



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

6 MAY 2024

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

Address of the Project: **32 Tipperary Ave, Killarney Heights**

Description of Project: **Stormwater Management Plan - Alteration & Additions**

With reference to the Development Application for the above property, please find attached a copy of the site Stormwater Management Plans, STORM-1 & STORM-2, for your perusal.

The plan shows collected flows from the proposed roofed areas being discharged to the kerb and gutter at Tipperary Avenue frontage.

Due to the site's low-level nature, a proportion of the impervious area and landscaping are proposed to drain to an above-ground detention basin located at the rear of the property. The basin has a total capacity of 12,380 litres, and discharges collected flows to a level spreader situated towards the rear boundary.

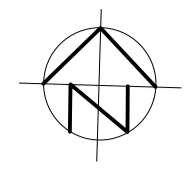
This is to certify that the Stormwater Management Plan layout, as shown on Plans STORM-1 & STORM-2 by Taylor Consulting Civil & Structural Engineers, has been designed in accordance with section 3.1.2, 'Drainage', of the Building Code of Australia Housing Provision, AS/NZS 3500.3.2 – Stormwater Drainage and Northern Beaches Council's Water Management for Development Policy - Version 1 - 26 August 2020.

Should you require any further information, please contact the undersigned.

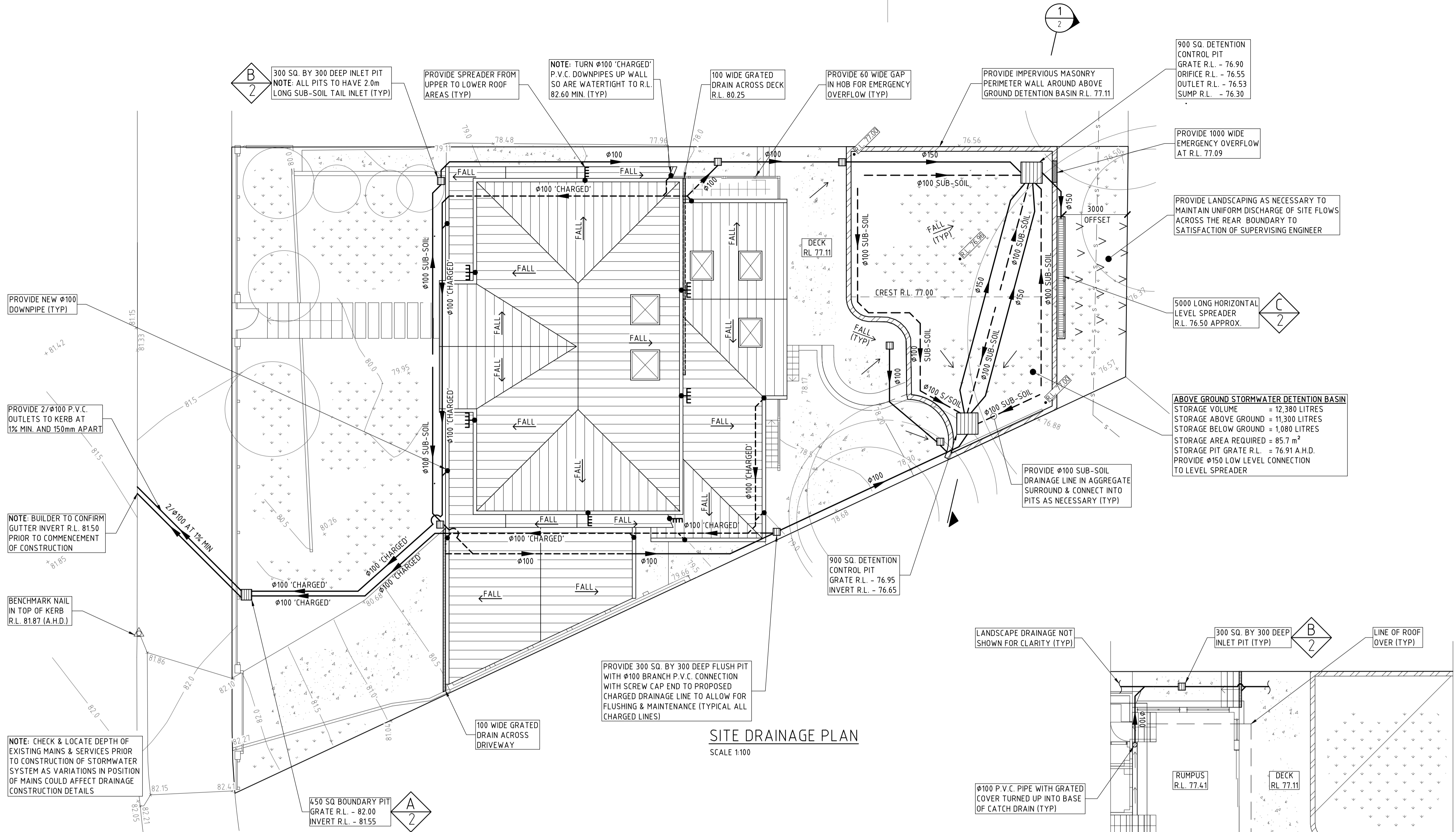
Yours faithfully
TAYLORCONSULTING.NET.AU

