

PROPOSED RESIDENTIAL DEVELOPMENT  
13 DE CHAIR ROAD, NARRAWEENA  
STORMWATER MANAGEMENT PLANS

GENERAL NOTES:

1. THESE THE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS'S PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONCEST AND CONSTRUCTION CERTIFICATE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND NASTASI & ASSOCIATES 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 PLAN UNLESS APPROVED BY NASTASI & ASSOCIATES ENGINEERS.

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 SIZE OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN 90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY 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. ALL PITS IN AN EASEMENT OR TRAFFICABLE AREA ARE TO BE PRE-CAST OR CASTIN-SITU OR APPROVED EQUIVALENT
8. MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK
9. VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION
10. 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
11. ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY NASTASI & ASSOCIATES PRIOR TO THEIR COMMENCEMENT

RAINWATER RE-USE 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 THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS WAY REQUIRE PROVISION OF:  
2.1. PERMANENT AIR GAP  
2.2. BACKFLOW PREVENTION DEVICE
3. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAINWATER SUPPLY
4. AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
5. PROVIDE AT LEAST ONE EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING
6. 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
7. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE
8. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN
9. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT BE CONNECTED
10. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS/NZE3500 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 (MAKE IN ACCORDANCE WITH AS1345)
11. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS131619
12. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.

EROSION AND SEDIMENT NOTES:

1. THESE THE PLANS SHALL BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED
2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURE AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY PRIOR TO THE COMMENCEMENT ANY DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE RELEVANT LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS"
3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREA SUCH AS DRAINAGE LINES. THIS TOPSOIL SHALL BE RESPREAD LATER ON AREAS TO BE REVEGETATED AND STABILIZED ONLY. TOPSOIL SHALL NOT BE RESPREAD ON ANY OTHER AREA UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN LONGER THAN ONE MONTH STOCK PILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF
4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DRISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY SUPERINTENDENT. OR COUNCIL
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS
6. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN DISTURBED AREA
7. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL  
- DOWNPIPES CONNECTED  
- PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

MINIMUM PIPE COVER NOTES:

LOCATION	MINIMUM COVER
NO SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL
SUBJECT TO VEHICLE LOADING	450mm WHERE NOT IN A ROAD
UNDER A SEALED ROAD	600mm
UNSEALED ROAD	750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES, HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL BE PAVED WITH AT LEAST:

- 150 mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC; OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC

SURFACE STORMWATER PIT NOTES:

PIT DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 600 mm	450 x 450
FROM 600mm TO LESS THAN 900mm	600 x 600
FROM 900mm	900 x 900

ALL BASEMENT PIT TO BE FITTED WITH HEAVY DUTY CLASS C GRATE & FRAME

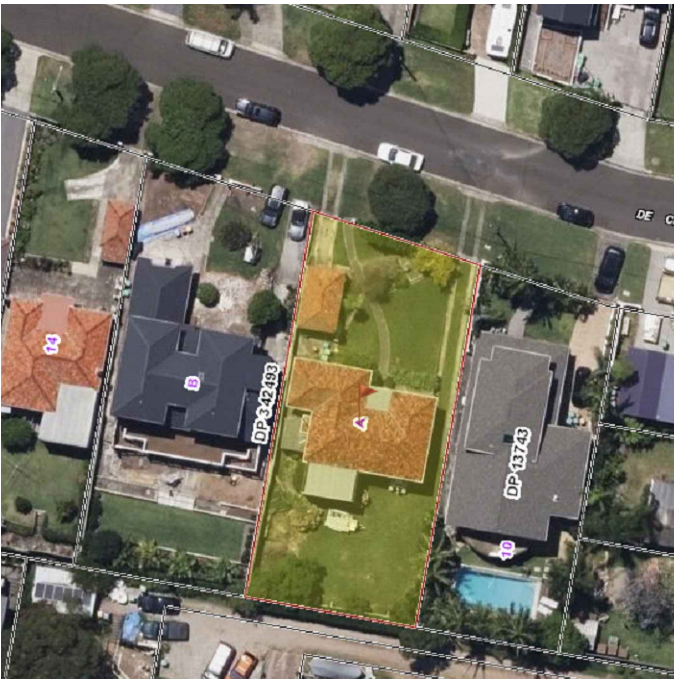
LEGEND

	DENOTES BELOW GROUND ON-SITE DETENTION TANK
	DENOTES ON-SITE DETENTION BASIN
	DENOTES #100 DOWNPIPE (U.N.O)
	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL
	DENOTED PLANTER BOX DRAINS
	DENOTED SURFACE DRAINAGE GRATES
	DENOTED CLEANING EYE
	STORMWATER PIT - SOLID COVER
	STORMWATER PIT - GRATED INLET
	DENOTES GRATED DRAIN
	DENOTES ABSORPTION TRENCH
	DENOTES NON RETURN VALVE
	DENOTES OVERLAND FLOW PATH
	INVERT LEVEL
	TOP OF KERB
	REDUCED LEVEL/SURFACE LEVEL
	PROPOSED FINISH SURFACE LEVEL
	DENOTED #100mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O FOR RAINWATER RE-USE
	DENOTED #100mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O
	DENOTED #150mm PVC (SEWER GRADE) @1% MIN. FALL U.N.O
	DENOTED #225mm PVC (SEWER GRADE) @0.5% MIN. FALL U.N.O
	DENOTE AGG PIPE
	DENOTE RAINWATER TANK

SCHEDULE OF DRAWING

DESCRIPTION	SHEET NUMBER
COVER SHEET & NOTES	C1
DRAINAGE PLAN	C2
RWT DETAILS	C3
OSD TANK DETAILS	C4
OSD TANK SECTION	C5
STORMWATER DETAILS	C6

