

PROJECT : MANAGING COASTAL AQUIFERS (MCAP), WOTJE

LOCATION : WOTJE, REPUBLIC of MARSHALL ISLAND

JOB NO : 22409192

CLIENT :



Pacific
Community
Communauté
du Pacifique

CONSULTANT:



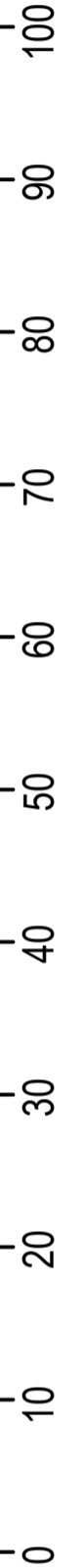
NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL, ELECTRICAL, MECHANICAL & PROJECT MANAGEMENT
79 RATU MARA ROAD, SAMABULA, SUVA
P. O. BOX 1208, SUVA
PHONE: (679) 3313 388, FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

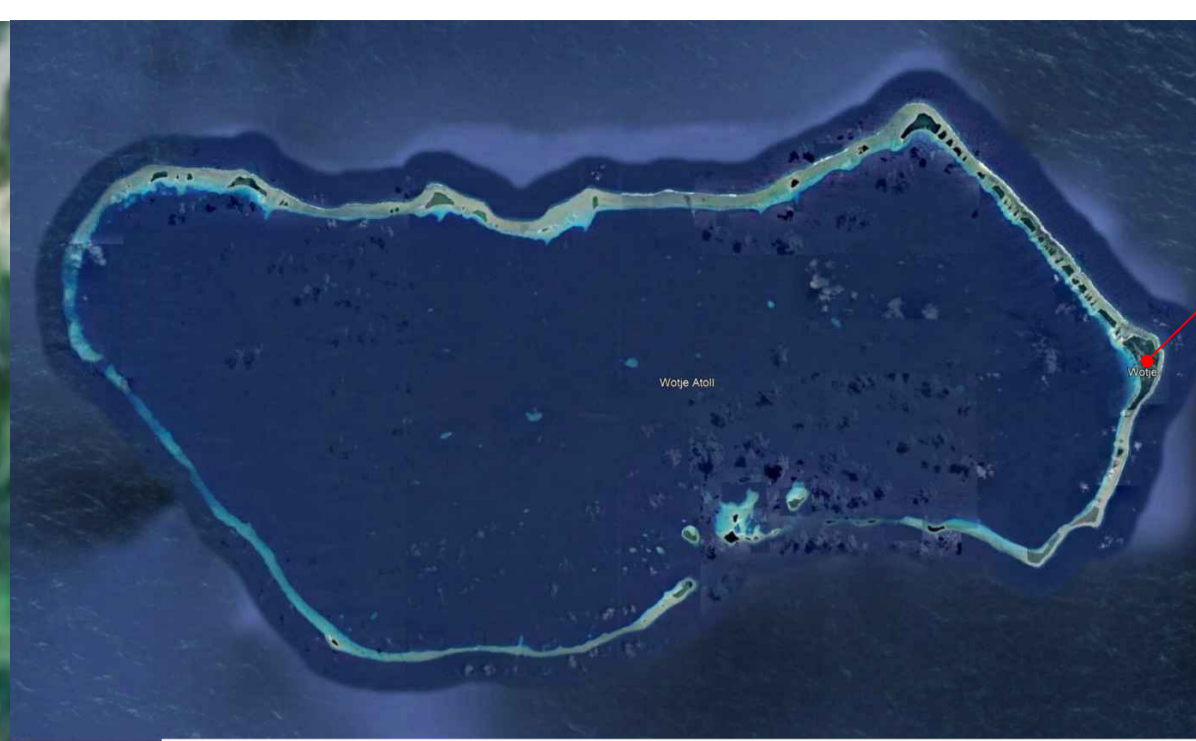
DRAWING SHEET SCHEDULES

SHEET No.	SHEET TITLE	REV	DATE
G-100	COVER SHEET	A	25-Oct-24
A-100	WOTJE LOCALITY PLAN	A	25-Oct-24
A-101	INFILTRATION GALLERY GENERAL LAYOUT PLAN	A	25-Oct-24
A-102	TYPICAL PUMP PIPE WORK SECTIONS AND PIPE SUPPORT DETAIL	A	25-Oct-24
A-103	INFILTRATION GALLERY ELEVATION AND TYPICAL TRENCH DETAILS	A	25-Oct-24
A-104	TYPICAL THRUST BLOCK DETAIL	A	25-Oct-24
A-105	TYPICAL TRENCH AND PIPE CONNECTIONS DETAIL	A	25-Oct-24
A-106	TYPICAL COMMUNITY TANK FOUNDATION, PLAN, SECTION, PIPE TANK CONNECTION AND TYPICAL SOAKAGE TRENCH DETAILS	A	25-Oct-24
A-107	TYPICAL FENCING DETAIL	A	25-Oct-24

DO NOT SCALE - IF IN DOUBT, ASK



Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of ORIGINAL SIZE A1 this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.



OVERALL VIEW OF WOTJE ATOLL
SCALE: NTS

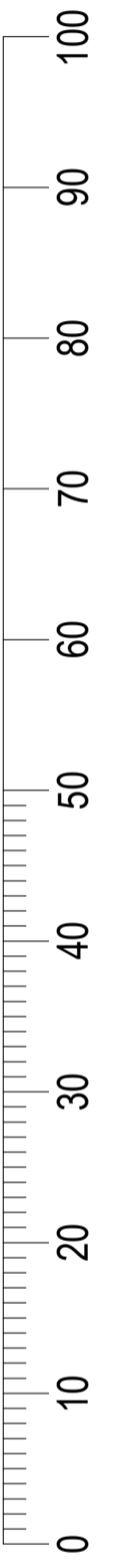
PROJECT AREA

- NOTE:
1. ALL DIMENSION ARE IN MILLIMETERS UMLSS NOTED OTHERWISE.
 2. SCHEMATIC DIAGRAM ONLY.

PIPELINE CO-ORDINATES							
PIPELINE NUMBER	PIPE DETAIL	LENGTH (m)	DIRECTION	DISTANCE	ANGLE	LATITUDE	LONGITUDE
2	GALLERY TO WOTJE POLICE STATION	595	SOUTH	0	183.14459	9.45654	170.23956
2	GALLERY TO WOTJE POLICE STATION	596	SOUTH	140.83	220.0074807	9.45527	170.23949
2	GALLERY TO WOTJE POLICE STATION	597	SOUTH	420.50	257.00585	9.45469	170.23701
2	GALLERY TO WOTJE POLICE STATION	598	SOUTH	499.05	210.54355	9.45453	170.23631
2	GALLERY TO WOTJE POLICE STATION	599	SOUTH	571.94	145.55342	9.45390	170.23649
2	GALLERY TO WOTJE POLICE STATION	600	SOUTH	595.89	127.16106	9.45377	170.23667
1	GALLERY TO WOTJE AIRPORT TERMINAL	460	NORTH	0	322.2479897	9.45654	170.23956
1	GALLERY TO WOTJE AIRPORT TERMINAL	461	NORTH	75.54	4.13919	9.45709	170.23914
1	GALLERY TO WOTJE AIRPORT TERMINAL	462	NORTH	101.83500	1.22066155	9.45725	170.23931
1	GALLERY TO WOTJE AIRPORT TERMINAL	463	NORTH	262.03500	316.63212	9.45830	170.23831
1	GALLERY TO WOTJE AIRPORT TERMINAL	464	NORTH	448.32900	283.01022	9.45954	170.23715
1	GALLERY TO WOTJE AIRPORT TERMINAL	465	NORTH	459.91400	283.90858	9.45949	170.23715

LOCALITY PLAN
SCALE: NTS

DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CLIENT REVIEW	SPC	NK	24.10.24

Client:

Pacific Community
Communauté du Pacifique

NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT
79 RATU MARA ROAD, SUVA
P.O. Box 1208
SUVA
FIJI

TELEPHONE: (679) 3313388
MOBILE: (679)
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT	Designed:	SPC TEAM
Checked:	SPC TEAM	Date:	24.10.24
Scale A1:	AS SHOWN	Scale A3:	HALF SHOWN

PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND

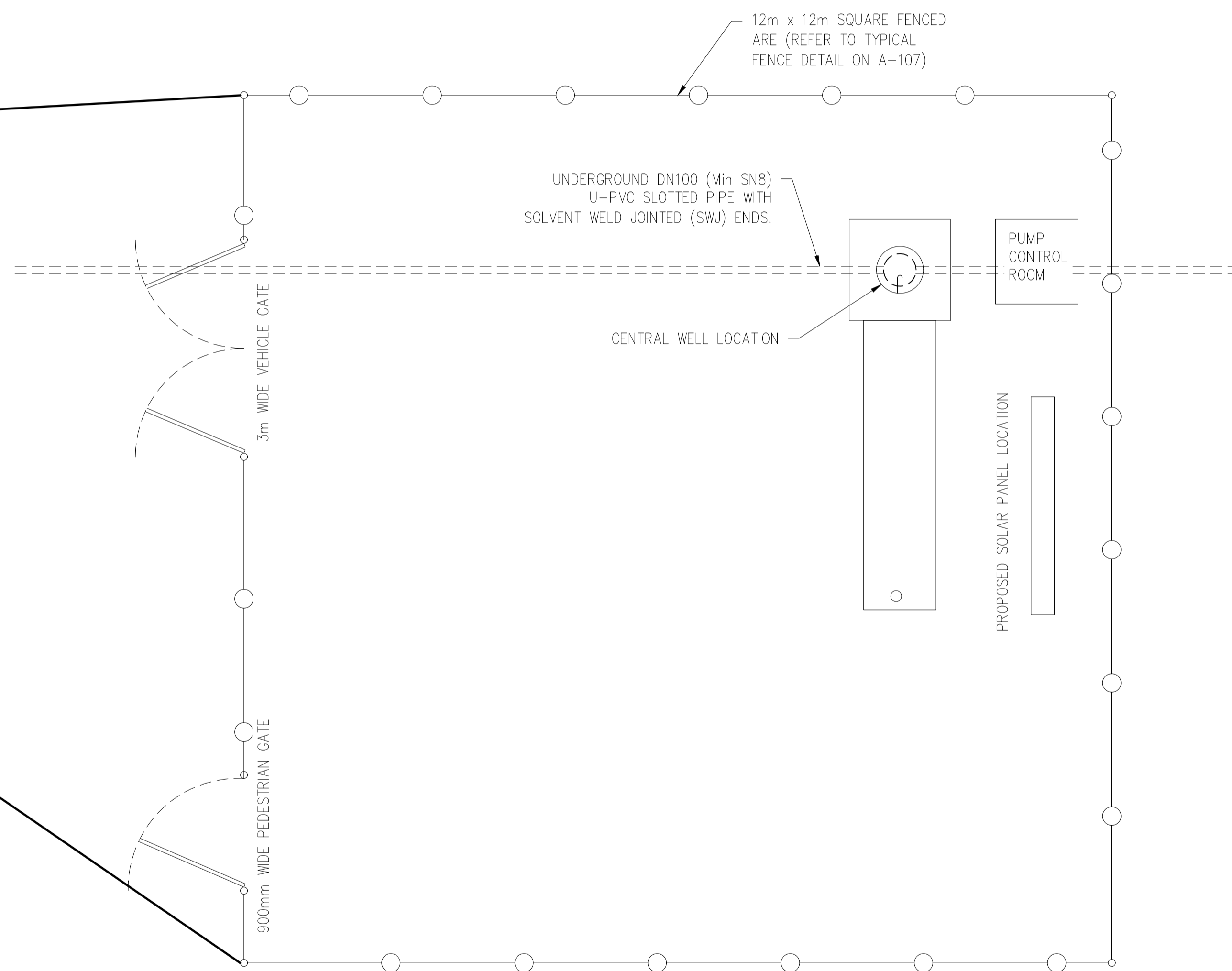
TITLE: **WOTJE LOCALITY PLAN**

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-100



WOTJE AIRSTRIP

- NOTE:
1. ALL DIMENSION ARE IN MILLIMETERS.
 2. SCHEMATIC DIAGRAM ONLY.



INFILTRATION GALLERY GENERAL LAYOUT PLAN
SCALE 1:50

DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CLIENT REVIEW	-	-	24.10.24

Client:



Pacific Community
Communauté du Pacifique



NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT

79 RATU MARA ROAD, SUVA
P.O.Box 1208
SUVA
FIJI

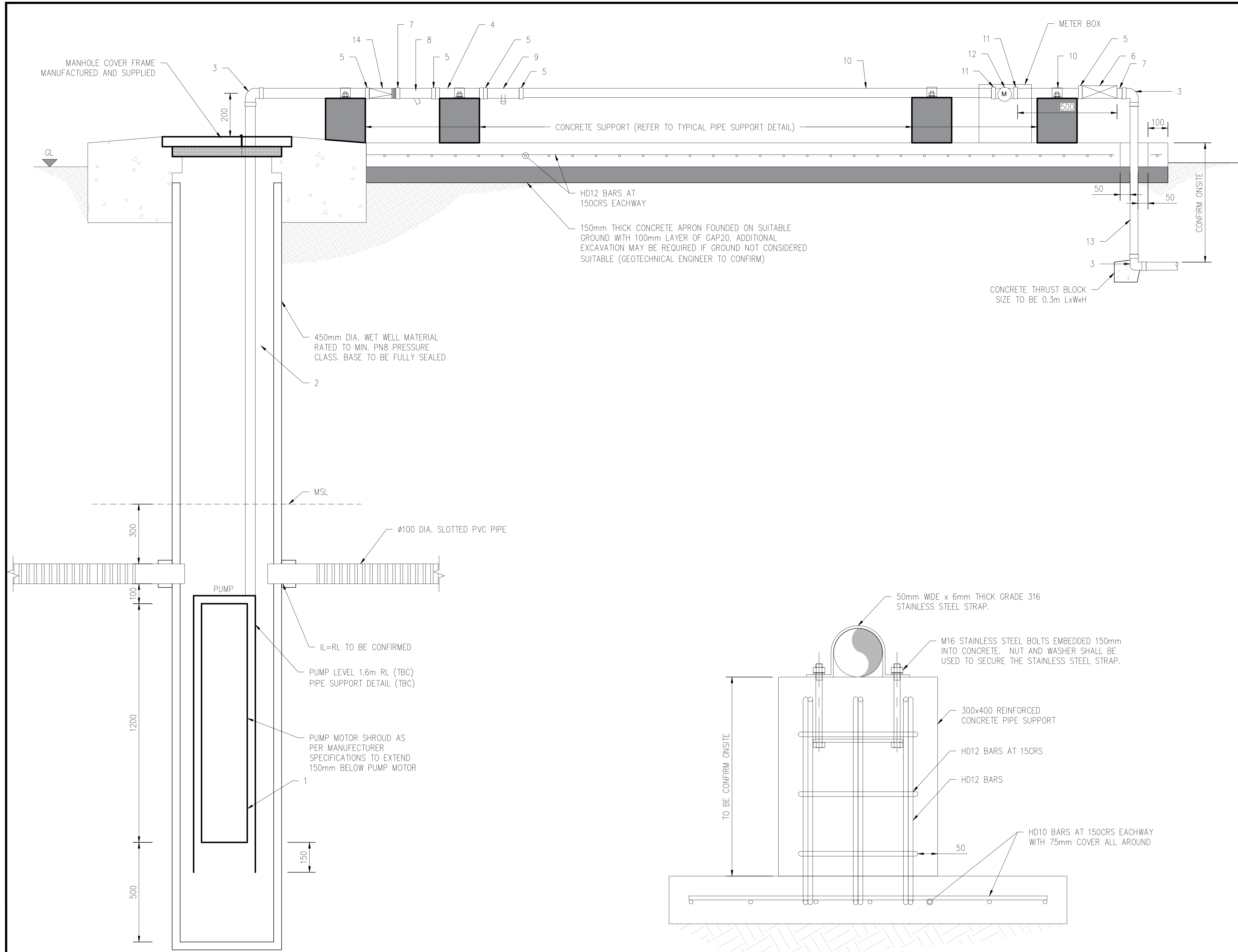
TELEPHONE: (679) 3313388
MOBILE: (679)
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT	Designed:	SPC TEAM
Checked:	SPC TEAM	Date:	24.10.24
Scale A1:	AS SHOWN	Scale A3:	HALF SHOWN

PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND

TITLE: **INFILTRATION GALLERY GENERAL LAYOUT PLAN**

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-101



- NOTE:**
1. ALL DIMENSION ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. ALL EXPOSED PIPELINE ARE TO BE POLYETHYLENE.
 3. PIPEWORK TO CONNECTED WITH PE COMPRESSION FITTINGS UNLESS NOTED OTHERWISE.
 4. ALL PE PIPE WORK AND FITTINGS TO BE CLASS PE100 SDR21 P8, UNLESS NOTED OTHERWISE.
 5. PIPEWORK TO BE CONNECTED WITH APPROVED COMPRESSION FITTINGS.
 6. ALL STEEL PIPE WORK AND FITTINGS TO BE 316 MARINE GRADE UNLESS NOTED OTHERWISE.
 7. CONCRETE IS TO BE 30MPa STRENGTH.
 8. PLASTIC DAMP PROOF COURSE (DPC) SHEETING PROVIDED BETWEEN ALL CONCRETE AND SOIL INTERECTION.

LEGEND:

No.	DESCRIPTION
1	SUBMERSIBLE PUMP, LORENTZ PS2-1800 HRE 32 HELICAL ROTAR PUMP, EC DRIVE AND CONTROLLER, ASSOCIATED FITTINGS INCLUDING CABLING AND ACCESSORIES
2	2 No. 50 OD PE100 SDR21 P8 PIPE
3	50mm 90 DEG. POLYETHYLENE ELBOW SOCKET
4	50 OD PE100 SDR21 P8 PIPE
5	50mm TO 2" BSP POLYETHYLENE MALE ADAPTOR
6	2" BSP THREADED FEMALE LOCKABLE BRASS BALL VALVE
7	2" BSP MALE THREADED NIPPLE
8	50mm FEMALE POLY Y-STRAINER WITH SS MESH
9	50mm POLY FEMALE TEE WITH 1" MALE THREAD OFFTAKE AND BIP TAP
10	50 OD PE100 SDR21 P8 PIPE
11	50mm TO 2" BSP POLYETHYLENE MALE ADAPTOR
12	50mm MULTI JET FLOW METER WITH 50mm (2") FEMALE THREADED EACH SIDE
13	50 OD PE100 SDR21 P8 PIPE
14	50 mm CHECK VALVE

1 PUMP PIPE WORK
A-103 SCALE 1:10

TYPICAL SUPPORT DETAIL
SCALE 1:5

DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CONSTRUCTION	HS	NK	04.10.23

Client:

Pacific Community
Communauté du Pacifique

NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT
79 RATU MARA ROAD, SUVA
P.O. Box 1208
SUVA
FIJI

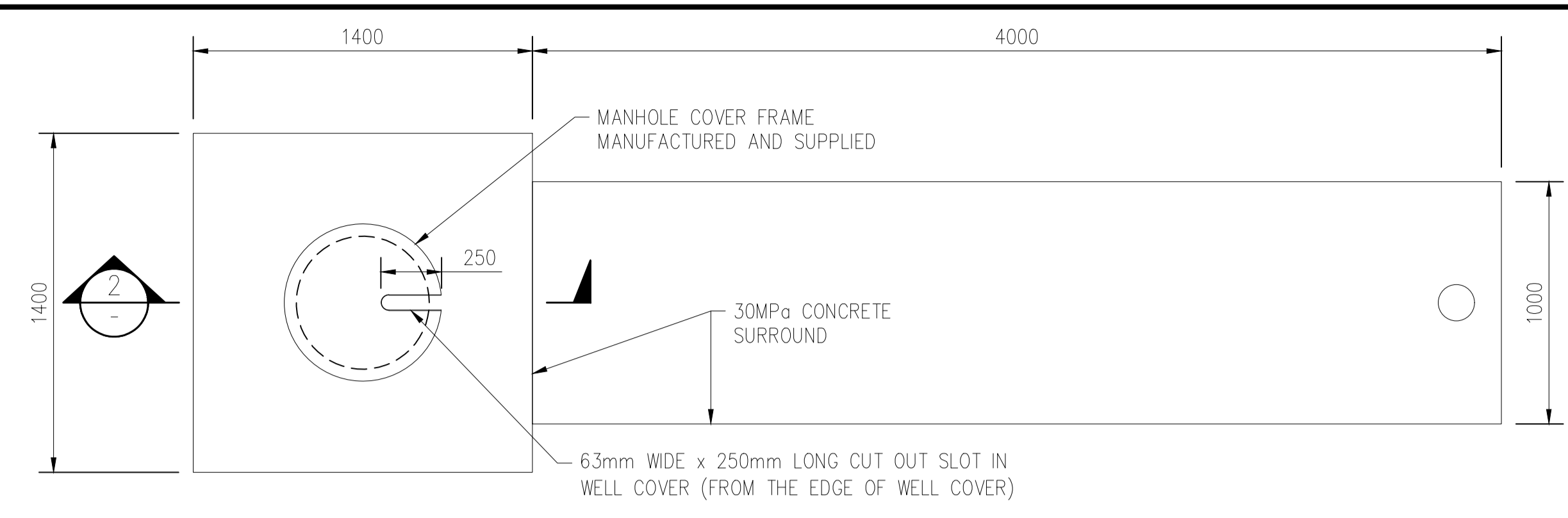
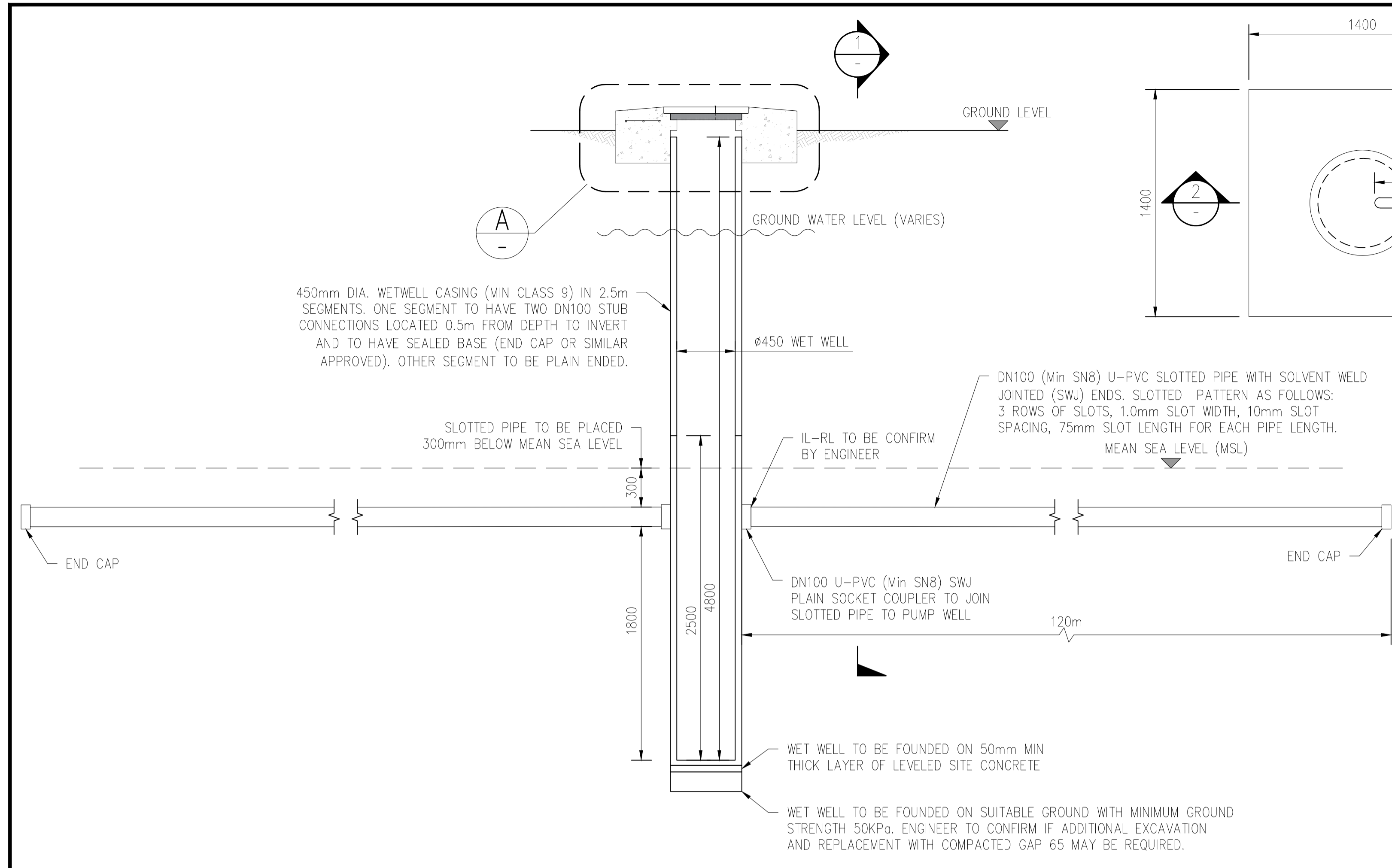
TELEPHONE: (679) 3313388
MOBILE: (679) 3302903
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT
Checked:	HS/NK
Scale A1:	AS SHOWN
Designed:	-
Date:	23.08.23
Scale A3:	HALF SHOWN

