

5 September 2022

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

Dear Sir/Madam,

**Re: Stormwater Management Plan – 9 Alexander Street, Collaroy**

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

The plan shows the collected flows from the existing and proposed roofed areas, along with the surrounding hardstand and landscaped areas, being discharged via the existing Council R.C.P. drainage line. Lower level hardstand areas are directed to an absorption trench.

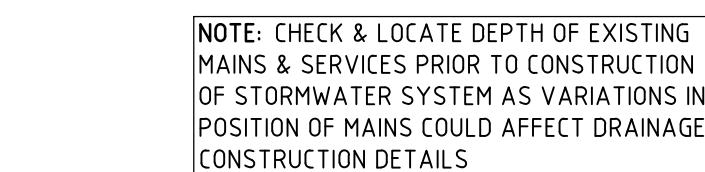
This is also to certify that the Stormwater Management Plan layout as shown on STORM-1 by Taylor Consulting Civil & Structural Engineers has been designed in accordance with section 3.1.2, 'Drainage', of the Building Code of Australia Housing Provision and AS/NZS 3500.3.2 – Stormwater Drainage & Northern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

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.





**NOTE:** PLUMBER TO PERFORM WATER TESTING OF EXISTING PIPED SYSTEM TO DETERMINE CAPACITY AND STATE OF REPAIR. PLUMBER TO INSPECT & REPAIR DAMAGED SECTIONS OF EXISTING PIPE (INCLUDING DOWNPIPES) AS NECESSARY OR PROVIDE NEW DRAINAGE LINES WHERE NECESSARY SUBJECT TO THE APPROVAL BY THE SUPERVISING ENGINEER

NOTE: TURN Ø100 'CHARGED' P.V.C. DOWNPIPES UP WALL SO ARE WATERTIGHT TO 1.0m ABOVE TOP OF BOUNDARY PIT

PROVIDE SPREADER FOR  
DISCHARGE OF RUNOFF  
FROM UPPER TO LOWER  
ROOF AREA (TYP)

BENCHMARK NAIL  
IN CONCRETE  
R.L. 7.83 (A.H.D.)

2000 LONG STORMWATER  
ABSORPTION TRENCHES - 4 ROWS

CONNECTION TO EXISTING  $\phi 750$   
R.C.P. VIA  $\phi 150$  PVC PIPE SPI 12831

EXISTING Ø750 COUNCIL  
R.C.P. SPI12831


600 SQ BOUNDARY PIT  
GRATE R.L - 6.60  
INVERT R.L - 6.15

BUILDER TO CONFIRM TOP OF PIPE  
R.L. 5.20 PRIOR TO COMMENCEMENT  
OF CONSTRUCTION

# SITE DRAINAGE PLAN

SCALE 1:100

Diagram illustrating a 300 SQ. manhole structure. The manhole is shown in cross-section, with a 300 SQ. ACCESS GRATE at the top. A 100 P.V.C. OUTLET is shown on the right side. The manhole is surrounded by a 300 SQ. area of gravel backfill. The outlet is labeled as 100 SLOTTED PIPE IN SOCK AND 200mm LONG EACH SIDE OF PIT. Arrows indicate the flow direction (FALL) into and out of the manhole.

DETAIL   
SCALE 1:10  
TYPICAL SURFACE INLET PIT DETAIL

**DRAINAGE NOTES**

1. - DENOTES EXISTING GROUND LEVEL
2. FALL STORMWATER PIPES AT 1% MN UNLESS OTHERWISE NOTED
3. SUB-SOL 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. CONFIRMING 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 COMPLETED 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. CONTRACTOR IS REQUIRED TO PLUMBER/BUILDER FOR CONSTRUCTION CONTACT TAYLOR CONSULTING FOR MORE INFORMATION.

Ø150 'CHARGED' P.V.C. INLET FROM SITE DRAINAGE (TYP)

600 SQ. ACCESS GRATE

450

600 SQ.

BOUNDARY

Ø150 OUTLET PIPE CONNECTED INTO TOP OF Ø750 R.C.P.

