

PROPOSED DEVELOPMENT

Lot 5 (No.985) PITTWATER ROAD, COLLAROY

STORMWATER MANAGEMENT PLANS

LEGEND

SW

RW

150 RW

150 SW

65 WRM

100 SS

DP

IO

CO

IL23.31

DENOTES ON-SITE DETENTION TANK

DENOTES ON-SITE RETENTION TANK

DENOTES DWELLING FOOTPRINT

DENOTES 100mm DIA. STORMWATER/SURFACE WATER SYSTEM PIPE AT 1% MIN. GRADE U.N.O.

DENOTES 100mm DIA. FULLY SEALED RAINWATER SYSTEM PIPE U.N.O.

DENOTES RAINWATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA.

DENOTES STORMWATER/SURFACE WATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA.

DENOTES RISING MAIN AND PIPE DIA. U.N.O.

DENOTES SUBSOIL DRAINAGE LINE AND DIA. WRAPPED IN GEOFABRIC U.N.O.

DENOTES DOWNPIPE

DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL

DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL FOR SYSTEM FLUSHING PURPOSES

STORMWATER PIT - SOLID COVER

STORMWATER PIT - GRATED INLET

DENOTES GRATED DRAIN

DENOTES ABSORPTION TRENCH

NON RETURN VALVE

PUMP

STOP VALVE (ISOLATION VALVE)

240v REQUIRED

DENOTES LEVEL OF INLET /OUTLET OF STORMWATER PIPE.
NOTE: UNLESS NOTED OTHERWISE, THE BASE OF THE PIT IS THE SAME AS THE PIPE INLET/OUTLET.

DIAL BEFORE YOU DIG

DIAL BEFORE YOU DIG

www.1100.com.au

IMPORTANT: THE CONTRACTOR IS TO MAINTAIN A CURRENT SET OF "DIAL BEFORE YOU DIG" DRAWINGS ON SITE AT ALL TIMES.

GENERAL NOTES

1. THESE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND ACOR CONSULTANTS (CC) MUST BE CONTACTED IMMEDIATELY FOR VERIFICATION

2. WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES

3. SUBSOIL DRAINAGE SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL ENGINEER. SUBSOIL DRAINAGE SHALL NOT BE CONNECTED INTO THE STORMWATER SYSTEM IDENTIFIED ON THESE PLANS UNLESS APPROVED BY ACOR CONSULTANTS (CC)

STORMWATER CONSTRUCTION NOTES

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500 (CURRENT EDITION) AND THE REQUIREMENTS OF THE LOCAL COUNCIL'S POLICIES AND CODES

2. THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY

3. THE MINIMUM GRADIENT OF STORMWATER DRAINS SHALL BE 1%, UNLESS NOTED OTHERWISE

4. COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY ADHERED TO. NO TREES SHALL BE REMOVED UNTIL PERMIT IS OBTAINED

5. PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT THE CLIENT'S EXPENSE

6. ALL PITS TO BE BENCHED AND STREAMLINED. PROVIDE STEP IRONS FOR ALL PITS OVER 1.2m DEEP

7. MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK

8. VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION

9. SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATIONS AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT & CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION

10. ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY ACOR CONSULTANTS (CC) PRIOR TO THEIR COMMENCEMENT

RAINWATER RE-USE SYSTEM NOTES

1. RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)

2. TOWN WATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY REQUIRE PROVISION OF:

2.1. PERMANENT AIR GAP

2.2. BACKFLOW PREVENTION DEVICE

3. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY

4. AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK

5. PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL

6. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE

7. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN

8. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT TO BE CONNECTED

9. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS/NZS3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345)

10. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1319

11. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY

SHEET INDEX

COVER SHEET & NOTES

SHEET C1

STORMWATER MANAGEMENT PLAN

SHEET C2

STORMWATER MANAGEMENT DETAILS SHEET No.1

SHEET C3

ON SITE DETENTION CHECKLIST

SHEET C4

NORTHERN BEACHES COUNCIL
WARRINGAH COUNCIL REQUIREMENTS

1. REFER TO WARRINGAH COUNCIL CHECKLIST ON SHEET C4

2. PROVIDE MINIMUM 3,000 LITRE RAINWATER RE-USE TANK IN ACCORDANCE WITH BASIX CERTIFICATE.
WE NOTE 5,000 LITRES HAS BEEN PROVIDED.

