

14 May 2025

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

Address of the Project: **32 Bellara Avenue, North Narrabeen**

Description of Project: **Proposed Subdivision**

With reference to the development application for the subdivision of the above property, please find enclosed a copy of the plans Stormwater Management Plan and Details, STORM-1/B, STORM-2/C, STORM-3/C and STORM-4/B, Subdivision Driveway Plan and Long-Section, CIVIL-1/C, CIVIL-2/C, CIVIL-3/C and CIVIL-4/C and Interallotment Drainage Plan and Long-Sections STORM-5 & STORM-6 for your perusal.

STORM-1/B and STORM-2/C contain the proposed inter-allotment drainage plan showing the stormwater drainage system and connection points to be provided as part of the proposed subdivision.

STORM-3/C contains Stormwater Management Details for House C.

STORM-4/C contains Stormwater Management Plan and Details for 64 Powderworks Road.

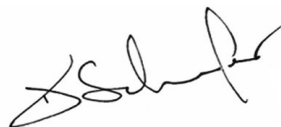
CIVIL-1/C, CIVIL-2/C, CIVIL-3/C and CIVIL-4/C contain the proposed subdivision plan and the driveway's extent with associated long-sections.

STORM-5 contains Interallotment Drainage Plan & Details for the proposed Subdivision.

STORM-6 contains Interallotment drainage long-sections for the proposed subdivision.

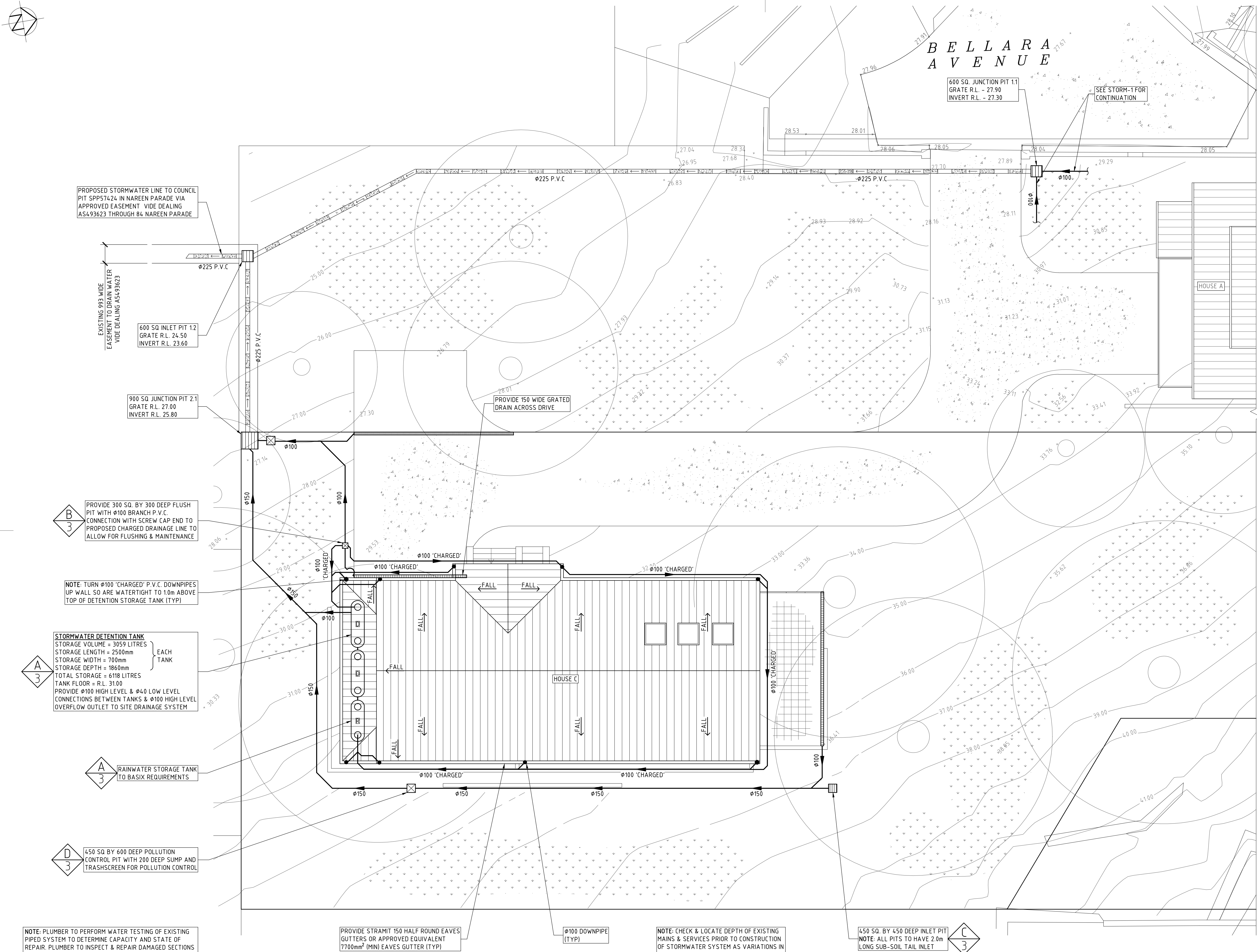
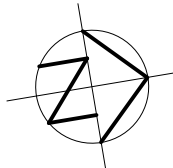
Should you require any further information please contact the undersigned.

