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**DIAL
BEFORE YOU DIG**



**DIAL
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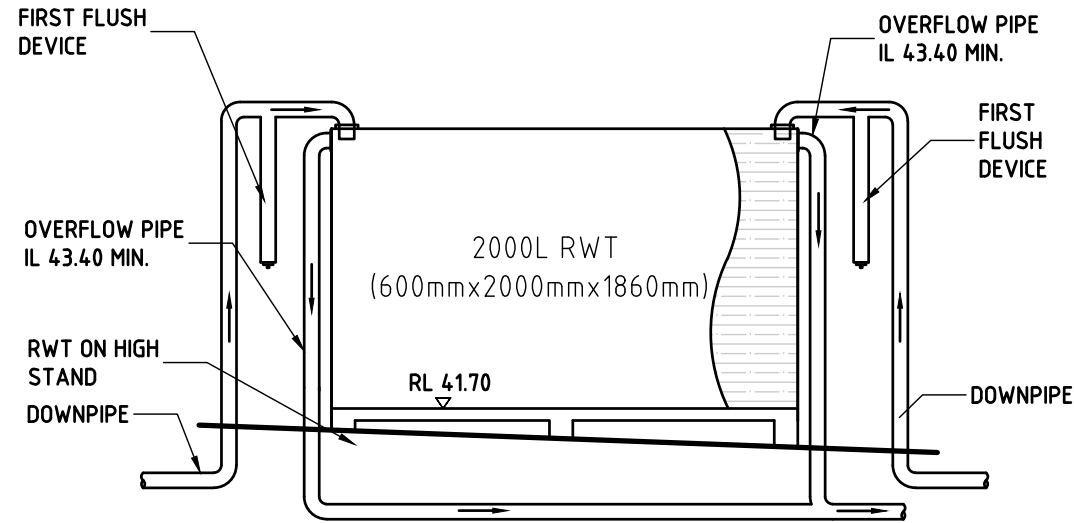


**DIAL
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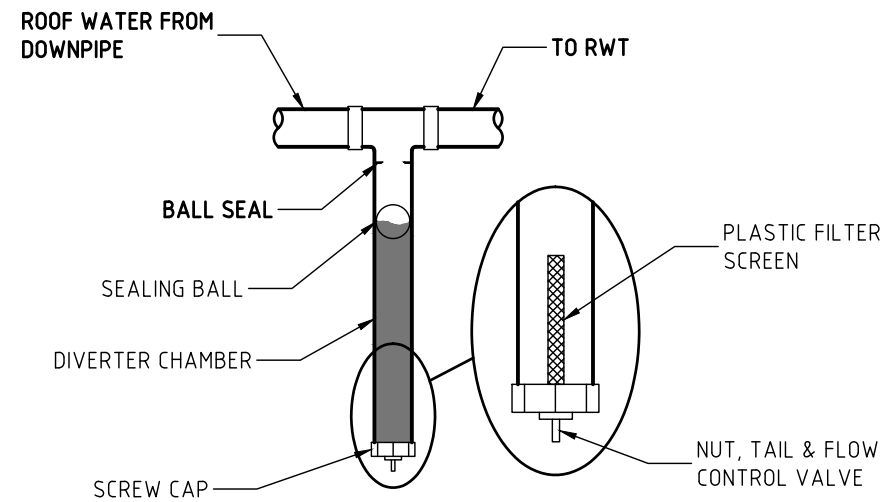


RAINWATER TANK NOTES:

1. RAINWATER TANKS BY KINGSPAN (TEL: 1300 736 562) OR SIMILAR.
2. DIMENSIONS ARE INDICATIVE ONLY. EXACT DETAILS TO MANUFACTURER'S SPECIFICATIONS.
3. A FIRST FLUSH DEVICE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS SHALL BE FITTED TO RAINWATER TANK SYSTEM TO FLUSH OUT THE FIRST 0.5mm OF RUN-OFF FROM THE ROOF AREA THAT DRAINED INTO THE TANK (E.G. 0.5L/m²).
4. PUMP SIZE & SPECIFICATION TO BE NOMINATED BY MANUFACTURER
5. 2 OVERFLOW PIPE FULLY SEALED