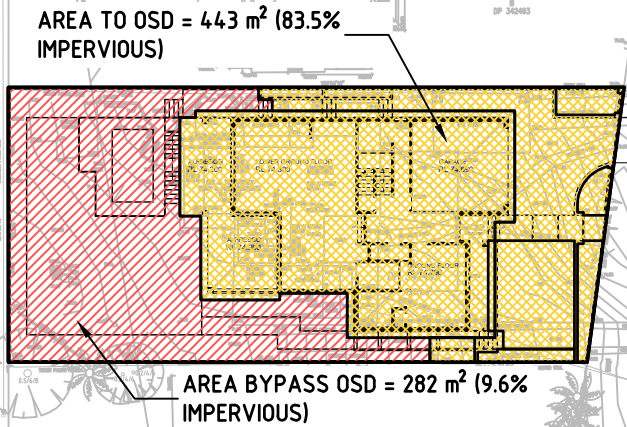
LOCATION MAP



ISSUE FOR APPROVAL



REFERENCE COORDINATION DRAWING		GENERAL NOTES:		QUALITY CONTROL		APPROVED:		CLIENT:		ADDRESS:		DRAWING STATUS	
DISCIPLINE		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		13 DE CHAIR ROAD, NARRAWEENA		CONCEPT PLAN FOR APPROVAL	
ARCH.		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		TITLE:		SCALE ( AT ORIGINAL SIZE)	
STRUCT.		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		COVER SHEET & NOTES		AS NOTED	
MECH.		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		PROJECT NO.		DRAWING NO.	
ELEC.		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		29056		C1	
HYD.		DRAWING TITLE AND NUMBER		DATE		DATE		DATE		REVISION NO.		A	
ISSUED FOR REVIEW		14.12.2023		DATE		DATE		DATE					
REVISION		DATE		DATE		DATE		DATE					

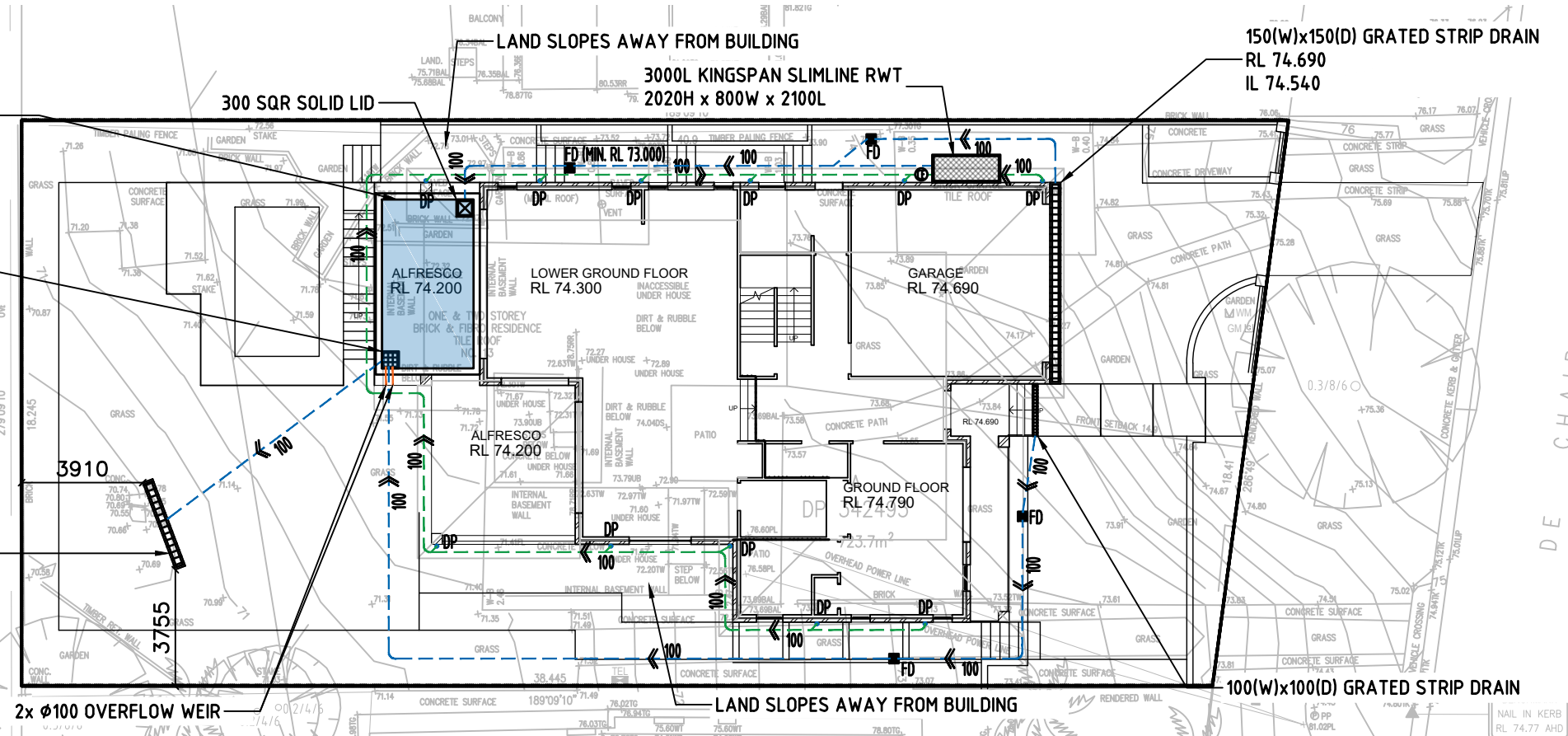


CATCHMENT PLAN  
SCALE 1:500

OSD TANK  
INTERNAL AREA = 16.100 m<sup>2</sup>  
ALFRESCO FFL = 74.200  
TWL = 72.900  
AVE. PONDING DEPTH = 1.820 m  
MAX. PONDING DEPTH = 1.850 m  
VOLUME PROVIDED = 29.302 m<sup>3</sup>

600 SQR DCP  
RL 74.200  
OUTLET CL 71.050  
OUTLET IL 71.000

3m LONG LEVEL SPREADER  
RL 71.000  
IL 70.800



GROUND FLOOR DRAINAGE PLAN  
SCALE 1:200

• LOCATION OF PITS AND PIPES SHOWN ON PLAN ARE INDICATIVE ONLY.