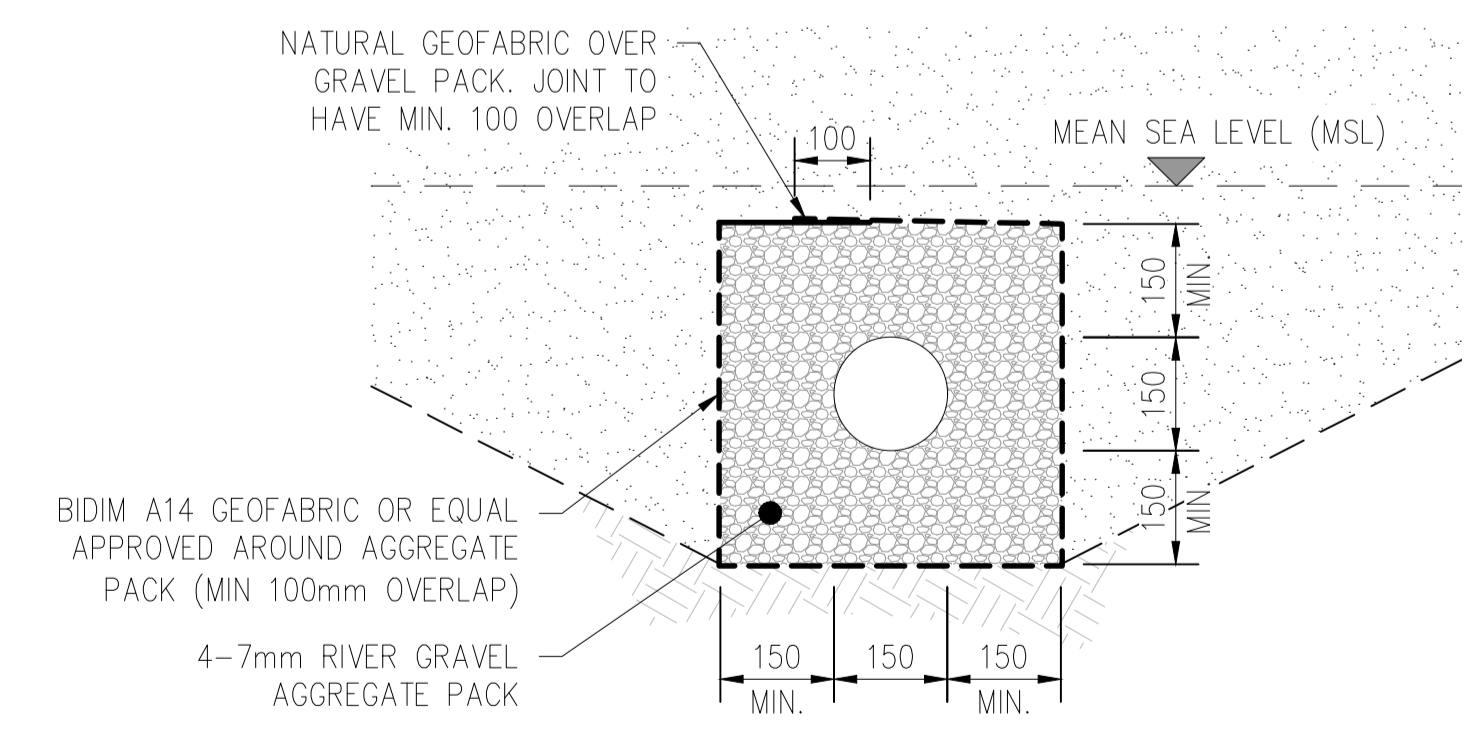
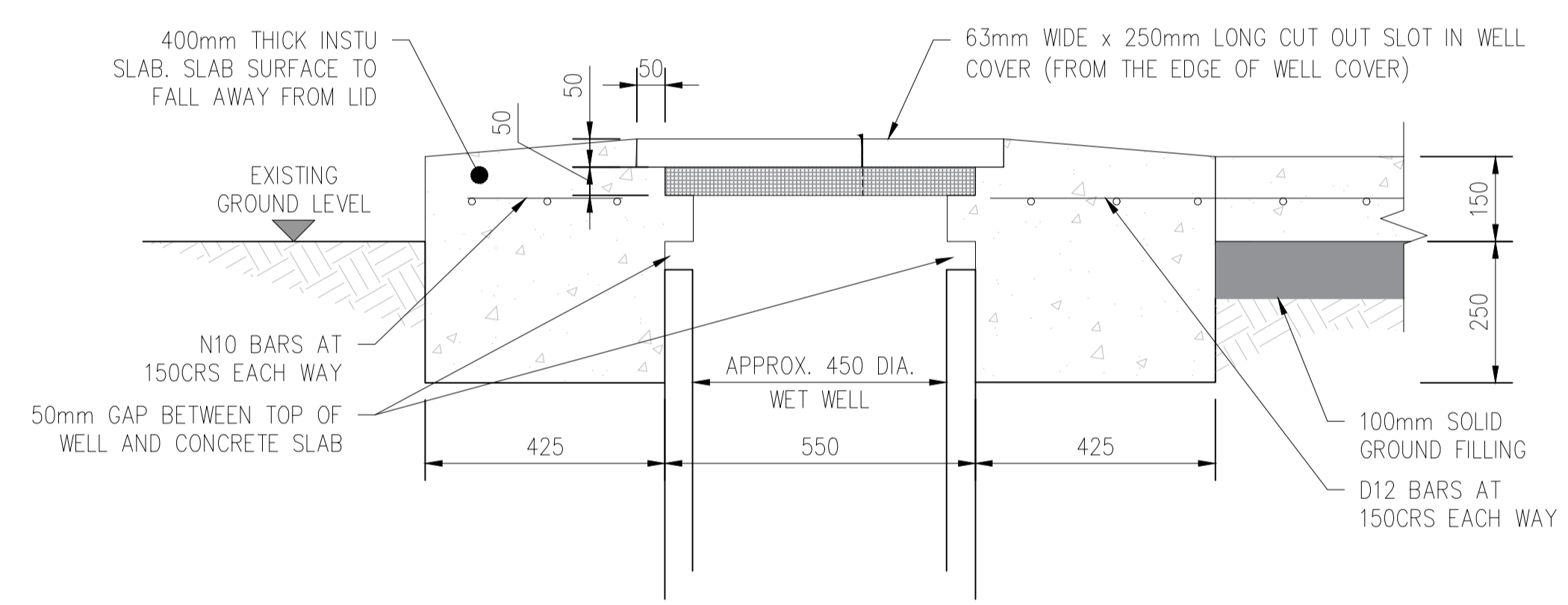
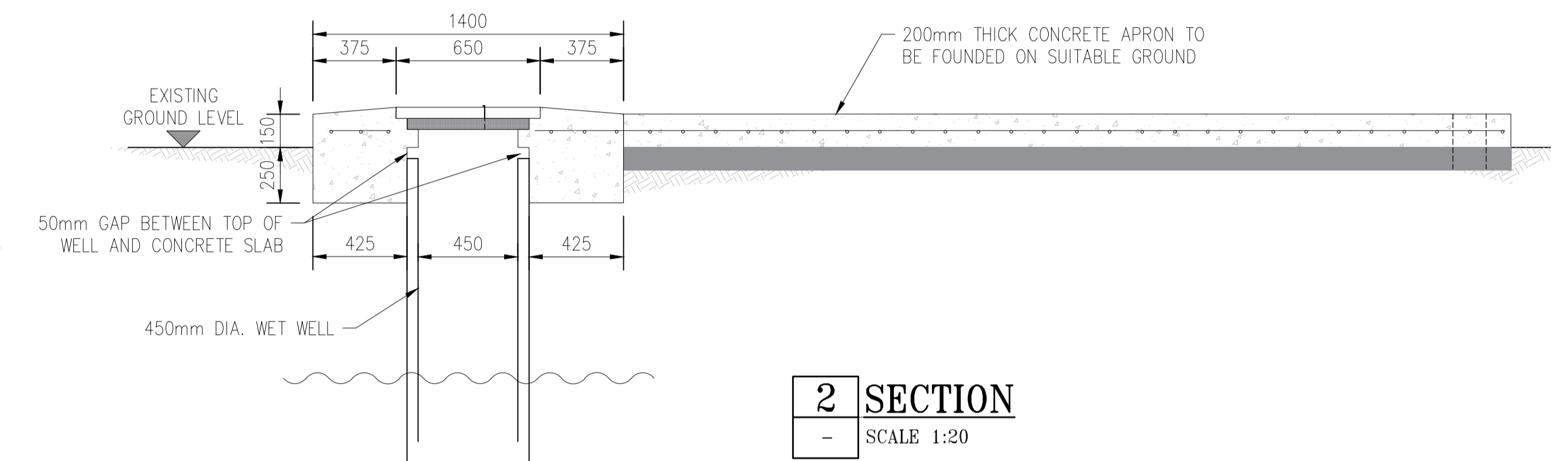
PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND

TITLE: **TYPICAL PIPE WORK SECTION AND PIPE SUPPORT DETAIL**

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-102

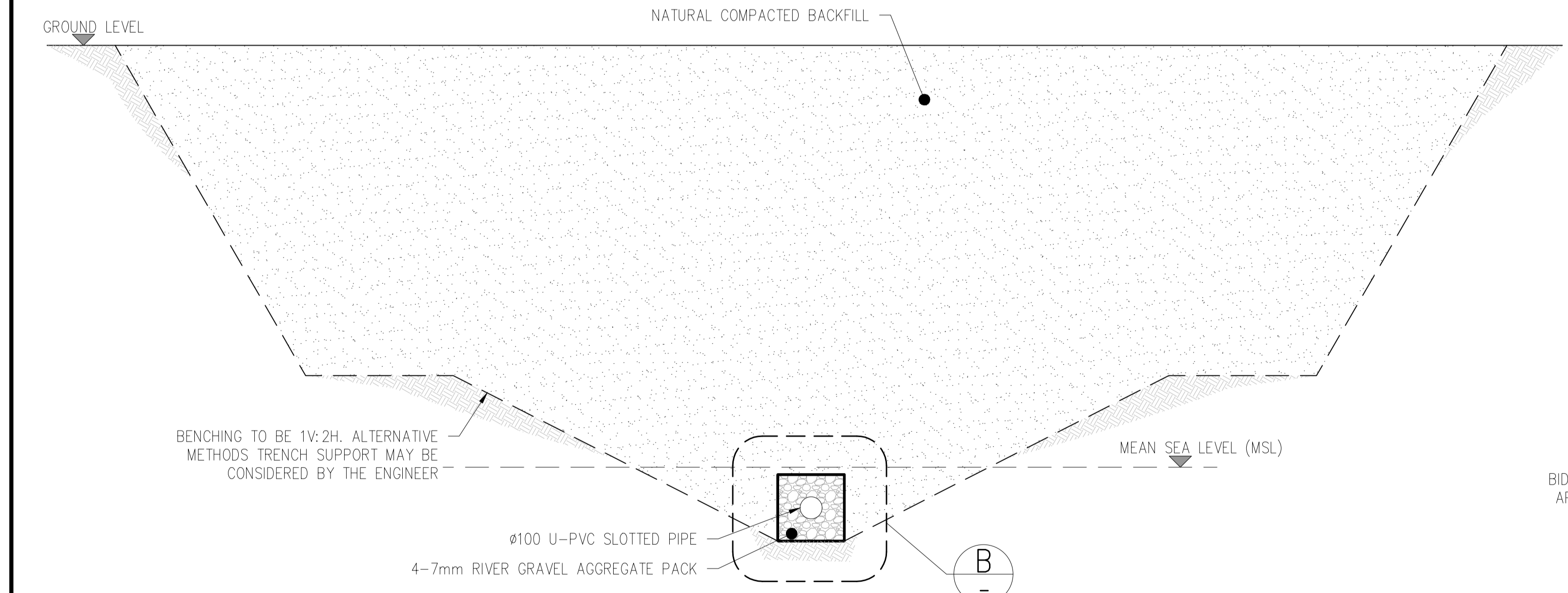


- NOTE:**
1. ALL DIMENSION ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. FINAL PIPE WORK LEVEL TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
 3. ALL EXPOSED PIPELINE ARE TO BE POLYETHYLENE.
 4. PIPEWORK TO CONNECTED WITH PE COMPRESSION FITTINGS UNLESS NOTED OTHERWISE.
 5. ALL PE PIPE WORK AND FITTINGS TO BE CLASS PE100 SDR21 P8, UNLESS NOTED OTHERWISE.
 6. PIPEWORK TO BE CONNECTED WITH APPROVED COMPRESSION FITTINGS.
 7. ALL STEEL PIPE WORK AND FITTINGS TO BE 316 MARINE GRADE UNLESS NOTED OTHERWISE.
 8. CONCRETE IS TO BE 30MPa STRENGTH.
 9. PLASTIC DAMP PROOF COURSE (DPC) SHEETING PROVIDED BETWEEN ALL CONCRETE AND SOIL INTERSECTION.

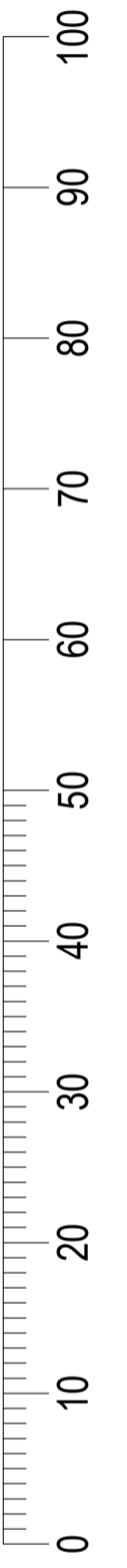


INFILTRATION GALLERY GENERAL ELEVATION
SCALE 1:25

1 TYPICAL TRENCH DETAIL-SECTION 1
SCALE 1:25



DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CONSTRUCTION	HS	NK	04.10.23

Client:

Pacific Community
Communauté du Pacifique

NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT

79 RATU MARA ROAD, SUVA
P.O. Box 1208
SUVA
FIJI

TELEPHONE: (679) 331388
MOBILE: (679) 330293
FAX: (679) 330293
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT	Designed:	-
Checked:	HS/NK	Date:	23.08.23
Scale A1:	AS SHOWN	Scale A3:	HALF SHOWN

PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND

TITLE: **INFILTRATION GALLERY ELEVATION AND TYPICAL TRENCH DETAIL**

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-103

**MINIMUM THRUST AREA FOR BLOCKS IN SQUARE METRES (m²)
DESIGN PRESSURE 1000 kPa (NOM. 100 m HEAD)**

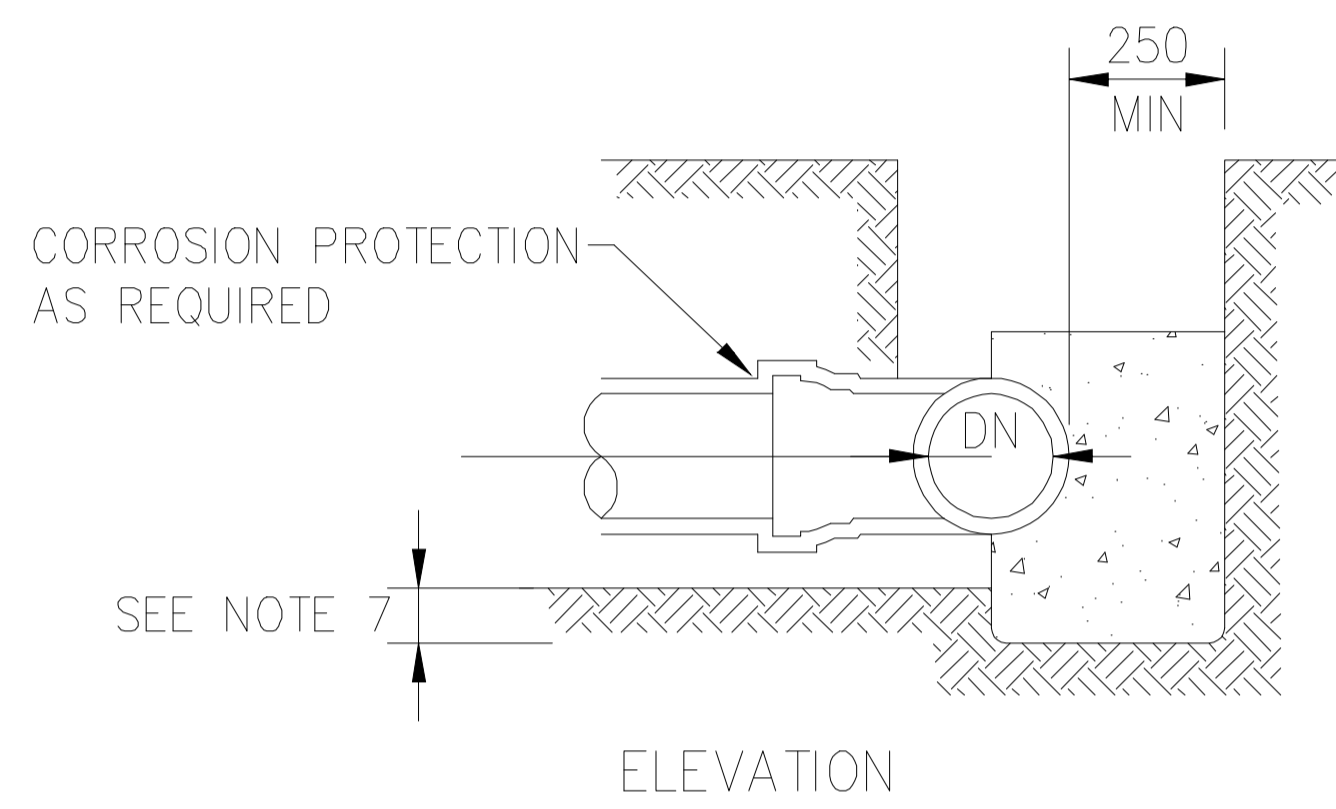
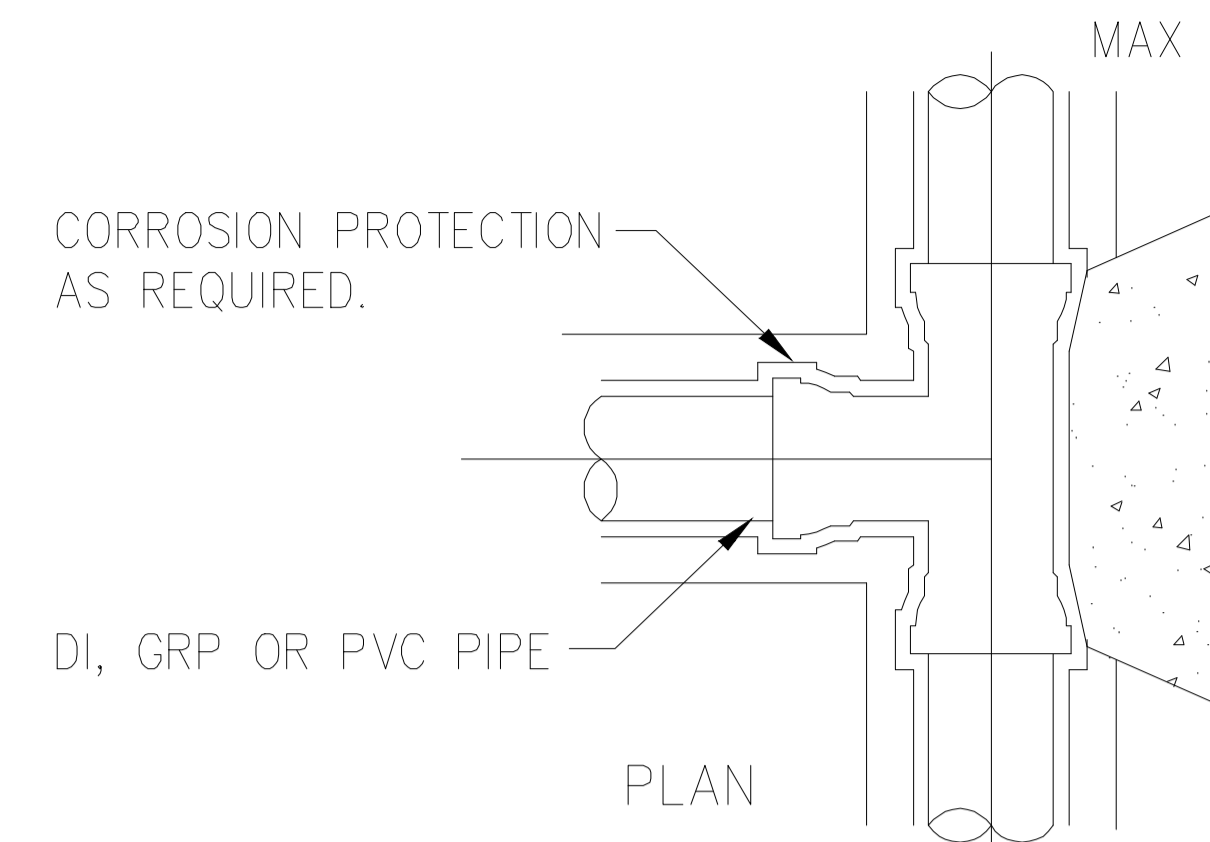
SOIL CLASSIFICATION AND ALLOWABLE HORIZONTAL BEARING PRESSURE OF GROUND. (SEE NOTE 3)

