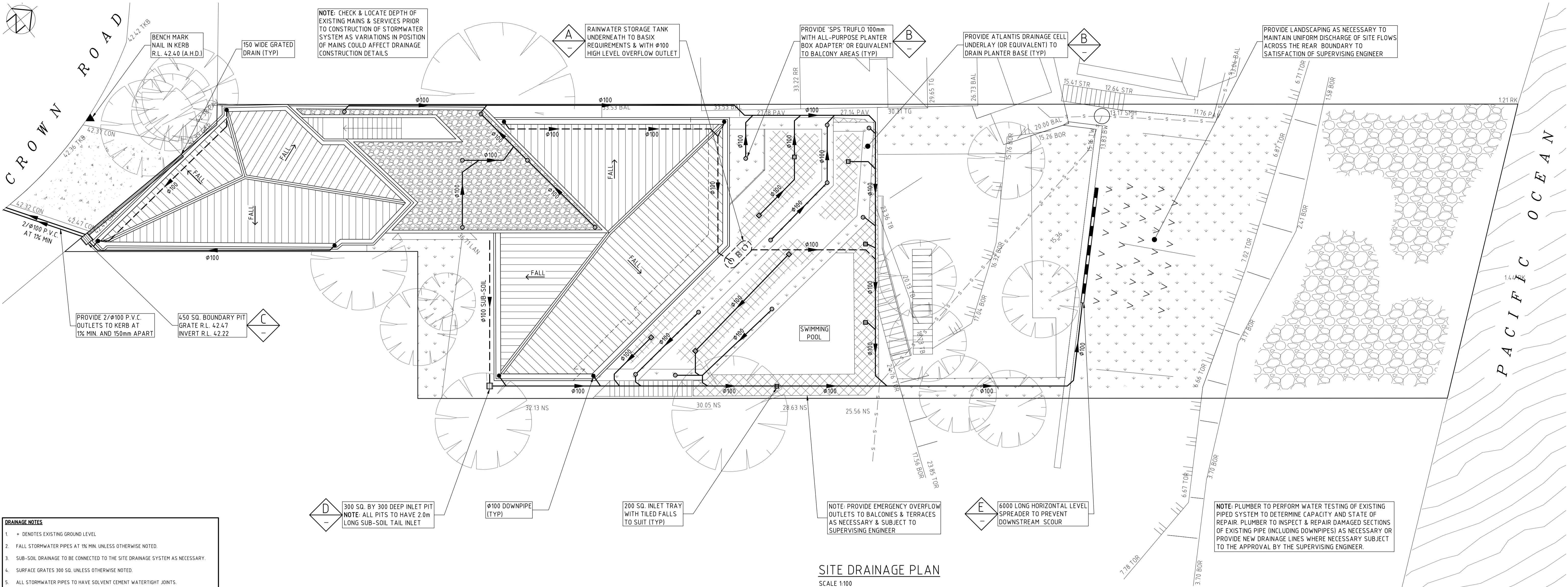
This is to certify that the Stormwater Management Plan layout as shown on Sheet-1/A and Sheet-2 by Taylor Consulting Civil & Structural Engineers has been designed in accordance with section 3.1.2, 'Drainage', of the Building Code of Australia Housing Provision and AS/NZS 3500.3.2 – Stormwater Drainage & Northern Beaches Council's Warringah - Stormwater Drainage from Low-Level Properties Technical Specification.