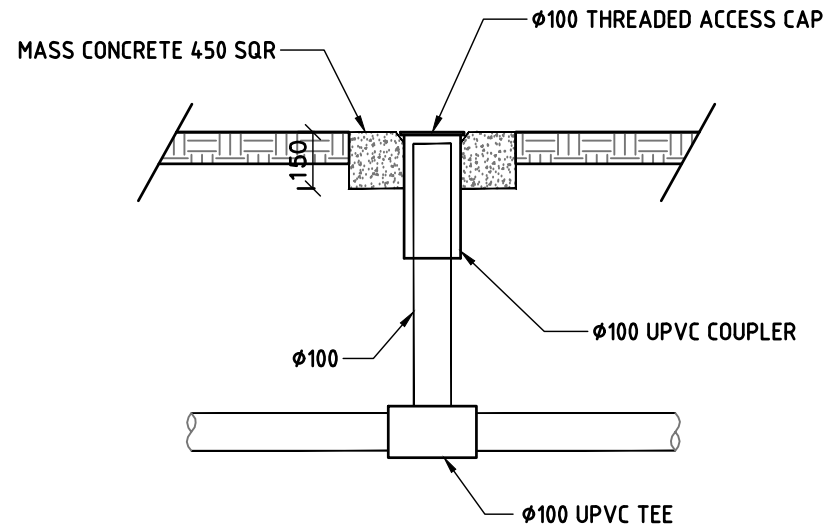
RAINWATER TANK 1 DETAIL
NTS



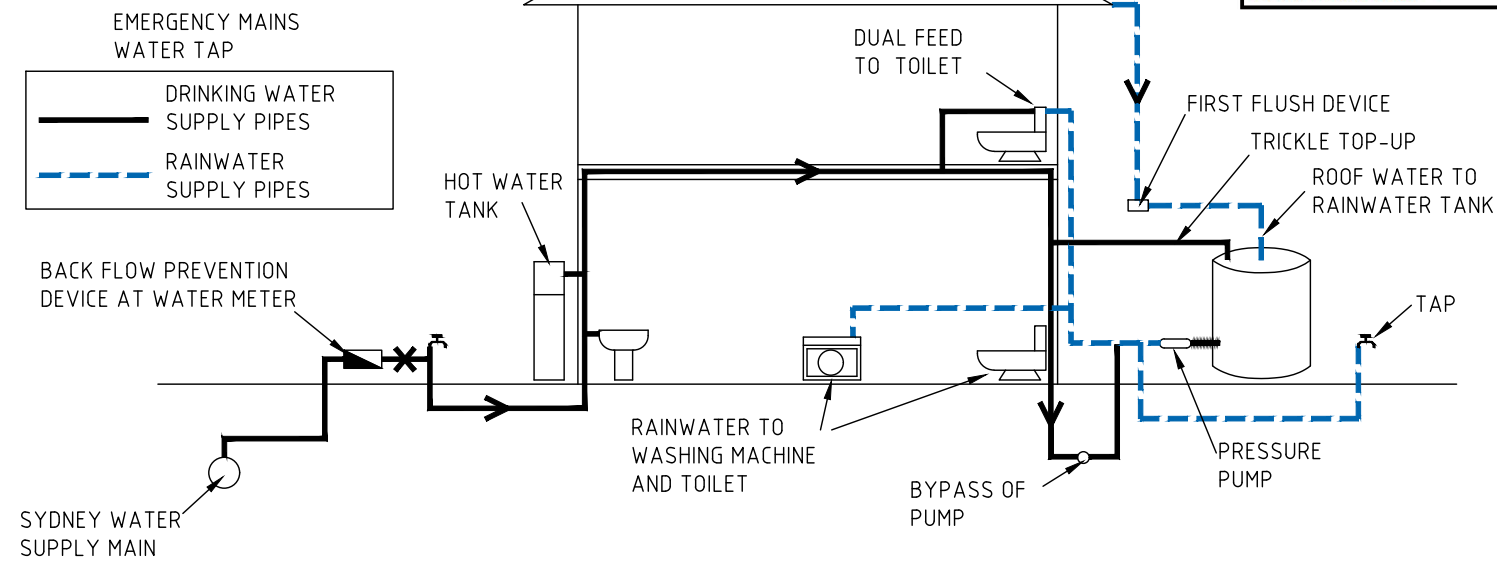
FIRST FLUSH DEVICE DETAIL
1:20

NOTES

1. DOWNPIPE SHALL BE FULLY SEAL UP TO RL 26.62 MINIMUM. THE SEALD PORTION OF THE DOWNPIPES MUST BE PAINTED, IN A COLOUR TO COMPLIMENT THE DEVELOPMENT AND TO PROTECT THEM AGAINST ULTRA-VIOLET LIGHT DAMAGE FROM THE SUN.
2. THE SEALED DOWNPIPES SHOULD BE CONSTRUCTED OF ONE MATERIAL TO THE UNDERSIDE OF THE ROOF GUTTER FOR AESTHETICS REASON.
3. DOWNPIPE SIZE MIN. Ø90, GUTTER SIZE MIN.125 QUAD
4. SEALED CLEANING EYES MUST BE PLACED AT 30 METTRE INTERVALS, CRITICAL BENDS IN THE PIPELINE AND AT THE LOWEST POINT IN THE DRAINAGE SYSTEM.
5. NO SURFACE INLET PITS CAN BE CONNECTED TO THE CHARGED LINE.



CLEANNING EYE DETAILS
SCALE 1:20



RAINWATER TANK RE-USE DIAGRAM
NTS

NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS

HYDRAULIC GRADE LINE CALCULATIONS

Project No: 28036
Address: LOT 2 NO 6 MIRIAM STREET BASS HILL

Coefficients

Gravity acceleration	g	9.81	m/s ²
Roughness Coefficient	k	0.005	10 ⁻³ m (pvc pipe)
Bendloss Coefficient	K _b	0.47	90° bend
Water density	ρ	1000	kg/m ³
Runoff Coefficient	C _{roof}	0.85	
Absolute viscosity	μ	0.001	water
Minor Loss Coefficient	ξ	1	

Length of pipe	L	16	m
Pipe diameter	h _d	0.1	m
Roof Area	A _{roof}	125	m ²
Rainfall 100 year	I _{smin}	201	mm/h

Flow Rate	Q	5.93	l/s
Flow Velocity	V	0.38	m/s

Fiction loss

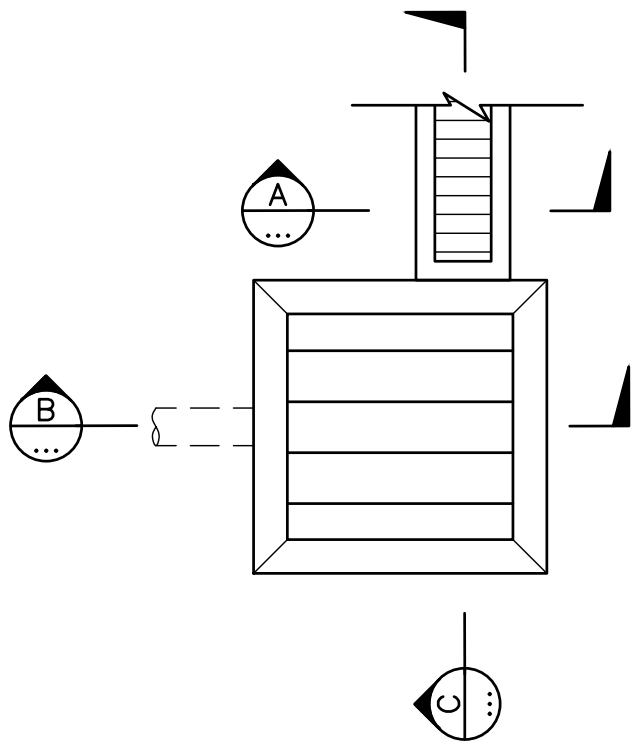
Reynolds No	Re	37766	Turbulent
Roughness Ratio		0.00005	
Friction coefficient	λ	0.023	(The Moody Diagram)

Friction loss	h _f	0.03	m
Bend loss (x4)	h _b	0.03	m
Exist loss	h _e	0.03	m
Total head loss =	H	0.08	m

