STORMWATER MANAGEMENT PLAN
PROPOSED DUAL OCCUPANCY
No.2 BARDOO AVENUE, NORTH BALGOWLAH

GENERAL NOTES:

1. THESE PLANS REMAIN THE PROPERTY OF NY CIVIL ENGINEERING PTY LTD AND ARE SUBJECT TO COPYRIGHT
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED. ALL REDUCED LEVELS (SURFACE LEVELS, INVERT LEVELS) AND CHAINAGES ARE IN METERS UNLESS OTHERWISE STATED. DO NOT SCALE OFF THE DRAWINGS, SCALES ARE AS SHOWN, USE FIGURED DIMENSIONS.
3. THIS PLAN IS TO BE READ IN JUNCTION WITH LATEST ARCHITECTURAL, STRUCTURAL, UTILITY AND LANDSCAPE PLANS IN ADDITION TO ANY RELEVANT GEOTECHNICAL, SOIL CLASSIFICATION OR REF/ENVIRONMENTAL REPORTS. ENGINEER IS TO BE NOTIFIED OF ANY DISCREPANCIES QUOTED ON THIS PLAN.
4. ALL WORKS SHALL BE CARRIED OUT TO LOCAL COUNCIL'S DEVELOPMENT CONTROL PLAN AND SPECIFICATIONS, AS/NZS 3500.3 AND B.C.A.
5. ALL LEVELS SHALL RELATE TO THE ESTABLISHED BM, PM AND/OR LM. ALL EXISTING SERVICES ARE TO BE VERIFIED FOR LOCATION AND DEPTH PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR TO NOTIFY DESIGNER OF ANY DISCREPANCIES OF SERVICE LEVELS QUOTED ON THIS PLAN. ALL SURVEY INFORMATION, BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.
6. 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 WORKS. NO TREES SHALL BE REMOVED WITHOUT THE WRITTEN PERMISSION OF COUNCIL.
7. THE CONTRACTOR SHALL TAKE ALL DUE CARE TO USE THE ABSOLUTE MINIMUM AREA FOR CONSTRUCTION AND THAT NO UNDUE DAMAGE IS DONE TO THE EXISTING VEGETATION.
8. THE CONTRACTOR SHALL COMPLY WITH CONDITIONS, AND SPECIFICATION OF COUNCIL AND ALL ACTS OF THE NSW EPA.
9. THE CONTRACTOR SHALL TAKE ALL REASONABLE CARE TO PROTECT EXISTING SERVICES. DAMAGED SERVICES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
10. ALL NEW WORK IS TO MAKE A SMOOTH JUNCTION WITH EXISTING WORK.
11. SUITABLE WARNING SIGNS AND BARRICADES ARE TO BE PROVIDED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AND AS DIRECTED BY THE RELEVANT AUTHORITY.
12. SERVICES SHOWN ARE INDICATIVE ONLY FROM AVAILABLE INFORMATION AND THE TIME OF SITE INVESTIGATION (IF ANY). THE BUILDER IS TO NOTIFY ENGINEER OF ANY DISCREPANCIES QUOTED ON THIS PLAN.
13. RESTORE ALL TRAFFIC AREAS TO PRE EXISTING CONDITION. FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITION AND COMPACT AS SPECIFIED.
14. RESTORE ALL AUTHORITY OWNED AREAS TO COUNCIL AND/OR AUTHORITY STANDARD AND SPECIFICATION.
15. THE WORK AS CONSTRUCTED WORKS SHALL BE INSPECTED BY THE ENGINEER, MINIMUM 48 HOURS NOTICE SHALL BE PROVIDED FOR ALL INSPECTION REQUESTS.
16. THE DESIGN PLANS HEREIN ARE SUBJECT TO COUNCIL APPROVAL PRIOR TO CONSTRUCTION.
17. WORK AS CONSTRUCTED DRAWINGS TO BE REQUESTED AND RECEIVED IN CAD/.DWG FILE TYPE AND HARD COPY 'RED LINE' MARKUP FROM CONSTRUCTOR FOR VERIFICATION AND CERTIFICATION.

ROOF STORMWATER DRAINAGE NOTES:

1. ALL DOWN PIPES TO BE MINIMUM DN90 OR 100x50mm FOR GUTTERS SLOPE 1:500 AND STEEPER AS PER AS 3500.3 - 3.7.8
2. ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3 AND SECTIONS 3.5.3, 3.7.5 AND APPENDIX G OF AS 3500.3.
3. ALL DOWNPIPES TO BE FITTED VERTICALLY TO THE SOLE OF EAVES GUTTERS, RAINHEAD AND/OR SUMP.
4. ALL DOWNPIPES TO DRAIN INTO RAINWATER TANK AND OR PIT PRIOR TO DISCHARGE OFFSITE UNLESS PRIOR APPROVAL IS OBTAINED FROM COUNCIL IN WRITING OR NOTED OTHERWISE ON THIS PLAN.
5. ALL EAVES GUTTERS TO BE SIZED FOR ARI 20 - AS PER AS 3500.3 - 3.5 AND APPENDIX H.
6. ROOF DRAINAGE INSTALLATION TO BE IN ACCORDANCE TO AS 3500.3 SECTION 4.
7. INTERNAL DOWNPIPES TO BE PROVIDED WITH ACOUSTIC LAGGING TO MANUFACTURERS SPECIFICATIONS

STORMWATER DRAINAGE NOTES:

PIPE SIZE:

1. THE MINIMUM PIPE SIZE SHALL BE:
   - 1.1. DN90 FOR ALL DOWNPIPES;
   - 1.2. DN100 WHERE THE LINE ONLY RECEIVES ROOF STORMWATER RUNOFF, OR;
   - 1.3. DN100 WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS.