DESIGN SUMMARY

NORTHERN BEACHES COUNCIL - REGION 2

SITE AREA = 724.00 m<sup>2</sup>  
PROPOSED IMPERVIOUS AREA = 396.90 m<sup>2</sup> (54.8%)

VOLUME OF RETENTION REQUIRED

STORAGE PROVIDED AS PER BASIX REQUIREMENT = 3.00 m<sup>3</sup>

SITE DISCHARGE ASSESSMENT BY DRAINS ILSAX MODEL

ROOF AREA TO OSD = 288.00 m<sup>2</sup> (100% IMPERVIOUS)  
SURFACE AREA TO OSD = 155.00 m<sup>2</sup> (53% IMPERVIOUS)  
AREA BYPASS OSD = 282.00 m<sup>2</sup> (9.6% IMPERVIOUS)

PERMITTED SITE DISCHARGE IS LIMITED TO PRE-DEVELOPMENT 5 YEAR ARI WITH 100% GRASSED AREA.

ARI	PRE DEV		POST DEV			OSD VOLUME (m <sup>3</sup> )	Ø ORIFICE (mm)
	Q <sub>PRE</sub> (l/s)		Q <sub>OSD</sub> (l/s)	Q <sub>BYPASS</sub> (l/s)	Q <sub>POST</sub> (l/s)		
5	20		2	8	10	13.691	37
20	32		3	13	16	19.674	37
100	44		3	17	20	27.234	37

OSD VOLUME REQUIRED = 27.234 m<sup>3</sup>  
OSD VOLUME PROVIDED = 29.302 m<sup>3</sup>

DESIGN SUMMARY

NORTHERN BEACHES COUNCIL

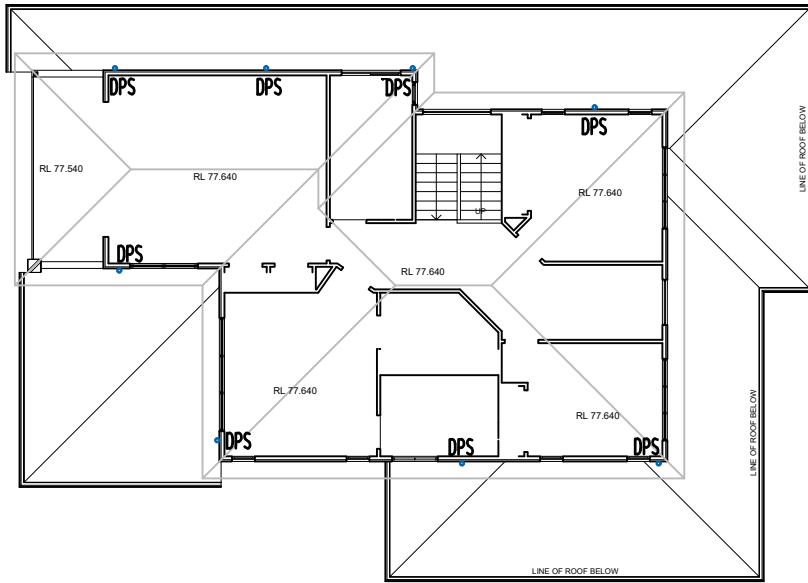
SINGLE DWELLING DEVELOPMENT

SITE AREA = 724.00 m<sup>2</sup>  
ROOF AREA = 282.00 m<sup>2</sup>  
1:100 ARI 5MIN. = 278 mm/hr  
1:20 ARI 5MIN. = 209 mm/hr

1. SINCE DOWNSTREAM EASEMENT CANNOT BE ACHIEVED (REFER TO EASEMENT REFUSAL LETTER) AND SOIL IS NOT SUITABLE FOR ABSORPTION, LEVEL SPREADER AND OSD SYSTEM (TANK) HAS BEEN PROPOSED.
2. DOWNPIPE SIZE MIN. Ø100, GUTTER SIZE MIN. 125 TRILINE SLOTTED
3. ROOF AREA WILL BE COLLECTED INTO RAINWATER TANK, OVERFLOW FROM RAINWATER TANK WILL DRAIN TO OSD TANK AND OVERFLOW TO LEVEL SPREADER.
4. ALL CHARGED LINES MUST BE OF PRESSURE GRADE AND JOINTS ARE TO BE SOLVENT WELDED
5. THE PIPE SYSTEM INCLUDING DOWNPIPES MUST BE CONSTRUCTED FROM SUITABLY DURABLE MATERIALS.
6. SEALED CLEANING EYES ARE TO BE PROVIDED AT LOWEST POINTS IN THE SYSTEM AND AT FRONT BOUNDARY PRIOR TO COUNCIL LAND AND SHOULD BE EASE TO ACCESS.

FIRST FLOOR DRAINAGE PLAN  
SCALE 1:200

• LOCATION OF PITS AND PIPES SHOWN ON PLAN ARE INDICATIVE ONLY.



ISSUE FOR APPROVAL



REFERENCE COORDINATION DRAWING		DRAWING TITLE AND NUMBER		DATE		DATE	
DISCIPLINE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
ARCH.							
STRUCT.							
MEDIA							
ELEC.							
HYD.							
ISSUED FOR REVIEW	14.12.2023						
REVISION	DATE						

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• CONTRACTOR TO VERIFY THE DESIGN / INFORMATION GIVEN IN THIS DRAWING. ANY DISCREPANCIES SHALL BE BROUGHT TO ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF WORK. FAILURE TO COMPLY WITH THE ABOVE WILL BE CONSIDERED LIABILITY.