3. ON SITE DETENTION IS NOTE REQUIRED AS THE PROPOSED IMPERVIOUS AREA IS <40% OF THE SITE AREA.
REFER TO SHEET C4 'ON SITE DETENTION CHECKLIST'

DESIGN PREPARED IN ACCORDANCE WITH WARRINGAH COUNCIL'S ON-SITE STORMWATER DETENTION TECHNICAL SPECIFICATION, AR&R AND AS/NZS 3500

DEVELOPMENT APPLICATION ISSUE

NOT FOR CONSTRUCTION

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				North	
A		ISSUED FOR DEVELOPMENT APPROVAL		02.03.20	BK
Issue	Description	Date	Drawn	Approved	
1					

Client

TULLIPAN HOMES
PTY LTD
(FILLETTI)

Architect

ACOR Consultants (CC) Pty Ltd

Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

AcOR

CONSULTANTS

ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Project

PROPOSED RESIDENTIAL
DEVELOPMENT

LOT 5 (No. 985)
PITTWATER ROAD
COLLARROY

Drawing Title

COVER SHEET & NOTES

Drawn	Date	Scale	A1	Q.A. Check	Date
RH	FEB 20	AS NOTED	-	-	-
Designed	Project No.	Dwg. No.	Issue		
BK	CC200041	C1	A		

NOTES:

1. TOP OF GRATE LEVELS HAVE BEEN DETERMINED FROM THE SURVEY DETAIL PROVIDED. FOLLOWING EARTHWORKS AND BENCHING, VALIDITY OF GRATE LEVELS SHOULD BE ASSESSED AND ADJUSTED AS REQUIRED TO MEET THE INTENT OF THE DESIGN. WHERE IN DOUBT CONTACT THE DESIGN ENGINEER.
2. LANDSCAPE SURFACE DRAINAGE SYSTEM TO DETAIL BY OTHERS. THIS SYSTEM IS TO BE INTEGRATED WITH ANY LANDSCAPE REQUIREMENTS. THE COLLECTION OF LANDSCAPE STORMWATER SHALL BE CONVEYED BY A SEPARATE SYSTEM OF PITS AND PIPES. NO CONNECTION IS ALLOWED INTO THE RAINWATER PIPE SYSTEM IDENTIFIED AS SHOWN — RW — RW —
3. THE LOCATIONS OF DOWNPIPES SHOWN ON THIS DRAWING ARE INDICATIVE AND WILL NEED TO BE SITE VERIFIED BY THE BUILDER. ALL DOWNPIPES TO BE 90mm MIN. DIA. U.N.O. IF CHANGES ARE MADE TO THE NUMBER OR POSITION OF DOWNPIPES THE DESIGN ENGINEER SHALL BE CONTACTED FOR VERIFICATION.
4. FOR CHARGED/SEALED LINES PROVIDE APPROPRIATE CLEAN OUT FACILITY AT LOW POINTS OF SYSTEM, TYP.

FULLY SEALED ROOF DRAINAGE SYSTEM

SHOWN THUS: — RW — RW —

DRAINAGE SYSTEM TO BE FULLY SEALED FROM ROOF GUTTER LEVEL TO TOP OF RAINWATER TANK. SEAL ALL PIPEWORK FROM RE-USE TANK TO EAVE LINE USING SOLVENT WELDED JOINTS. RAINWATER SYSTEM SHALL COLLECT ROOF WATER ONLY. NO ADDITIONAL PITS FOR COLLECTION OF SURFACE WATER WILL BE PERMITTED TO CONNECT INTO THE ROOF WATER SYSTEM. PROVIDE FOLLOWING STANDARD FITTINGS TO CONNECTED DOWNPIPES: LEAF/MOSQUITO SCREEN HEADS AND FIRST FLUSH DIVERTER. REFER TO NOTE 3 FOR DOWNPIPES, PROVIDE IO AT LOW POINTS IN SYSTEM FOR CLEANOUT, IO'S TO BE CAPPED AT FINISHED SURFACE LEVEL WITH 100mm MIN. COVER IN NON-TRAFFICABLE LOCATIONS, TYP.