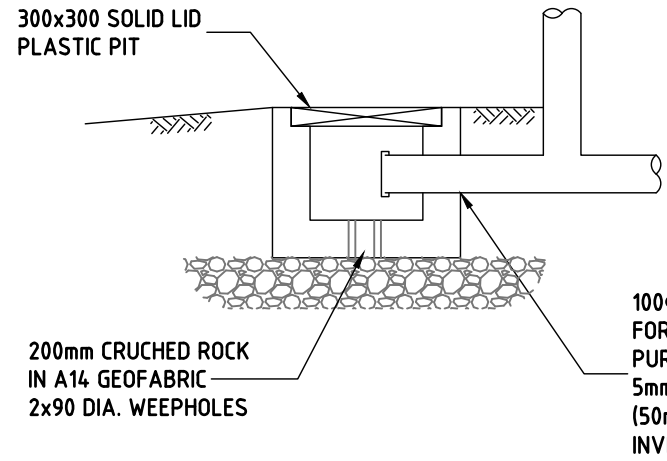
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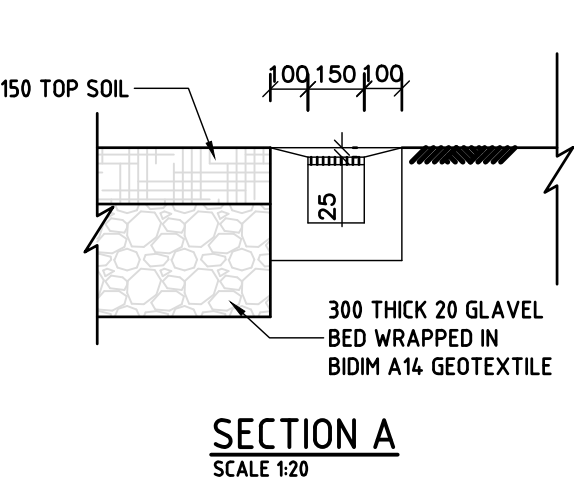
		REFERENCE COORDINATION DRAWING						GENERAL NOTES:		NASTASI & ASSOCIATES		QUALITY CONTROL		APPROVED:		CLIENT:		ADDRESS:		DRAWING STATUS	
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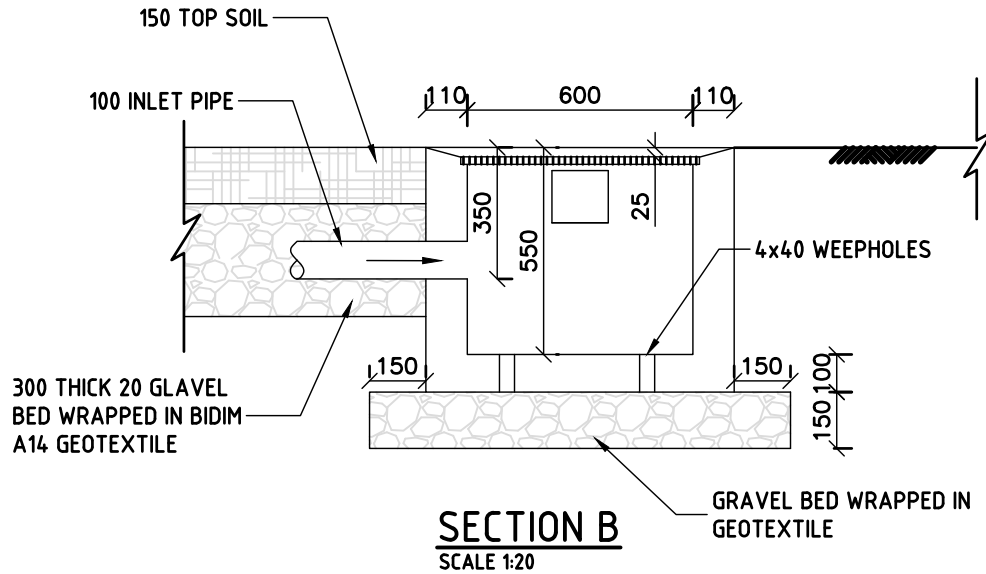
SPREADER SYSTEM PLAN
SCALE 1:20



