

- 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 D.A. SUBMISSION TO COUNCIL 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.

SDS SYSTEM DESIGN DATA

SITE DATA

SITE AREA = 1708 m²
 EXIST. MODELLED IMPERVIOUS AREA = 0% imp
 EXIST. GRASSED FLOW LENGTH = 4.0 m
 EXIST. GRASSED SLOPE = 12.15%
 MODELLED IMPERVIOUS AREA = 1200 m²

EXISTING SITE FLOWS

5 YR ARI = 4.3 l/s
 20 YR ARI = 7.2 l/s
 100 YR ARI = 9.3 l/s

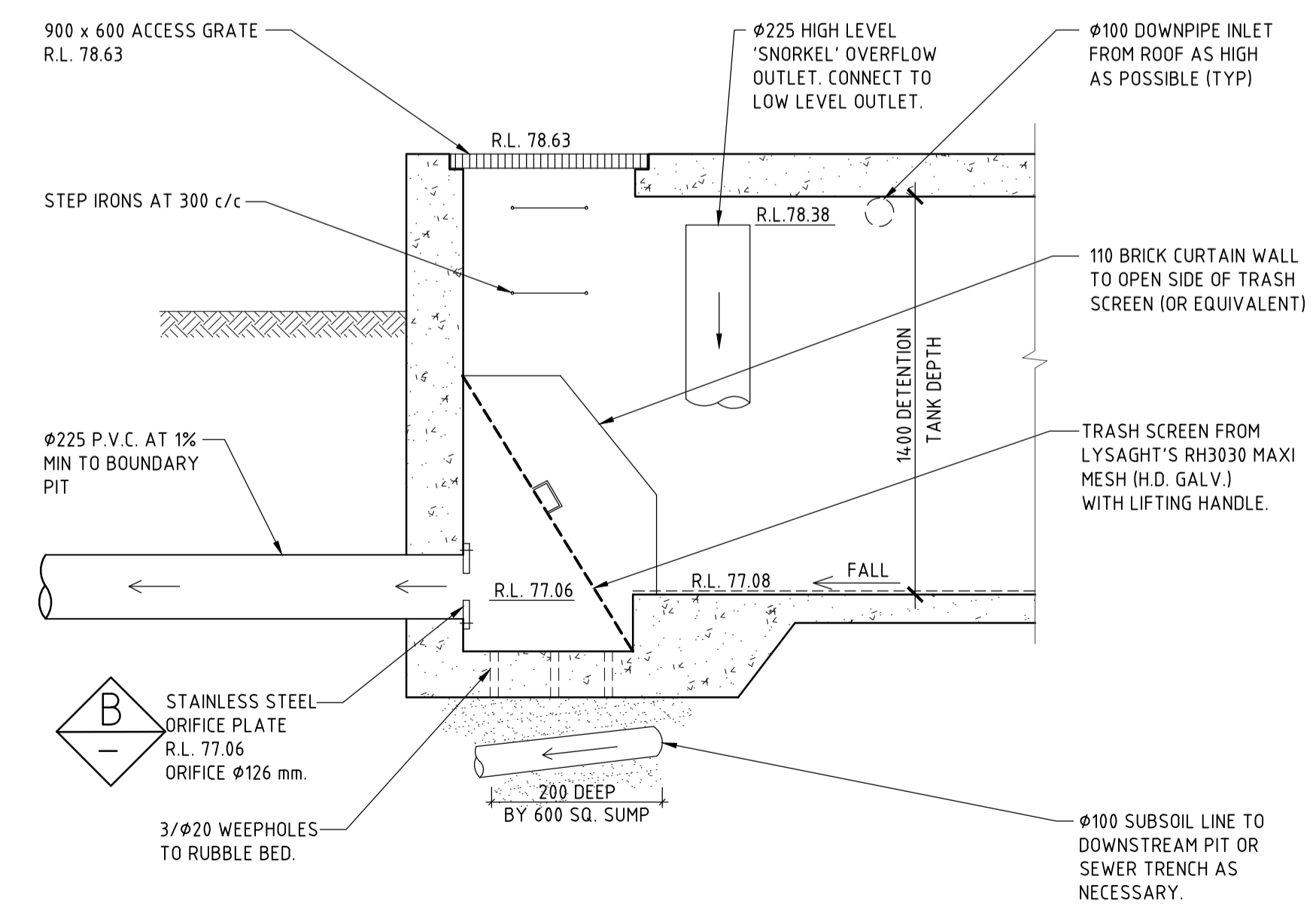
DEVELOPED SITE FLOWS

5 YR ARI = 4.2 l/s
 20 YR ARI = 5.4 l/s
 100 YR ARI = 9.3 l/s

DETENTION SYSTEM DATA

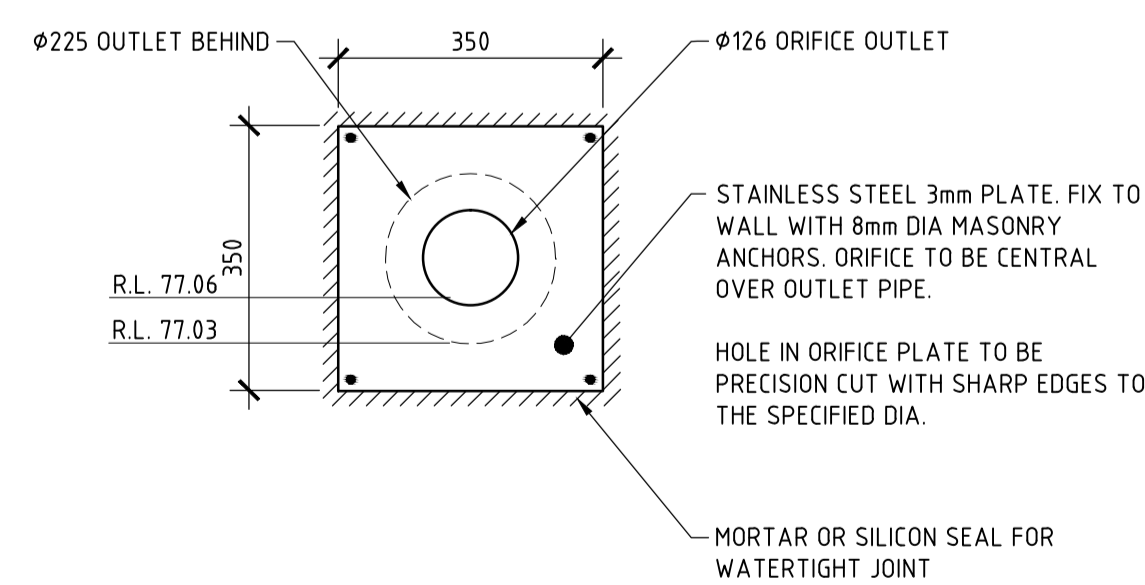
AREA DRAINING TO THE TANK = 1166 m²
 MAX. 100YR TWL = RL 78.38
 ORIFICE DIAM = 126 mm
 SSR = 35.0 m³

SITE DRAINAGE PLAN
SCALE 1:200

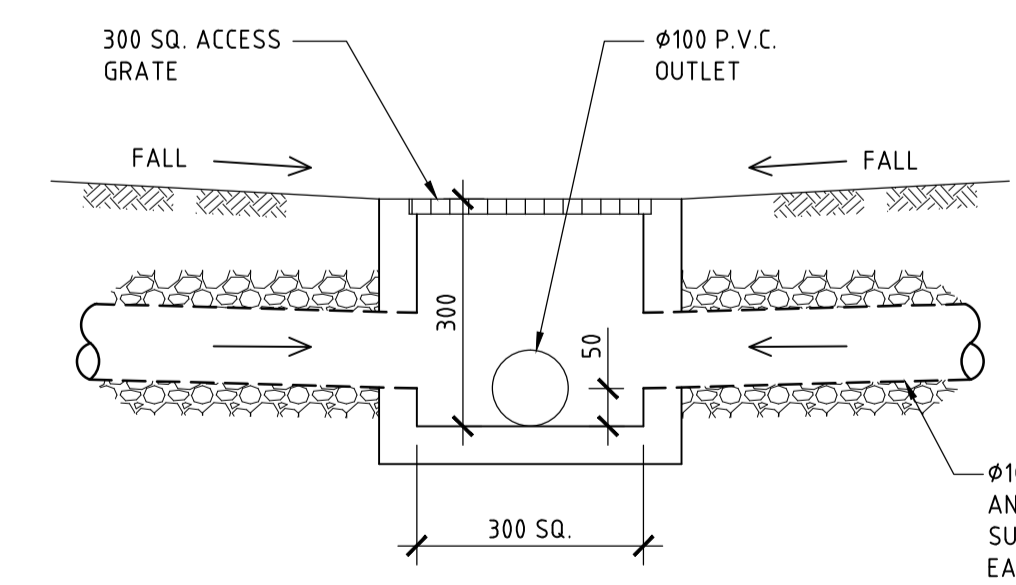


DETAIL A
SCALE 1:20

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



DETAIL B
SCALE 1:10
ORIFICE PLATE DETAIL



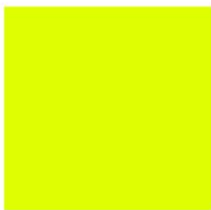
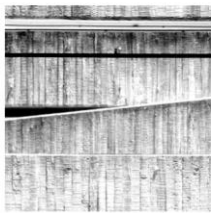
DETAIL C
SCALE 1:10
TYPICAL SURFACE INLET PIT DETAIL

ISSUE DATE	REVISION

TITLE			
STORMWATER MANAGEMENT PLAN 60 BINALONG AVENUE, ALLAMBIE HEIGHTS			
DRAWN	DATE	CHECKED	SCALE @ A1
JBK	18 JANUARY 2018	<i>[Signature]</i>	1:200 1:20 1:10
BE Civil (Hons) MIE Aust.			

TAYLOR CONSULTING
CIVIL & STRUCTURAL ENGINEERS

11518-1



31 January 2018

Our Ref: 11518

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

Dear Sir

Re: Stormwater Management Plan – 60 Binalong Avenue, Allambie Heights

With reference to the Development Application for the above property, please find enclosed copies of the site Stormwater Management Plan No. 11518-1 and the site Erosion and Sediment Control Plan No. 11518-2 for your perusal.

Sheet 1 shows collected flows draining to the existing natural watercourse situated along the eastern boundary of the site. Note that roofed and landscaped areas drain via an on-site detention tank in accordance with council policy. The ILSAX hydraulic modelling files are attached.

Sheet 2 shows the provision for the temporary control of erosion and sediment from the site during the construction phase.

This is to certify that the Stormwater Management Plan layout as shown on Plan No. 11218-1 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 and AS/NZS 3500.3.2 – Stormwater Drainage & Northern Beaches Council's Warringah - Stormwater Drainage from Low Level Properties Technical Specification.

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