**NASTASI & ASSOCIATES**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
S.E., M.I.E. AUSTR. OPENING NPER-3  
ABN 45 533 226 008  
UNIT 5, 1-3 WHYYALLA PLACE, PRESTONS NSW 2170  
PH: (02) 9607 2864 OR (02) 9798 9517 FAX: (02) 9791 2081  
MOB: 0419 041 401

QUALITY CONTROL	
DESIGNED	DATE
HM	14.12.2023
CHECKED	DATE
MD	14.12.2023

APPROVED:  
  
S. NASTASI  
B.E., M.I.E., CPEng, Nper-3

CLIENT:  
**G.J. Gardner. HOMES**  
Builders Details

ADDRESS:  
13 DE CHAIR ROAD, NARRAWEENA

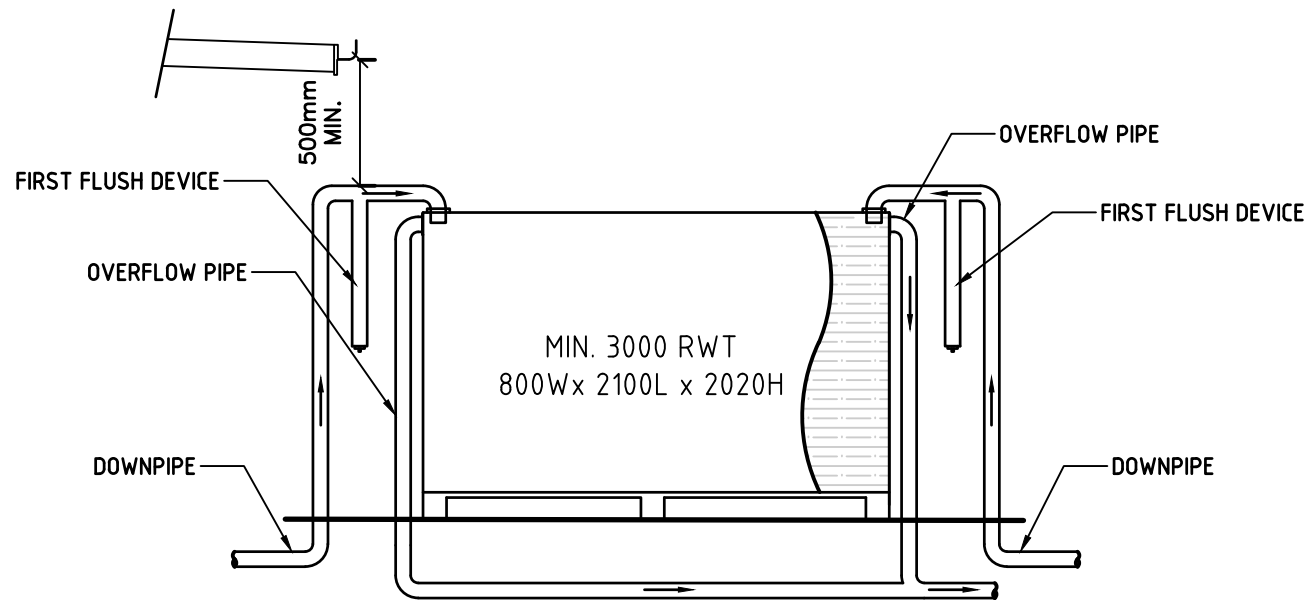
TITLE:  
DRAINAGE PLAN

DRAWING STATUS		
CONCEPT PLAN FOR APPROVAL		
SCALE ( AT ORIGINAL SIZE)	AS NOTED	
PROJECT NO.	DRAWING NO.	REVISION NO.
29056	C2	A