PIPE GRADE:

1. THE MINIMUM PIPE GRADE SHALL BE:
   - 1.1. FOR DN100 - DN150 - 1.00%
   - 1.2. FOR DN225 - 0.50%
   - 1.3. FOR DN300 - 0.45%
   - 1.4. FOR DN375 - 0.35%

STANDARD COVER:

1. MINIMUM PIPE COVER FOR PVC PIPES SHALL BE AS PER AS 3500.3 TABLE 6.2.5:
   - 1.1. NOT SUBJECT TO VEHICULAR LOADING:
     - 1.1.1. WITHOUT PAVEMENT SINGLE DWELLINGS - 100mm
     - 1.1.2. WITHOUT PAVEMENT OTHER THAN SINGLE DWELLINGS - 300mm
     - 1.1.3. WITH PAVEMENT (BRICK/PAVERS) AND/OR UNREINFORCED CONCRETE - 100mm
   - 1.2. SUBJECT TO VEHICULAR LOADING:
     - 1.2.1. ROADS (SEALED) - 600mm
     - 1.2.2. ROADS (UNSEALED) - 750mm
     - 1.2.3. OTHER THAN ROADS (WITH PAVEMENT) - 100mm
     - 1.2.4. OTHER THAN ROADS (WITHOUT PAVEMENT) - 450mm

PIPE INSTALLATION

1. PIPES AND FITTINGS FOR STORMWATER DRAINAGE SHALL BE AS FOLLOWS:
   - 1.1. FOR PIPE SIZES UP TO DN225 - PVC WITH SOLVENT WELDED JOINTS (IN GROUND).
   - 1.2. FOR PIPE SIZES GREATER THAN DN225 - RCP WITH RUBBER RING JOINTS.
   - 1.3. FOR LARGER PIPE DEPTHS AS SPECIFIED IN AS 3500.3 - RCP WITH RUBBER RING JOINTS.
   - 1.4. FOR PIPES AND FITTINGS FOR SUBSOIL DRAINAGE SHALL BE SLOTTED PVC WITH SOLVENT WELDED JOINTS MINIMUM DN150.
   - 1.5. INSPECTION RISERS TO BE PROVIDED AT 30m (MAXIMUM) INTERVALS TO ALL LENGTHS OF PIPE GREATER THAN 30m.
2. FOR GRATED DRAINS SHALL BE MINIMUM DN150 IN NON-TRAFFICABLE ZONES AND DN225 IN TRAFFICABLE ZONES.
3. LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURING RECOMMENDATIONS AND:
   - 3.1. AS 3725-1989 - LOADS ON BURIED CONCRETE PIPES
   - 3.2. AS 2566 - 1988 - BURIED FLEXIBLE PIPELINES
   - 3.3. AS 1597.2 - 1996 - PRECAST REINFORCED CONCRETE BOX CULVERTS
   - 3.4. AS 3500 - 1990 NATIONAL PLUMBING AND DRAINAGE CODE - PART 2 SANITARY PLUMBING AND SANITARY DRAINAGE - SYDNEY WATER REQUIREMENTS.
4. ALLOW TO TEST ALL PIPES AND PITS TO MANUFACTURERS REQUIREMENTS.

CONNECTIONS TO STORMWATER SYSTEMS UNDER BUILDINGS:

IN ACCORDANCE WITH AS 3500.3 SECTION 6. TESTING IN ACCORDANCE WITH AS 3500.3 SECTION 9.2

CONNECTIONS TO COUNCIL STORMWATER SYSTEMS:

CONNECTION TO COUNCIL STORMWATER SYSTEM TO BE IN ACCORDANCE TO LOCAL COUNCIL DCP AND STANDARDS. NO CONNECTIONS TO BE MADE UNTIL PERMIT/APPROVALS ARE OBTAINED FROM LOCAL COUNCIL IN WRITING.

WARNING:

EXISTING SERVICES SHOWN ON THESE PLANS ARE NOT GUARANTEED COMPLETE OR CORRECT AND FURTHER INFORMATION IS REQUIRED FROM THE RELEVANT AUTHORITY AND FIELD INVESTIGATION AND ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

LEGEND

SURFACE INLET PIT		GRATED TRENCH DRAIN	
SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)		ABSORPTION TRENCH	
ACCESS GRATE (WITH GROSS POLLUTANT TRAP)		PROPOSED ROOF GUTTER FALL	
450 SQUARE INTERNAL	450 X 450	PROPOSED DOWNPIPE SPREADER	SP 90
GRATE LEVEL = RL 75.50	SL 75.50	PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.	DP 90
INVERT LEVEL = RL 75.20	IL 75.20	INSPECTION RISER	IR
NATURAL GROUND FINISHED DESIGN LEVEL	× 10.00	RAINWATER HEAD	

STORMWATER PIT/STRUCTURES NOTES:

PIT SIZES AND DEPTHS:

1. PIT SIZES WILL BE AS FOLLOWS:

DEPTH (mm)	MIN. PIT SIZE (mm)
UP TO 450	350x350
450 – 600	450x450
600 – 900	600x600
900 – 1200	600x900
1200+	900x900 (WITH STEP IRONS)

PIT DESIGNS:

1. TRENCH DRAINS: CONTINUOUS TRENCH DRAINS ARE TO BE MIN. DN150 AND MIN. 100mm DEPTH. THE BARS OF THE GRATE ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.
2. STEP IRONS: PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS 1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.
3. PLASTIC/PVC PITS: PVC PITS WILL ONLY BE PERMITTED IF THEY ARE MAX. 450x450 AND MAX. 450mm DEPTH AS WELL AS BEING HEAVY DUTY.
4. IN-SITU PITS: IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS 3500.4. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.
5. GRATES: GRATES ARE TO BE GALVANIZED STEEL GRID TYPE. GRATES ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY BE SUBJECT TO VEHICLE LOADING.

