



NORTHERN SYDNEY
Seascope
Suite 7 22-27 Fisher Rd
Dee Why NSW 2099

BLUE MOUNTAINS
Shop 1
274 Macquarie Rd
Springwood NSW 2777

TAYLORCONSULTING.NET.AU

CONSULTING ENGINEERS
Civil
Structural
Stormwater & Flood

15 November 2024

General Manager
Northern Beaches Council
725 Pittwater Road
Dee Why NSW 2099

Address of the Project: **17 Egan Pl, Beacon Hill**

Description of Project: **Stormwater Management Plan - Alterations and Additions**

With reference to the Development Application for the above property, please find enclosed a copy of the site Stormwater Management Plan, STORM-1, and Stormwater Management Details, STORM-2, for your perusal.

The plan shows collected flows from the roofed areas, along with the surrounding hardstand and landscaped areas, discharging via a level spreader located adjacent to the rear boundary of the property.

Note that 3000 litres of rainwater storage is proposed in accordance with Sydney Water and the Council's policy for non-potable re-use.

It is also noted that the level spreader's location is a minor departure from the policy which is appropriate as the property backs onto South Creek and will not be developed.

This is to certify that the Stormwater Management Plan and Details layout as shown on Plans STORM-1 and STORM-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, AS/NZS 3500.3.2 – Stormwater Drainage and Northern Beaches Council's Water Management for Development Policy.

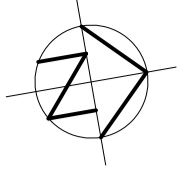
Should you require any further information please contact the undersigned.

Yours faithfully
TAYLORCONSULTING.NET.AU

D.M.Schaefer - Director
B.E Civil (Hons) M.I.E. Aust. N.E.R.