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

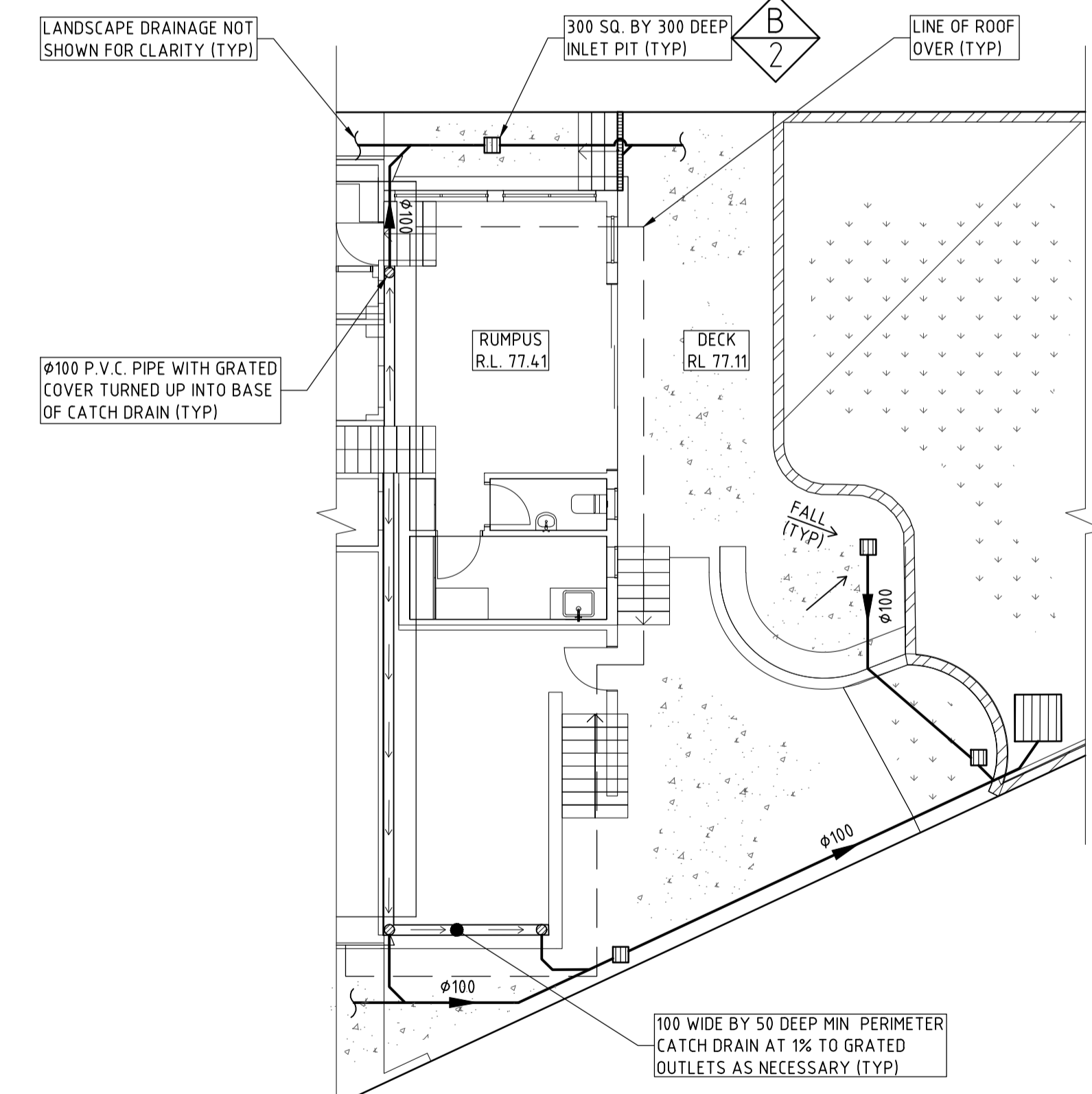




TIPPERARY AVENUE



SITE DRAINAGE PLAN
SCALE 1:100



LOWER GROUND FLOOR DRAINAGE PLAN
SCALE 1:100

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. CONFIRM 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 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.

STORMWATER SYSTEM DESIGN DATA

NORTHERN BEACHES COUNCIL - PARTIAL REGION 2 AND PARTIAL LOW-LEVEL PROPERTY

SITE DATA

SITE AREA = 697.70 m² (100%)
 PROPOSED IMPERVIOUS AREA = 398.80 m² (60%)
 PROPOSED LANDSCAPED AREA = 298.90 m² (40%)
 AREA DRAINING TO KERB & GUTTER = 250m²
 AREA DRAINING TO DETENTION BASIN = 448m²