INSTALLATION NOTES:

1. ALL PIPES INTO PITS TO BE CUT FLUSH WITH PIT WALL.
2. GRATED COVERS ON PITS GREATER THAN 600mm TO BE HINGED.
3. MINIMUM 20mm FALL TO BE PROVIDED ACROSS BASE OF PIT

NY CIVIL ENGINEERING
NADER ZAKI
MIEAust CPEng NER 3894863
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
NADER ZAKI MIEAust CPEng NER 3894863	A	EM	ISSUED FOR DA	09.05.2025

DRAWING TITLE: DETAILS, NOTES & LEGEND

PROJECT TITLE: PROPOSED DUAL OCCUPANCY No.2 BARDOO AVENUE NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	-
JOB REFERENCE	E250155
DRAWING No.	D1
No. IN SET	8

AREA CALCULATIONS		
TOTAL SITE AREA	828.9	m²
EXISTING DEVELOPMENT		
ROOF AREA	126.5	m²
PAVED AREA	181.4	m²
DRIVEWAY AREA	13.0	m²
IMPERVIOUS AREA	320.9	m²
TOTAL IMPERVIOUS AREA PERCENTAGE	38.7	%
PROPOSED DEVELOPMENT		
PROPOSED ROOF AREA	377.1	m²
PROPOSED PAVED AREA	15.5	m²
PROPOSED DRIVEWAY AREA	27.7	m²
TOTAL IMPERVIOUS AREA	420.3	m²
TOTAL IMPERVIOUS AREA PERCENTAGE	50.7	%

DRAINAGE PIPE LEGEND

- EXISTING STORMWATER PIPE — SW
- DRAINAGE PIPES TO RAINWATER TANK — RWT
- IN-GROUND DRAINAGE PIPES VIA GRAVITY
- CHARGED DRAINAGE PIPES — CH
- PIPES STRAPPED TO UNDERSIDE OF SLAB

NOTE: ALL IN GROUND PIPES TO BE Ø100 PVC AT 1% (MIN) UNO

OSD CALCULATION SUMMARY DWELLING A		
STORM (AEP) SITE AREA	1%	20%
PREDEVELPOED PSD (L/s)	-	12
POSTDEVELOPED OSD DISCHARGE (L/s)	7	7
POSTDEVELOPED BYPASS (L/s)	5	2
OSD VOLUME (m^3)	5.1	0.8

THEREFORE POST DEVELOPMENT DISCHARGE LIMITED TO PREDEVELOPED STATE IN ANY STORM EVENT UP TO AND INCLUDING 5% AEP

OSD CALCULATION SUMMARY DWELLING B		
STORM (AEP) SITE AREA	1%	20%
PREDEVELPOED PSD (L/s)	-	12
POSTDEVELOPED OSD DISCHARGE (L/s)	10	10
POSTDEVELOPED BYPASS (L/s)	2	1
OSD VOLUME (m^3)	6.1	0.2

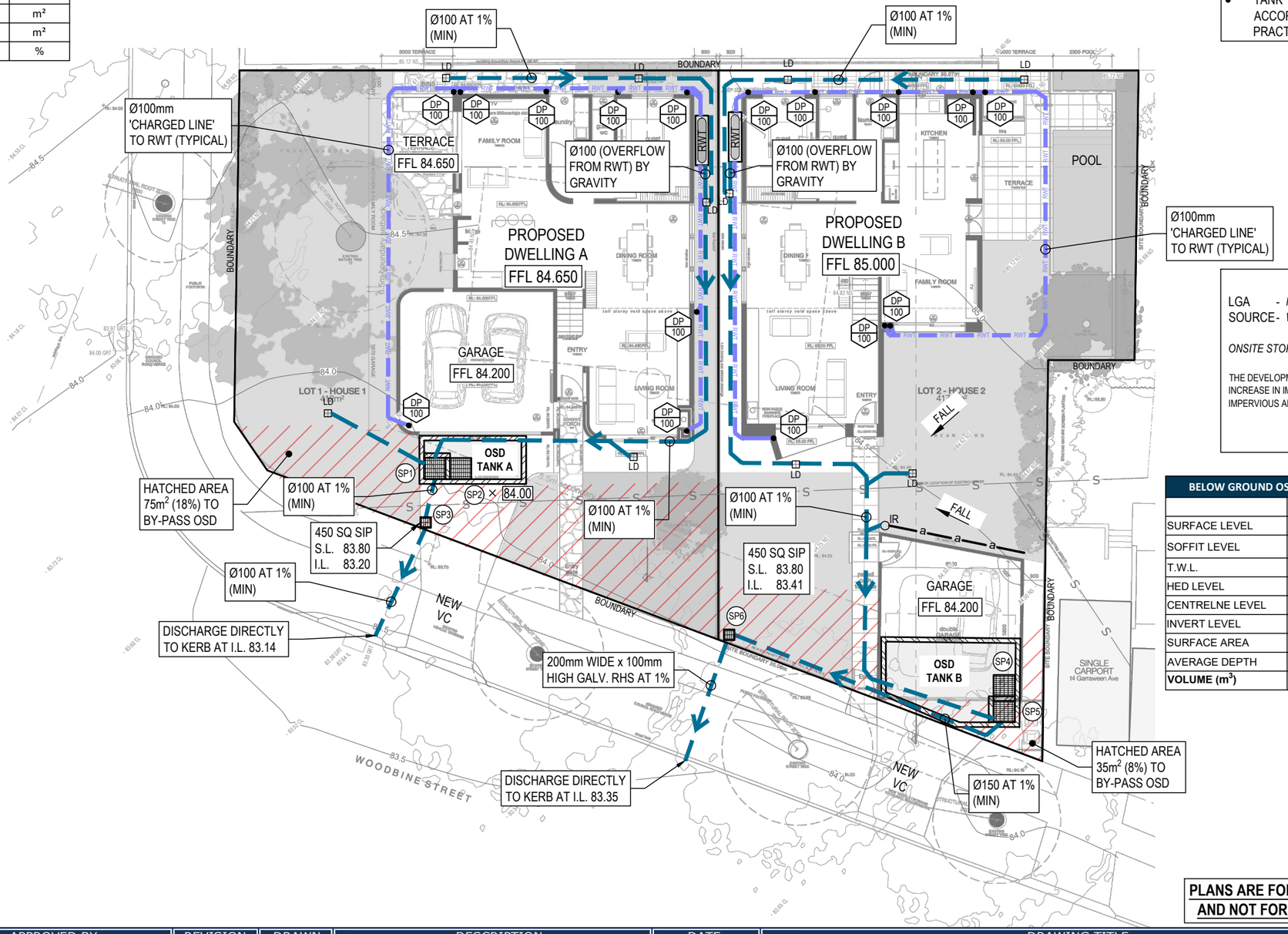
THEREFORE POST DEVELOPMENT DISCHARGE LIMITED TO PREDEVELOPED STATE IN ANY STORM EVENT UP TO AND INCLUDING 5% AEP

