

14 May 2025

Chief Executive Officer
Northern Beaches Council
725 Pittwater Road
DEE WHY NSW 2099

Address of the Project: **37 Lanford Avenue, Killarney Heights**

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

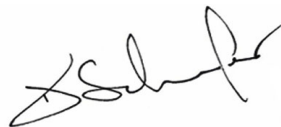
With reference to the Development Application for the above property, please find enclosed a copy of the site Stormwater Management Plan, STORM-1, and Stormwater Management Details, STORM-2, for your perusal.

The plan shows collected flows from roofed and landscaped area draining via an 18,500 litre detention tank to a level spreader system.

The rate of discharge for the developed area has been restricted to the 5 year state-of-nature level, in accordance with Council's Water Management for Development Policy for low level properties. The level spreader discharges collected runoff as uniform sheet flow across the rear boundary, observing the natural fall of the land.

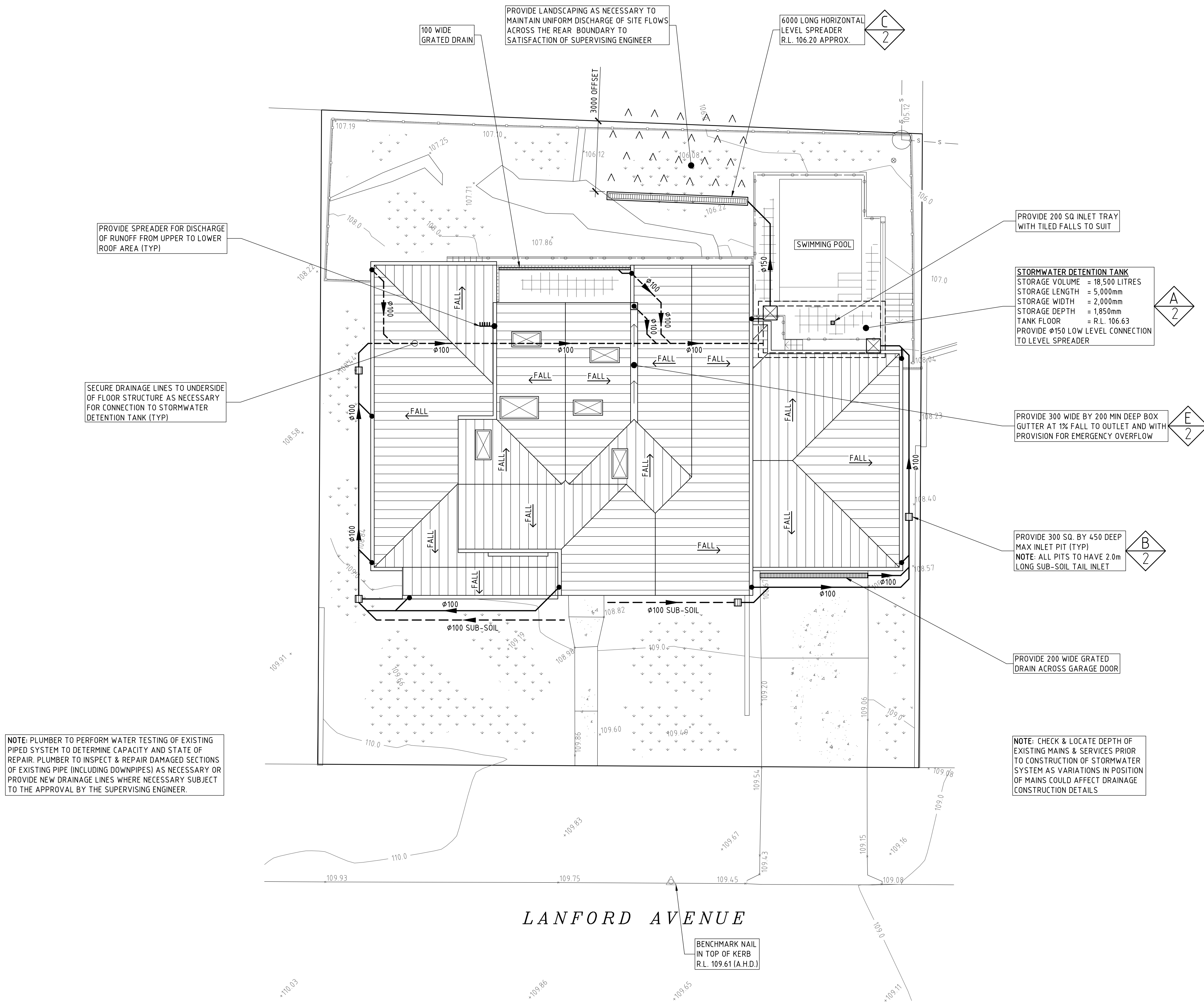
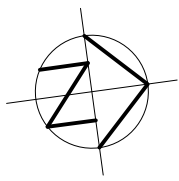
Should you require any further information, please contact the undersigned.