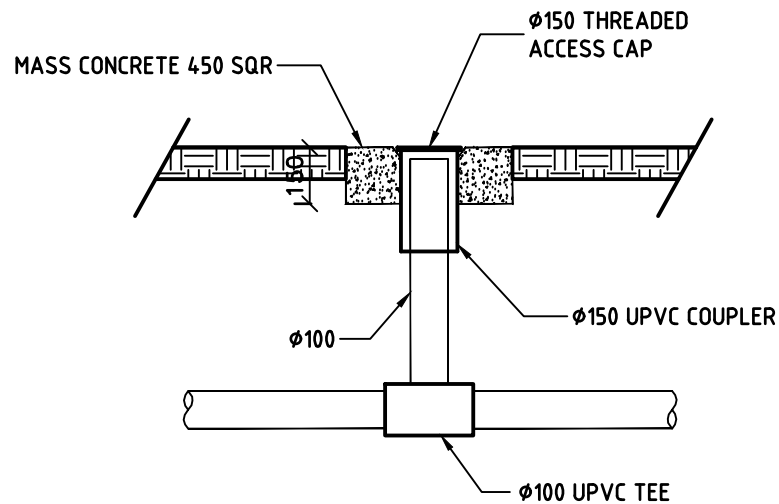


### RAINWATER TANK NOTES:

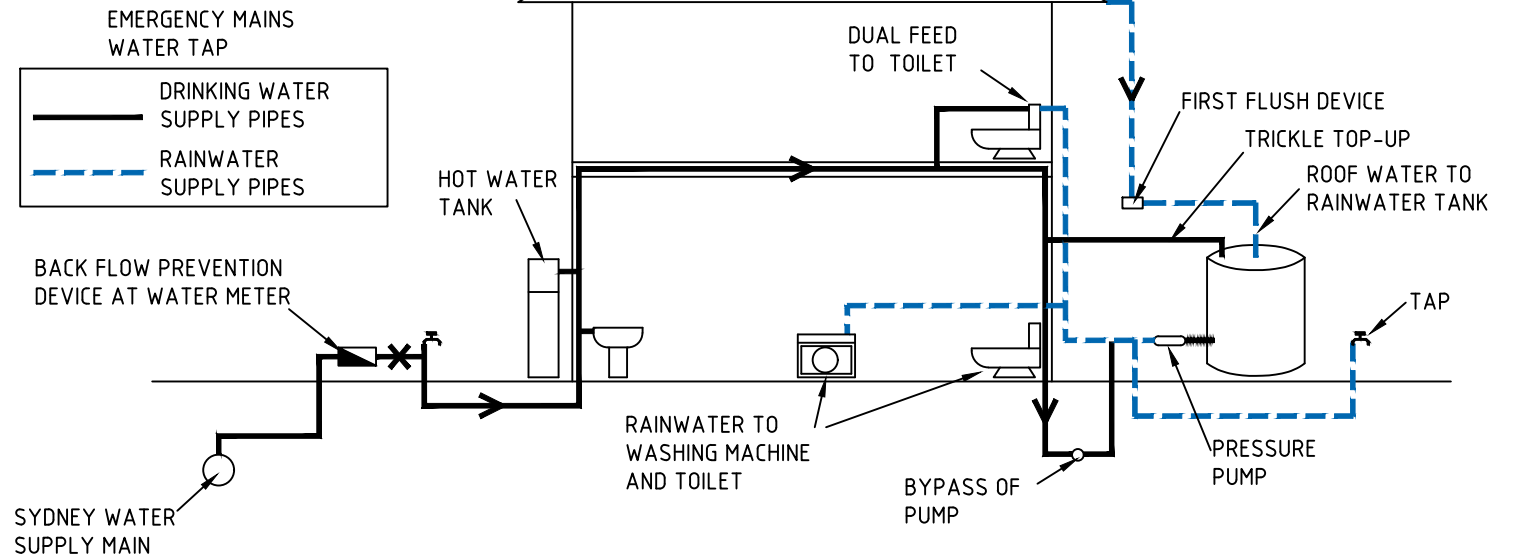
1. A FIRST FLUSH DEVICE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS SHALL BE FITTED TO RAINWATER TANK SYSTEM TO FLUSH OUT THE FIRST 0.5mm OF RUN-OFF FROM THE ROOF AREA THAT DRAINED INTO THE TANK (E.G. 0.5L/m<sup>2</sup>).
2. PUMP SIZE & SPECIFICATION TO BE NOMINATED BY MANUFACTURER.
3. DIMENSIONS ARE INDICATIVE ONLY. EXACT DETAILS TO MANUFACTURER'S SPECIFICATIONS.