RAINWATER RE-USE TANK - RWT

(AS PER BASIX REQUIREMENTS)

SIZE: 2,000 LITRES (MIN)
SLIMLINE TANK BY "KINGSPAN" OR SIMILAR
(2100L x 550W x 2015H)
INSTALL TO MANUFACTURES SPECIFICATIONS, AS3500 AND COUNCIL REQUIREMENTS

- FOR RE-USE AS SPECIFIED BY BASIX CERTIFICATE
- ENSURE TOP OF TANK IS MIN 0.5m BELOW ROOF GUTTERS TO ENSURE SUFFICIENT HEAD FOR THE SYSTEM
- TANK TO BE INSTALLED BY LICENSED PLUMBER IN ACCORDANCE WITH AS/NZS 3500.3.2021 AND NSW CODE OF PRACTICE PLUMBING AND DRAINAGE 2006



BELOW GROUND OSD TANK A	
	OSD
SURFACE LEVEL	RL 84.00
SOFFIT LEVEL	RL 83.80
T.W.L.	RL 83.70
HED LEVEL	RL 83.60
CENTRELNE LEVEL	RL 82.95
INVERT LEVEL	RL 82.90
SURFACE AREA	6.6m²
AVERAGE DEPTH	0.78m
VOLUME (m^3)	5.15m³

BELOW GROUND OSD TANK B	
	OSD
SURFACE LEVEL	RL 84.20
SOFFIT LEVEL	RL 84.00
T.W.L.	RL 83.90
HED LEVEL	RL 83.80
CENTRELNE LEVEL	RL 83.52
INVERT LEVEL	RL 83.47
SURFACE AREA	16.1m²
AVERAGE DEPTH	0.38m
VOLUME (m^3)	6.12m³

INSPECTION RISER (IR)

PROVIDE 'SCREW CAP' INSPECTION RISER AT LOWEST POINT OF 'CHARGED LINES'

NOTE: ENSURE ANY PROPOSED PAVING IS GRADED SO THAT IT IS NOT IMPACTING ADJOINING PROPERTIES.

GRATED DRAIN

PROVIDE 150mm WIDE GRATED DRAINS UNO

OSD WARRANT

LGA - *NORTHERN BEACHES COUNCIL*
SOURCE- *WATER MANAGEMENT DEVELOPMENT POLICY*

ONSITE STORMWATER DISPOSAL REQUIREMENTS REGION 3

THE DEVELOPMENT IS **NOT** A ONE-OFF EXTENSION OR AN ADDITION, INVOLVING AN INCREASE IN IMPERVIOUS AREA OF LESS THAN 50m² AND THE TOTAL EXISTING IMPERVIOUS AREAS OF THE SITE DOES NOT EXCEED 35%.

THEREFORE, OSD REQUIRED

BEFORE YOU DIG www.byda.com.au

PLANS ARE FOR CONCEPT ONLY AND NOT FOR CONSTRUCTION

NY CIVIL ENGINEERING
NADER ZAKI
MIEAust CPEng NER 3894863
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
NADER ZAKI MIEAust CPEng NER 3894863	A	EM	ISSUED FOR DA	09.05.2025