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



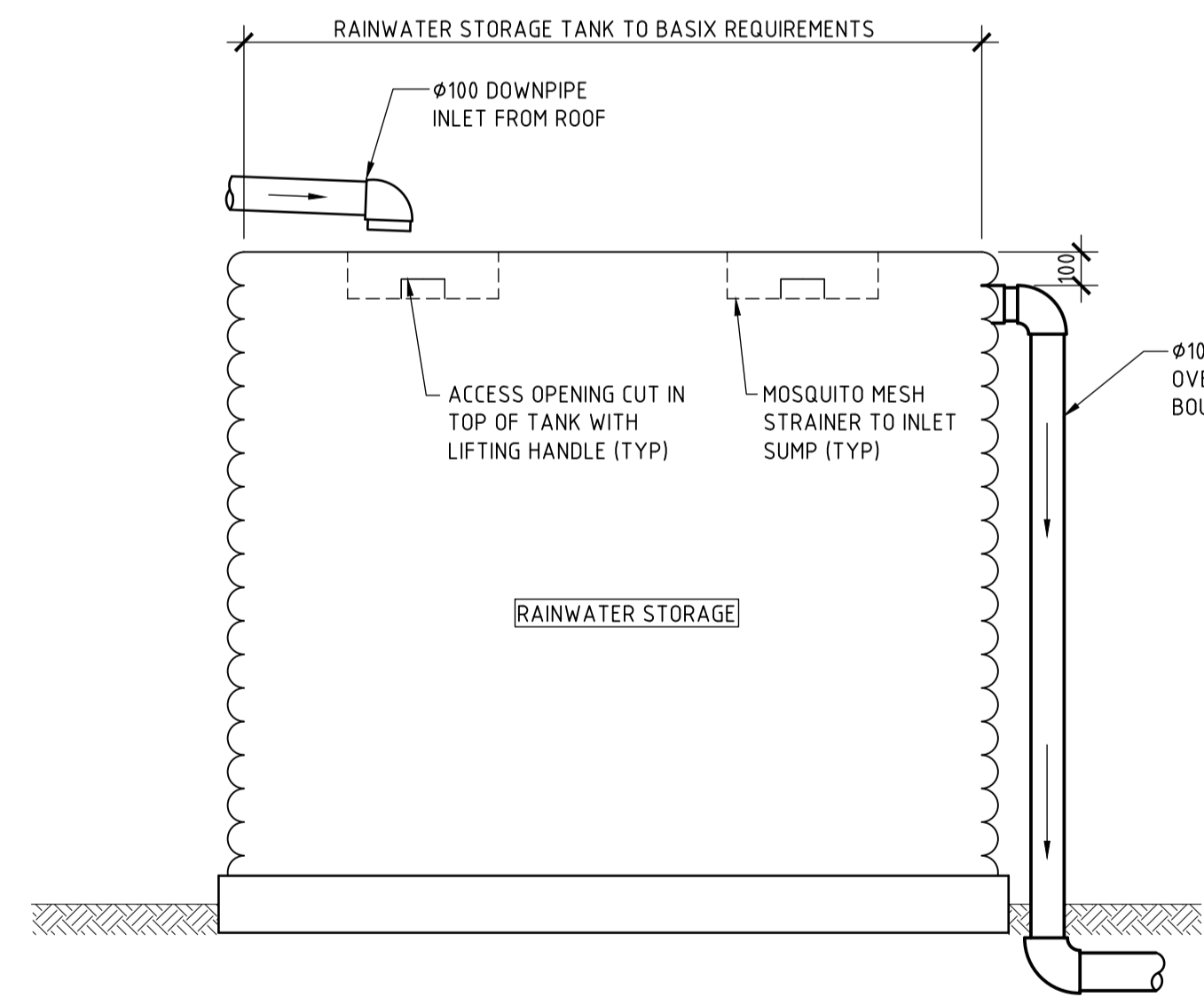


DRAINAGE NOTES

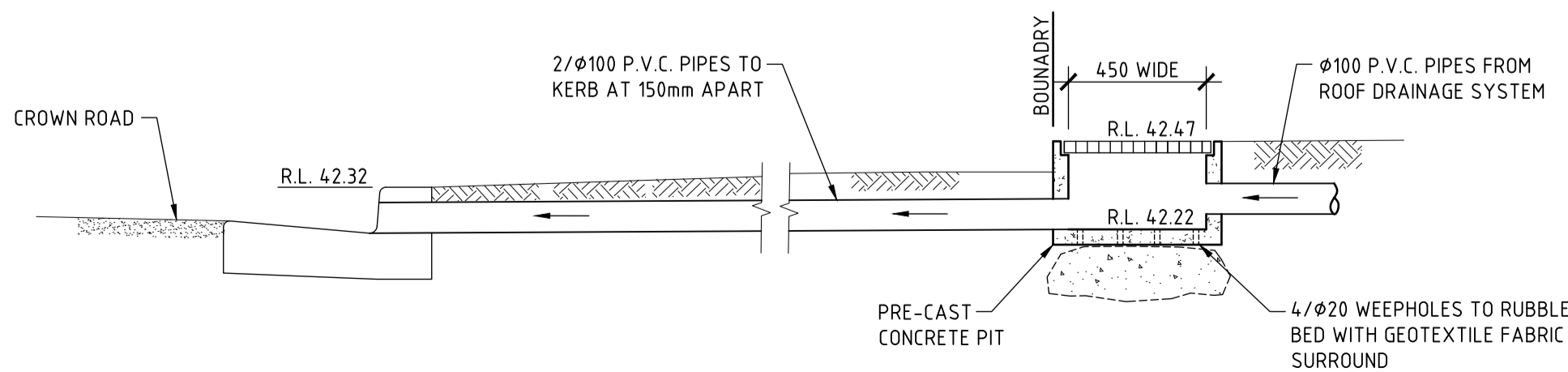
1. + DENOTES EXISTING GROUND LEVEL.
2. FALL STORMWATER PIPES AT 1% MIN UNLESS OTHERWISE NOTED.
3. SUB-SOIL DRAINAGE TO BE CONNECTED TO THE SITE DRAINAGE SYSTEM AS NECESSARY.
4. SURFACE GRATES 300 SQ. UNLESS OTHERWISE NOTED.
5. ALL STORMWATER PIPES TO HAVE SOLVENT CEMENT WATERTIGHT JOINTS.
6. CHECK & LOCATE DEPTH OF EXISTING MAINS & SERVICES PRIOR TO CONSTRUCTION OF STORMWATER SYSTEM AS VARIATIONS IN POSITION OF MAINS COULD AFFECT DRAINAGE CONSTRUCTION DETAILS.
7. INSPECTIONS MUST BE UNDERTAKEN BY THIS OFFICE (BY PRIOR ARRANGEMENT WITH ENGINEER) DURING CONSTRUCTION TO ENABLE FULL CERTIFICATION UPON COMPLETION OF WORKS.
8. ALL CONSTRUCTION OF COUNCIL DRAINAGE WORKS TO COMPLY WITH COUNCIL STANDARD.
9. REMOVE REDUNDANT DRAINAGE PITS AND SEAL PIPES.
10. PIT BENCHING TO BE HALF THE OUTGOING PIPE DIAMETER. CONCRETE FOR BENCHING TO BE 20 MPa MASS CONCRETE.
11. APPROVED PRE-CAST PITS MAY BE USED.
12. 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.
13. PIPE ROUTES SHOWN ARE INDICATIVE ONLY AND SHOULD BE AS NECESSARY ACCORDING TO SITE CONDITIONS, TREE POSITIONS ETC. CONFORM SIGNIFICANT CHANGES IN PIPES SYSTEM DETAILS WITH SUPERVISING ENGINEER PRIOR TO COMMENCEMENT OF DRAINAGE CONSTRUCTION WORKS.
14. 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.