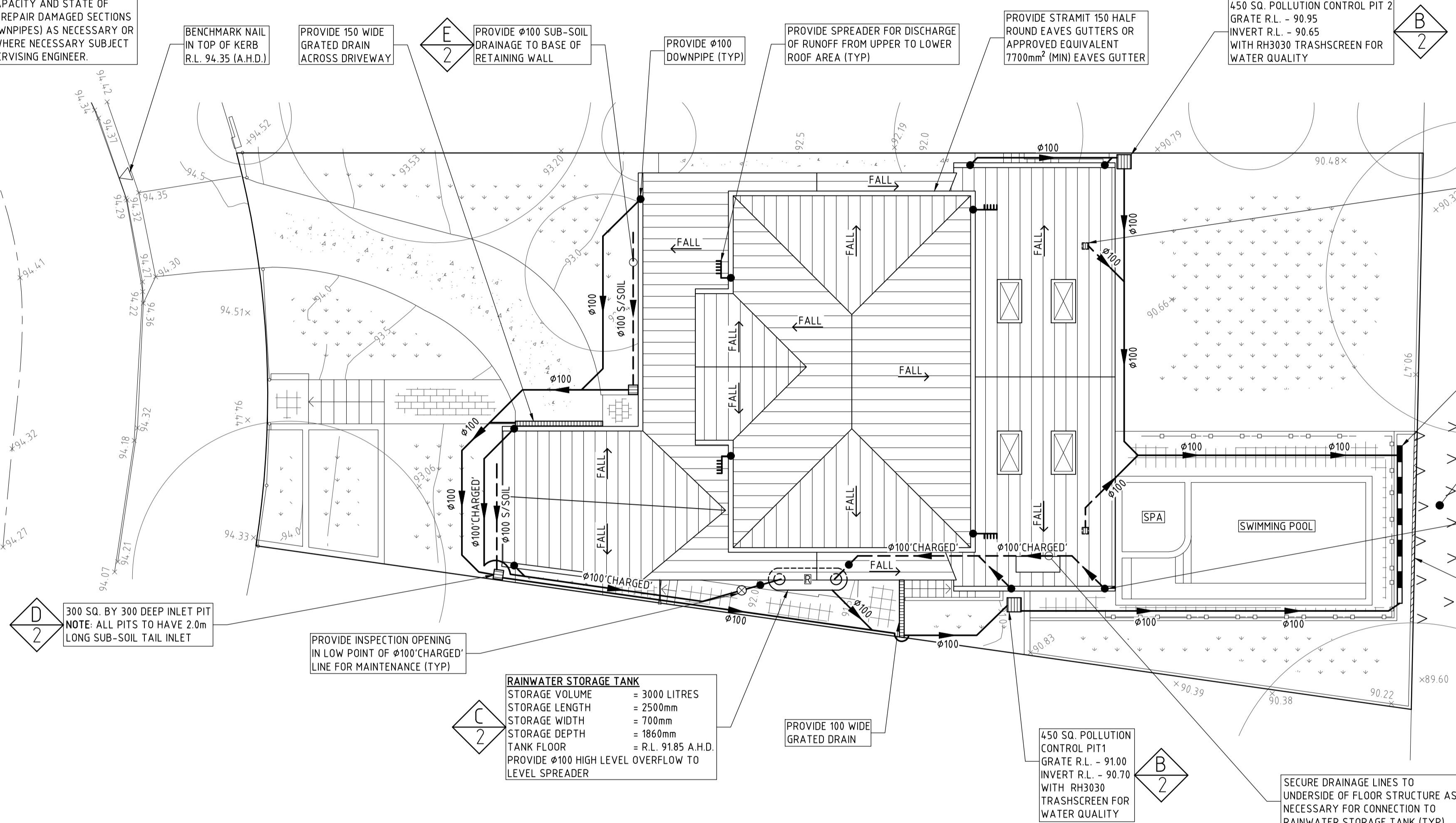
TAYLOR



NOTE: PLUMBER TO PERFORM WATER TESTING OF EXISTING PIPED SYSTEM TO DETERMINE CAPACITY AND STATE OF REPAIR. PLUMBER TO INSPECT & REPAIR DAMAGED SECTIONS OF EXISTING PIPE (INCLUDING DOWNPIPES) AS NECESSARY OR PROVIDE NEW DRAINAGE LINES WHERE NECESSARY SUBJECT TO THE APPROVAL BY THE SUPERVISING ENGINEER.

NOTE: CHECK & LOCATE DEPTH OF EXISTING MAINS & SERVICES PRIOR TO CONSTRUCTION OF STORMWATER SYSTEM AS VARIATIONS IN POSITION OF MAINS COULD AFFECT DRAINAGE CONSTRUCTION DETAILS

EGAN PLACE



RAINWATER STORAGE TANK
 STORAGE VOLUME = 3000 LITRES
 STORAGE LENGTH = 2500mm
 STORAGE WIDTH = 700mm
 STORAGE DEPTH = 1860mm
 TANK FLOOR = R.L. 91.85 A.H.D.
 PROVIDE 100 HIGH LEVEL OVERFLOW TO LEVEL SPREADER

SITE DRAINAGE PLAN
 SCALE 1:100

- 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.

5000 LONG HORIZONTAL 150 LEVEL SPREADER (PIPE STRAPPED TO WALL) INVERT R.L. 90.40 APPROX

PROVIDE LANDSCAPING AS NECESSARY TO MAINTAIN UNIFORM DISCHARGE OF SITE FLOWS ACROSS THE REAR AND SIDE BOUNDARIES TO SATISFACTION OF SUPERVISING ENGINEER

NOTE: TURN 100 'CHARGED' P.V.C. DOWNPIPES UP WALL SO ARE WATERTIGHT TO 1.0m ABOVE TOP OF RAINWATER STORAGE TANK

EXISTING MASONRY WALL TO BE LOWERED TO NOT IMPEDE LAMINAR FLOW ACROSS BOUNDARY R.L. 89.90 (MIN)

STORMWATER SYSTEM DESIGN DATA

SITE DATA

SITE AREA	= 556 m ² (100%)
PROPOSED IMPERVIOUS AREA	= 315.2 m ² (57%)
PROPOSED LANDSCAPED AREA	= 240.8 m ² (43%)
EXISTING IMPERVIOUS AREA	= 319.7 m ² (58%)
EXISTING LANDSCAPED AREA	= 236.3 m ² (42%)