Yours faithfully
TAYLORCONSULTING.NET.AU



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





- 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 SUPPLIERS 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.

OSD SYSTEM DESIGN DATA

TOTAL SITE AREA = 1610 m²
AREA TO OSD = 226 m² (100% IMPERVIOUS)
AREA BYPASSING OSD = 1384 m² (17% IMPERVIOUS)

PRE-DEVELOPED SITE FLOWS

20% AEP = 33 l/s
1% AEP = 71 l/s

DEVELOPED SITE FLOWS

20% AEP = 33 l/s
1% AEP = 71 l/s

DETENTION SYSTEM DATA

TOTAL SSR = 4.8 m³
ORIFICE DIAMETER = 50 mm

STORMWATER SYSTEM DESIGN DATA

SITE DATA

SITE AREA = 1609m² (100%)
PROPOSED IMPERVIOUS AREA = 482 m² (30%)
PROPOSED LANDSCAPED AREA = 1127 m² (70%)
EXISTING IMPERVIOUS AREA = 0 m² (0%)
EXISTING LANDSCAPED AREA = 1609 m² (100%)

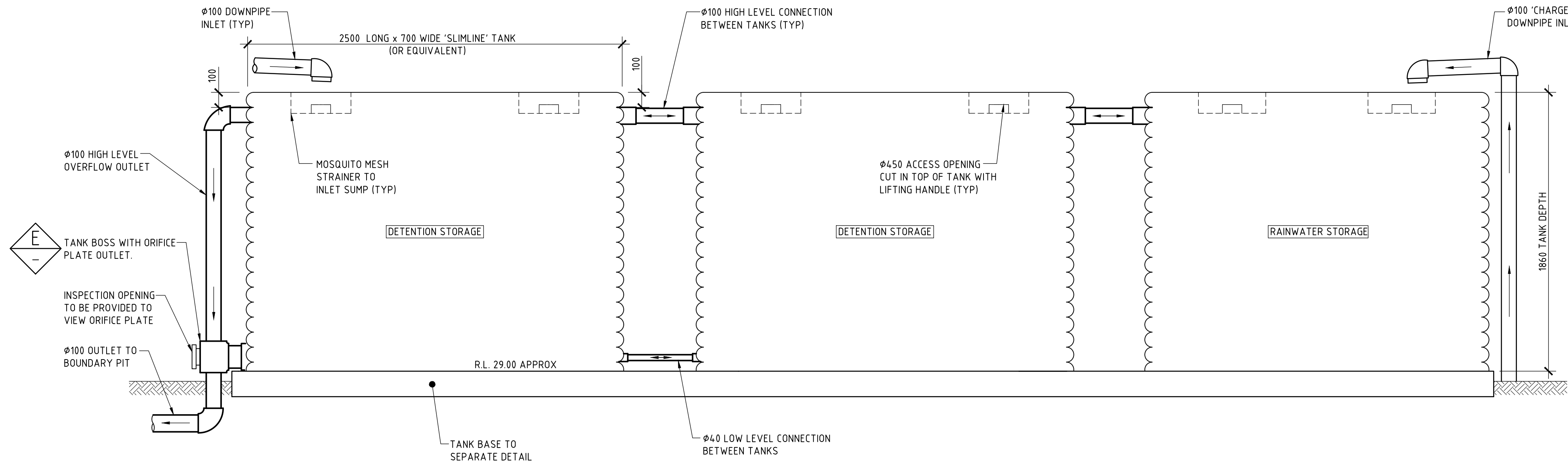
ISSUE DATE	REVISION
18 JUN 2024	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL PLANS
12 JUL 2024	AMENDMENTS TO TITLE BLOCK
12 MAR 2025	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL PLANS