15. 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.
16. PLUMBING AND DRAINAGE WORKS TO COMPLY WITH AS-3500, THE NATIONAL DRAINAGE & PLUMBING CODE.
17. 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.
18. THIS STORMWATER MANAGEMENT PLAN HAS BEEN PREPARED FOR D.A. SUBMISSION TO COUNCIL 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

1. ROOF WATER ONLY TO BE DRAINED TO THE RAINWATER STORAGE TANK.
2. THE RAINWATER STORAGE TANK NEEDS TO BE CONNECTED FOR RE-USE AS REQUIRED BY THE OWNER.
3. RAINWATER STORAGE TANK TO BE CONFIGURED IN ACCORDANCE WITH SYDNEY WATER SPECIFICATIONS 'GUIDELINES FOR RAINWATER TANK ON RESIDENTIAL PROPERTIES'.
4. 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.
5. PROVIDE A MECHANICAL PUMPING ARRANGEMENT (IN SOUND-PROOF HOUSING) TO PUMP SUPPLIERS SPECIFICATION TO SUIT INTENDED USAGE OF RAINWATER STORAGE. PUMPING ARRANGEMENTS MUST COMPLY WITH EPA GUIDELINES.
6. INLETS TO RAINWATER TANK MUST BE SCREENED TO PREVENT THE ENTRY OF FOREIGN MATTER, ANIMALS OR INSECTS.
7. 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.
8. RAINWATER TANK TO BE PLACED ON A STRUCTURALLY ADEQUATE BASE IN ACCORDANCE WITH THE MANUFACTURER'S OR STRUCTURAL ENGINEER'S DETAILS.
9. THE TANK MUST NOT BE INSTALLED OVER ANY MAINTENANCE STRUCTURE OR FITTINGS USED BY A PUBLIC AUTHORITY.
10. RAINWATER TANK AND ASSOCIATED PLUMBING WORKS TO BE INSTALLED AND CONFIGURED BY A LICENSED PLUMBER. PUMP TO BE INSTALLED BY A LICENSED ELECTRICIAN.