 AREA BYPASS THE DETENTION BASIN = 30m²

PARTIAL PERMISSIBLE SITE FLOWS (STATE OF NATURE FOR CATCHMENT = 448m²)

5 YR ARI = 9 l/s
 100 YR ARI = 9 l/s

DEVELOPED PARTIAL SITE FLOWS (FOR CATCHMENT = 448m²)

100 YR ARI = 9 l/s

DETECTION SYSTEM DATA

AREA DRAINING TO DETENTION BASIN = 448 m²
 IMPERVIOUS AREA DRAINING TO OSD = 149m²
 ORIFICE DIA = 80 mm
 MAX. 100YR TWL = R.L. 77.09
 SSR = 12 m³

PARTIAL PROPOSED SITE FLOWS - (KERB & GUTTER)

SITE AREA = 250 m²
 PSD = 18 l/s

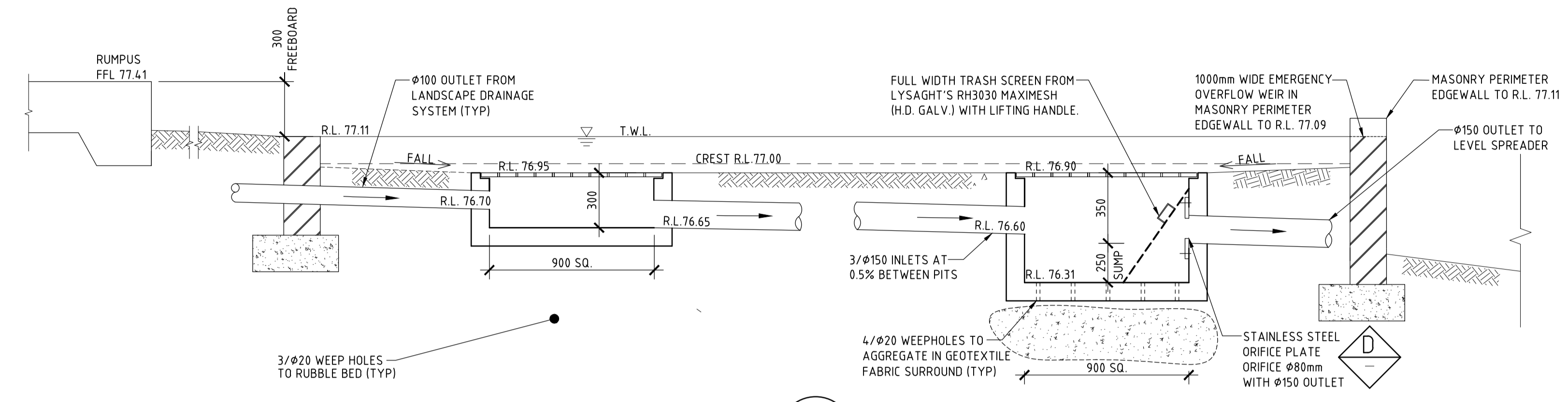
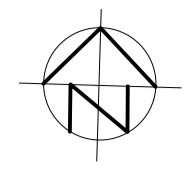
NOTE - AN ADDITIONAL 20% OF THE REQUIRED ABOVE GROUND STORAGE VOLUME HAS BEEN ADDED PER COUNCIL'S POLICY.

