













STORMWATER MANAGEMENT PLAN PROPOSED RESIDENTIAL DEVELOPMENT Lot 5, No 9 ANZIO AVENUE, ALLAMBIE HTS

LEGEND

 4.50 x 4.50 GR TP 7.5, 5.4 IL 7.5, 1.2  DP06  RWH  CO	GRATED INLET PIT 460 SQUARE INTERNAL GRATE LEVEL = RL 76.64 INVERT LEVEL = 75.12 DOWNPIPE : 90 DIA ROUND OR 100 x 50 RECTANGULAR RAINWATER HEAD EXISTING TREE SUBSOIL DRAINAGE CLEANOUT CAPPED & MARKED SWP	 GTD100  SF3  FTT   BD2   IO  RO	GRATED TREENCH DRAIN 100mm WIDE PROPOSED ROOF GUTTER FALL PROPOSED STANDARD DOWNPIPE SPREADER STRUCTURE No.1 STORMWATER DRAINAGE BALCONY DRAIN - 150mm SQUARE WITH 90mm DIA OUTLET SCREW-CAPPED INSPECTION OPENING GRATED ROUND OUTLET 100mm DIA.
--	--	--	---

WARRINGAH DETENTION (OSD) CALCULATIONS

RELEVANT DESIGN CODE : WARRINGAH COUNCIL, "ON-SITE STORMWATER DETENTION TECHNICAL SPECIFICATION", 2012.

SITE AREA = 558 m²
PROPOSED HARD SURFACE = ROOF + DWY = 325 m² = 58% > 40%
AND SITE AREA > 450 m² NEED OSD.

DETENTION DESIGN METHOD : STREAMLINED METHOD

SITE AREA = 558 m²
SSR = 200 x 0.0558 = 11.2 m³
PSD = 400 x 0.0558 = 22.318

RAINWATER TANK CONCESSION

PROPOSED BASKY RAINWATER TANK REQUIREMENT = 5600 litres
ALLOWED OSD REDUCTION IS FULL BASKY VOLUME UP TO MAXIMUM 50% OF OSD
THEREFORE OSD STORAGE MAY BE REDUCED 11,200 - 5600 = 5600 litres

PERMISSIBLE SITE DISCHARGE

ROOF TO OSD = 286 m²
BALANCE SITE BYPASS = 558 - 286 = 272 m² at 25% Impervious.
C100 = 0.74; 100 year, 10 min I = 230 mm/hr A = 0.0272 ha THEN C100 = 12.91s.
THEREFORE OSD PSD = 22.3 - 12.9 = 9.41s