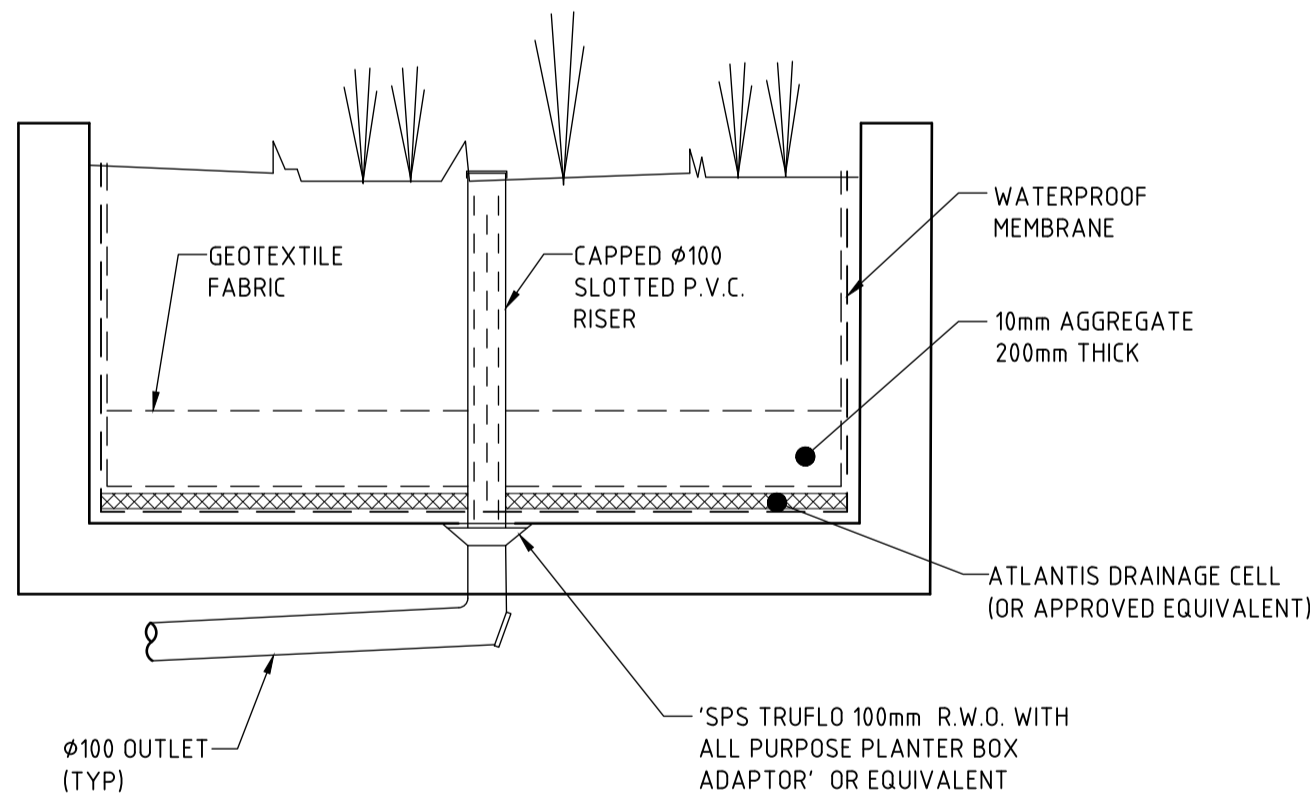
DETAIL A
SCALE 1:20



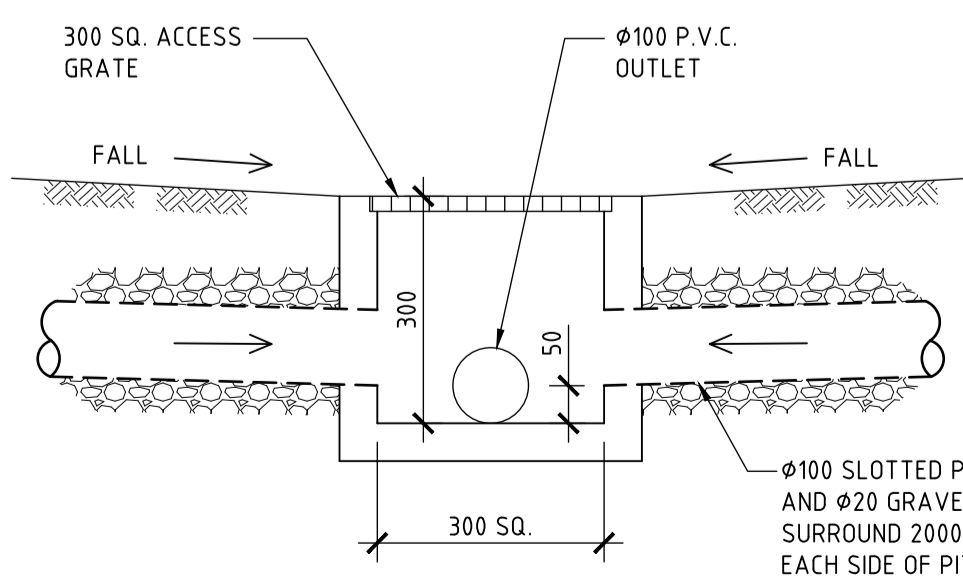
DETAIL B
SCALE 1:20
SHOWING TYPICAL PLANTER BOX DETAIL



