TAYLOR
CONSULTING
CIVIL & STRUCTURAL ENGINEERS

4 May 2023

General Manager
Northern Beaches Council
PO Box 882
MONA VALE NSW 1660

Dear Sir/Madam,

Re: Stormwater Drainage Details – 110 Central Avenue, Avalon Beach

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

The stormwater plan shows runoff collected from the proposed and existing roof areas, along with the surrounding hardstand and landscaped areas, connecting to the kerb and gutter in Central Avenue.

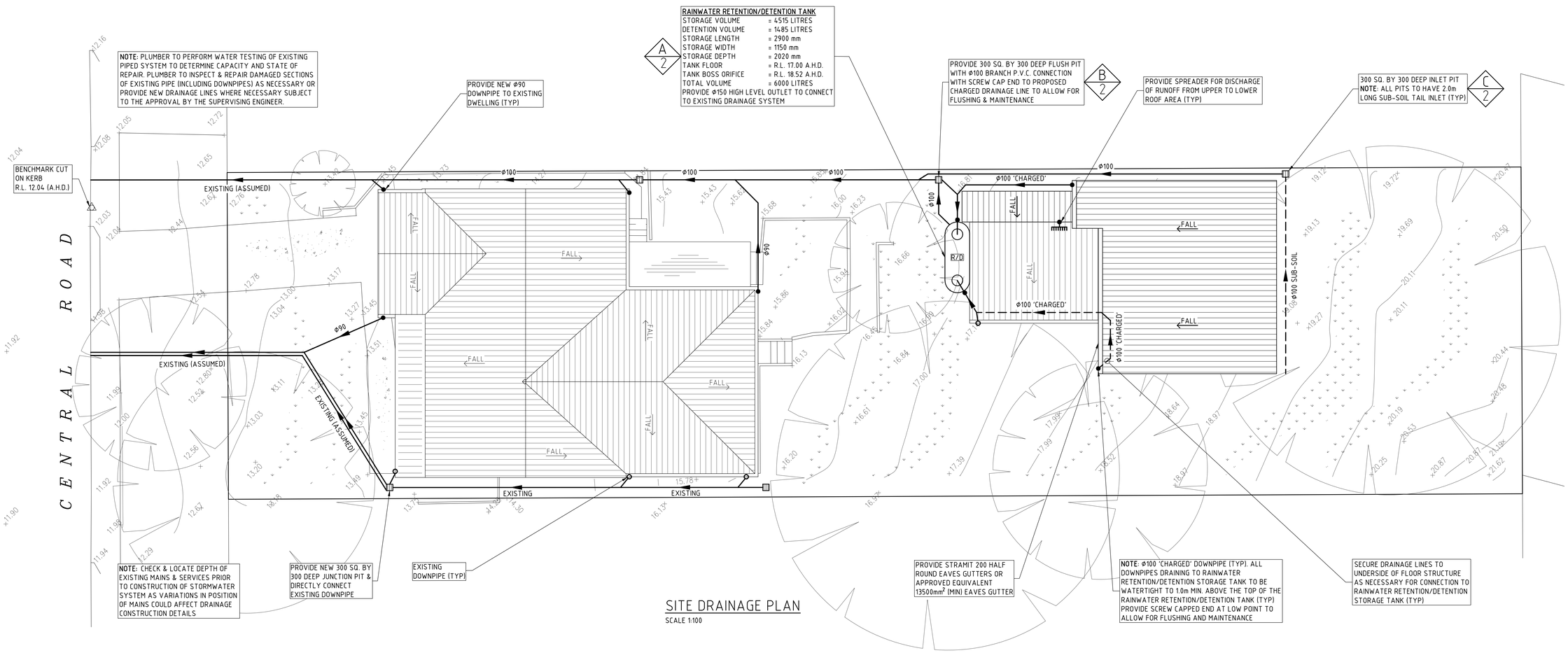
Note that it is proposed to provide a combined rainwater/detention tank adjacent to the rear secondary dwelling, in accordance with Council and BASIX requirements.

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. N.E.R

REGISTERED NER Engineers Australia



SITE 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/CERTIFEIR 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.