Yours faithfully
TAYLORCONSULTING.NET.AU



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





LANFORD AVENUE

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.

OSD SYSTEM DESIGN DATA

SITE DATA

SITE AREA = 702.8m²
TOTAL IMPERVIOUS AREA = 357.1m²
TOTAL PERVIOUS AREA = 345.7m²
IMPERVIOUS AREA DRAINING TO SPREADER = 357.1m²
PERVIOUS AREA DRAINING TO SPREADER = 345.7m²

PARTIAL PERMISSIBLE SITE FLOWS (STATE OF NATURE FOR CATCHMENT = 250m²)

5 YR ARI = 15 l/s

DEVELOPED PARTIAL SITE FLOWS (FOR CATCHMENT = 250m²)

100 YR ARI = 15 l/s

DETENTION SYSTEM DATA

AREA DRAINING TO THE TANK = 550 m²
IMPERVIOUS AREA DRAINING TO OSD = 357.1m²
ORIFICE DIAM = 50 mm
SSR = 18 l/s
MAX 100 YR TWL = 108.44

STORMWATER SYSTEM DESIGN DATA

SITE DATA

SITE AREA = 702.8 m² (100%)
PROPOSED IMPERVIOUS AREA = 357.1 m² (51%)
PROPOSED LANDSCAPED AREA = 345.7 m² (49%)
EXISTING IMPERVIOUS AREA = 337.4 m² (48%)
EXISTING LANDSCAPED AREA = 365.4 m² (52%)