NOMINAL DIAMETER OF FITTING (DN)	90° & 60° HORIZONTAL BENDS			45° & 30° HORIZONTAL BENDS			22.5° HORIZONTAL BENDS			11.25° HORIZONTAL BENDS			TEES AND DEAD ENDS		
	STIFF CLAY MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY DENSE SAND/GRAVEL DECOMPOSED ROCK	HARD CLAY SOUND ROCK	STIFF CLAY MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY DENSE SAND/GRAVEL DECOMPOSED ROCK	HARD CLAY SOUND ROCK	STIFF CLAY MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY DENSE SAND/GRAVEL DECOMPOSED ROCK	HARD CLAY SOUND ROCK	STIFF CLAY MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY DENSE SAND/GRAVEL DECOMPOSED ROCK	HARD CLAY SOUND ROCK	STIFF CLAY MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY DENSE SAND/GRAVEL DECOMPOSED ROCK	HARD CLAY SOUND ROCK
PBH kPa	50	100	200	50	100	200	50	100	200	50	100	200	50	100	200
100	0.34	0.17	N	0.18	N	N	0.10	N	N	N	N	N	0.24	0.12	N
150	0.70	0.35	0.18	0.38	0.19	0.10	0.20	0.10	N	0.10	N	N	0.50	0.25	0.13
200	1.20	0.60	0.30	0.65	0.33	0.17	0.33	0.17	N	0.17	N	N	0.85	0.43	0.22
225	1.49	0.75	0.38	0.81	0.41	0.21	0.42	0.21	0.11	0.21	0.11	N	1.06	0.53	0.27
250	1.82	0.91	0.46	0.99	0.50	0.25	0.51	0.26	0.13	0.26	0.13	N	1.29	0.65	0.33
300	2.65	1.33	0.67	1.43	0.72	0.36	0.73	0.37	0.19	0.37	0.19	0.10	1.87	0.94	0.47
375	4.03	2.02	1.01	2.18	1.09	0.55	1.12	0.56	0.28	0.56	0.28	0.14	2.85	1.43	0.72
450	5.71	2.86	1.43	3.09	1.55	0.78	1.58	0.79	0.40	0.80	0.40	0.20	4.04	2.02	1.01
500	6.96	3.48	1.74	3.77	1.89	0.95	1.93	0.97	0.49	0.97	0.49	0.25	4.93	2.47	1.24
600	9.88	4.94	2.47	5.35	2.68	1.34	2.73	1.37	0.69	1.37	0.69	0.35	6.99	3.50	1.75
750	15.15	7.58	3.79	8.20	4.10	2.05	4.18	2.09	1.05	2.10	1.05	0.53	10.71	5.36	2.68

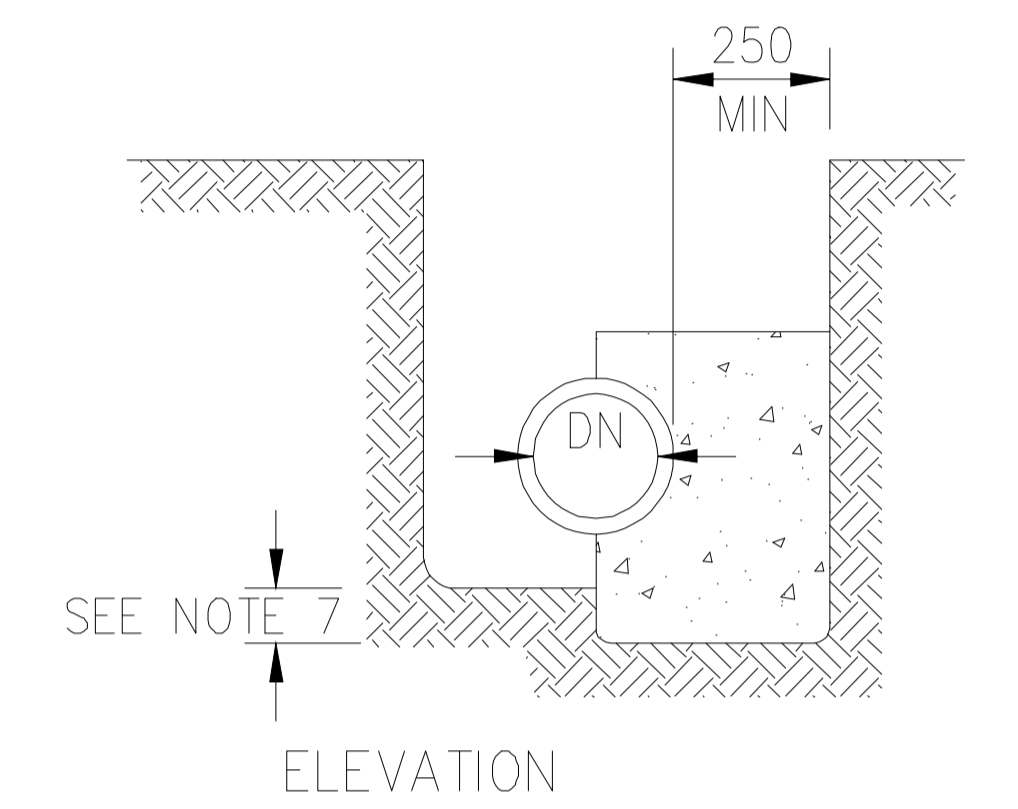
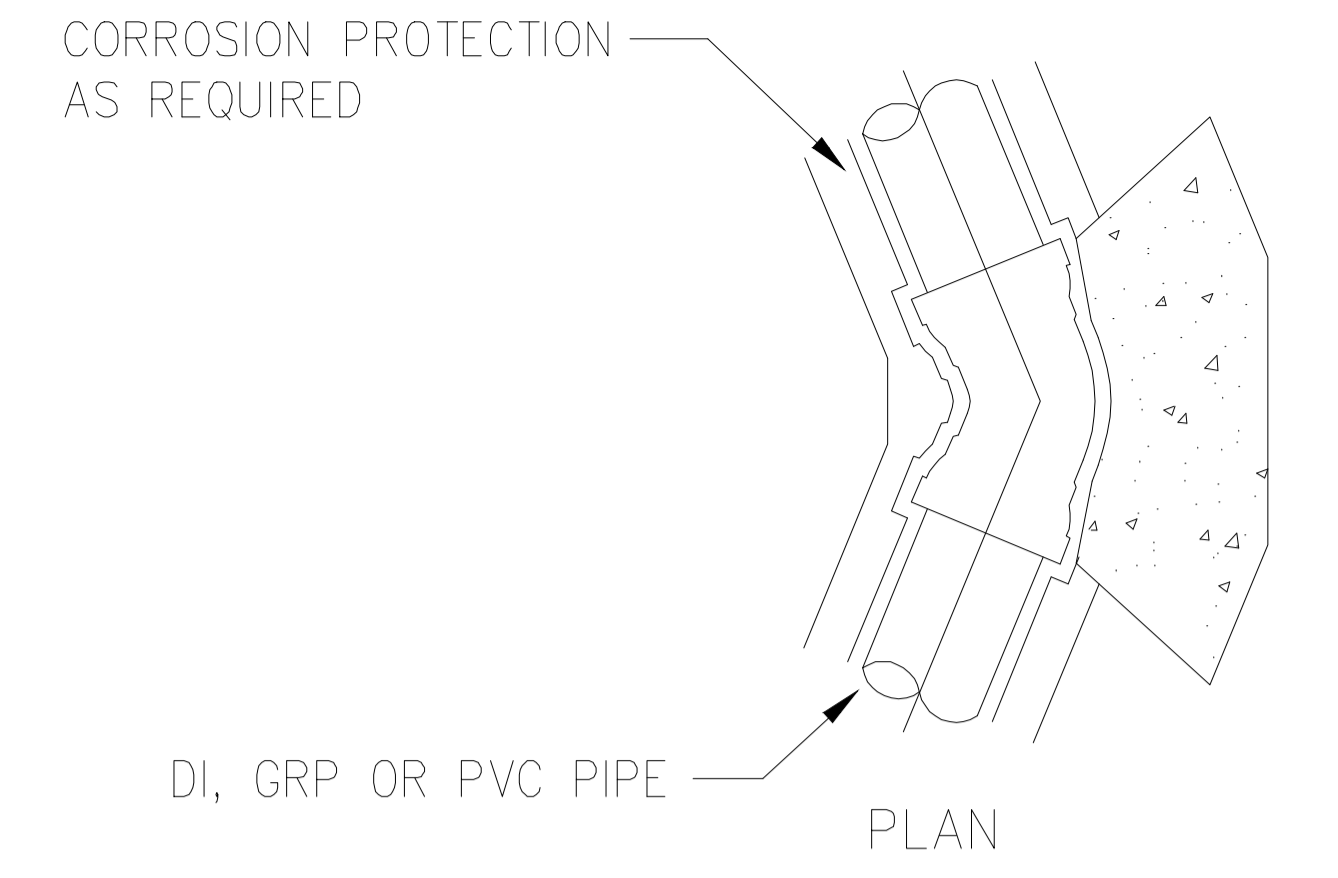
'N' DENOTES NOMINAL THRUST AREA - (SEE NOTES 4&5)
PBH - ALLOWABLE HORIZONTAL BEARING PRESSURE

NOTES:

