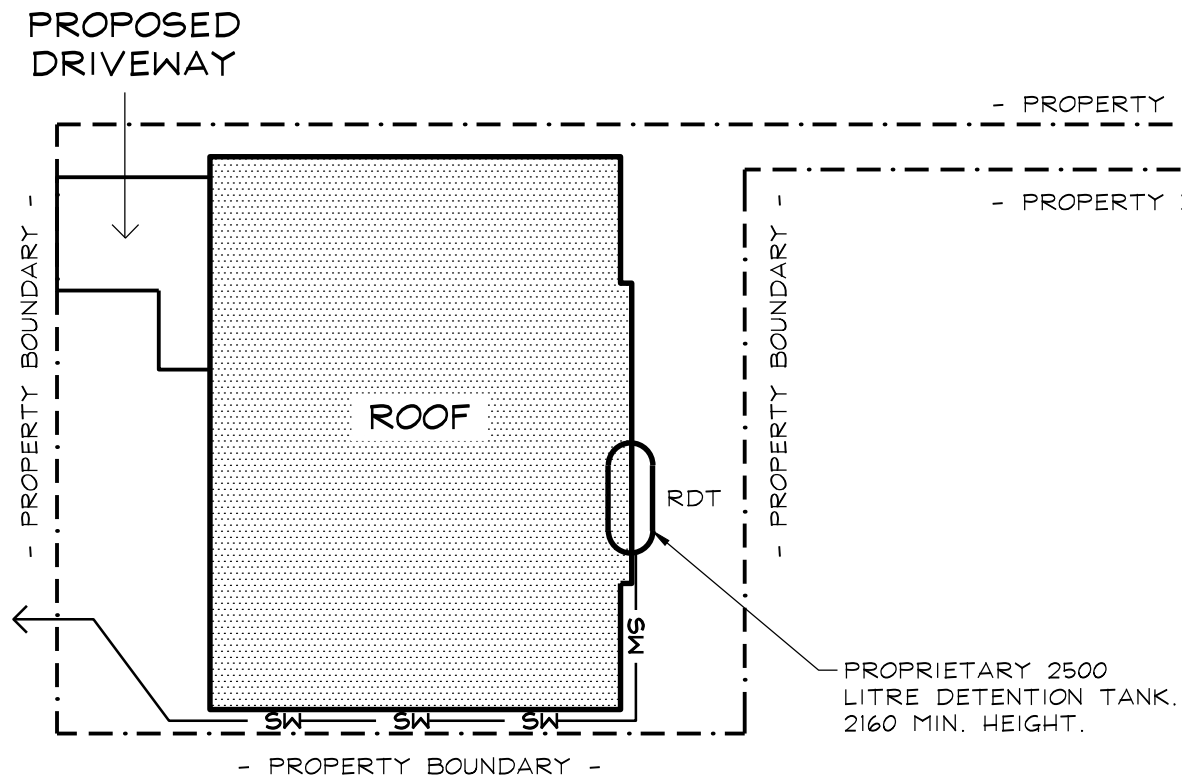


NOTE:-
DIRECT ALL DOWNPIPES TO RAINWATER DETENTION TANK.