ISSUE DATE	REVISION

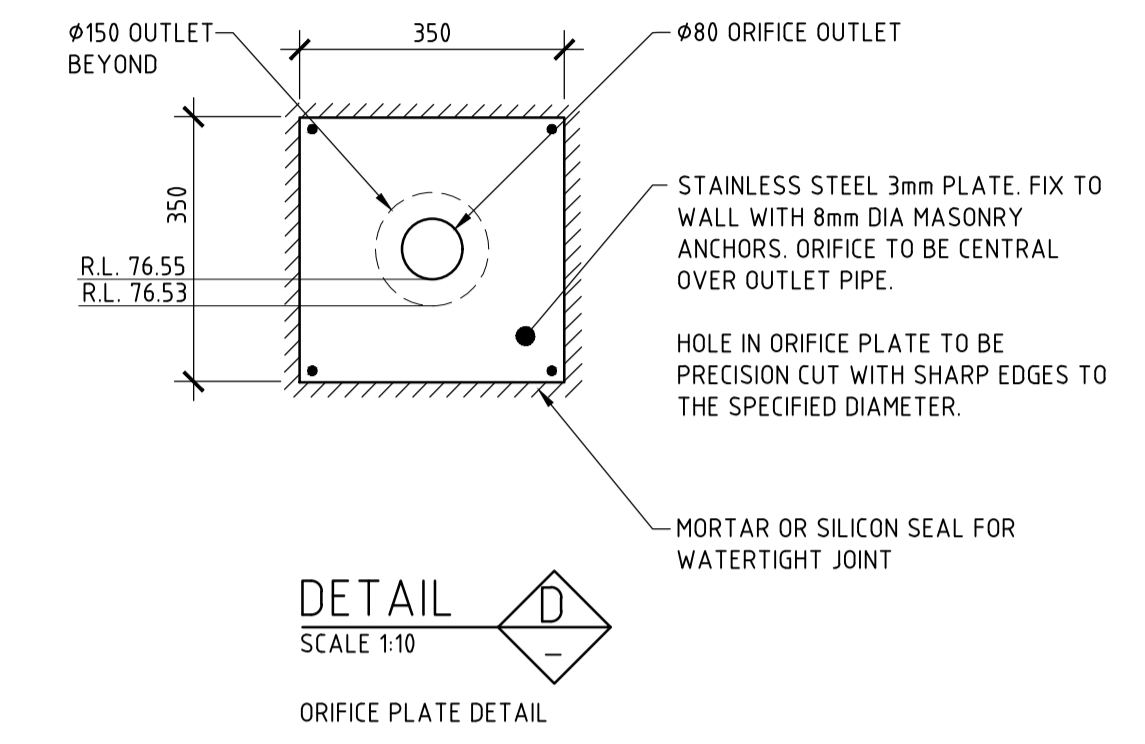
TITLE STORMWATER MANAGEMENT PLAN 32 TIPPERARY AVENUE, KILLARNEY HEIGHTS			
DRAWN LI	DATE 6 MAY 2024	CHECKED 	SCALE @ A1 1:100
ENGINEER G.S.	BE Civil (Hons) MIE Aust.		