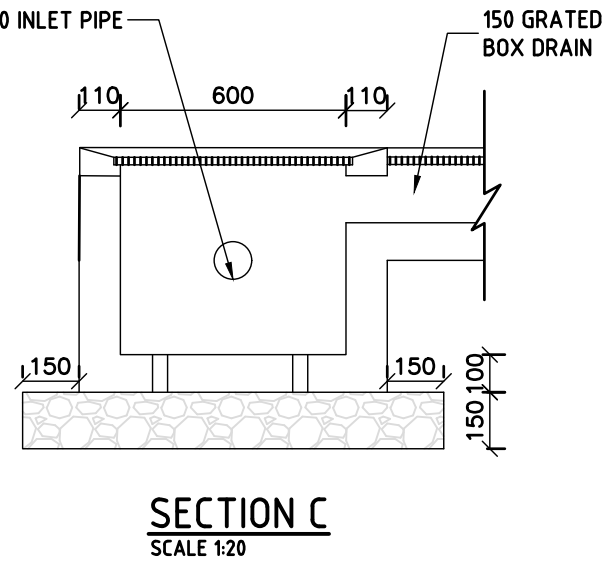
TYPICAL MAINTENANCE PIT
SCALE 1:20



SECTION A
SCALE 1:20



SECTION B
SCALE 1:20



SECTION C
SCALE 1:20

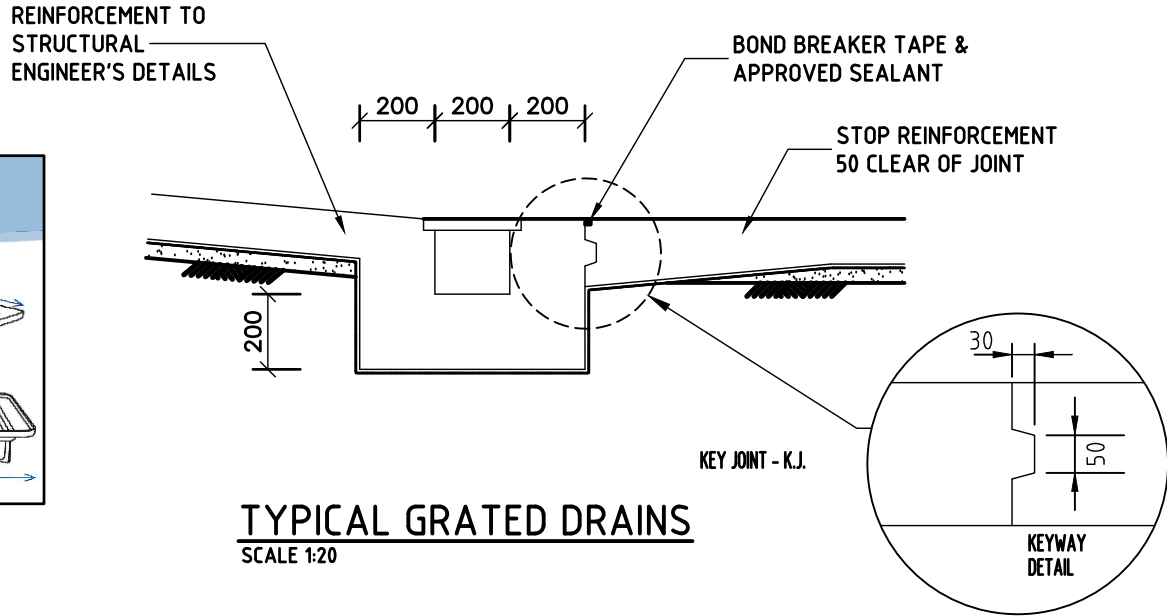
SURFACE WATER DRAINAGE - DOMESTIC

EasyDRAIN™ SHALLOW & DEEP FLO-WAY™ PITS & GRATES AND RAINWATER PIT

- Innovative, yet simple approach to solving your drainage problems
- Flo-way Pits are available in two sizes - 75mm shallow and 160mm deep.
- Flo-way Pits suit 90mm or 100mm PVC Pipe.
- Square trap design funnels rainwater direct into a connected stormwater pipe.
- Complete units with grates in black, grey sandstone and terracotta polymer as well as aluminium and EURODESIGN 316 Stainless Steel.

Deep Flo-way Pit: 257x257x160mm
Shallow Flo-way Pit: 257x257x75mm
Grate: 245x245mm

TYPICAL SURFACE DRAINS
NTS



TYPICAL GRATED DRAINS
SCALE 1:20

		REFERENCE COORDINATION DRAWING										GENERAL NOTES:										QUALITY CONTROL										APPROVED:										CLIENT:										ADDRESS:										DRAWING STATUS																			
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		DISCIPLINE DRAWING TITLE AND NUMBER DATE REV.										DRAWING TITLE AND NUMBER DATE REV.										CHECKED DATE M.D. 22.03.2022																				TITLE: STORMWATER DETAILS										SCALE (AT ORIGINAL SIZE) AS NOTED																													
		ARCH. STRUCT. MECH. ELEC. SURVEY										FINE LANDS CIVIL SURVEY																																								PROJECT NO. 28036										DRAWING NO. C4										REVISION NO. A									
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