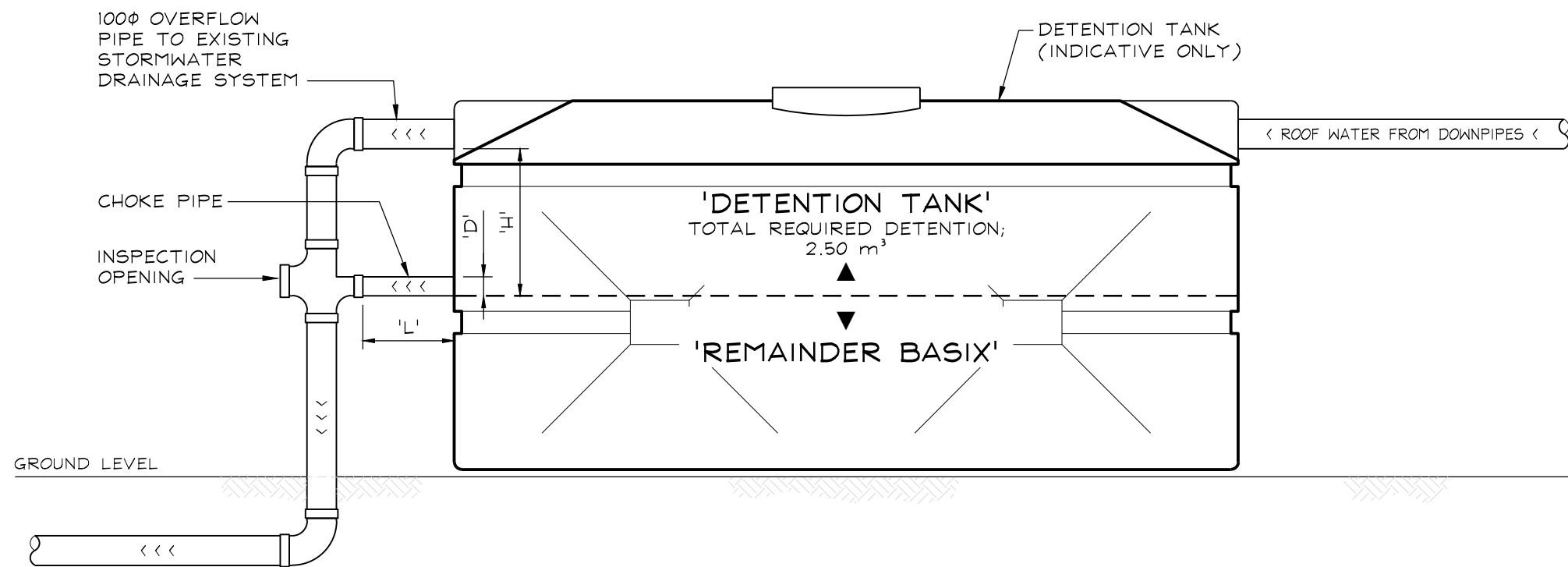


CATCHMENT AREA SUMMARY	
ROOFED AREA	167.5 m ²
PAVED AREA	0.0 m ²
CONCRETE DRIVEWAY	14.5 m ²
VEGETATED AREA UNCONTROLLED	146.4 m ²
TOTAL CATCHMENT AREA	328.4 m ²

LEGEND

- 'RDT' DENOTES RAINWATER DETENTION TANK
(LOCATION TO BE DETERMINED ON SITE)
- SW — 100Ø OVERFLOW PIPE AT 1% FALL TO
EXISTING STORMWATER DRAINAGE SYSTEM

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				THIS DRAWING IS THE PROPERTY OF LUCENA ENGINEERS PTY. LTD. AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE CONSENT OF THE COMPANY.			DESIGN EC	DRAWN EC	DRAWING SCALE 1:200	SHEET SIZE A3
	A	FOR CONSTRUCTION	19.04.24	PRINCIPAL ENGINEERS SIGNATURE 			PROJECT REF No 240302.1		DRAWING No OSD1	REVISION A
	ISSUE	DESCRIPTION	DATE							



NOTES

1. REFER TO DESIGN CALCULATIONS ON DRAWING OSD3 FOR CHOKE PIPE DETAILS.
2. PARAMETERS ARE INDICATIVE ONLY BASED ON ASSUMED CHOKE HEAD TO CHOKE PIPE. CHOKE PIPE SIZE AND LOCATION MAY NEED TO BE RECALCULATED DEPENDING ON CHOSEN TANK SIZE, CONTACT ENGINEER IF REQUIRED.