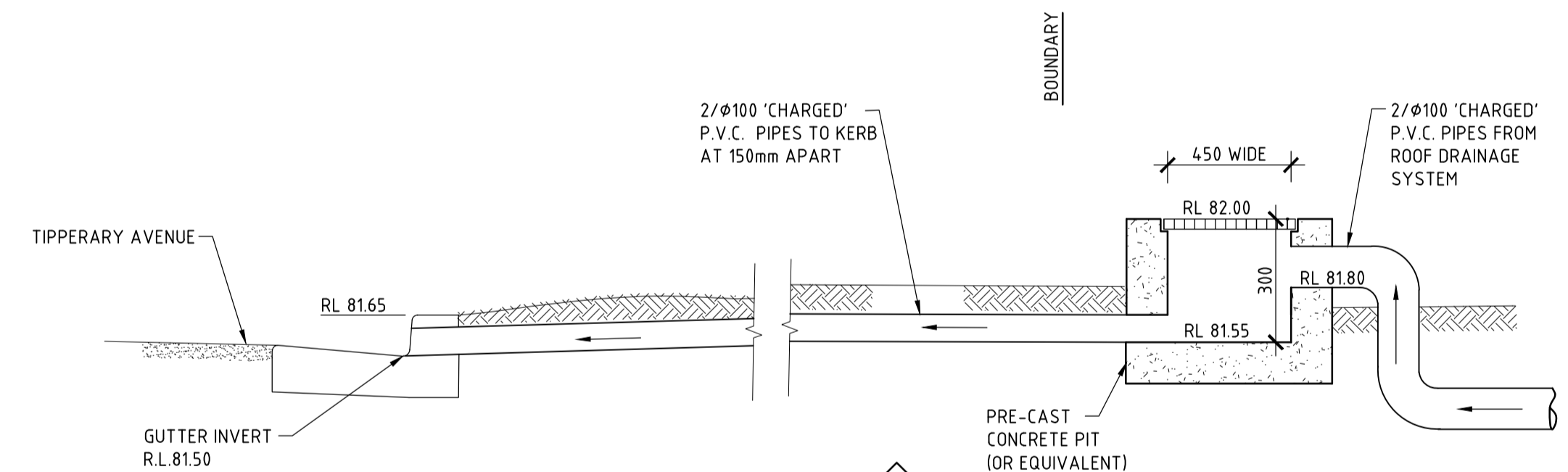
DRAINING NO
STORM-1



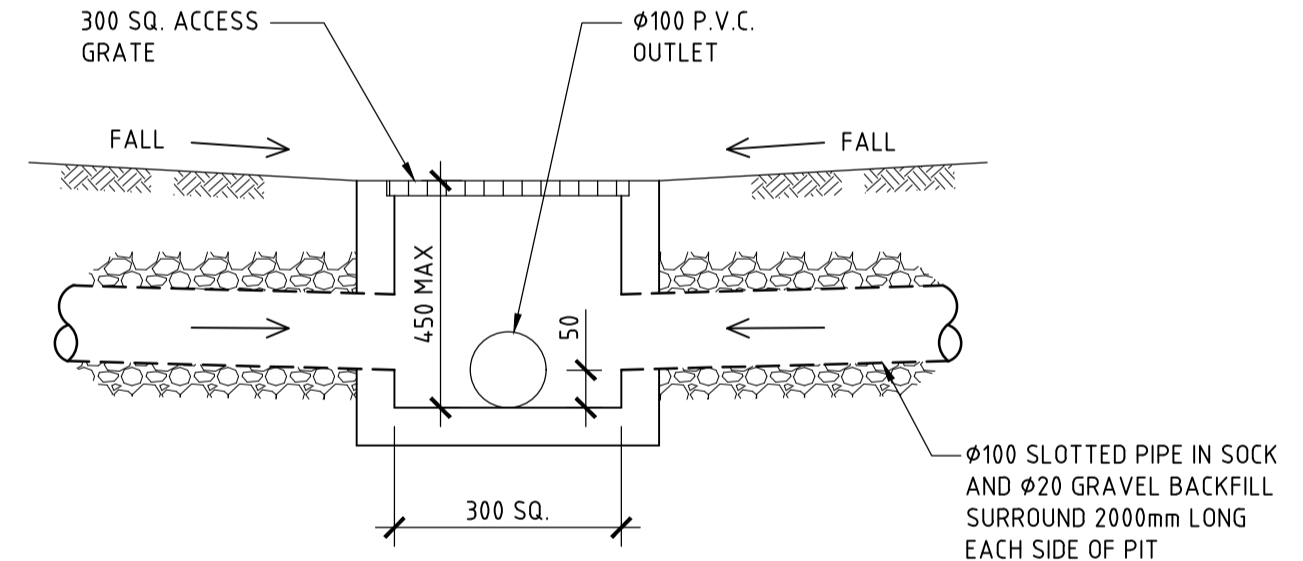
SECTION 1
SCALE 1:20
SCHEMATIC OF DETENTION CONTROL PIT ORIENTATION SHOWING ORIFICE OUTLET, TRASHSCREEN, SUMP & OUTLET TO LEVEL SPREADER