TITLE STORMWATER MANAGEMENT PLAN 62 & 64 POWDERWORKS ROAD, NORTH NARRABEEN (LOWER SECTION) – HOUSE C			
DRAWN TDR	DATE 19 DECEMBER 2023	CHECKED 	SCALE @ A1 1:100
ENGINEER R B			

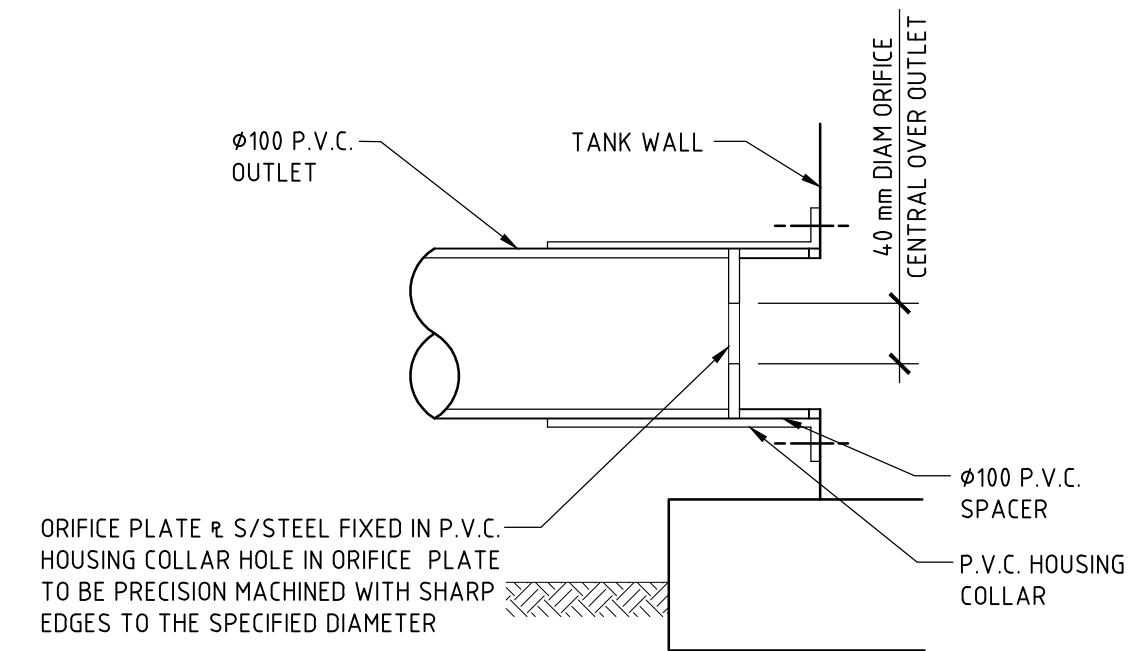


STORM-2/C

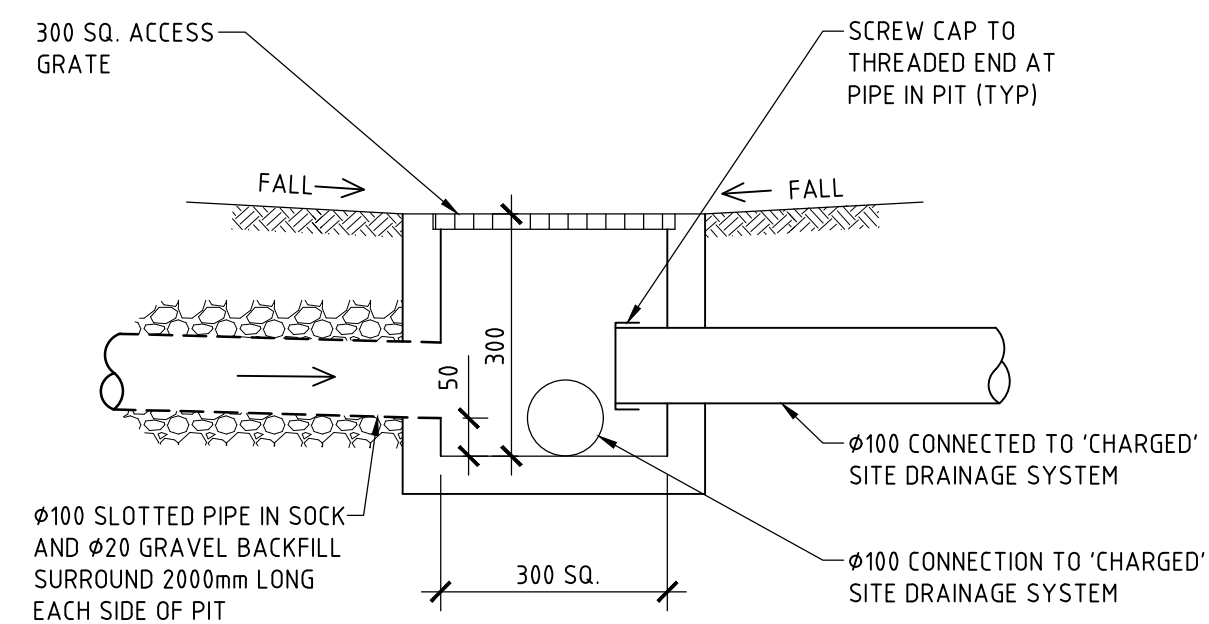
SITE DRAINAGE PLAN
SCALE 1:100