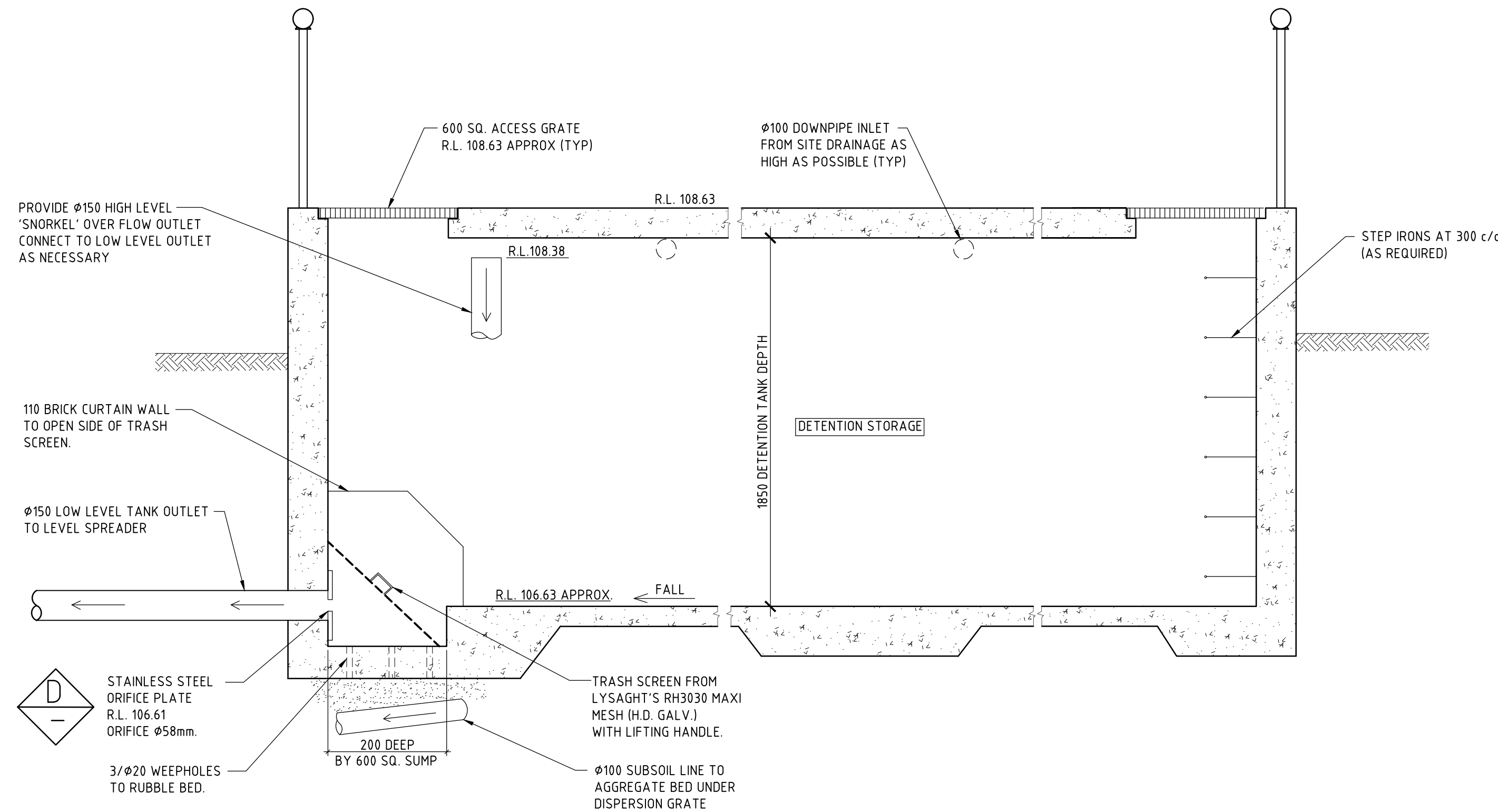
ISSUE	DATE	REVISION

TITLE
STORMWATER MANAGEMENT PLAN
37 LANFORD AVENUE, KILLARNEY HEIGHTS

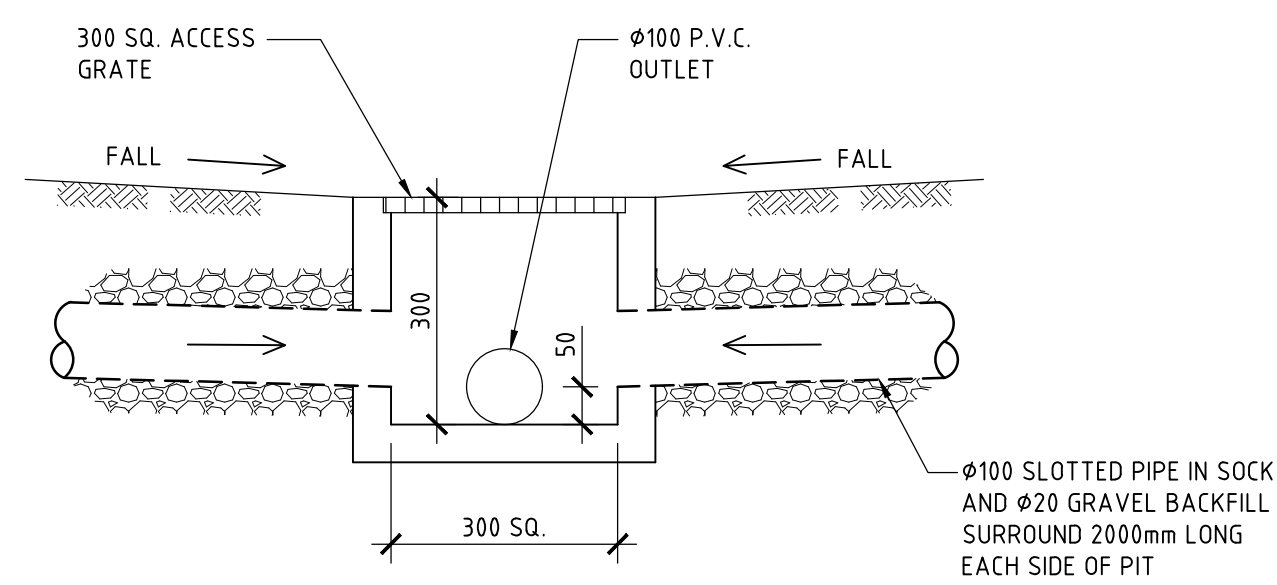