TYPICAL ABOVE GROUND RAINWATER DETENTION TANK "RDT" DETAIL

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				<div>THIS DRAWING IS THE PROPERTY OF LUCENA ENGINEERS PTY. LTD. AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE CONSENT OF THE COMPANY.</div>			<div>DESIGN</div> <div>EC</div>	<div>DRAWN</div> <div>EC</div>	<div>DRAWING SCALE</div> <div>NOT TO SCALE</div>	<div>SHEET SIZE</div> <div>A3</div>
	A	FOR CONSTRUCTION	19.04.24	<div>PRINCIPAL ENGINEERS SIGNATURE</div> <div></div>			<div>PROJECT REF No</div> <div>240302.1</div>		<div>DRAWING No</div> <div>OSD2</div>	<div>REVISION</div> <div>A</div>
	ISSUE	DESCRIPTION	DATE							

ON-SITE STORMWATER DETENTION (OSD)
DESIGN SUMMARY SHEET FOR SITES UNDER 2,500m²
LOCATED WITHIN THE BYRON SHIRE

PRE DEVELOPMENT			
ROOFED AREA (A _r)	0.0 m ²	1.00	COEFFICIENT OF RUN OFF (C _r)
PAVED/IMPERVIOUS AREA (A _p)	0.0 m ²	0.90	COEFFICIENT OF RUN OFF (C _p)
VEGETATED/PERVIOUS AREA (A _v)	328.4 m ²	0.66	COEFFICIENT OF RUN OFF (C _v)
TOTAL AREA	328.4 m ²		
STORMWATER FLOWS (5 YEAR STORM EVENT):			
DURATION	5 min		
RAINFALL INTENSITY (5Is)	190 mm/hr	AS PER SECTION 6.3 - BYRON SHIRE COUNCILS "COMPREHENSIVE GUIDELINES FOR STORMWATER MANAGEMENT"	
STORMWATER FLOW (Q ₅)	11.44 L/s	Q ₅ = PERMISSIBLE SITE DISCHARGE ('PSD')	
POST DEVELOPMENT			
ROOFED AREA (A _r)	167.5 m ²	1.00	COEFFICIENT OF RUN OFF (C _r)
PAVED/IMPERVIOUS AREA (A _p)	14.5 m ²	0.90	COEFFICIENT OF RUN OFF (C _p)
VEGETATED/PERVIOUS AREA (A _v)	146.4 m ²	0.73	COEFFICIENT OF RUN OFF (C _v)
TOTAL AREA	328.4 m ²		
STORMWATER FLOWS (20 YEAR STORM EVENT):			
DURATION	5 min		
RAINFALL INTENSITY (20Is)	240 mm/hr	AS PER SECTION 6.3 - BYRON SHIRE COUNCILS "COMPREHENSIVE GUIDELINES FOR STORMWATER MANAGEMENT"	
ROOF FLOW	11.17 L/s	CONTROLLED	
PAVED FLOW	0.87 L/s	UNCONTROLLED	
VEGETATED FLOW	7.12 L/s	UNCONTROLLED	
STORMWATER FLOW (Q ₂₀)	19.16 L/s		
CHOKE PIPE CALCULATIONS			
HEAD (H)	0.80 m	MAX. WATER LEVEL TO TAILWATER LEVEL	
LENGTH (L)	0.50 m		
INTERNAL DIAMETER (D)	0.065 m		
FRICTION LOSSES (Kf)	0.15 mm		
COMPONENT HEAD LOSSES (Kp)	1.50 mm	PIPE ENTRY: 0.5mm + PIPE EXIT: 1.0mm	
TOTAL PIPE LOSSES (Kt)	1.65 mm	COLEBROOK-WHITE ROUGHNESS COEFFICIENT	
MAX. FLOW RATE (Q _d)	10.22 L/s	MUST BE LESS THAN PSD	
TANK INLET FLOW	8.94 L/s	Q ₂₀ TOTAL FLOW - Q _d MAX. FLOW RATE	
DETENTION VOLUME REQUIRED	2.32 m ³	(Q ₂₀ -Q ₅)x5x60/1000	
USE 65ϕ I.D. CHOKE PIPE / 0.50m L DETENTION TANK			

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