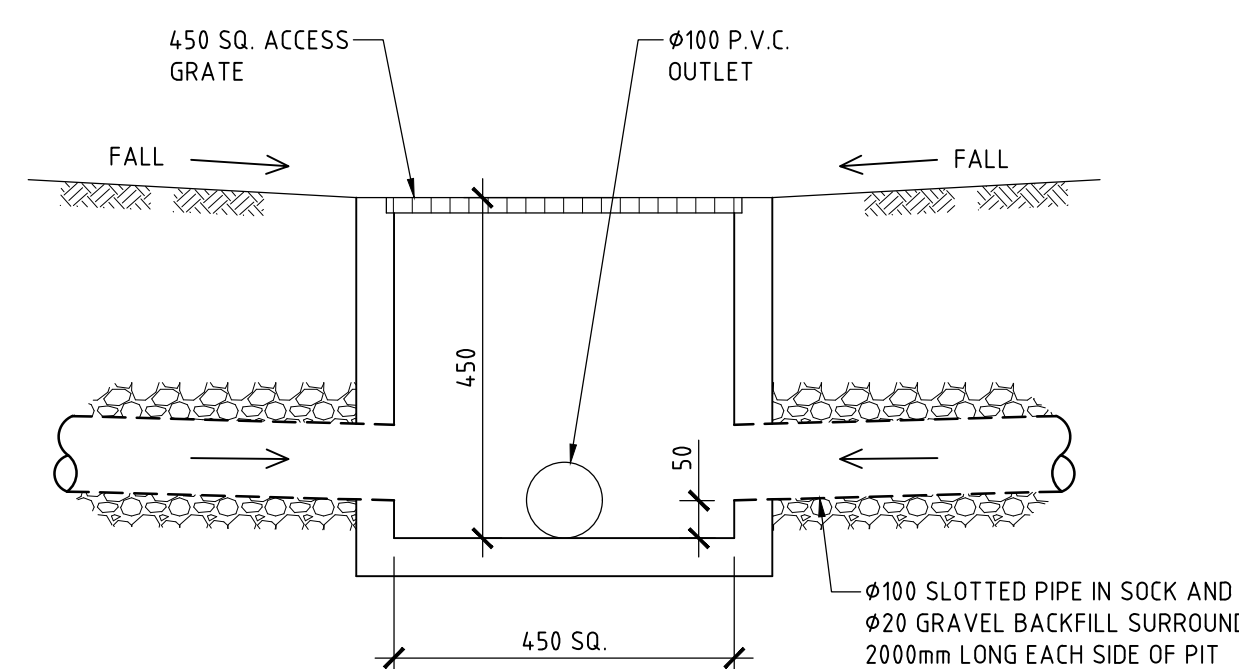
DETAIL A
SCALE 1:20



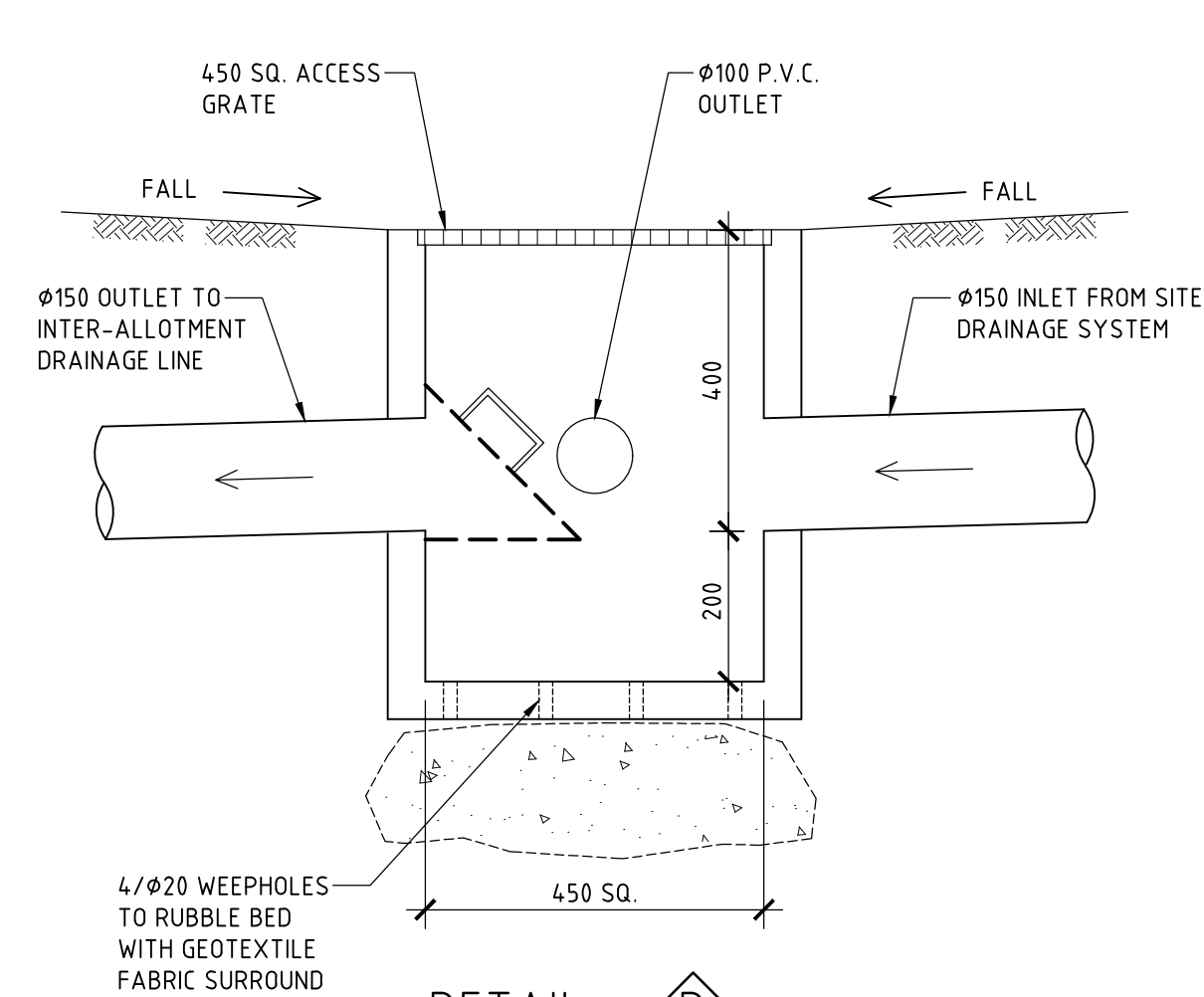
DETAIL E
SCALE 1:5
DETENTION STORAGE OUTLET