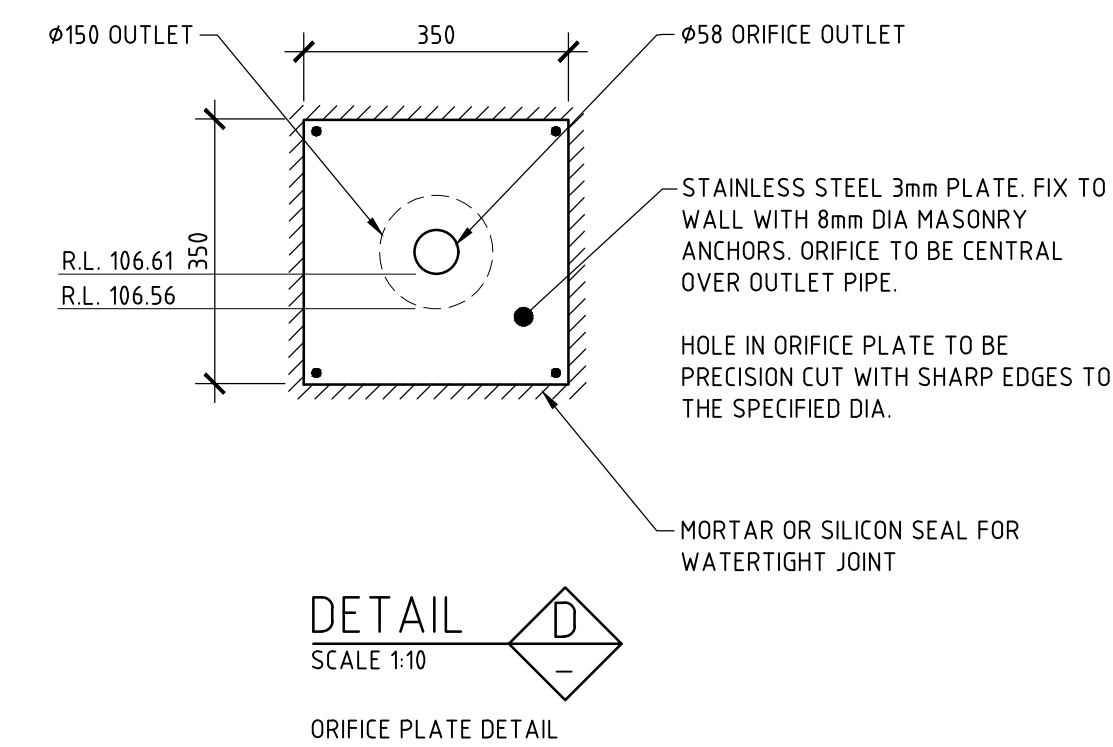
DRAWN: MDB
ENGINEER: DMS
DATE: 14 MAY 2025
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SCALE: @ A1
1:100
TAYLOR CONSULTING
BE Civil (Hons) MIE Aust.