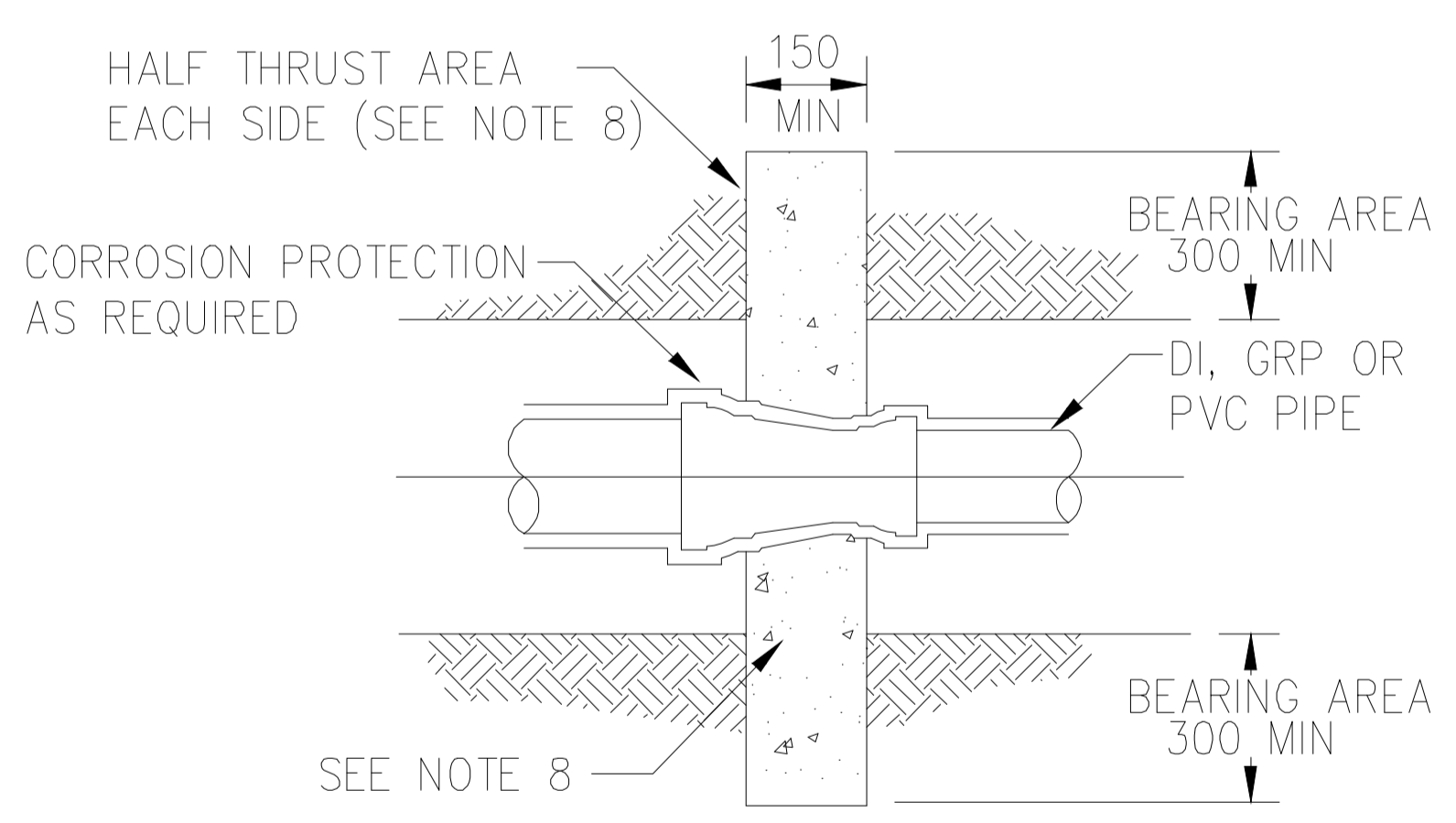
- ALL DIMENSION ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
- CAST THRUST BLOCK AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL. THRUST BLOCK NOT TO INTERFERE WITH OTHER OR EXISTING SERVICES.
- THE SOIL CLASSIFICATIONS USED ON THE DRAWING ARE TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER ONSITE.
- DO NOT USE STANDARD THRUST BLOCKS AS SPECIFIED IN THIS DRAWING IN:
 - VERY SOFT, SOFT OR FIRM CLAY
 - LOOSE CLEAN SAND
 - UNCOMPACTED FILL OR REFUSE
 A GEOTECHNICAL ASSESSMENT AND INDIVIDUAL DESIGN IS REQUIRED FOR THE SOILS.
- THE NOMINAL THRUST AREA 'N' TO BE ACHIEVED BY POURING CONCRETE THE FULL LENGTH OF THE FITTING AND EXTENDING FORM THE FLOOR OF THE TRENCH TO ABOVE THE FITTING (SEE NOTE 7).
- DESIGN PRESSURES OTHER THAN 1000kPa REDUCE OR INCREASE THE MINIMUM THRUST AREA BY THE RATIO OF THE DESIGN PRESSURE EXCEPT WHERE:
 - MIN. THRUST AREA IS $0.1m^2$, AND
 - 'N' APPEARS IN THE TABLE AND DESIGN PRESSURE IS ABOVE 1000kPa CALCULATE THE AREA.
- FINISH THRUST BLOCK APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTINGS OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
- THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCKS TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREAS FOR DEAD ENDS OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER.
- FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN.
- WHEN POURING CONCRETE AGAINST FITTINGS PLACE A MEMBRANE OR POLYETHYLENE, PVC OR FELT BETWEEN THE FITTINGS AND CONCRETE TO PREVENT DAMAGE TO THE FITTING. JOINTS TO BE CLEAR OF CONCRETE.



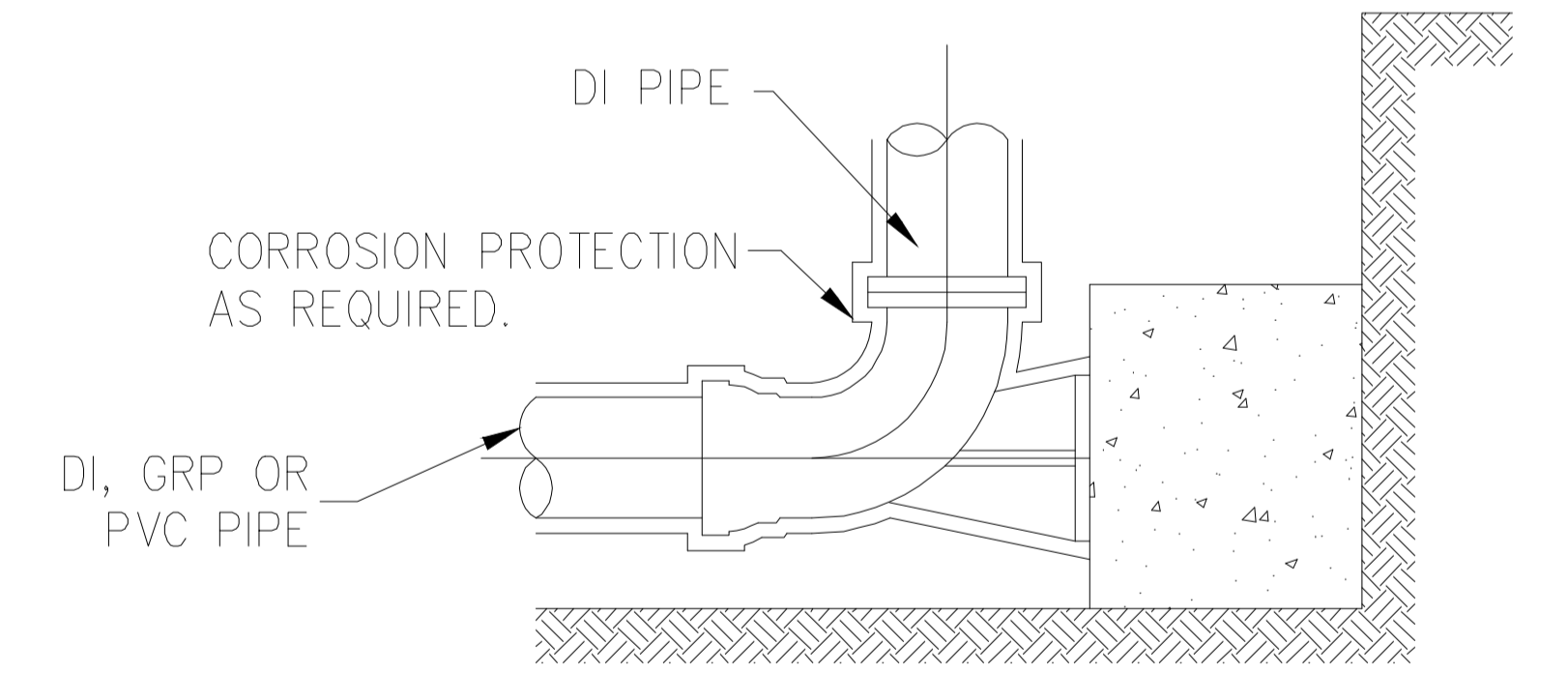
THRUST BLOCK FOR TEES
(FOR HORIZONTAL THRUST)



THRUST BLOCK FOR BENDS
(FOR HORIZONTAL THRUST)



TAPER THRUST BLOCK
(FOR HORIZONTAL THRUST)

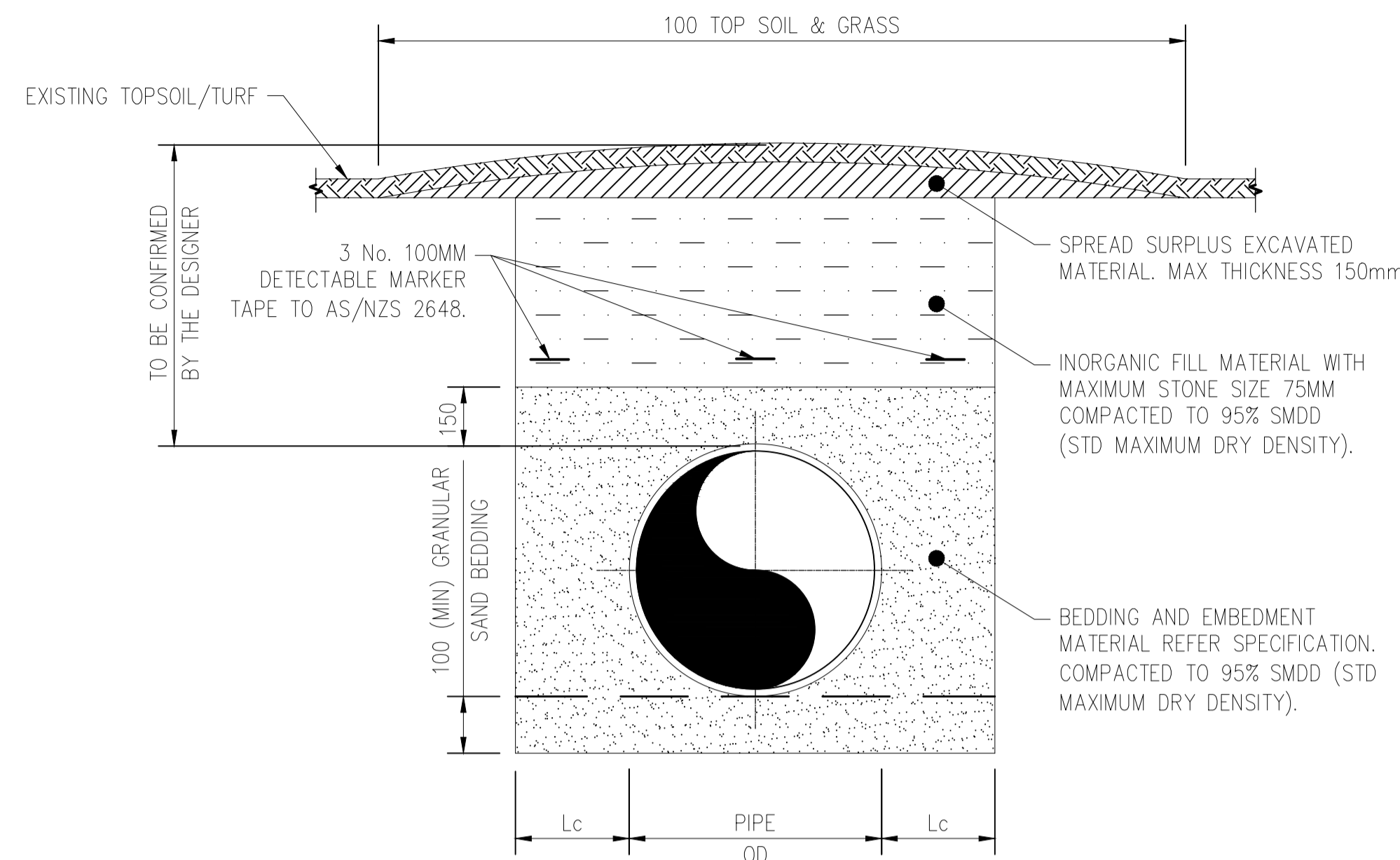


FLUSHING/WASHOUT BEND THRUST BLOCK
(FOR HORIZONTAL THRUST)
(MINIMUM REQUIRED THRUST AREA AS PER DEAD END)

Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS
Client:		Pacific Community Communauté du Pacifique
Client:		NRW MACALLAN (FIJI) LTD CONSULTING ENGINEERS

NOTE:

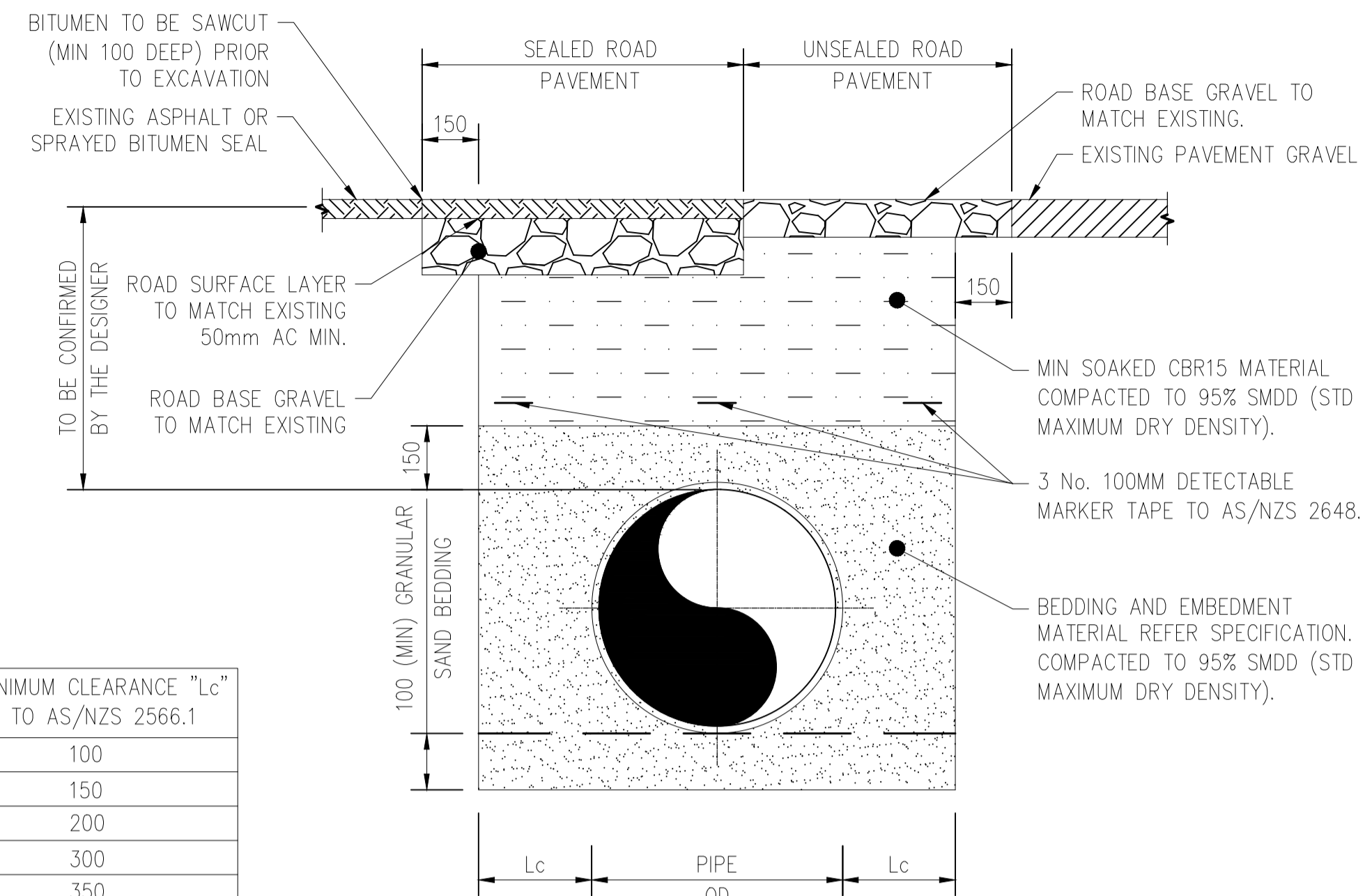
1. ALL DIMENSION ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR IS TO CONFIRM ALL DIMENSIONS AND LEVELS ON SITE PRIOR TO CONSTRUCTION. ALL FIGURED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
3. CONTRACTOR IS TO REFER ANY ANOMALIES TO THE ENGINEER FOR INSTRUCTIONS.
3. CONTRACTOR TO SEEK DESIGNER APPROVAL IF CHANGES ARE MADE TO THE DRAWINGS.
4. ANY CHANGES MADE APART FROM THE APPROVED DESIGN, CLIENT WILL BARE EXTRA COST.
12. ALL STEELWORK AND FASTENERS TO BE STAINLESS STEEL GRADE 316 UNLESS NOTED OTHERWISE (UNO).
13. ALL WELDS SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART BEING JOINED.