DETAIL B
SCALE 1:10
TYPICAL INLET FLUSH PIT DETAIL

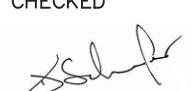


DETAIL C
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL



DETAIL D
SCALE 1:10
TYPICAL POLLUTION CONTROL PIT DETAIL

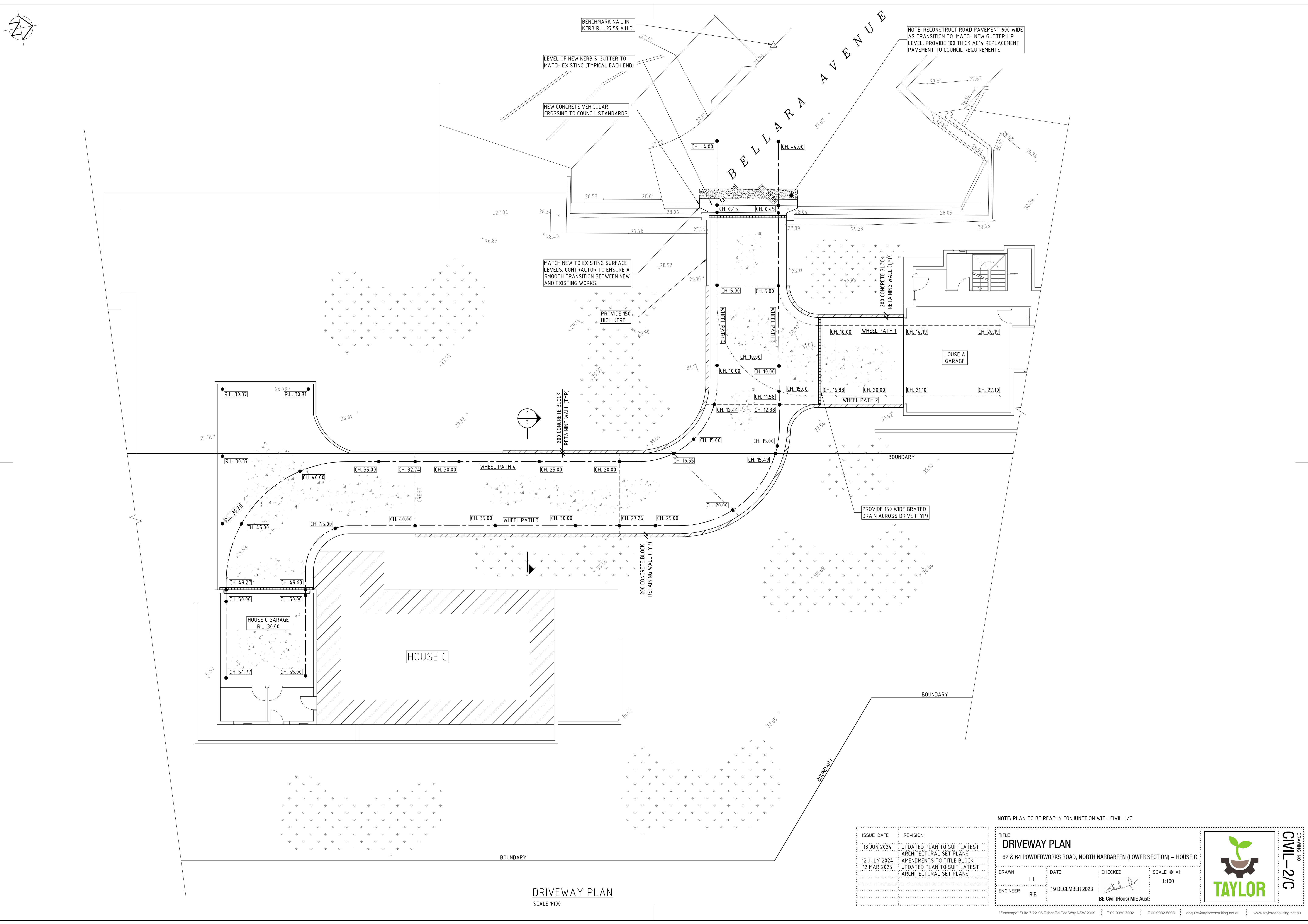
ISSUE DATE	REVISION
18 JUN 2024	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL PLANS
12 JUL 2024	AMENDMENTS TO TITLE BLOCK
12 MAR 2025	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL PLANS

TITLE STORMWATER MANAGEMENT DETAILS 62 & 64 POWDERWORKS ROAD, NORTH NARRABEEN (LOWER SECTION) – HOUSE C			
DRAWN TDR	DATE 19 DECEMBER 2023	CHECKED 	SCALE @ A1 1:20 1:10 1:5
ENGINEER R B	BE Civil (Hons) MIE Aust.		