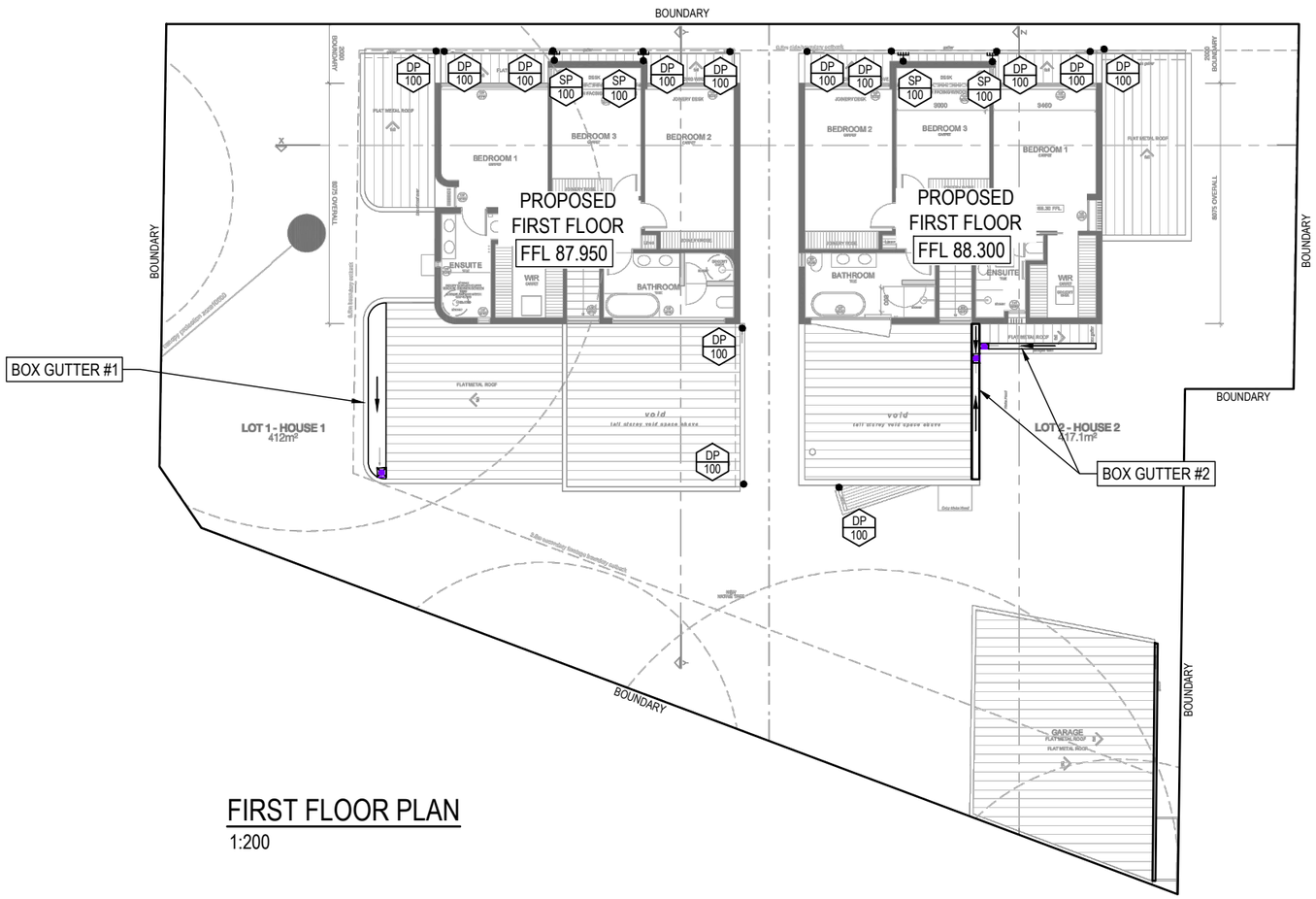
DRAWING TITLE

STORMWATER MANAGEMENT PLAN

PROJECT TITLE

PROPOSED DUAL OCCUPANCY
No.2 BARDOO AVENUE
NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	1:200
JOB REFERENCE	E250155
DRAWING No.	D2
No. IN SET	8



FIRST FLOOR PLAN
1:200

ROOF DRAINAGE

- GUTTERING - **STRATCO HALF ROUND UNSLOTTED** OR EQUIVALENT GUTTER WITH CROSS SECTIONAL AREA GREATER THAN 7700mm²
- DOWN PIPES - Ø90 PVC

NOTE: ROOF DESIGNED TO 5% AEP INTENSITY 205 mm/hr

BEFORE YOU DIG www.byda.com.au

N

PLANS ARE FOR CONCEPT ONLY AND NOT FOR CONSTRUCTION

NY CIVIL ENGINEERING
NADER ZAKI
MIEAust CPEng NER 3894863
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

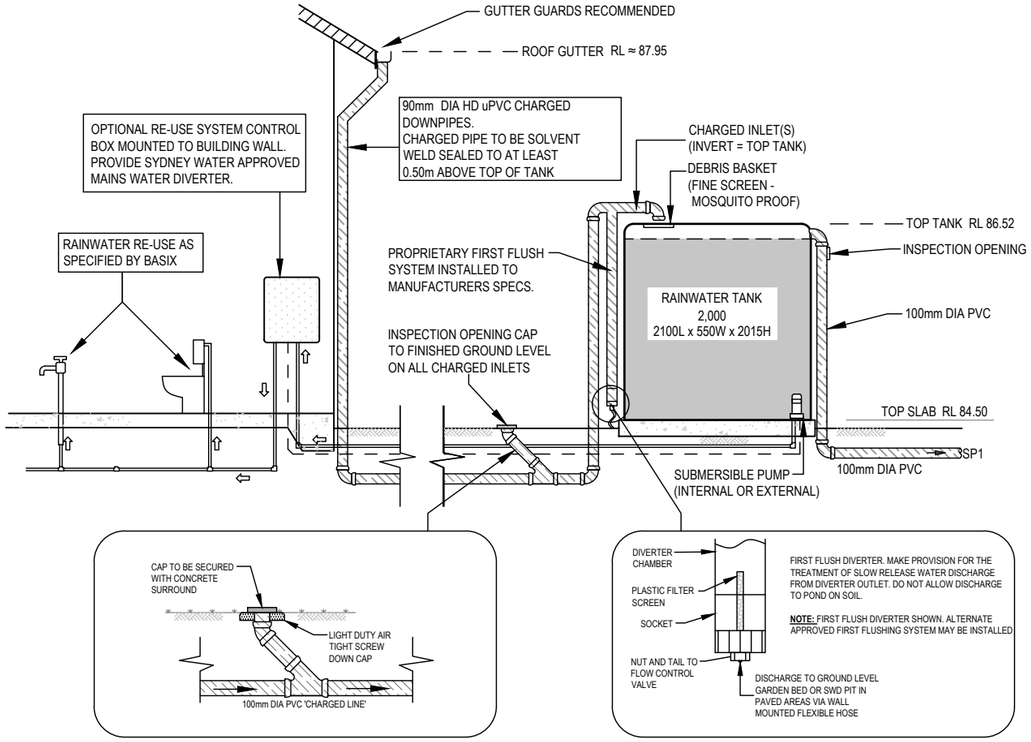
APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
	A	EM	ISSUED FOR DA	09.05.2025