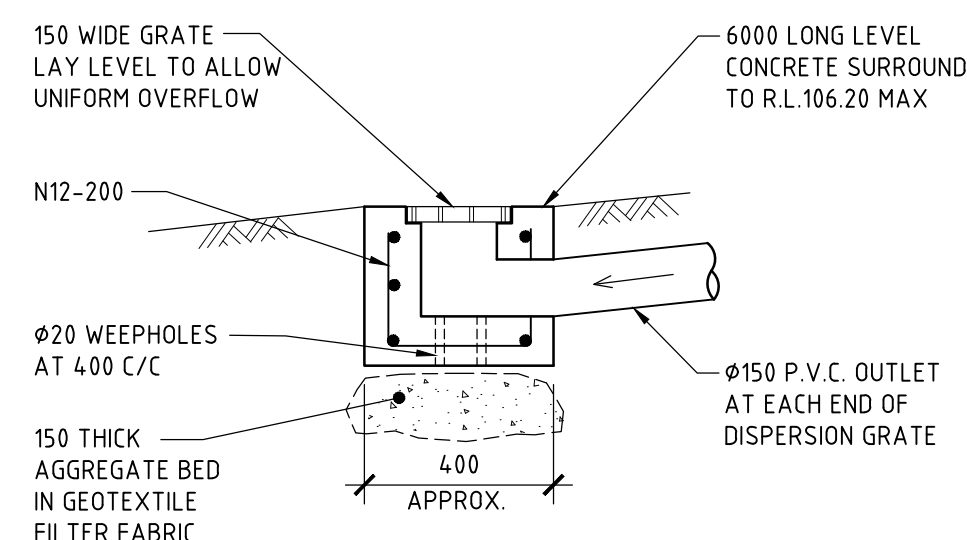
DRAINAGE NO.
STORM-1



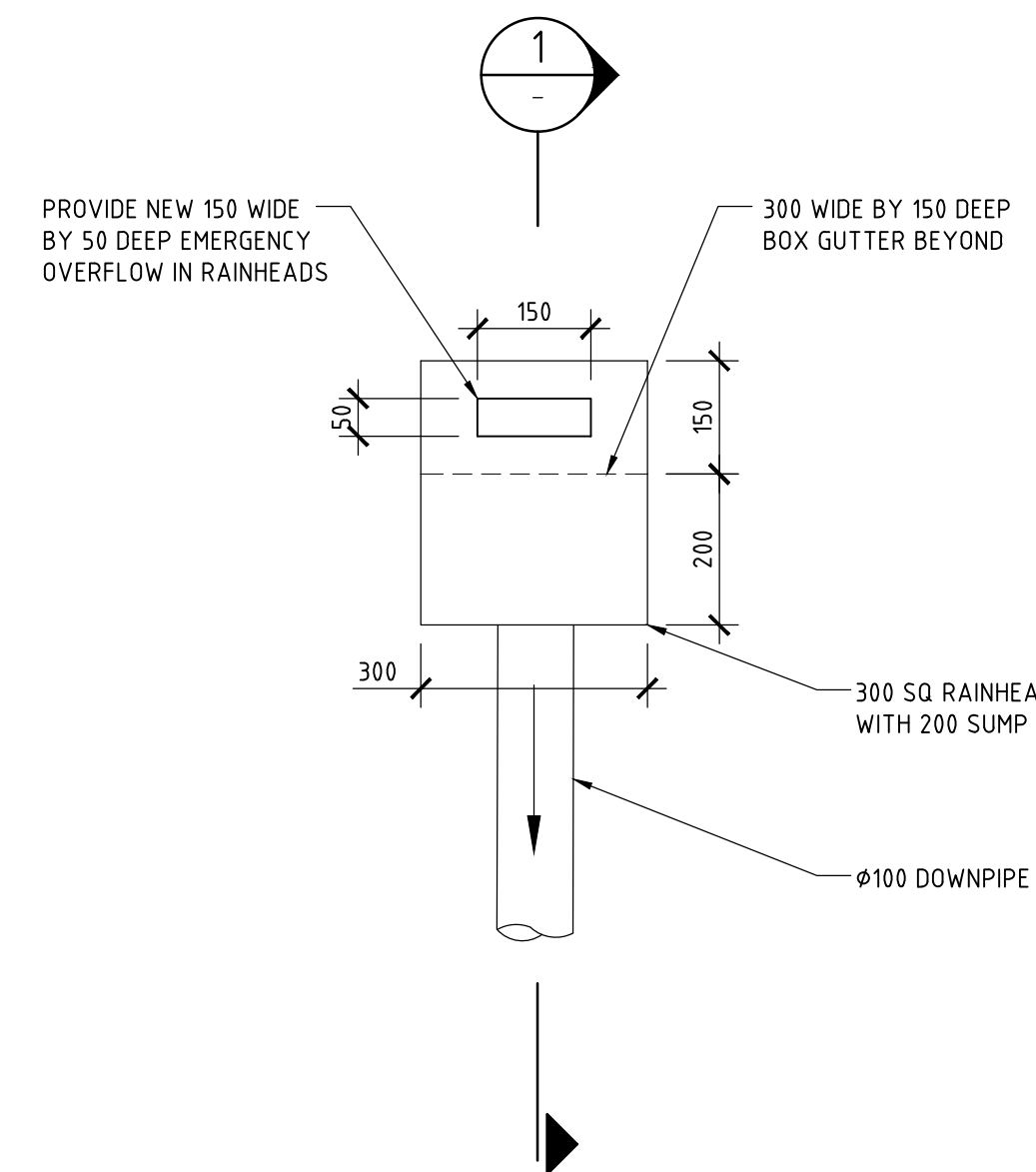
DETAIL A
SCALE 1:20
SHOWING SCHEMATIC LAYOUT DETENTION SYSTEM
NOTE: STRUCTURAL DESIGN OF TANK TO FUTURE SEPARATE DETAIL.