TAYLOR

STORM-3/C




SCALE 1:100

ISSUE DATE	REVISION
18 JUN 2024	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL SET PLANS
12 JULY 2024	AMENDMENTS TO TITLE BLOCK
12 MAR 2025	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL SET PLANS

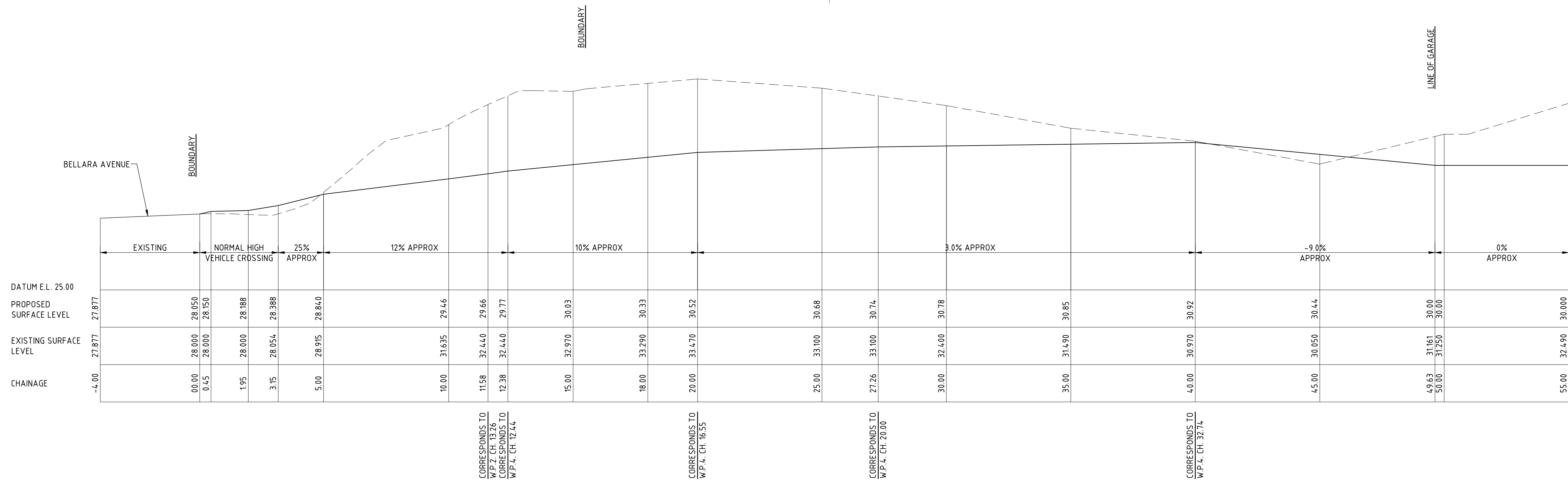
NOTE: PLAN TO BE READ IN CONJUNCTION WITH CIVIL-1/C

TITLE
DRIVEWAY PLAN
62 & 64 POWDERWORKS ROAD, NORTH NARRABEEN (LOWER SECTION) – HOUSE C

DRAWN	LI	DATE	CHECKED	SCALE @ A1
ENGINEER	RB	19 DECEMBER 2023		1:100
BE Civil (Hons) MIE Aust.				