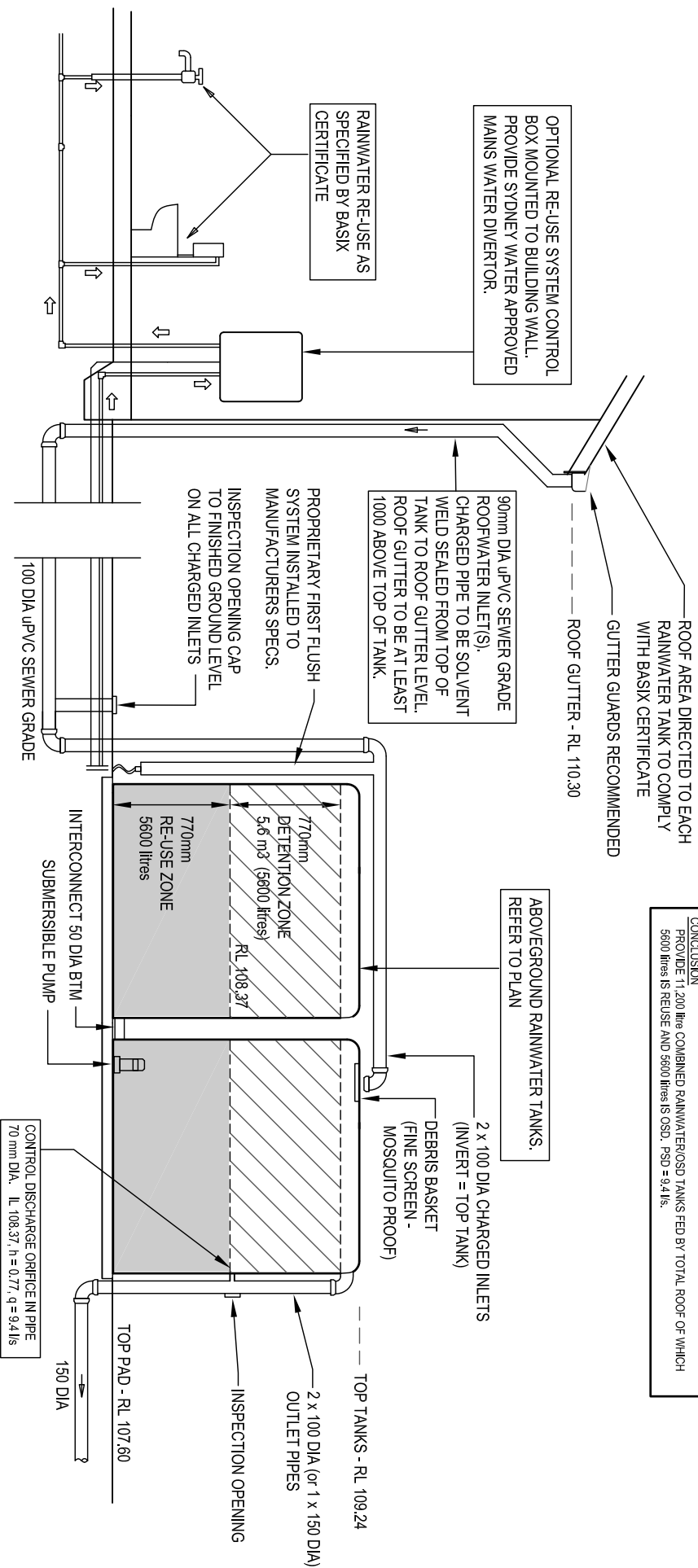
CONCLUSION

PROVIDE 11,200 litres COMBINED RAINWATER/ROSD TANKS FED BY TOTAL ROOF OF WHICH 5600 litres IS RELEASE AND 5600 litres IS OSD. PSD = 9.41s.

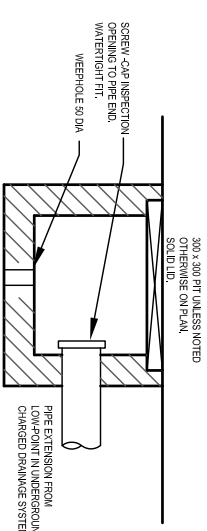
MINIMUM PRE-CURE			
FROM FINISH SURFACE TO TOP OF DECK			
LOCATION	1) NOT SELECT TO VENTILATION	2) SELECT TO VENTILATION	3) SELECT TO VENTILATION
	<ul style="list-style-type: none"> A. WITHOUT PAVEMENT B. WITH PAVEMENT C. OTHER THAN SHEET PILING - D. SHEET PILING E. SHOWN/REINFORCED CONCRETE 	<ul style="list-style-type: none"> 1. WITHOUT PAVEMENT 2. WITH PAVEMENT 3. OTHER THAN SHEET PILING - 4. SHEET PILING 5. SHOWN/REINFORCED CONC DIRT VEHICLES 6. REINFORCED CONC DIRT VEHICLES 7. SLOPED 8. UNSLOPED 	<ul style="list-style-type: none"> 1. SELECT TO CONSTRUCTION DETAILS OR REINFORCED CONCRETE
	GAL STEEL 0 300 0-17' 50-7'	300 450 100-10" 0-17" 100-10" 550-60" 500-60" 300	300 520-60" 520-60" 300

GENERAL NOTES

1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS. ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS. THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
6. THESE DRAWINGS DEPICT THE DESIGN OF SURFACE STORMWATER RUN-OFF DRAINAGE SYSTEMS ONLY AND DO NOT DEPICT ROOF DRAINAGE OR SUBSOIL DRAINAGE SYSTEMS UNLESS NOTED OTHERWISE. THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.
7. ALL STORMWATER DRAINAGE PIPES ARE TO BE 100mm DIAMETER UPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
8. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.
9. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.
10. THIS PLAN IS THE PROPERTY OF STORMCIVIL AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM STORMCIVIL.



TYPICAL DETAIL - CHARGED SYSTEM CLEANOUT PIT

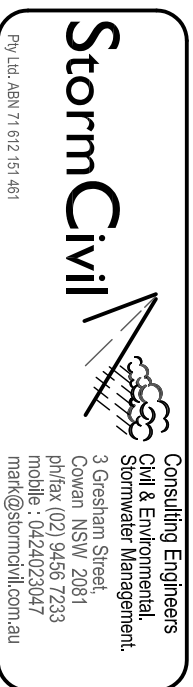


TYPICAL DETAIL - COMBINED DETENTION/RAINWATER RE-USE TANK

NTS

B	14.12.2020	AMEND DWY
A	02.09.2020	DA ISSUE
ISS	DATE	AMENDMENT

ARCHITECT/BUILDER	ARCH. REF : 29914257
CLARENDON HOMES	
OWNER	
WONG	
LGA	NORTHERN BEACHES (WARRINGAH)