**TYPICAL TRENCH DETAIL (TYPE 1)
NOT UNDER ROAD PAVEMENT**

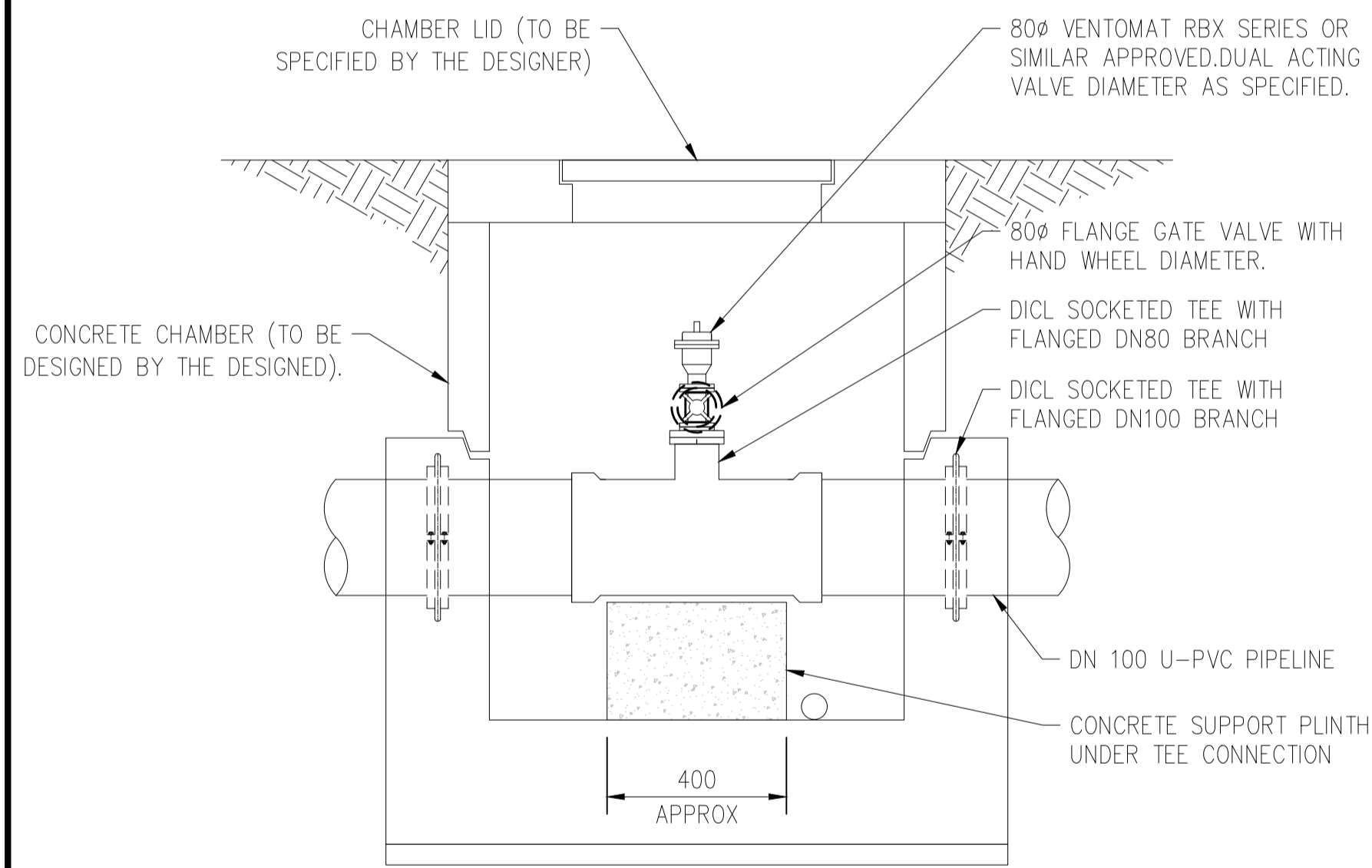
SCALE 1:20

NOMINAL DIAMETER (DN)	MINIMUM CLEARANCE "Lc" TO AS/NZS 2566.1
≤150	100
>150-≤300	150
>300-≤450	200
>450-≤900	300
>900-≤1500	350



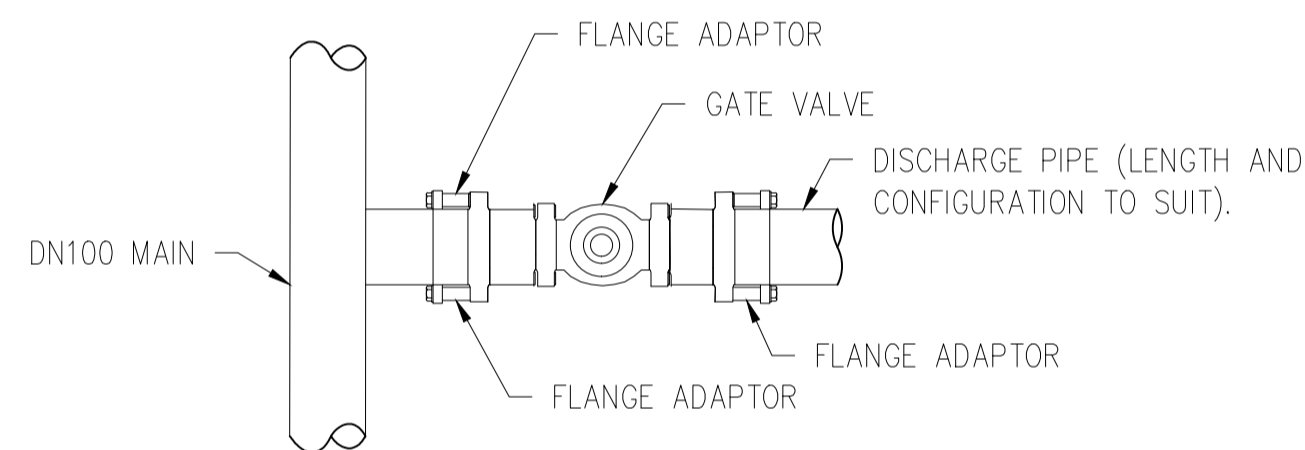
**TYPICAL TRENCH DETAIL (TYPE 2)
UNDER ROAD PAVEMENT**

SCALE 1:20



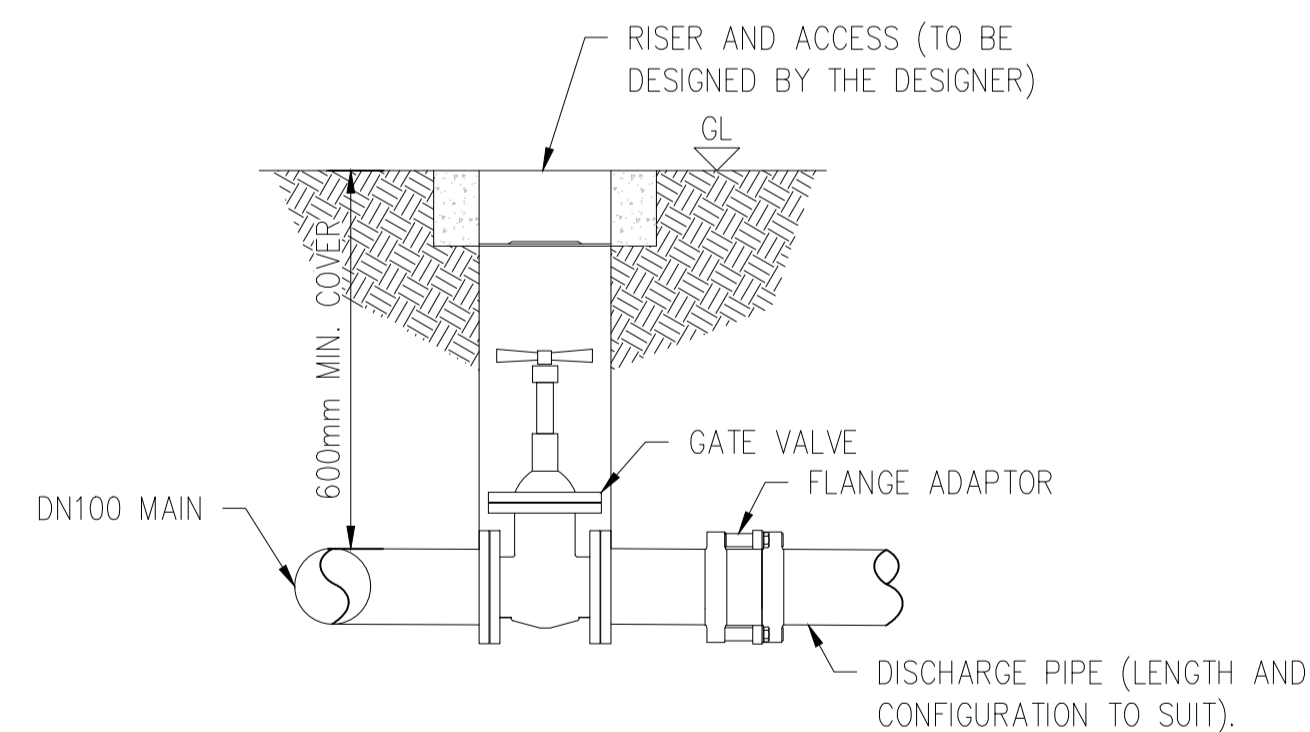
TYPICAL AIR VALVE DETAIL

SCALE 1:20



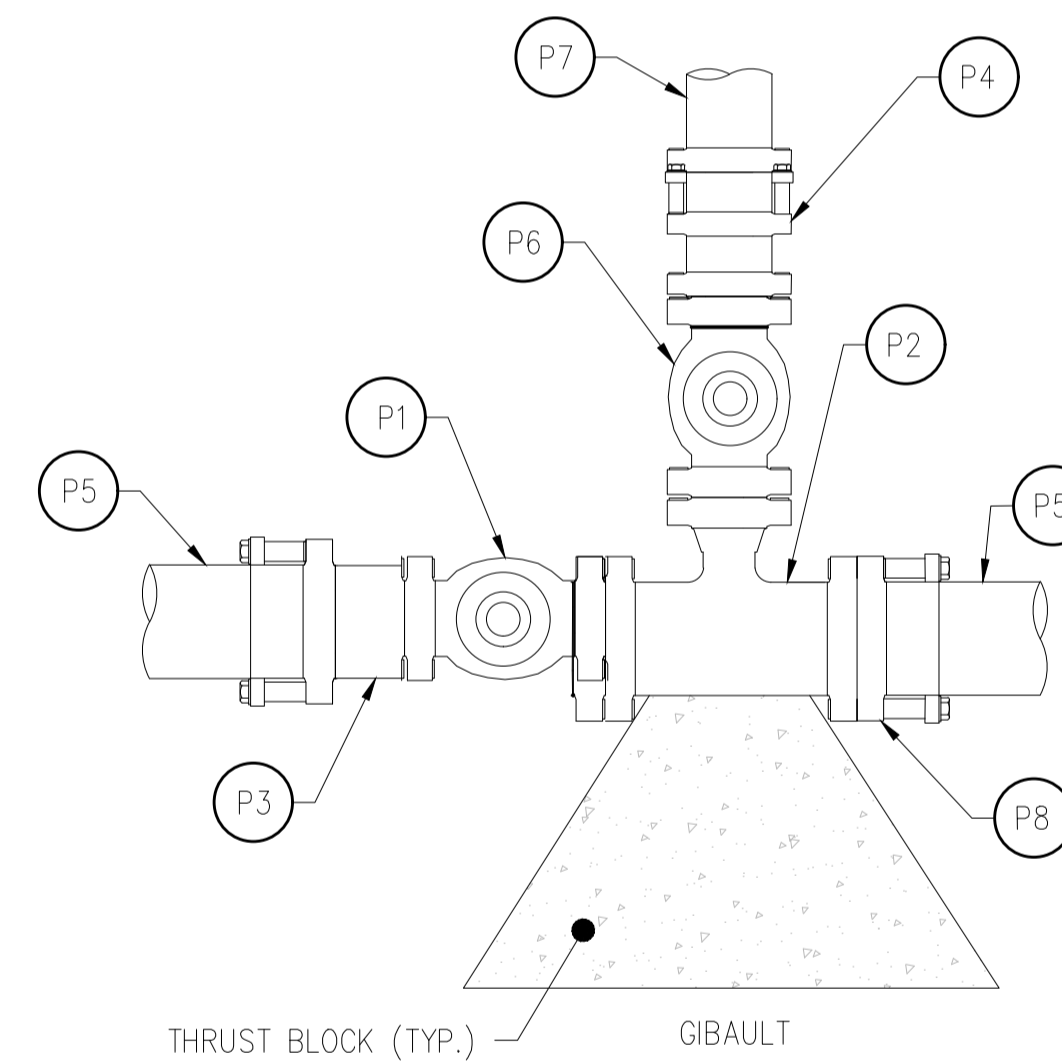
TYPICAL WASHOUT (PLAN)

SCALE 1:10



TYPICAL WASHOUT ELEVATION

SCALE 1:10



ITEM	FITTING No.	DIAMETER	DESCRIPTION	MATERIAL	QTY
1	P1	100	FLANGED RSV GATE VALVE C/W VALVE SURFACE BOX TO STD DETAIL	DICL	1
2	P2	100	FLANGED DN100 TEE	DICL	2
3	P3	100	FLANGE SPIGOT	DICL	2
4	P4	100	FLANGE ADAPTOR	MPVC	-
5	P5	100	DN 100 U-PVC	-	-
6	P6	100	FLANGED RSV GATE VALVE C/W VALVE SURFACE BOX TO STD DETAIL	DICL	1
7	P7	100	DN150 MPVC PN12 RRJ	DICL	1
8	P8	100	FLANGE ADAPTOR	DICL	1