STORMWATER SYSTEM DESIGN DATA

PARTIAL SITE DATA

PARTIAL SITE AREA = 122.1 m² (100%)
PROPOSED IMPERVIOUS AREA = 112.9 m² (92.5%)
PROPOSED LANDSCAPED AREA = 9.2 m² (7.5%)

NORTHERN BEACHES COUNCIL - REGION 1: NORTHERN CATCHMENTS

TOTAL INCREASE IN IMPERVIOUS AREA > 50m²; OSD REQUIRED

OSD SYSTEM DESIGN DATA

EXISTING SITE FLOWS (FOR 122.1m²)

5 YR ARI = 3 l/s
100 YR ARI = 6 l/s

DEVELOPED SITE FLOWS (FOR 122.1m²)

5 YR ARI = 3 l/s
100 YR ARI = 5 l/s

DETENTION SYSTEM DATA

AREA DRAINING TO THE TANK = 112.9 m²
MAX. 100YR TWL = RL 18.87
ORIFICE DIAM = 65 mm
SSR = 1.040 m³

STORMWATER SYSTEM DESIGN DATA

SITE DATA

SITE AREA = 919.7 m² (100%)
PROPOSED IMPERVIOUS AREA = 364.9 m² (40%)
PROPOSED LANDSCAPED AREA = 554.8 m² (60%)
EXISTING IMPERVIOUS AREA = 298.9 m² (33%)
EXISTING LANDSCAPED AREA = 620.8 m² (67%)

ISSUE	DATE	REVISION

TITLE
STORMWATER MANAGEMENT PLAN
110 CENTRAL ROAD, AVALON

DRAWN	DATE	CHECKED	SCALE @ A1
HSC	4 MAY 2023	BE Civil (Hons) MIE Aust	1:100

DRAWING NO. STORM-1

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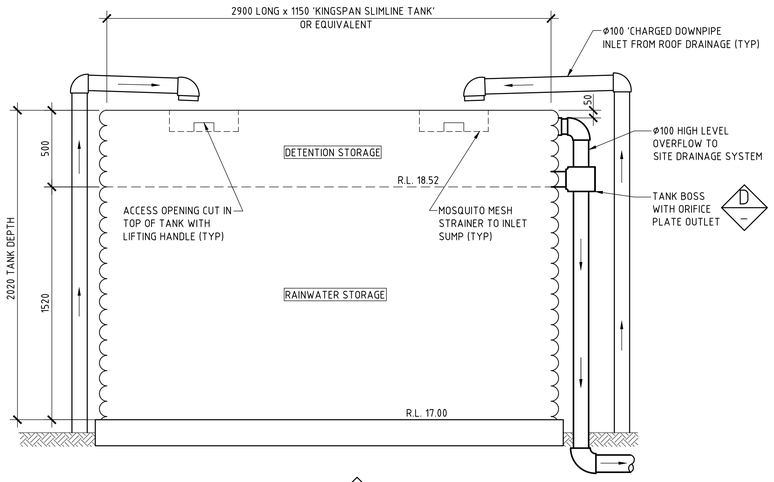
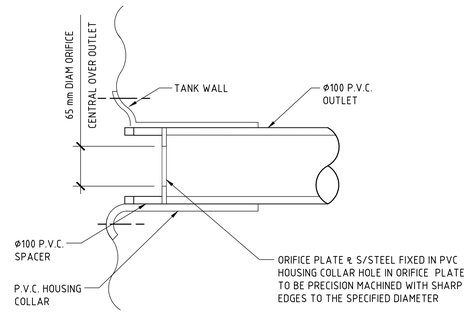


DETAIL A / 1

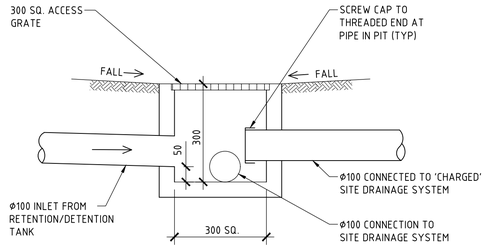
SCALE 1:20



DETAIL B / —

SCALE 1:5

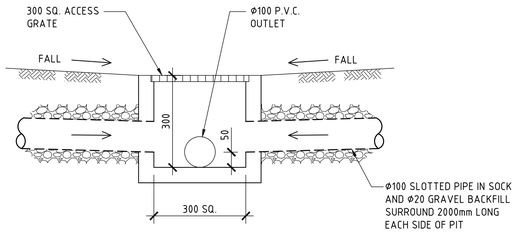
DETENTION STORAGE OUTLET ORIFICE PLATE



DETAIL B / 1

SCALE 1:10

TYPICAL INLET FLUSH PIT DETAIL



DETAIL C / 1

SCALE 1:10

TYPICAL SURFACE INLET PIT DETAIL

ISSUE DATE	REVISION

TITLE

STORMWATER DRAINAGE DETAILS
110 CENTRAL ROAD, AVALON

DRAWN	DATE	CHECKED	SCALE @ A1
HSC	4 MAY 2023	BE Civil (Hons) MIE Aust.	1:20 1:10 1:5

TAYLOR CONSULTING
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DRAWING NO. STORM–2

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