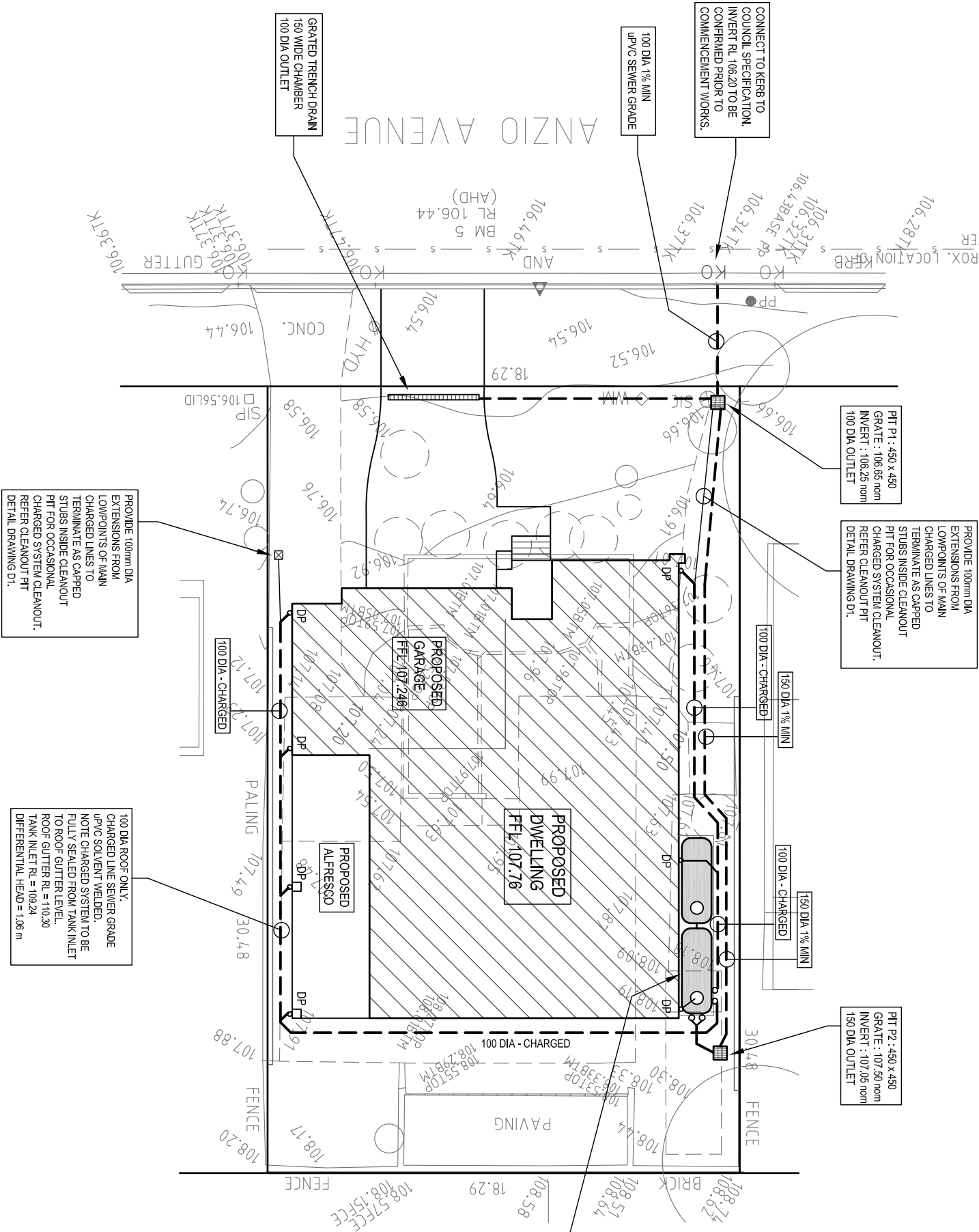
DWG TITLE	LEGEND, NOTES, DETAILS, CALCULATIONS
PROJECT TITLE	PROPOSED RESIDENTIAL DEVELOPMENT Lot 5, No 9 ANZIO AVENUE, ALLAMBE HTS

APPROVED ON BEHALF OF STORMCIVIL PTY LTD		Mark Taylor M/E Austral Eng NER/73333	
StormCivil			
JOB No	DWG No	No in SET	ISSUE
305047	D1	2	B



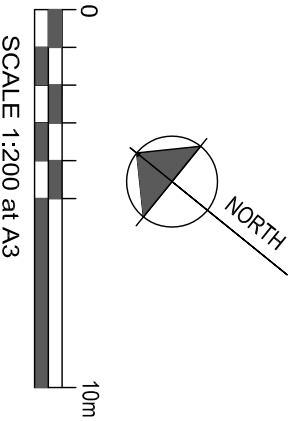
TREE PRESERVATION NOTE
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS.