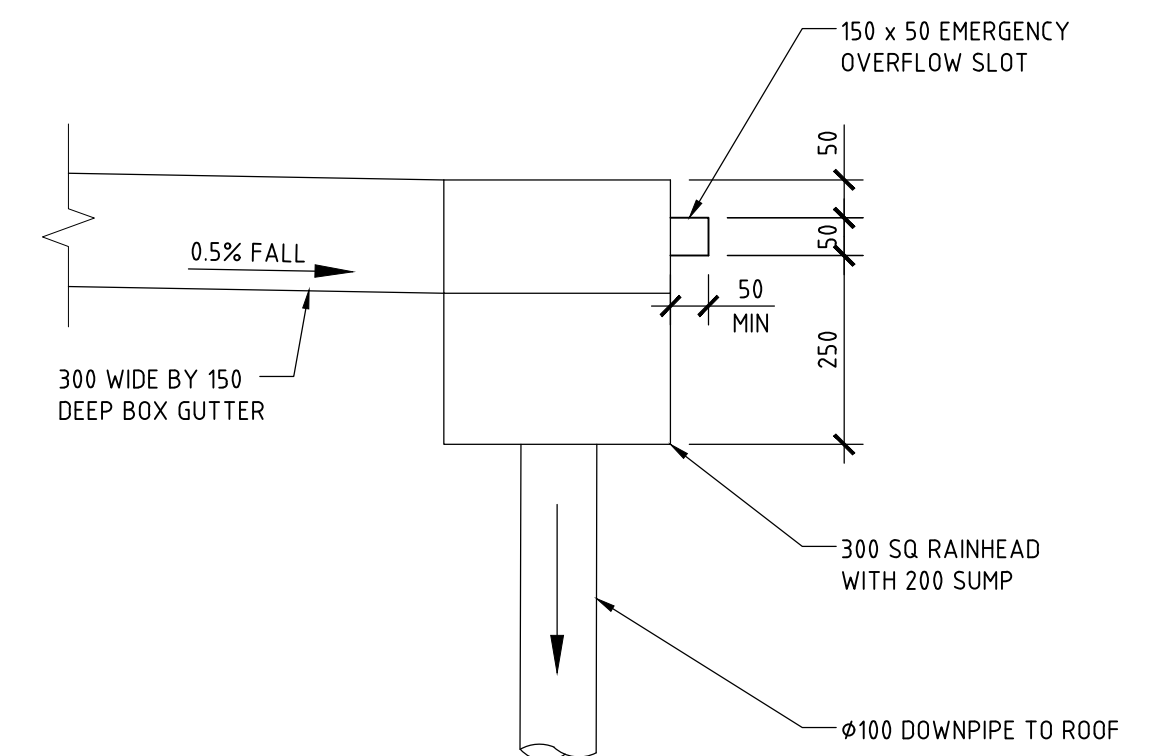
DETAIL B
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL



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


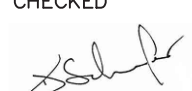


DETAIL E
SCALE 1:10
TYPICAL RAINHEAD DETAIL (OR EQUIVALENT)
SHOWING PROVISION FOR EMERGENCY OVERFLOW



SECTION 1
SCALE 1:10

ISSUE	DATE	REVISION

TITLE STORMWATER MANAGEMENT DETAILS 37 LANFORD AVENUE, KILLARNEY HEIGHTS				 TAYLOR	DRAWN MDB ENGINEER DMS	DATE 14 MAY 2025	CHECKED  BE Civil (Hons) MIE Aust.	SCALE @ A1 1:20 1:10