CORE Ø150 THROUGH TOP OF R.C.P. & PROVIDE FLOWCON P.V.C. CONNECT 150mm CONNECTION

DEPTH TO EXISTING PIPE TO BE DETERMINED PRIOR TO COMPETENT OF DRAINAGE WORKS

TRASH SCREEN FROM LYSAGHT'S RH3030 MAXI MESH (H.D. GALV.) WITH LIFTING HANDLE


DETAIL B

1:20

TYPICAL OUTLET PIPE CONNECTION TO EXISTING Ø750 PIPE SP1 12831

EXISTING COUNCIL Ø750 R.C.P.

DETAIL  
1:20



TYPICAL OUTLET PIPE CONNECTION  
TO EXISTING  $\phi 750$  PIPE SPI 12831

1

PROVIDE  
END CAP

100 THICK CRUSHED  
AGGREGATE BASE

CONSOLIDATED  
TOPSOIL/SAND  
(50/50) 150mm THICK

NON-WOVEN  
GEOTEXTILE FILTER  
FABRIC SURROUND

450 SQ. ACCESS  
GRATE

450 x 600 TRASH SCREEN  
FROM LYSAGHT'S RH3030  
MAXMESH (H.D. GALV.)  
WITH LIFTING HANDLE (TYP)

φ100 P.V.C.

φ100 P.V.C. INLET FROM  
SURFACE DRAINAGE

CAPPED (WATERTIGHT) END  
FOR CHARGED LINES

3/φ20 WEEPHOLES  
TO RUBBLE BED (TYP)

410 HIGH JUMBO  
EVERGLAS PLASTIC  
ABSORPTION TRENCH

450 SQ.  
WITH 200  
DEEP SUMP

BASE OF ABSORPTION  
TRENCH TO BE LEVEL

2000 LONG BY 2000 WIDE


DETAIL   
SCALE 1:20  
TYPICAL ABSORPTION TRENCH & PIT DETAIL

Diagram illustrating the cross-section of a trench system, showing the following components and dimensions:


- 20mm GRAVEL BACKFILL (2000 WIDE)**: The top layer of the trench.
- NON-WOVEN GEOTEXTILE FABRIC**: A layer separating the gravel backfill from the plastic absorption trench.
- 410 HIGH JUMBO EVERGLAS PLASTIC ABSORPTION TRENCH (3 ROWS IN TOTAL)**: The central trench structure.
- CONSOLIDATED TOPSOIL/SAND (50/50) 150mm THICK**: The bottom layer of the trench.
- 20 mm GRAVEL BACKFILL WRAPPED IN GEOTEXTILE FABRIC**: The bottom layer of the trench.
- Dimensions**:
  - 100**: Vertical dimension of the top gravel backfill layer.
  - 410**: Vertical dimension of the plastic absorption trench.
  - 150**: Vertical dimension of the consolidated topsoil/sand layer.

SECTION 1  
SCALE 1:20

TRANSVERSE SECTION THROUGH ABSORPTION TRENCH SYSTEM

[illegible]

TITLE  
STORMWATER MANAGEMENT PLAN  
9 ALEXANDER STREET, COLLAROY

DRAWN	DATE	CHECKED	SCALE @ A1
RB	5 SEPTEMBER 2022		1:100 1:10 1:20
BE Civil (Hons) MIE Aust.			

BE Civil (Hons) MIE Aust

**TAYLOR**  
CONSULTING  
CIVIL & STRUCTURAL ENGINEERS

DRAWING NO  
STORM-1

**STORMWATER SYSTEM DESIGN DATA**

**SITE DATA**

SITE AREA = 467.7 m<sup>2</sup> (100%)  
PROPOSED IMPERVIOUS AREA = 288.4 m<sup>2</sup> (62%)  
PROPOSED LANDSCAPED AREA = 179.3 m<sup>2</sup> (38%)  
EXISTING IMPERVIOUS AREA = 291.8 m<sup>2</sup> (62%)  
EXISTING LANDSCAPED AREA = 175.9 m<sup>2</sup> (38%)