FOR LANDSCAPE SURFACE STORMWATER DRAINAGE SYSTEM REFER TO NOTE 2

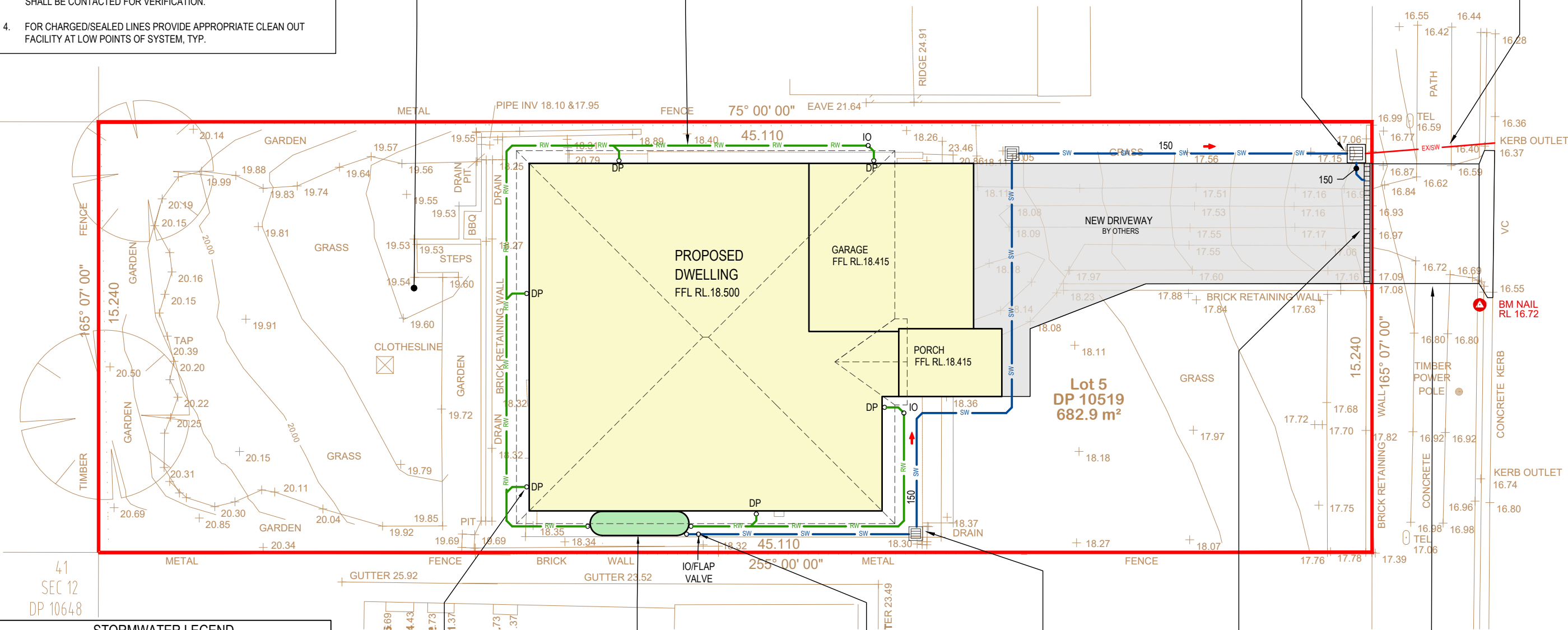


PLATE 1

WARNING
LOCATION AND DEPTH OF ALL UNDERGROUND SERVICES TO BE INVESTIGATED WITH THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK

EXISTING PIPE WITHIN ROAD RESERVE AND KERB OUTLET TO BE RETAINED AND PROVIDE DISCHARGE POINT FOR NEW DWELLING. PRIOR TO COMMENCEMENT OF WORKS EXISTING OUTLET SHALL BE TESTED AND VERIFIED AS DISCHARGING FROM NO. 985 TO ENSURE IT MEETS THE DESIGN REQUIREMENTS.

WHERE THE EXISTING IS FOUND IN ADEQUATE FOR PURPOSE ALLOW TO REPLACE AND CONSTRUCT NEW 200 x 100 GALV. RHS TO KERB AT A MIN. 1% FALL IN ACCORDANCE WITH COUNCIL REQUIREMENTS. REFER TO PLATE 1



STORMWATER LEGEND

- EX/SW — DENOTES EXISTING & ASSUMED LOCATION OF UNDERGROUND STORMWATER SYSTEM PIPE U.N.O.
- RW — DENOTES 100mm DIA. FULLY SEALED UNDERGROUND RAINWATER SYSTEM PIPE U.N.O.
- SW — DENOTES 100mm DIA. UNDERGROUND STORMWATER / SURFACE WATER SYSTEM PIPE AT 1% MIN. GRADE U.N.O.
- 150 RW DENOTES RAINWATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA.
- 150 SW DENOTES STORMWATER/SURFACE WATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA.

FOR ALL DOWNPIPES REFER TO NOTE 3.

RAINWATER RE-USE TANK

PROVIDE 1 x 5,000 litre ABOVE GROUND TANK FOR RE-USE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BASIX CERTIFICATE & COUNCIL REQUIREMENTS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION, AS/NZS 3500, AND COUNCIL'S GUIDELINES. REFER SHEET C3 FOR DETAIL. FINAL LOCATION OF TANK TO BE SITE CONFIRMED.