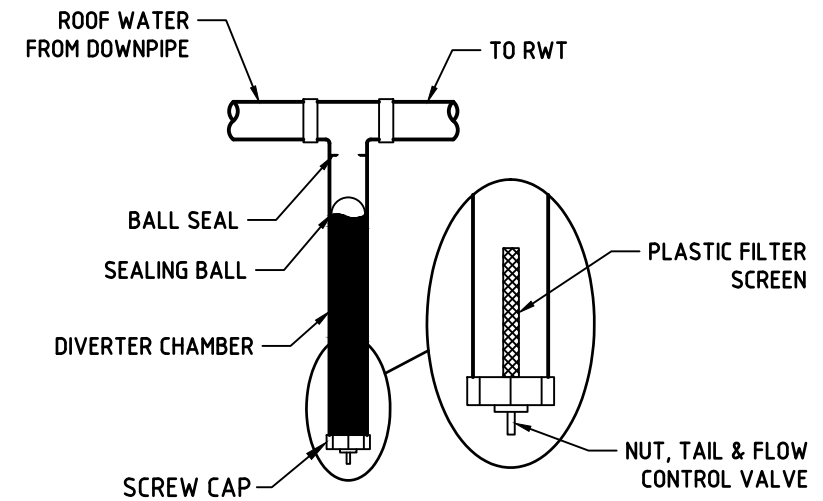
**RAINWATER TANK DETAIL**  
NTS



**CLEANING EYE DETAILS**  
SCALE 1:20



**RAINWATER TANK RE-USE DIAGRAM**  
NTS



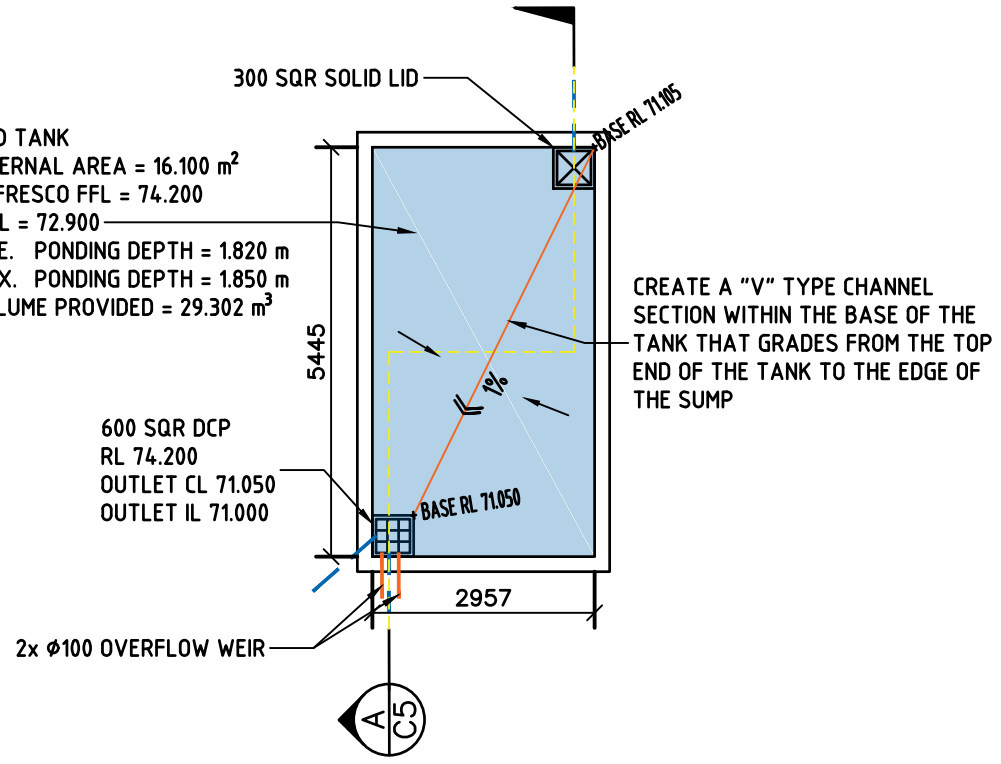
**FIRST FLUSH DEVICE DETAIL**  
1:20

ISSUE FOR APPROVAL



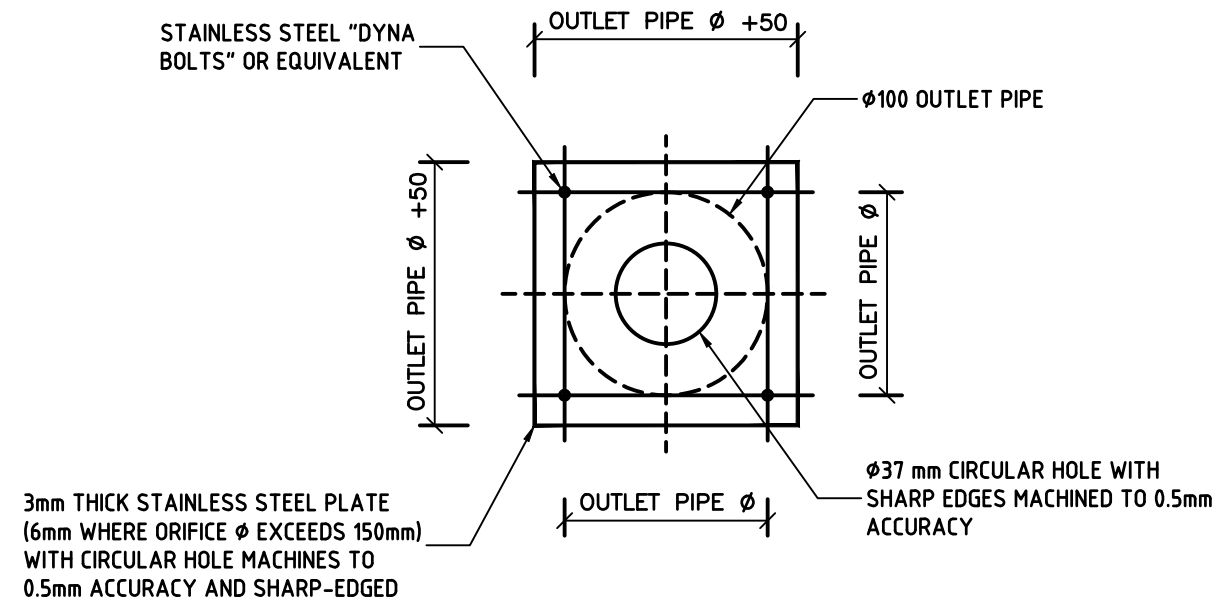
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DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE	DESIGNED	DATE	G.J. Gardner. <b>HOMES</b> Builders Details		13 DE CHAIR ROAD, NARRAWEENA		CONCEPT PLAN FOR APPROVAL	
ARCH.						HM	14.12.2023						
MECH.						CHECKED	DATE	S. NASTASI B.E., M.A.E., CPEng, Nper-3		TITLE: RWT DETAILS		SCALE ( AT ORIGINAL SIZE) AS NOTED	
ELEC.						MD	14.12.2023					PROJECT NO. 29056	DRAWING NO. C3
ISSUE	REVISION	DATE	REV.									REVISION NO. A	

OSD TANK  
INTERNAL AREA = 16.100 m<sup>2</sup>  
ALFRESCO FFL = 74.200  
TWL = 72.900  
AVE. PONDING DEPTH = 1.820 m  
MAX. PONDING DEPTH = 1.850 m  
VOLUME PROVIDED = 29.302 m<sup>3</sup>

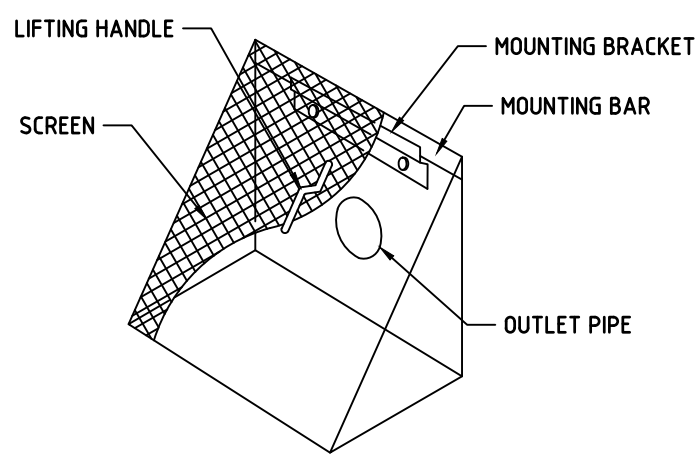


**OSD TANK - PLAN**  
SCALE 1:100

STAINLESS STEEL "DYNA BOLTS" OR EQUIVALENT



**ORIFICE PLATE DETAILS**  
NTS



**DEBRIS SCREEN DETAILS**  
NTS

THIS IS AN  
ON-SITE STORMWATER  
DETENTION SYSTEM  
REQUIRED BY YOUR LOCAL COUNCIL

IT IS AN OFFENCE TO REDUCE THE VOLUME OF THE  
TANK OR BASIN OR TO INTERFERE WITH THE  
ORIFICE PLATE THAT CONTROLS THE OUTFLOW