ISSUE DATE	REVISION

TITLE
STORMWATER MANAGEMENT PLAN
17 EGAN PLACE, BEACON HILL

DRAWN: LI
 ENGINEER: GK

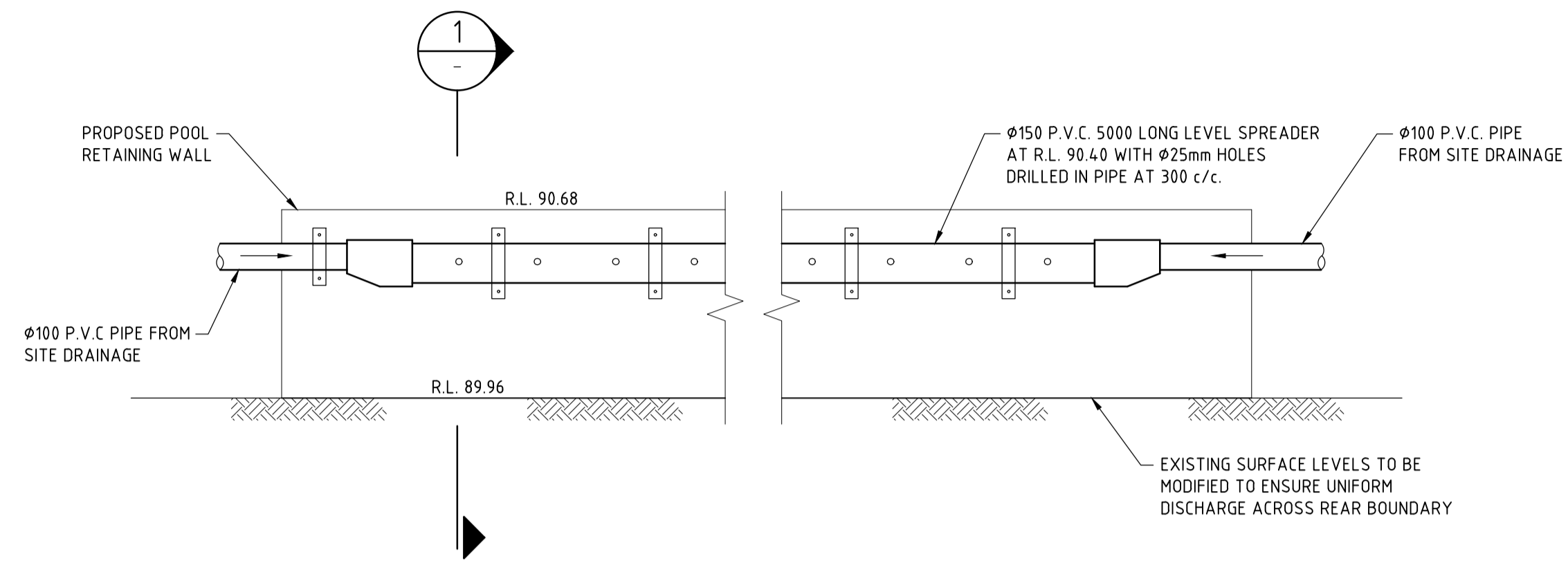
DATE: 12 NOVEMBER 2024

CHECKED: [Signature]
 BE Civil (Hons) MIE Aust.

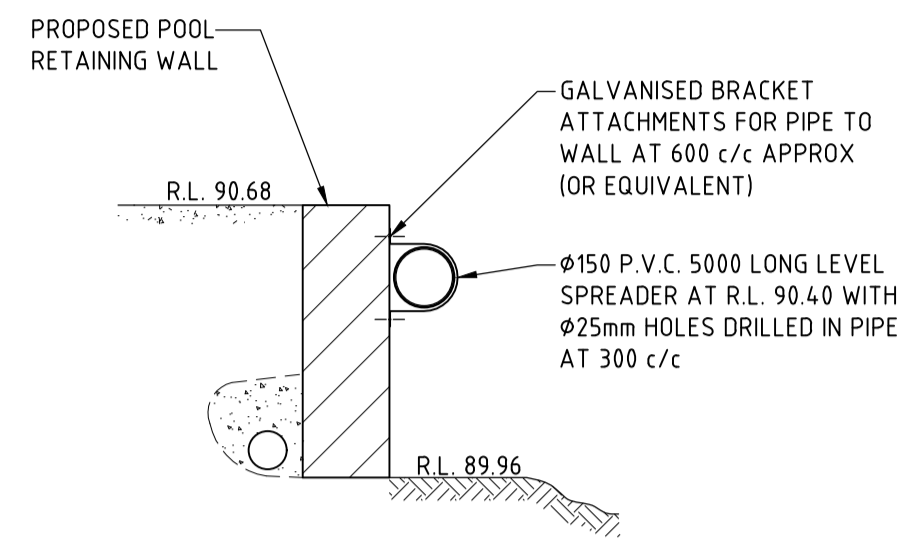
SCALE: A1
 1:100

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 CIVIL & STRUCTURAL CONSULTANTS