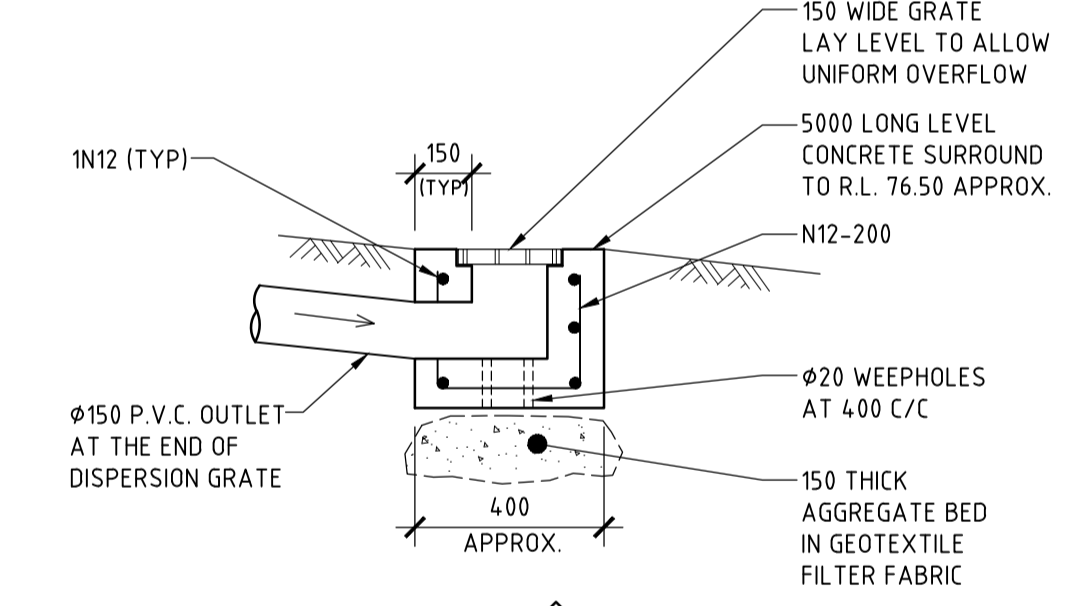
DETAIL D
SCALE 1:10
ORIFICE PLATE DETAIL



DETAIL A
SCALE 1:20
STORMWATER OUTLET ACROSS KERB



DETAIL B
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL



DETAIL C
SCALE 1:20
SHOWING HORIZONTAL DISPERSION GRATE
NOTE: CONCRETE STRENGTH = 20 MPa
NOTE: GRATING SURROUND MAY BE A PROPRIETARY PRODUCT SUBJECT TO APPROVAL BY SUPERVISING ENGINEER

ISSUE DATE	REVISION

TITLE STORMWATER MANAGEMENT DETAILS 32 TIPPERARY AVENUE, KILLARNEY HEIGHTS			
DRAWN LI	DATE 6 MAY 2024	CHECKED <i>[Signature]</i> BE Civil (Hons) MIE Aust.	SCALE @ A1 1:20 1:10

TAYLOR CONSULTING
CIVIL & STRUCTURAL ENGINEERS

DRAWING NO
STORM-2