DRAWING TITLE
STORMWATER MANAGEMENT
FIRST FLOOR PLAN

PROJECT TITLE
PROPOSED DUAL OCCUPANCY
No.2 BARDOO AVENUE
NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	1:200

JOB REFERENCE E250155
DRAWING No. D3
No. IN SET 8



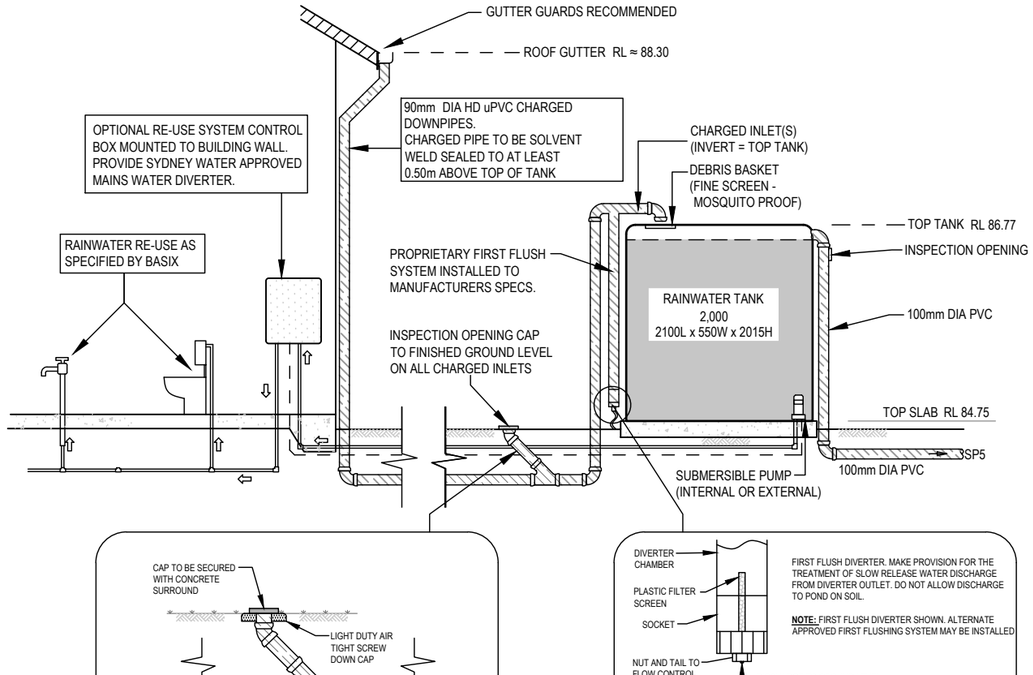
RAINWATER RE-USE TANK - ABOVE GROUND (DWELLING A)

NTS

TYPICAL WARNING SIGN

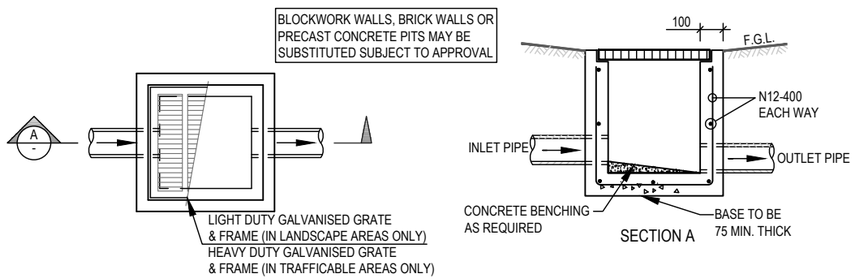
NTS

EVERY EXTERNAL SUPPLY OUTLET FROM RAINWATER RE-USE TANK TO BE LABELED WITH METALLIC WARNING SIGN



RAINWATER RE-USE TANK - ABOVE GROUND (DWELLING B)

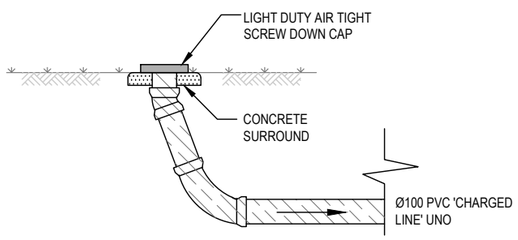
NTS



TYPICAL PIT (SIP)

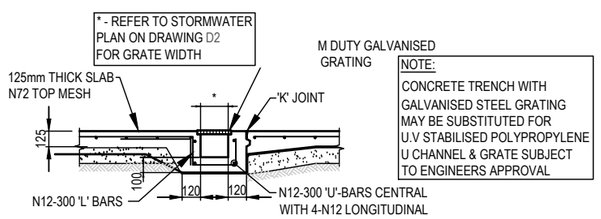
NTS

NOTE:
ALL PROPOSED SITE PITS ARE TO BE CONSTRUCTED IN CONCRETE CAST IN SITU, PLASTIC OR BRICK PITS ARE NOT ACCEPTABLE. HOWEVER, 'COUNCIL MAY CONSIDER PRE-CAST UNITS IF THE UNITS ARE PLACED ON A SOLID BASE OF GRAVEL OR CONCRETE OF 75mm THICK AND BACKFILL UP TO HALF THE DEPTH OF THE PIT SURROUND WITH CONCRETE.



INSPECTION RISER - IR

NTS



GRATED DRAIN

NTS

NY CIVIL ENGINEERING
NADER ZAKI
MIEAust CPEng NER 3894863
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
NADER ZAKI MIEAust CPEng NER 3894863	A	EM	ISSUED FOR DA	09.05.2025

DRAWING TITLE: STORMWATER DETAILS

PROJECT TITLE: PROPOSED DUAL OCCUPANCY No.2 BARDOO AVENUE NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	AS NOTED