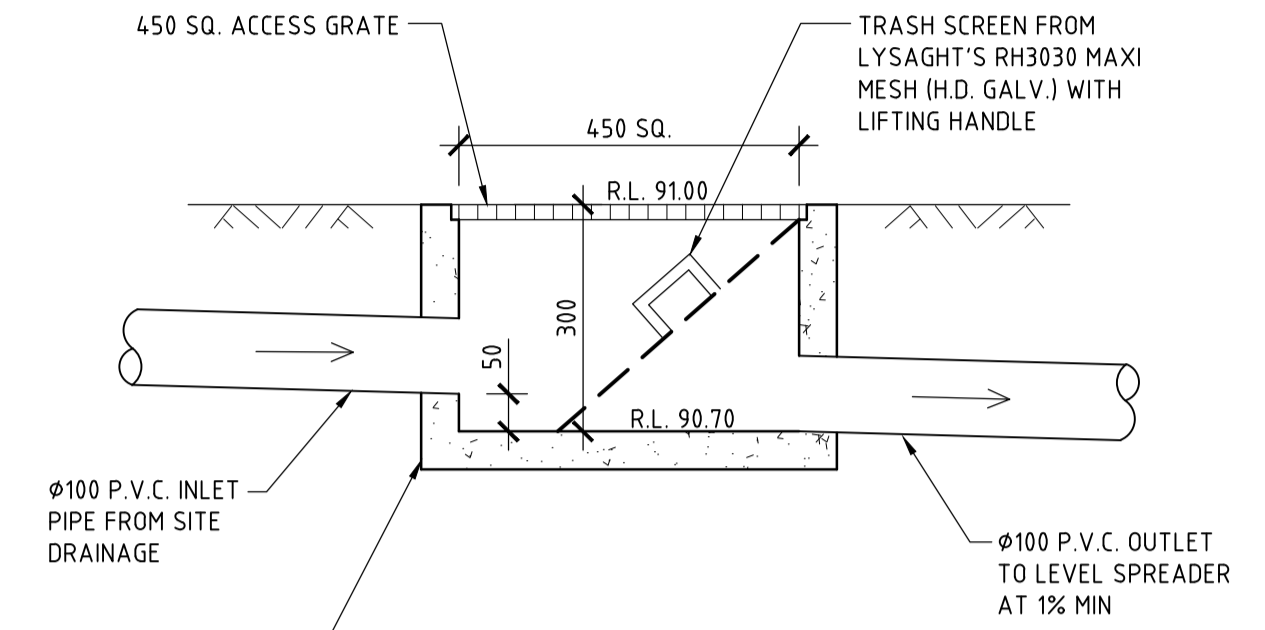
STORM-1



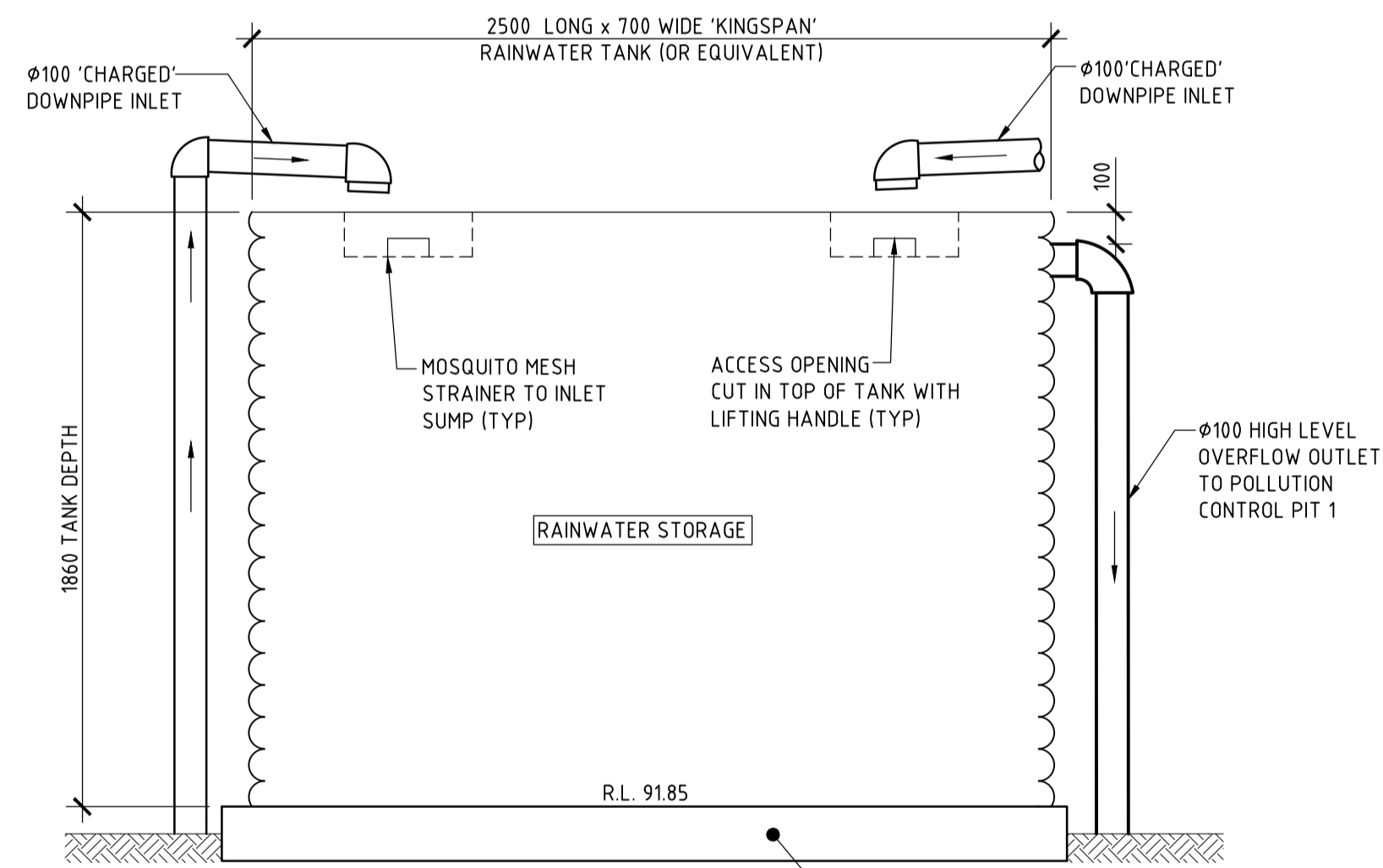
DETAIL A
SCALE 1:20
SHOWING HORIZONTAL DISPERSION SYSTEM
NOTE: CONCRETE STRENGTH = 20 MPa