PROVIDE TANK RE-USE PUMP CONTROL UNIT TO MANUFACTURERS SPECIFICATION. PROVIDE FIRST FLUSH DEVICE OR EQUIVALENT PRIOR TO DISCHARGING TO TANK.

PROVIDE IN-LINE FLAP VALVE (AYMROO TYPE FLAPIL150 OR EQUIVALENT) WITH IO ON OUTLET OF TANK TO PREVENT VERMIN EGRESS AND WATER BACKFLOW FROM EXTERNAL SOURCES

DENOTES 450 SQUARE LANDSCAPE DRAINAGE PITS BY OWNER. FINAL LOCATION AND LEVEL TO BE CONFIRMED ON SITE BY OWNER, TYP. REFER TO NOTE 2.

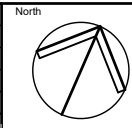
CONSTRUCT 100 WIDE GRATED BOX DRAIN MIN 100 DEEP. GRADE FROM INVERT TO OUTLET AT A MINIMUM GRADE OF 2% TOP OF GRATE RL 17.00 NOM. GRADE LEVEL TO BE CONFIRMED FROM CROSS OVER LEVELS PROVIDED BY COUNCIL

CROSSOVER AND DRIVEWAY TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THE LEVELS AND DESIGN OF THE CROSSOVER AND DRIVEWAY SHALL BE BY OTHERS.

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Issue	Description	Date	Drawn	Approved
A	ISSUED FOR DEVELOPMENT APPROVAL	02.03.20	RH	BK
1cm at full size				



TULLIPAN HOMES
PTY LTD
(FILLETTI)

Client

Architect



ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499



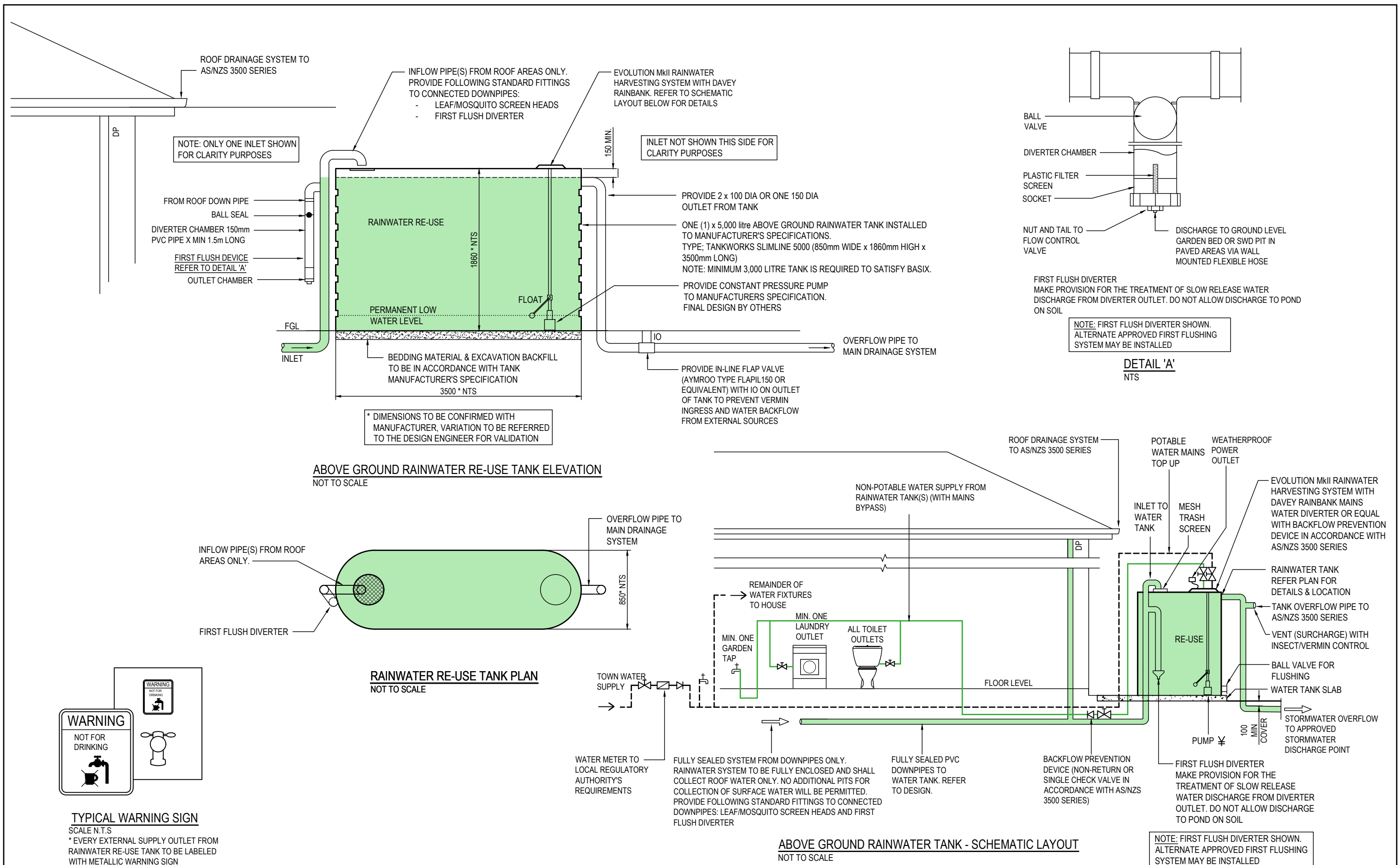
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STORMWATER MANAGEMENT
PLAN