COMBINED STORMWATER DETENTION / RAINWATER TANKS.
INTERCONNECTED ABOVE-GROUND TANKS. TOTAL STORAGE 11,200 litres mhl.
USE 2 x CUSTOM "KINGSPAN SLIMLINE":
EACH TANK : 1640 h x 3300 b x 1150 w = 5600 litres.
TOTAL STORAGE = 2 x 5600 = 11,200 litres.
CONNECT ALL ROOF-WATER DIRECT TO PRIMARY TANK.
TOP TANKS : RL 109.24
DEFENTION ZONE : 5600 litres
TOP WATER LEVEL = RL 109.14
INVERT OUTLET = RL 108.37
OUTLET : 70mm ORIFICE IN PIPE
RE-USE ZONE : 5600 litres
TOP WATER LEVEL = RL 108.37
INVERT = TANK PAD = RL 107.80
INVERT = TANK PAD = RL 107.80
REFER TYPICAL DETAIL DRAWING D1.
SPECIAL NOTES :
1. REQUIRE 70mm ORIFICE IN OUTLET FROM SIDE OF PRIMARY TANK AT SPECIFIED RL - SEE DRAWING D1.
2. PROVIDE 2 x 100 DIA CHARGED INLET PIPES TO PRIMARY TANK AS SHOWN.
3. PRIMARY TANK TO HAVE 2 x 100 DIA (OR 1 x 150 DIA) OVERFLOW PIPES AS SHOWN.
4. TANKS TO BE SET AT THE SAME LEVEL.
5. ENSURE ALL ROOF GUTTERS AT LEAST 1.0m ABOVE TOP OF TANKS.
INSTALL TO MANUFACTURERS SPECIFICATIONS AND BY LICENSED PLUMBER IN ACCORDANCE WITH AS/NZS 3500:2003 AND NSW CODE OF PRACTICE PLUMBING AND DRAINAGE 2006.



STORMWATER MANAGEMENT PLAN

SCALE 1:200 at A3




NOTE
THIS DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS BY :
REF : 29914257

NOTE
THIS DRAWING IS NOT TO BE USED FOR SETOUT PURPOSES - REFER TO ARCHITECTURAL DRAWINGS

B	14.12.2020	AMEND DWY
A	02.09.2020	DA ISSUE
ISS	DATE	AMENDMENT

ARCHITECT/BUILDER	ARCH. REF : 29914257
CLARENDON HOMES	
OWNER	WONG
LGA	NORTHERN BEACHES (WARRINGAH)



StormCivil

Consulting Engineers
Civil & Environmental
Stormwater Management.

3 Gresham Street,
Cowan NSW 2081
ph/fax (02) 9456 7233
mobile : 0424023047
mark@stormcivil.com.au

Py Ltd, ABN 71 612 151 461

DWG TITLE	STORMWATER MANAGEMENT PLAN
PROJECT TITLE	PROPOSED RESIDENTIAL DEVELOPMENT Lot 5, No 9 ANZIO AVENUE, ALLAMBIE HTS

StormCivil		APPROVED ON BEHALF OF STORMCIVIL PTY LTD
JOB NO	DWG NO	No IN SET
305047	D2	2
		ISSUE
		B

NOTE
ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.1.3, 3.1.5 AND APPENDIX G OF AS 3500.3:2003.

NOTE
THIS DRAWING DOES NOT INCLUDE ROOF GUTTER/DRAINPIPE OR SUBSOIL DRAINAGE DESIGN UNLESS NOTED OTHERWISE.
THE DESIGN OF ROOF AND SUBSOIL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF OTHERS.

NOTE
THIS PLAN MANAGES STORMWATER RUNOFF DERIVED FROM ROOF AND DRIVEWAY SURFACES ONLY AS SHOWN ON ARCHITECTURAL DRAWINGS.
ANY OTHER SURFACE RUNOFF WATER INCLUDING REAR/PONT YARD OR NEIGHBOURING PROPERTY RUNOFF TO BE MANAGED BY SEPARATE SYSTEM BY OWNER IN ACCORDANCE WITH AS 3500.3 AND BCA PART 3.1.2