SECTION 1
SCALE 1:20
SHOWING ORIENTATION OF LEVEL SPREADER OUTLET

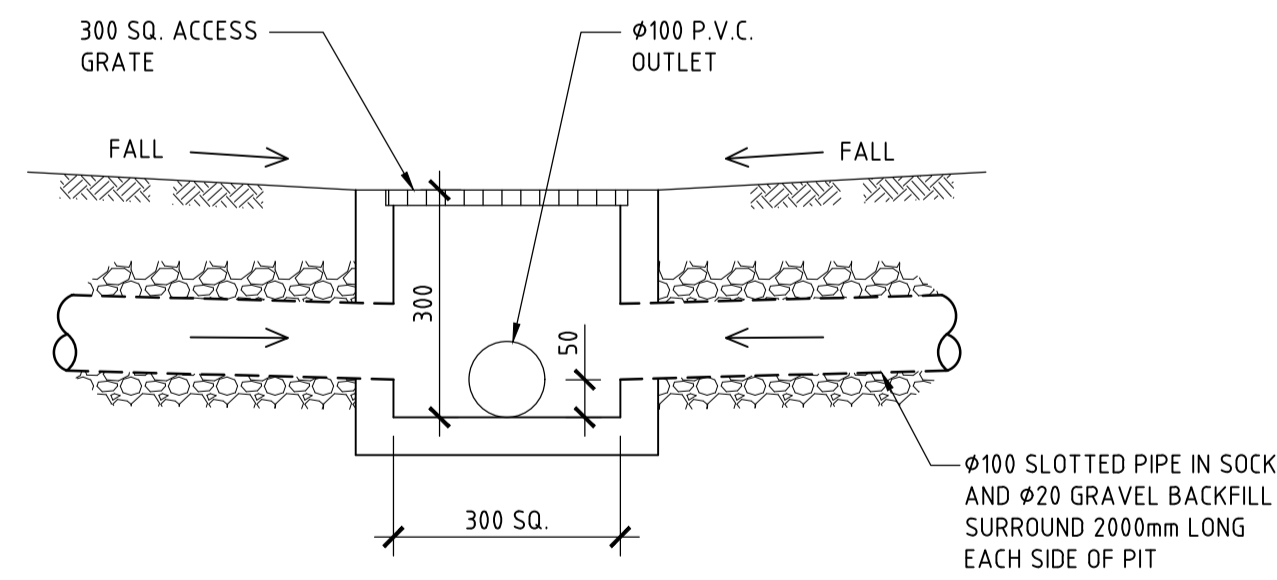


DETAIL B
SCALE 1:10
TYPICAL POLLUTION CONTROL PIT 1 DETAIL
NOTE: POLLUTION CONTROL PIT 2 SIMILAR

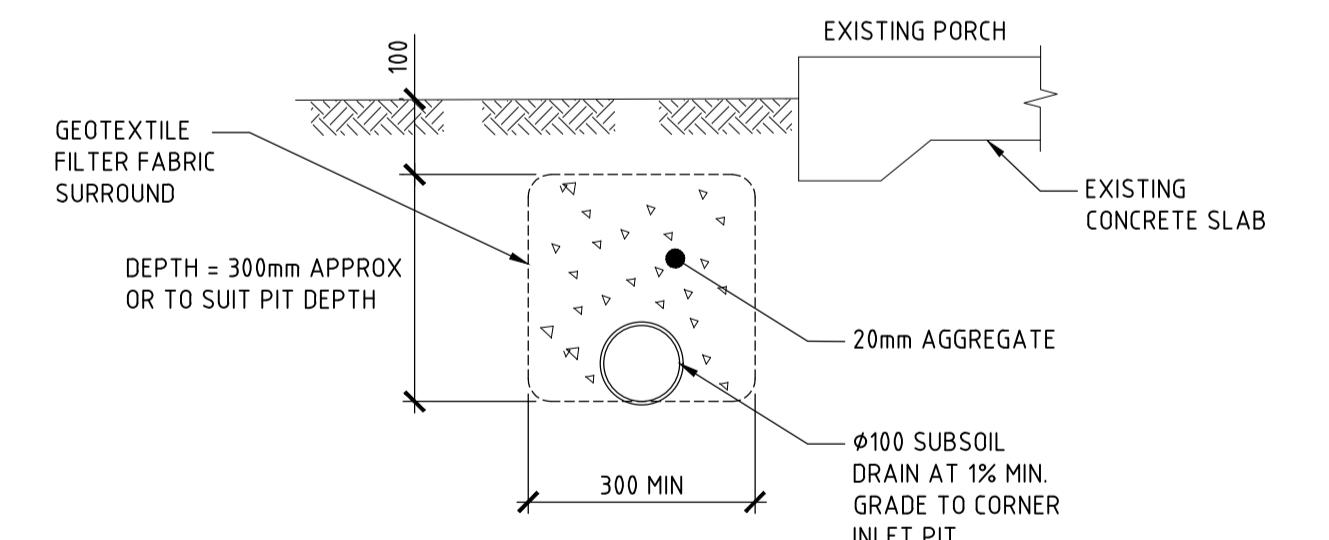


NOTE: RAINWATER STORAGE TANK TO BE INSTALLED AND CONFIGURED TO SYDNEY WATER, COUNCIL AND MANUFACTURER'S REQUIREMENTS.

DETAIL C
SCALE 1:20
TYPICAL RAINWATER STORAGE TANK



DETAIL D
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL



DETAIL E
SCALE 1:10
TYPICAL SUBSOIL DRAINAGE ALONG FOUNDATION

ISSUE DATE	REVISION

TITLE STORMWATER MANAGEMENT DETAILS 17 EGAN PLACE, BEACON HILL			
DRAWN LI	DATE 12 NOVEMBER 2024	CHECKED <i>[Signature]</i> BE Civil (Hons) MIE Aust.	SCALE @ A1 1:20 1:10

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CIVIL & STRUCTURAL ENGINEERS

DRAWING NO.
STORM-2