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Warringah Council

On-site Stormwater Detention (OSD) Checklist

For Single Dwelling Residential Developments

This form is to be used to determine if OSD will be required for demolition and reconstruction, or construction of new single dwelling residential developments and must be completed and included with the submission of any development application for these works. Please read both sides of this form carefully for its applications, guidelines and definitions.

For assistance and support, please contact Council's Customer Service Centre on (02) 8942 2111.

Address of Proposed Development

Address of proposed development	Lot	5	DP (if applicable)	10519
	No.	985	Street	PITTWATER ROAD
	Suburb	COLLARROY		

PART 1 Exemption for properties that drain naturally away from the street

Tick one only	Does the site fall naturally away from the street?
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If yes, stormwater drainage must be in accordance with Council's Policy No. PDS-POL 136 'Stormwater Drainage from Low Level Properties'.
	If no, proceed to the next part.

PART 2 Is the site area less than 450m²

Tick one only	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If yes, OSD is not required.
	If no, proceed to next part.

PART 3 Exemption for Direct Discharge to Ocean

Tick one only	Does the site of the development drain directly to the ocean without the need to pass through a drainage control structure such as a pipe, bridge, culvert, kerb and gutter or natural drainage system?
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If yes, OSD is not required.
	If no, proceed to the next part.

x

PART 4 Exemption for Flood Affected Areas

Tick one only	Is the site of the development located within an established Flood Prone Land as referred to in the Warringah Local Environmental Plan? Refer to section 2.6 of Council's OSD Technical Specification.
	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	If yes, OSD is not required.
	If no, proceed to the next part.

PART 5 Determination of OSD Requirements

3.1 Calculations	(a) Site area <u>682.9</u> m ² x 0.40 = <u>273</u> m ² (b) Proposed and remaining impervious area <u>271</u> m ²
Please view below examples	OSD will not be required when (a) is greater than (b) Is OSD required for this development (tick one only) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, then a design in accordance with the Streamlined Method in Council's OSD Technical Specification is to be provided with the Development Application (refer to Clause 3.1.1) If no, OSD is not required.
3.2 Example	If the proposed combined impervious area is greater than 40% of the site area, then OSD is required. <i>Example 1:</i> Site Area = 600m ² Total proposed & remaining impervious area = 290m ² 600 x 0.4 = 240m ² (290 > 240) OSD required <i>Example 2:</i> Site Area = 800m ² Total proposed & remaining impervious area = 290m ² 800 x 0.4 = 320m ² (290 < 320) OSD is not required

DEFINITIONS

Designed to help you fill out this application	Site area: This refers to the area of the land bounded by its existing or proposed boundaries. Impervious areas: This refers to driveways, pathways, paved areas, hardstand areas, roofed areas, garages and outbuildings that are proposed and to be retained. Where an existing structure is to be demolished to make way for a new dwelling, only the proposed impervious areas and remaining impervious areas are to be used in the calculations. No credit is given for existing impervious areas that are not retained.
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NOTES

Please read before filling out this form	1. Other works, ancillary buildings, commercial, industrial, subdivisions and multiple occupancy developments are to comply with Council's OSD Technical Specification. 2. A reduction in the OSD volume required may be permitted. Refer to Council's "OSD Rainwater Re-use Policy for Single Residential Dwellings". If OSD is required, then a design for OSD in accordance with Council's "OSD Technical Specifications" is to be provided with the development application.
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For assistance and support, please contact Council's Customer Service Centre on (02) 8942 2111

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T +61 2 4324 3499



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LOT 5 (No. 985)
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ON SITE DETENTION
CHECKLIST

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