TYPICAL TEE CONNECTION

SCALE 1:10

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CONSTRUCTION	HS	NK	04.10.23

Client: Pacific Community / Communauté du Pacifique

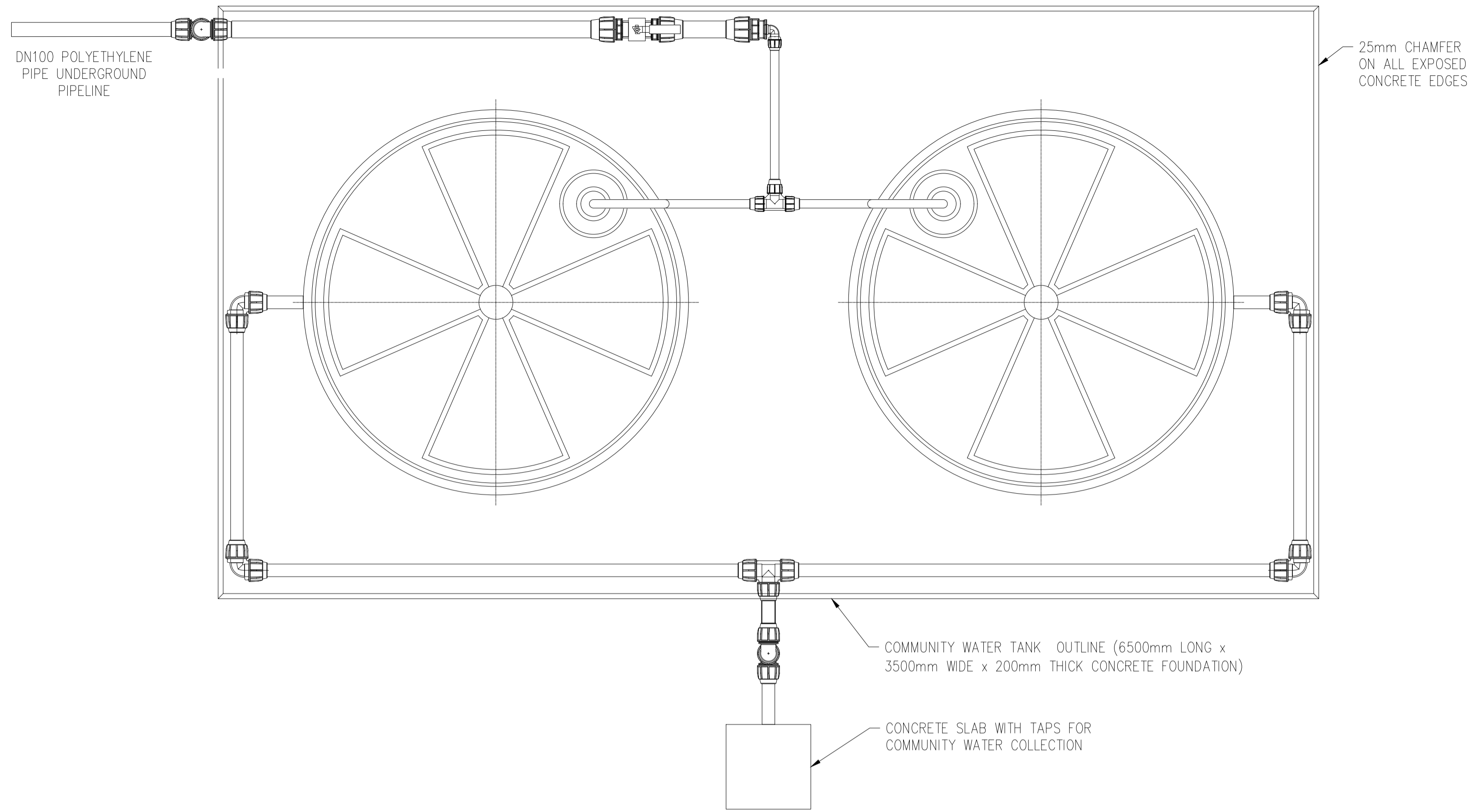
NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS
CIVIL, STRUCTURAL & PROJECT MANAGEMENT
79 RATU MARA ROAD, SUVA
P.O. Box 1208 SUVA FIJI
TELEPHONE: (679) 3313388
MOBILE: (679) 3302903
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter: HT
Checked: HS/NK
Scale A1: AS SHOWN
Designed: -
Date: 23.09.23
Scale A3: HALF SHOWN

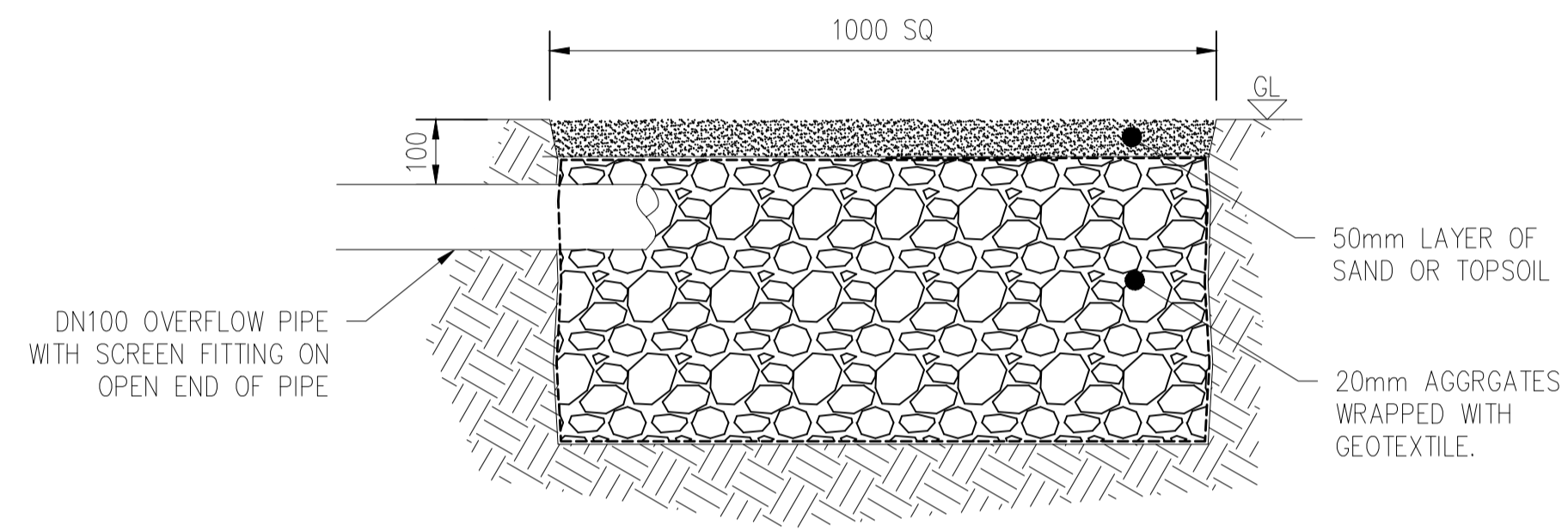
PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND
TITLE: **TYPICAL TRENCH AND PIPELINE DETAILS**

JOB NO: **22409192**
REV. NO: A
DRAWING NO: A-105

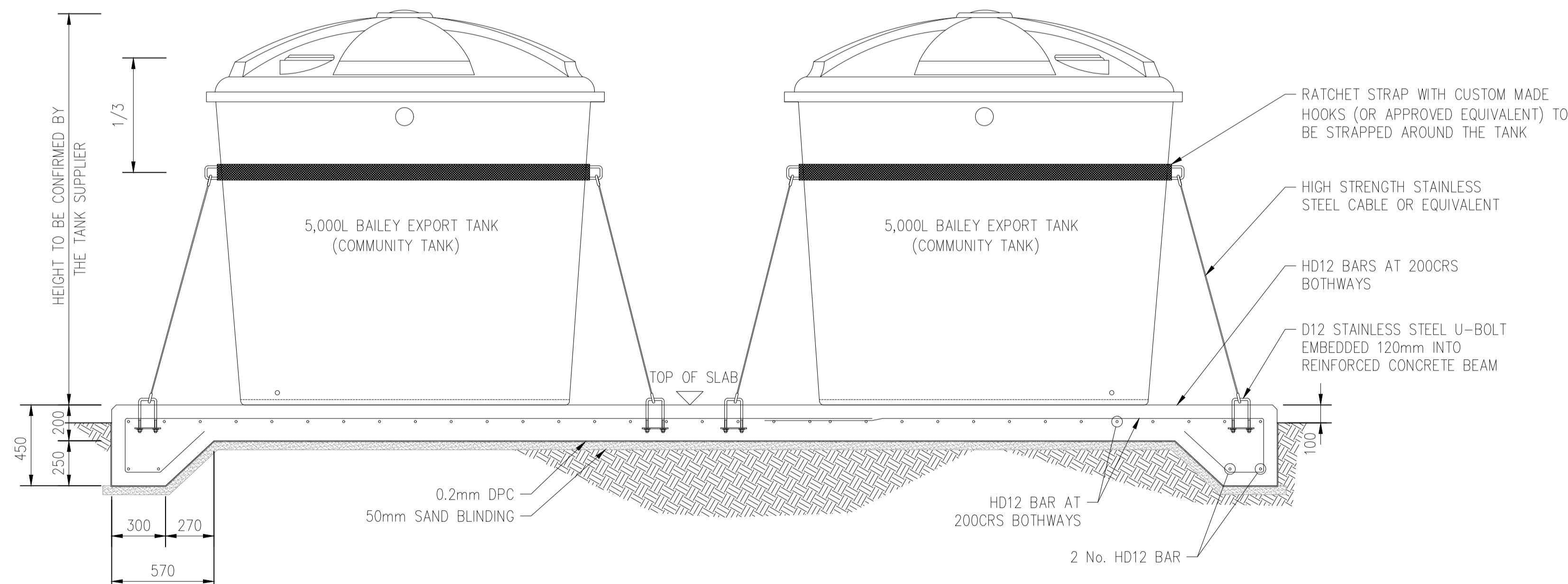
DO NOT SCALE - IF IN DOUBT, ASK ORIGINAL SIZE A1 Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.



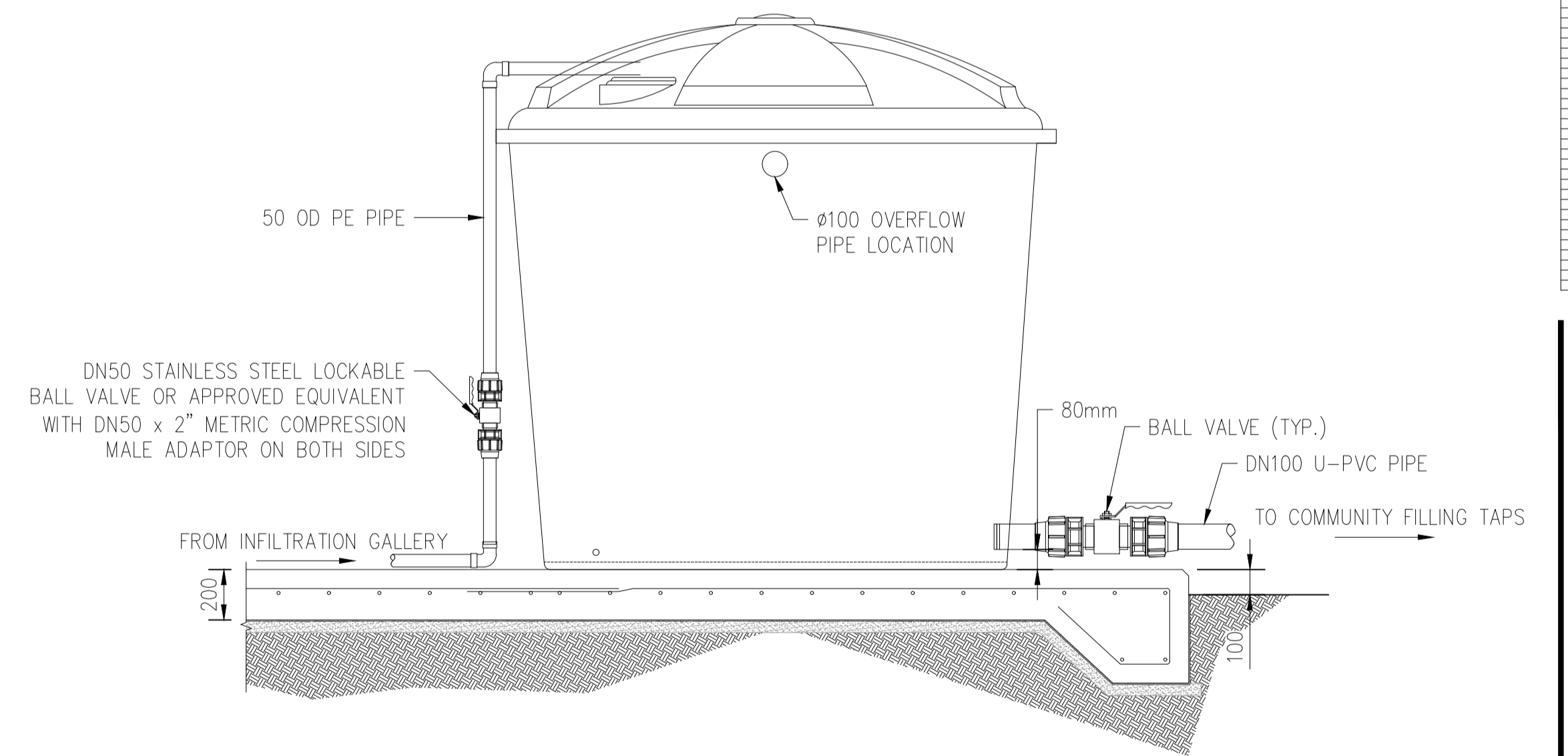
TYPICAL COMMUNITY TANK FOUNDATION PLAN
SCALE 1:20



TYPICAL SOAKAGE TRENCH DETAIL
SCALE 1:10



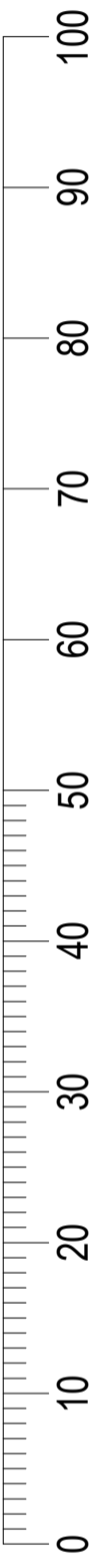
TYPICAL TANK SECTION DETAIL FOR COMMUNITY FILLING POINT
SCALE 1:20



TYPICAL TANK PIPE CONNECTION
SCALE 1:10

- NOTE:**
1. ALL DIMENSION ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. PIPE AND STRUCTURE LEVELS TO BE CONFIRMED ON SITE BY THE ENGINEER.
 3. BEFORE CONSTRUCTION, CONTRACTOR TO RE-CHECK EXISTING DIMENSION ONSITE.
 4. CONTRACTOR TO SEEK DESIGNER APPROVAL IF CHANGES ARE MADE TO THE DRAWINGS.
 5. ALL PIPE CONNECTION IS TO BE CONFIRMED BY THE ENGINEER PRIOR TO PROCUREMENT.
 6. ANT OTHER CHANGES MADE APART FROM THE DISIGNERS APPROVAL, CLIENT WILL BARE EXTRA COST.
 7. THE LOCATION AND ORIENTATION OF THE COMMUNITY TANK SHALL BE CONFIRMED ONSITE BY THE ENGINEER.

DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CONSTRUCTION	HS	NK	04.10.23

Client:

Pacific Community
Communauté du Pacifique

NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT

79 RATU MARA ROAD, SUVA
P.O. Box 1208
SUVA
FIJI

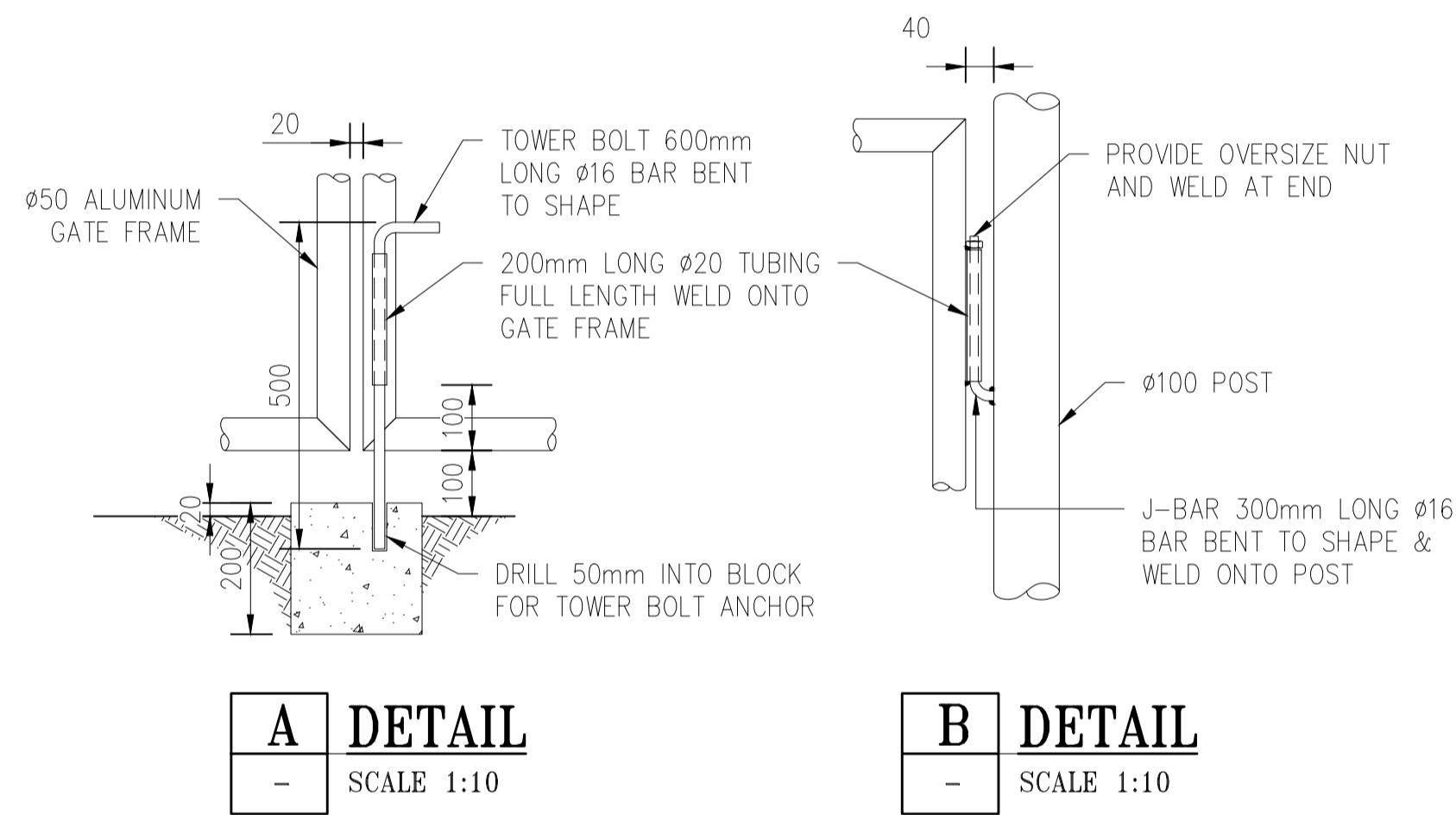
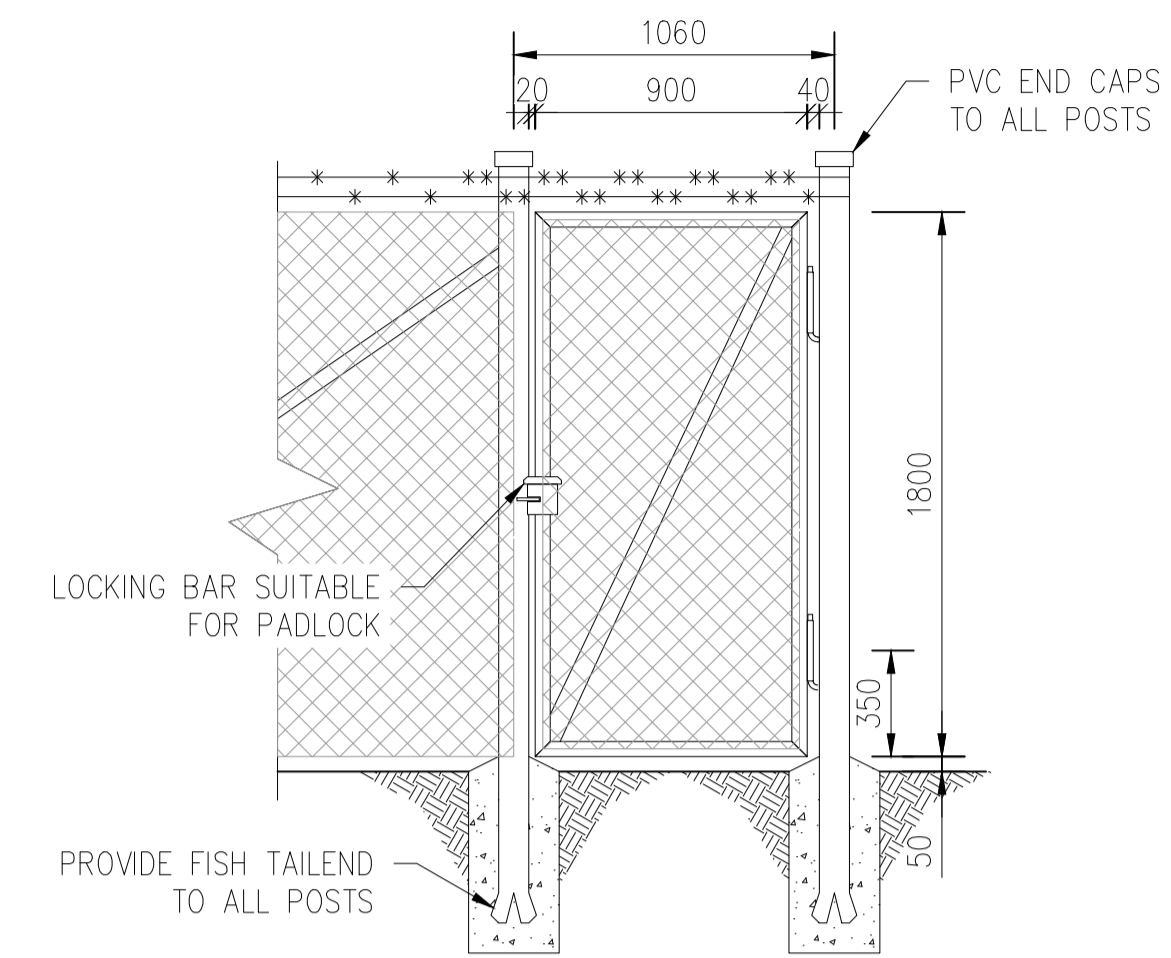
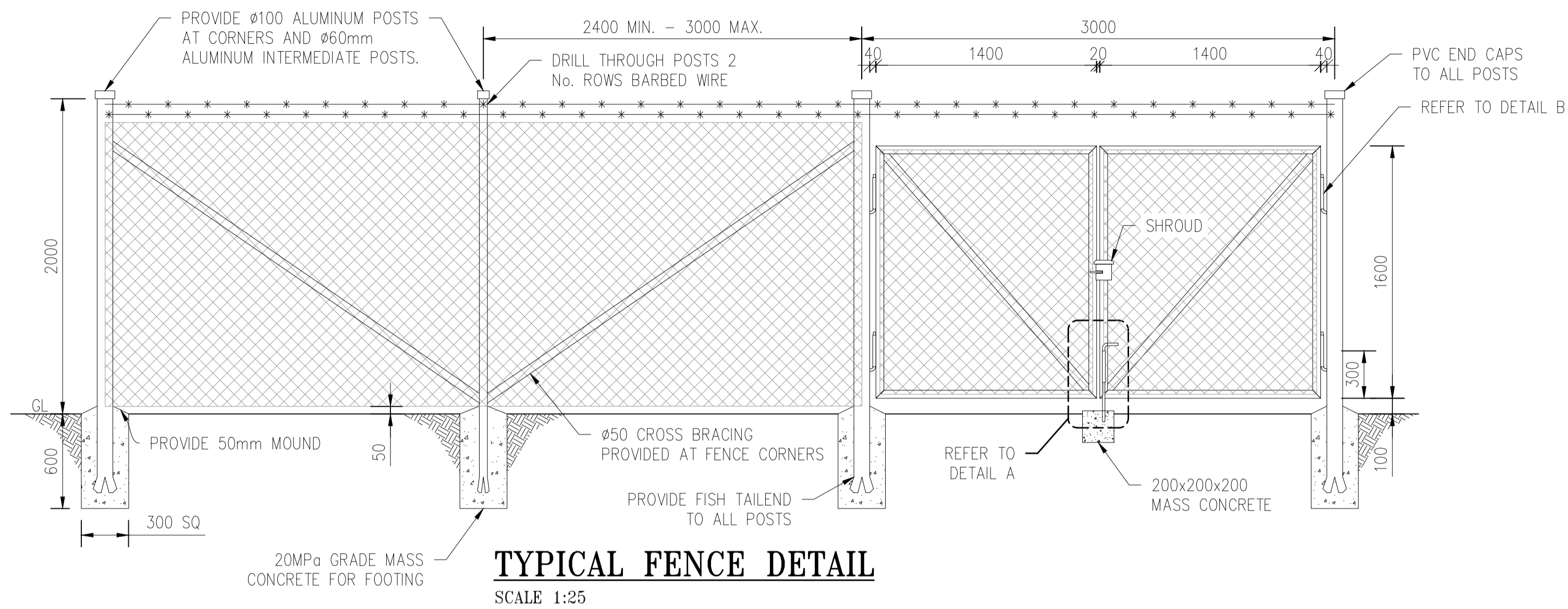
TELEPHONE: (679) 3313388
MOBILE: (679)
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT
Checked:	HS/NK
Scale A1:	AS SHOWN
Designed:	-
Date:	23.08.23
Scale A3:	HALF SHOWN

PROJECT: MANAGING COASTAL AQUIFERS (MCAP), WOTJE, MARSHALL ISLAND

TITLE: **TYPICAL COMMUNITY TANK FOUNDATION PLAN, SECTION, PIPE TANK CONNECTION AND TYPICAL SOAKAGE TRENCH**

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-106



- NOTE:
1. ALL DIMENSION ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. ALL STEEL UTILISED FOR THE FENCE FABRICATION ARE TO ALUMINUM e.g. POST, BOLTS, LOCKS, PIPE, etc.
 3. BARBED WIRE TO AS2423 AND HEAVY DUTY GALVANISED OR EQUIVALENT.
 4. ALL ALUMINUM POSTS AND BRACES TO BE PAINTED WITH PRIMER AND TOP COAT TO ENGINEERS SPECIFICATION.
 5. CORNER POST TO BE ADOPTED WHERE THE CHANGE IN HORIZONTAL ALIGNMENT EXCEEDS 20 DEGREES.
 6. STAYS TO BE PROVIDED AT END POST, GATE POST, CORNER POSTS AND EVERY EIGHT POST.
 7. CABLES TO BE FORMED FROM TWO 3.15 DIAMETER WIRES TWISTED TOGETHER AND INSTALLED IN ACCORDANCE WITH AS 1725.
 8. ALL POSTS, STAYS AND CABLES ARE TO BE ALUMINUM.
 9. CHAINWIRE TO BE FIXED USING 1.6 WIRE STAYS AS FOLLOWS:
 - INTERMEDIATE POSTS AT 3 LOCATION
 - END POST AT THREE LOCATIONS
 - HORIZONTAL CABLE AT 375 CENTRES TO TOP CABLE
 - HORIZONTAL CABLE AT 600 CENTRES TO MIDDLE CABLE

DO NOT SCALE - IF IN DOUBT, ASK

0 10 20 30 40 50 60 70 80 90 100

ORIGINAL SIZE A1

ISSUE	DESCRIPTION	CHECKED	APPROVED	DATE
A	FOR CLIENT REVIEW	-	-	24.10.24

Client:



Pacific Community
Communauté du Pacifique



NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL & PROJECT MANAGEMENT

79 RATU MARA ROAD, SUVA
P.O. Box 1208
SUVA
FIJI

TELEPHONE: (679) 3313388
MOBILE: (679)
FAX: (679) 3302903
EMAIL: info@nrwmacallan.com.fj

Drafter:	HT	Designed:	SPC TEAM
Checked:	SPC TEAM	Date:	24.10.24
Scale A1:	AS SHOWN	Scale A3:	HALF SHOWN

PROJECT:	MANAGING COASTAL AQUIFERS (MCA), WOTJE, MARSHALL ISLAND
TITLE:	TYPICAL FENCING DETAIL

JOB. NO:	22409192
REV. NO:	A
DRAWING. NO:	A-107

Copyright © of this drawing shall remain the property of NRW MACALLAN. No part of this document may be reproduced or transmitted by any means without the prior permission in writing of NRW MACALLAN Ltd.