JOB REFERENCE E250155

DRAWING No. D4

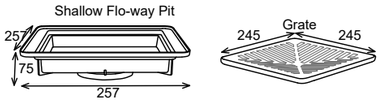
No. IN SET 8

FLO-WAY & RAINWATER
PIT AND GRATES

Flo-way Pits suit 90mm or 100mm PVC Pipe

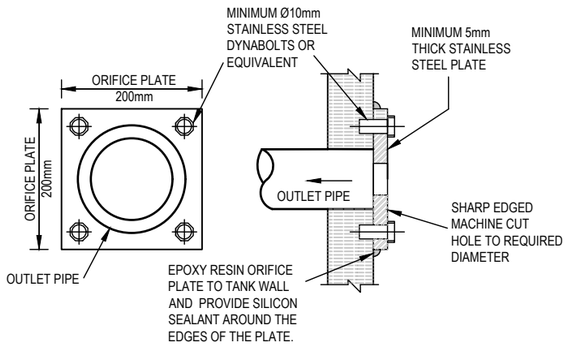
SPECIFICATIONS - SHALLOW

Length:	257mm
Width:	257mm
Shallow Height:	75mm
Capacity:	1L



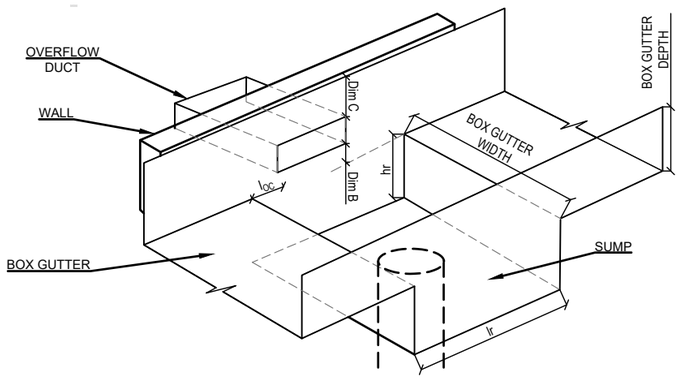
LANDSCAPE DRAIN - LD

NTS



ORIFICE PLATE DETAIL

NTS



SUMP DETAIL

NTS

DIMENSIONS (mm)		
	BOX GUTTER #1	BOX GUTTER #2
CATCHMENT AREA TO DOWNPIPE	32m^2	30m^2
RUNOFF (L/s)	2.6	2.9
WIDTH OF BOX GUTTER	600	200
DEPTH OF BOX GUTTER (AT HP)	110	125
DEPTH OF BOX GUTTER (AT SUMP)	140	155
SLOPE OF BOX GUTTER	1:200	1:200
SUMP WIDTH	600	200
SUMP LENGTH (lr)	400	400
SUMP DEPTH (hr)	50	55
OVERFLOW WIDTH	300	200
OVERFLOW DEPTH	65	65
DIMENSION l_{OC}	15	30
DIMENSION B	10	20
DIMENSION C	35	40
DOWNPIPE DIA	90	90
ROOF DRAINAGE DESIGNED FOR 100 YEAR ARI STORM EVENT (I = 269 mm/hr)		

NOTE:-

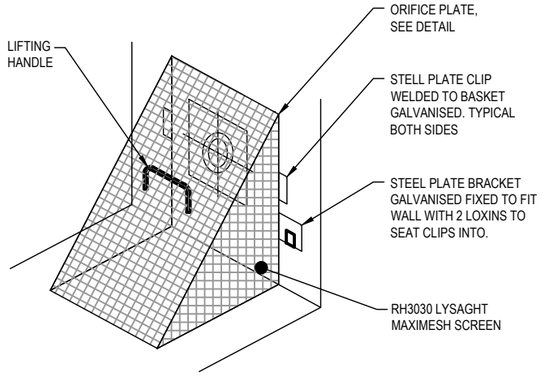
1 - SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION OF EACH DETENTION BASIN.

COLOURS:-

TRIANGLE AND "WARNING"	-	RED
WATER	-	BLUE
FIGURE AND OTHER LETTERING	-	BLACK

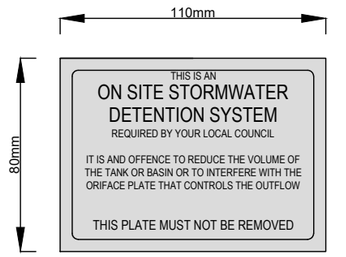
ON-SITE DETENTION WARNING SIGN

NTS



TRASH SCREEN

NTS



CORNERS: SQUARE
COLOUR: ETCHED AND FILLED BLACK LEGEND ON NATURAL SILVER BACKGROUND
MATERIAL: ALUMINIUM 0.9mm MILL

OSD PLAQUE

NTS

NY CIVIL ENGINEERING

NADER ZAKI
MIEAust CPEng NER 3894863

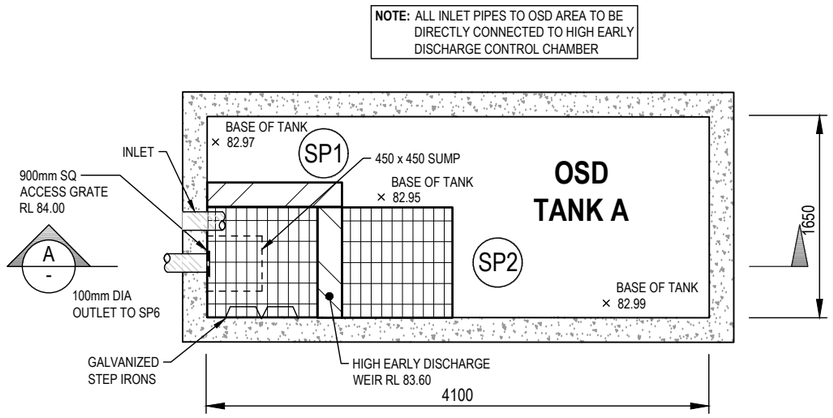
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
NADER ZAKI MIEAust CPEng NER 3894863	A	EM	ISSUED FOR DA	09.05.2025