THE BASE OF THE OUTLET CONTROL PIT AND THE  
DEBRIS SCREEN MUST BE CLEANED OF DEBRIS AND  
SEDIMENT ON A REGULAR BASIS BY THE OWNER

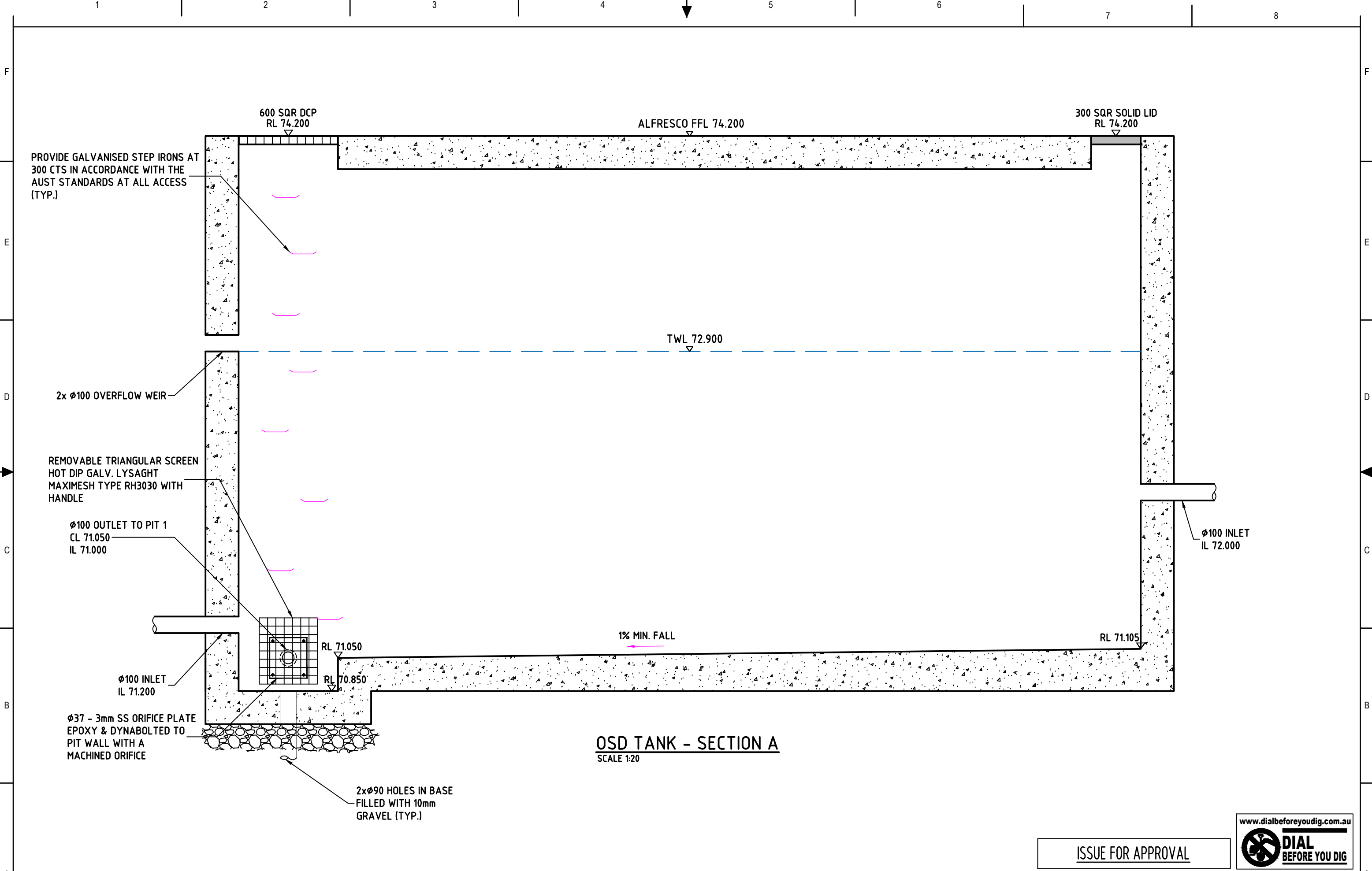
THIS PLATE MUST NOT BE REMOVED

**OSD SIGN**  
NTS

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				REFERENCE COORDINATION DRAWING				GENERAL NOTES:				QUALITY CONTROL				APPROVED:		CLIENT:		ADDRESS:		DRAWING STATUS	
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																				OSD TANK DETAILS		29056 C4 A	



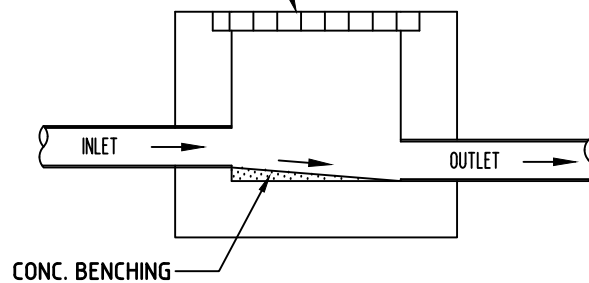
OSD TANK - SECTION A  
SCALE 1:20

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										* THIS DRAWING IS THE COPYRIGHT OF NASTASI & ASSOCIATES CONSULTING CIVIL & STRUCTURAL ENGINEERS, Unit 5/1-3 Whyalla Place/Prestons, 2170, PO Box 6246, Narrabeen, NSW, 2170.										 <b>NASTASI &amp; ASSOCIATES</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS B.E., M.I.E. AUST. CPENG NPER-3 Unit 5, 1-3 WHYALLA PLACE, PRESTONS NSW 2170 PH: (02) 9607 2884 OR (02) 8798 5617 FAX: (02) 9731 2081 MOB: 0419 041 401										DESIGNED HM 14.12.2023																				<b>G.J. 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REMOVABLE GALVANISED  
SUM GRADE (CLASS B WHERE  
VEHICLE CROSSING)