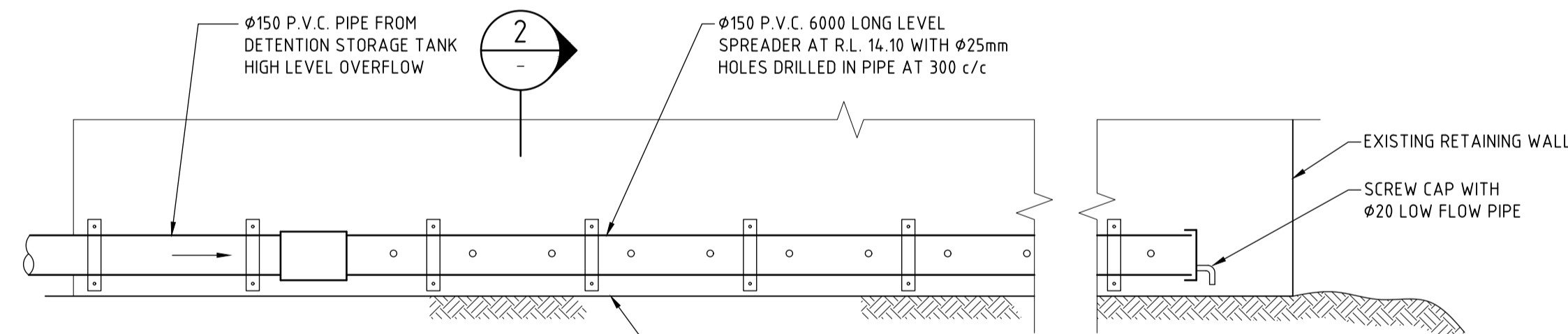
DETAIL C
SCALE 1:20



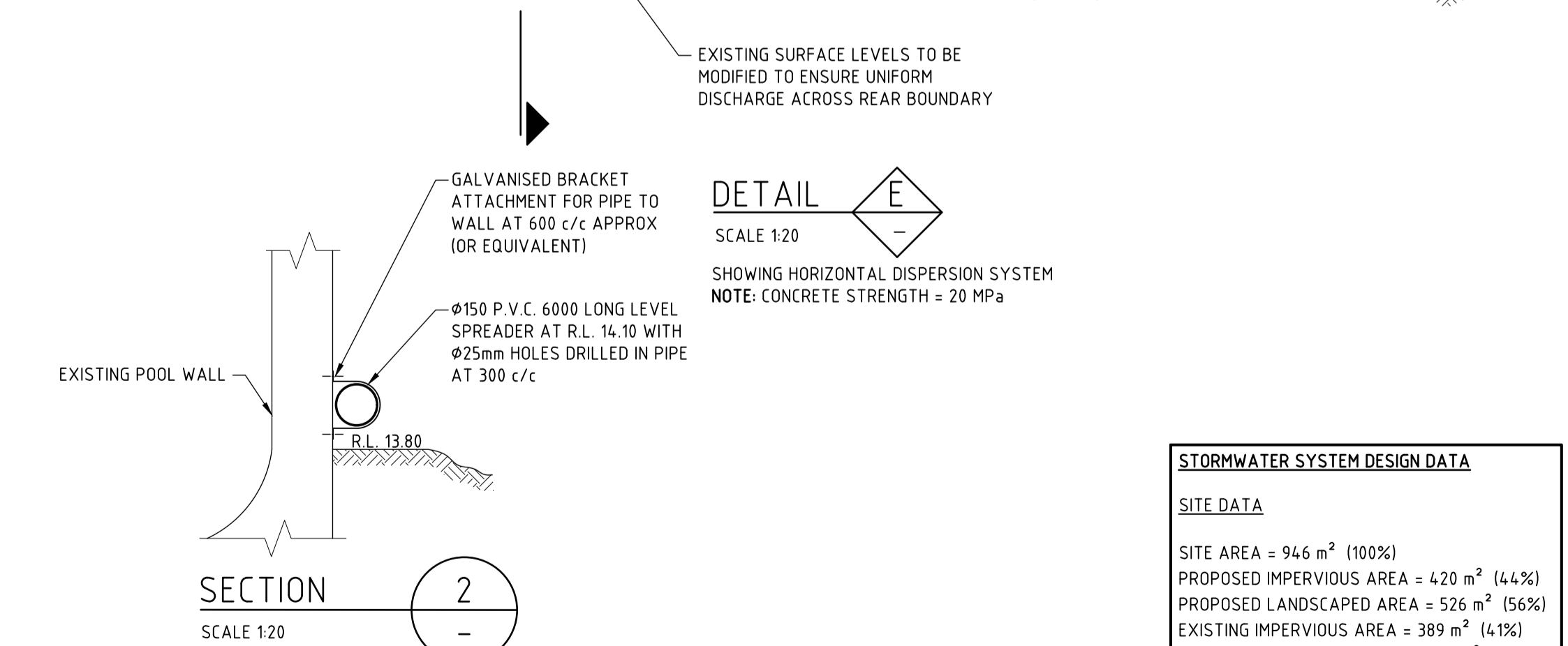
SITE DRAINAGE PLAN
SCALE 1:100



DETAIL E
SCALE 1:100
TYPICAL SURFACE INLET PIT DETAIL



DETAIL F
SCALE 1:20



SECTION 2
SCALE 1:20

ISSUE	DATE	REVISION
1	30 AUG 21	TANK LOCATION MOVED

TITLE STORMWATER MANAGEMENT PLAN 7 CROWN ROAD, QUEENSLIFF			
DRAWN MDB	DATE 19 AUGUST 2021	CHECKED <i>[Signature]</i> BE Civil (Hons) MIE Aust.	SCALE A1 1:100 1:20 1:10

STORMWATER SYSTEM DESIGN DATA	
SITE DATA	
SITE AREA = 946 m ² (100%)	PROPOSED IMPERVIOUS AREA = 420 m ² (44%)
PROPOSED LANDSCAPED AREA = 526 m ² (56%)	EXISTING IMPERVIOUS AREA = 389 m ² (41%)
EXISTING LANDSCAPED AREA = 557 m ² (59%)	

TAYLOR
CONSULTING
CIVIL & STRUCTURAL ENGINEERS

SHEET -1/A



SCALE 1:20

TYPICAL SECTION THROUGH
TEMPORARY SILT FENCE