DRAWING TITLE: STORMWATER DETAILS

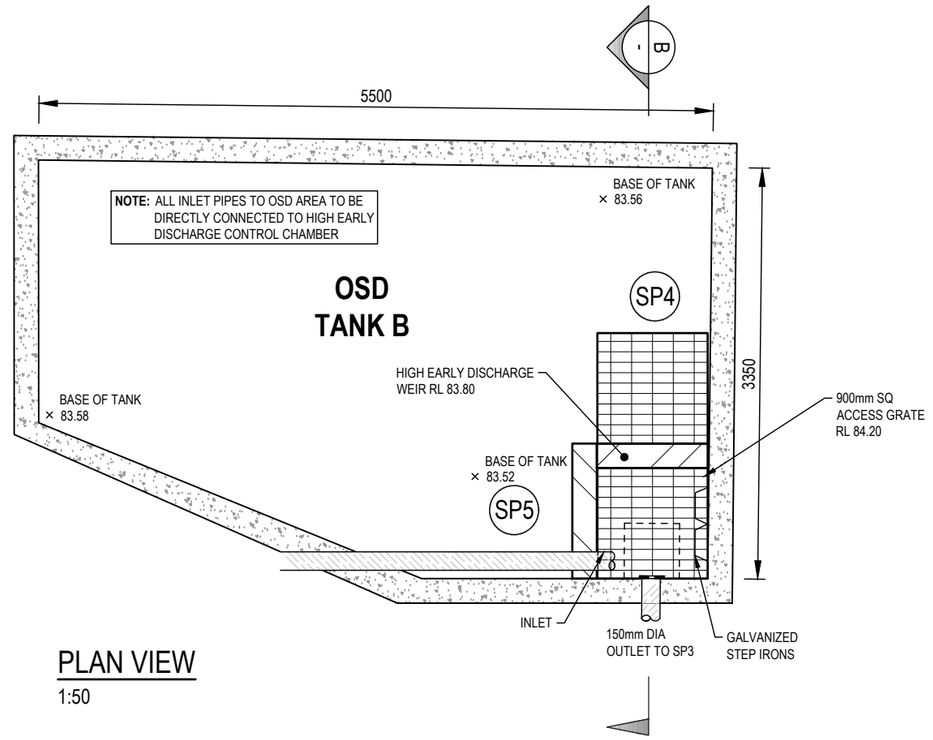
PROJECT TITLE: PROPOSED DUAL OCCUPANCY No.2 BARDOO AVENUE NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	AS NOTED
JOB REFERENCE	E250155
DRAWING No.	D5
No. IN SET	8



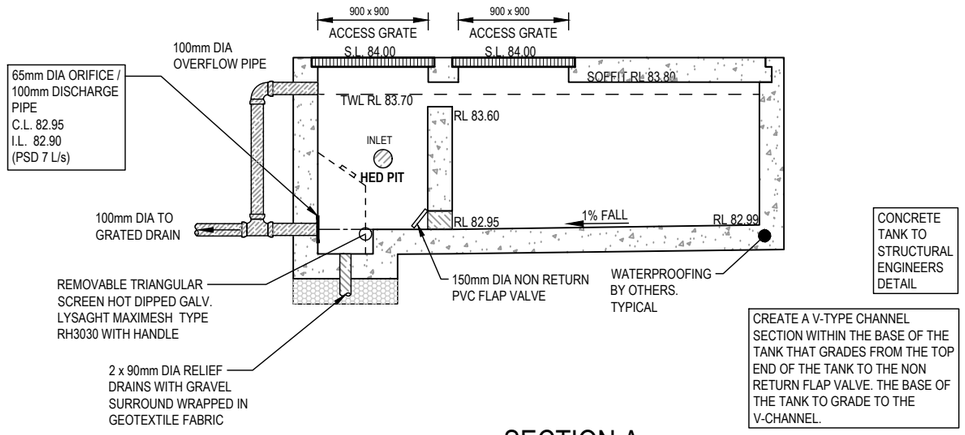
PLAN VIEW

1:50



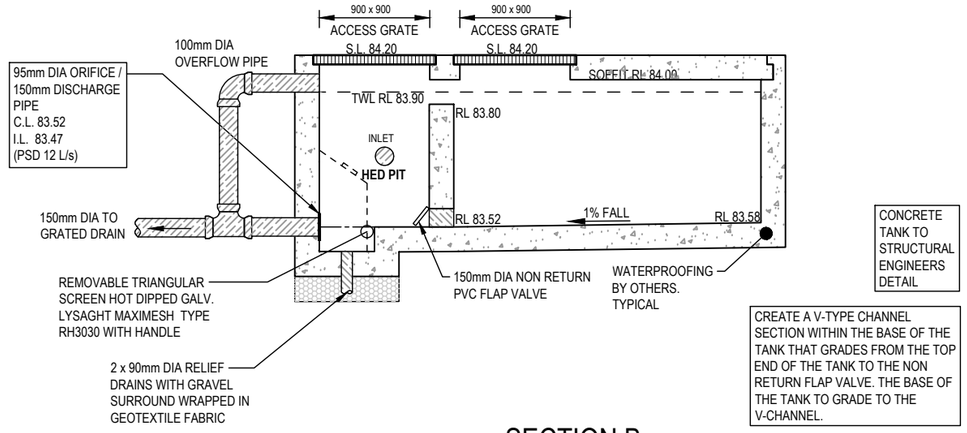
PLAN VIEW

1:50



SECTION A

1:50



SECTION B

1:50

NY CIVIL ENGINEERING
(02) 4610 5262
admin@nycivilengineering.com.au
www.nycivilengineering.com.au

APPROVED BY	REVISION	DRAWN	DESCRIPTION	DATE
NADER ZAKI MIEAust CPEng NER 3894863	A	EM	ISSUED FOR DA	09.05.2025

DRAWING TITLE

STORMWATER DETAILS

PROJECT TITLE

PROPOSED DUAL OCCUPANCY
No.2 BARDOO AVENUE
NORTH BALGOWLAH

SHEET SIZE	A3
DESIGNED	EM
CHECKED	NZ
ISSUE	A
SCALE	AS NOTED

JOB REFERENCE E250155

DRAWING No. D6

No. IN SET 8