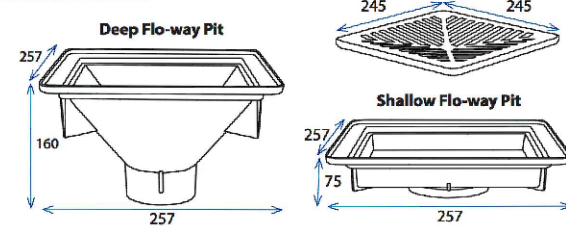


**TYPICAL SURFACE PIT**  
NTS

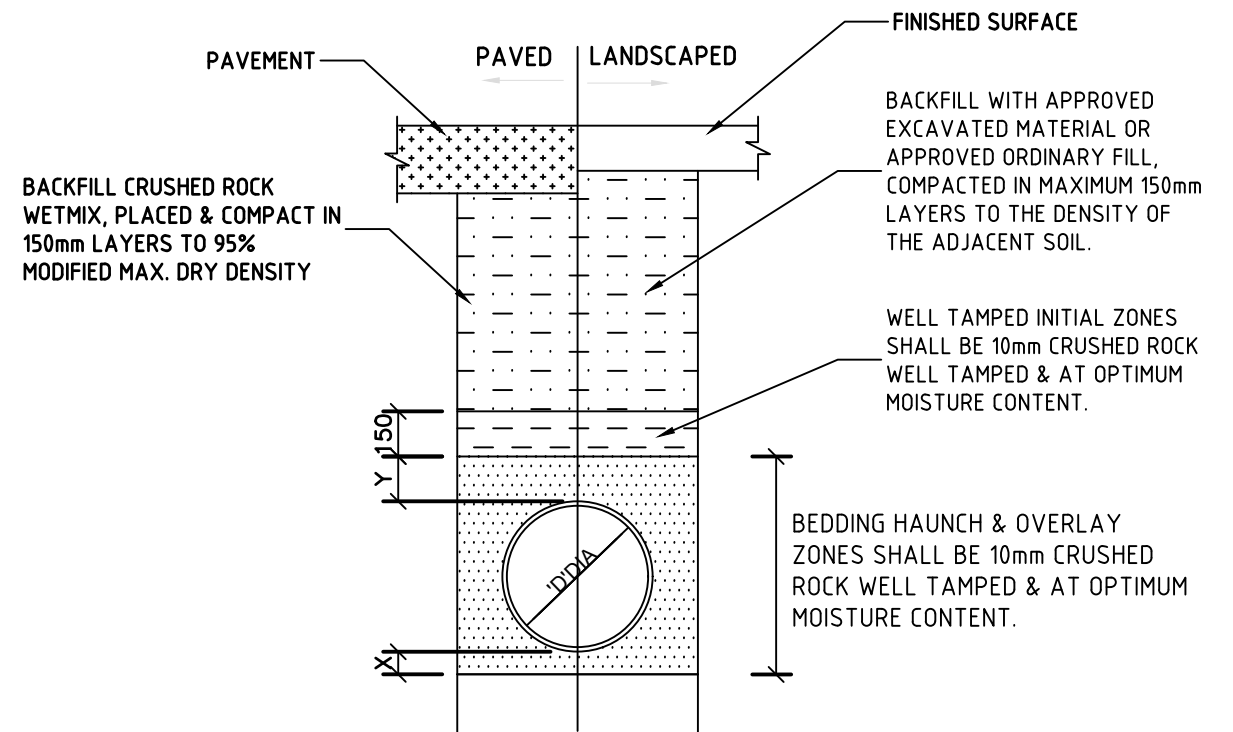
## SURFACE WATER DRAINAGE - DOMESTIC

### 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.



**TYPICAL SURFACE DRAINS (FD)**  
NTS



NOTE:  
1 REFER TO PIPE LAYING SPECIFICATIONS  
FOR DETAILS.


PIPE DIA 'D'	W	X MIN.	Y
100-150	300	75	75
225-300	600	75	75

UPVC PIPE

**TYPICAL PIPE LAYING DETAIL**  
NTS



ISSUE FOR APPROVAL

REFERENCE COORDINATION DRAWING				GENERAL NOTES:				QUALITY CONTROL		APPROVED:		CLIENT:		ADDRESS:		DRAWING STATUS	
DISCIPLINE	DRAWING TITLE AND NUMBER	DATE	REV.	DRAWING TITLE AND NUMBER	DATE	REV.		DESIGNED	DATE	 S. NASTASI B.E., M.A.E., CPEng, Nper-3		<b>G.J. Gardner.</b> <small>HOMES</small> Builders Details		13 DE CHAIR ROAD, NARRAWEENA		CONCEPT PLAN FOR APPROVAL	
ARCH.								HM	14.12.2023								
STRUCT.								CHECKED	DATE					TITLE: STORMWATER DETAILS		SCALE ( AT ORIGINAL SIZE) AS NOTED	
MECH.								MD	14.12.2023							PROJECT NO. 29056	
ELEC.																DRAWING NO. C6	
HYD.																REVISION NO. A	
ISSUE	REVISION	DATE															