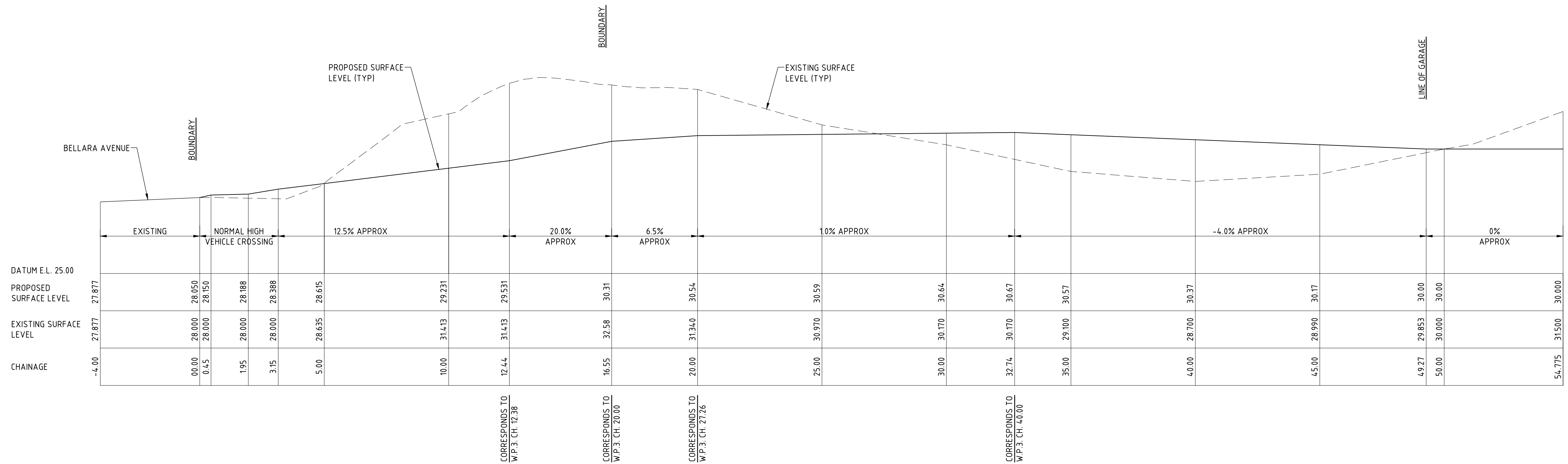


DRAWING NO
CIVIL-2/C



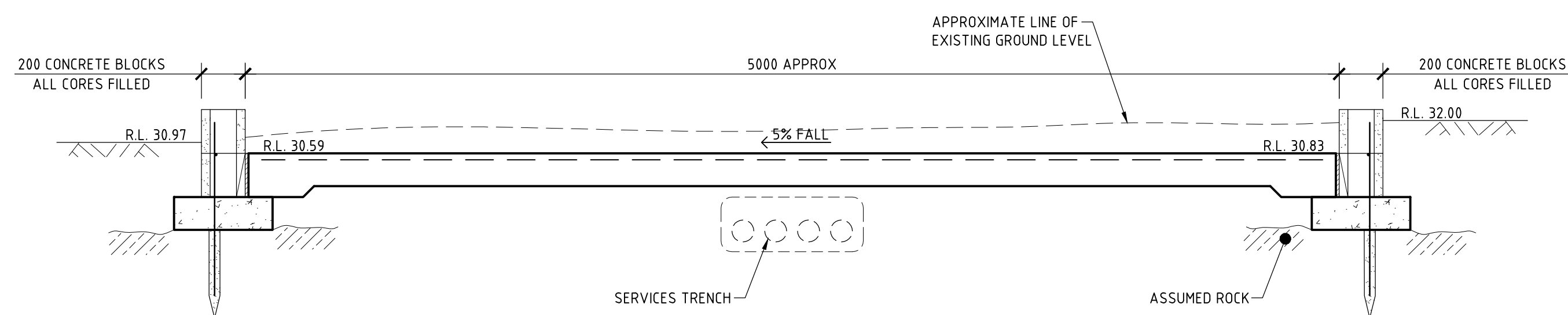
WHEEL PATH 3 LONG-SECTION

SCALE 1:100



WHEEL PATH 4 LONG-SECTION

SCALE 1:100

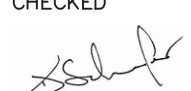


SECTION 1

SCALE 1:20

2

ISSUE DATE	REVISION
18 JUN 2024	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL SET PLANS
12 JULY 2024	AMENDMENTS TO TITLE BLOCK
12 MAR 2025	UPDATED PLAN TO SUIT LATEST ARCHITECTURAL SET PLANS

TITLE			
DRIVEWAY LONG-SECTIONS			
62 & 64 POWDERWORKS ROAD, NORTH NARRABEEN (LOWER SECTION) – HOUSE C			
DRAWN	DATE	CHECKED	SCALE @ A1
L I	19 DECEMBER 2023		1:100 1:20
ENGINEER	R B	BE Civil (Hons) MIE Aust.	



TAYLOR

DRAWING NO
CIVIL-3/C