

- STORMWATER NOTES:**
1. ALL PIPES TO BE 100mm Ø UNLESS NOTED OTHERWISE.
 2. ALL PIPES TO BE UPVC UNLESS NOTED OTHERWISE.
 3. ALL PIPES TO BE LAID AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE.
 4. ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D. BELOW PAVEMENTS. (NO COMPACTION REQUIRED BELOW LANDSCAPING) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN TRENCHES TO BE FILLED WITH GRANULAR MATERIAL, AS SPECIFIED.
 5. ALL PIPES SHOWN ON PLAN ARE SHOWN INDICATIVELY ONLY & MINIMUM CLEARANCES FROM THE EXTERNAL WALLS OF BUILDINGS, FOR THE EXCAVATION OF TRENCHES, ARE TO BE PROVIDED IN ACCORDANCE WITH AS3500.
 6. ALL DOWN PIPES TO BE 90mm Ø UNLESS NOTED OTHERWISE.
 7. DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
 8. PROVIDE CLEANING EYES AT ALL DOWNPIPES UNO.
 9. ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
 10. ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
 11. ALL LEVELS SHOWN ARE TO AHD.
 12. ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
 13. EXCAVATION OF TRENCHES ADJACENT TO TREES TO BE CARRIED OUT USING HAND TOOLS ONLY.
 14. ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO UPVC.
 15. ALL WORKS TO BE IN ACCORDANCE WITH AS 3500.
 16. THE FOLLOWING ABBREVIATIONS DENOTE:
FSL - FINISHED SURFACE LEVEL
INV - INVERT
 17. PROVIDE FALLS IN SURFACES TO ALL PITS, GRATED DRAINS & FLOOR DRAINS IN ACCORDANCE WITH AS3500 & ARCHITECT'S DETAILS.

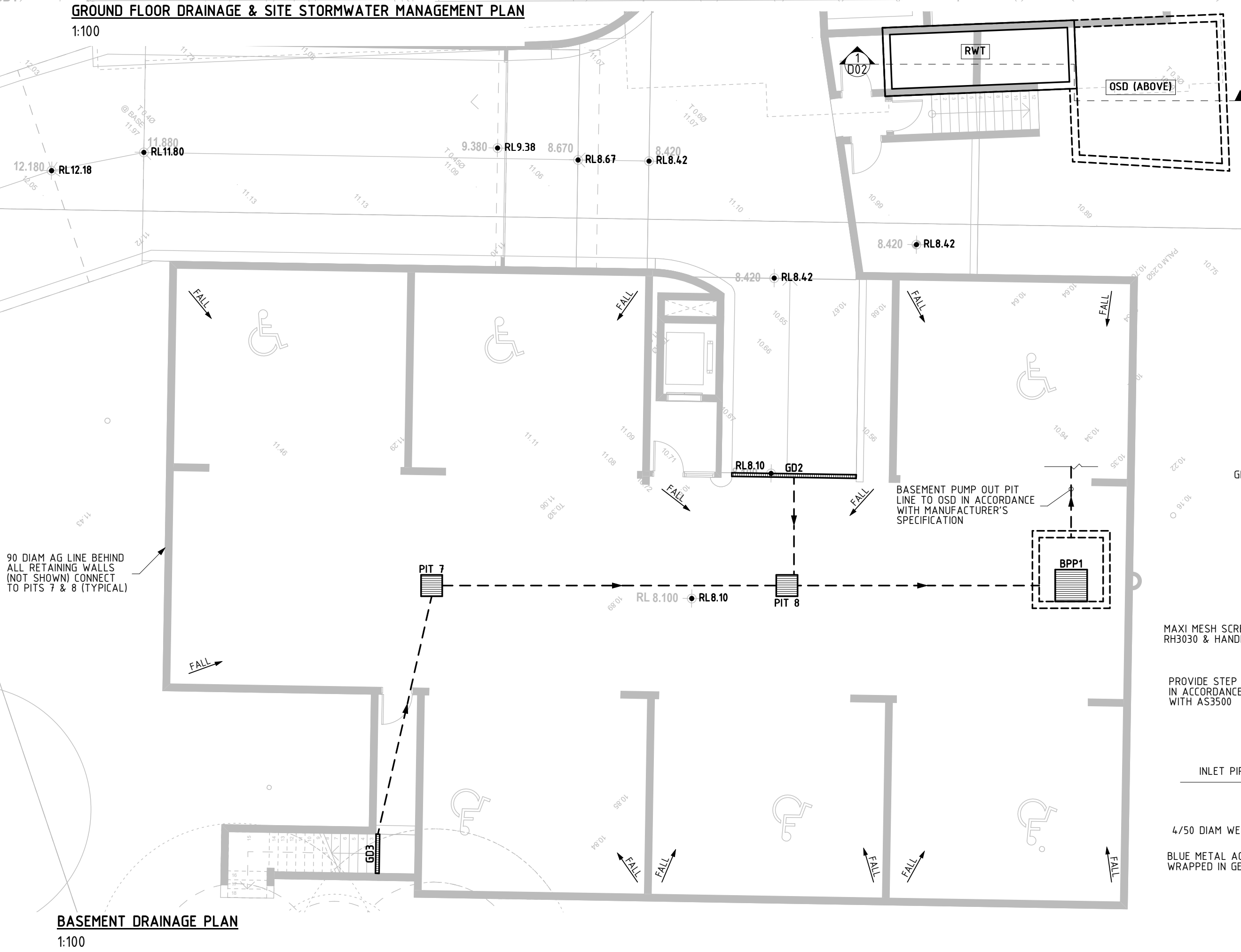
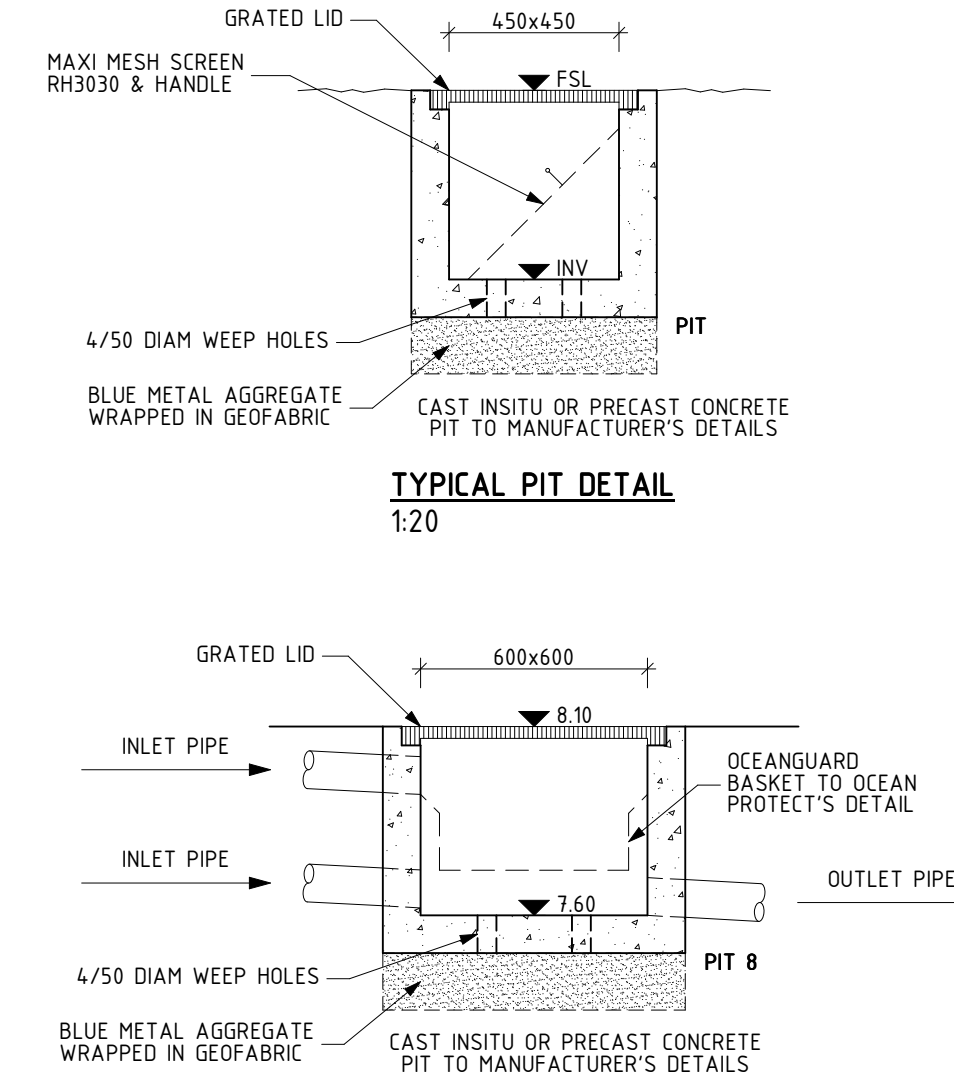
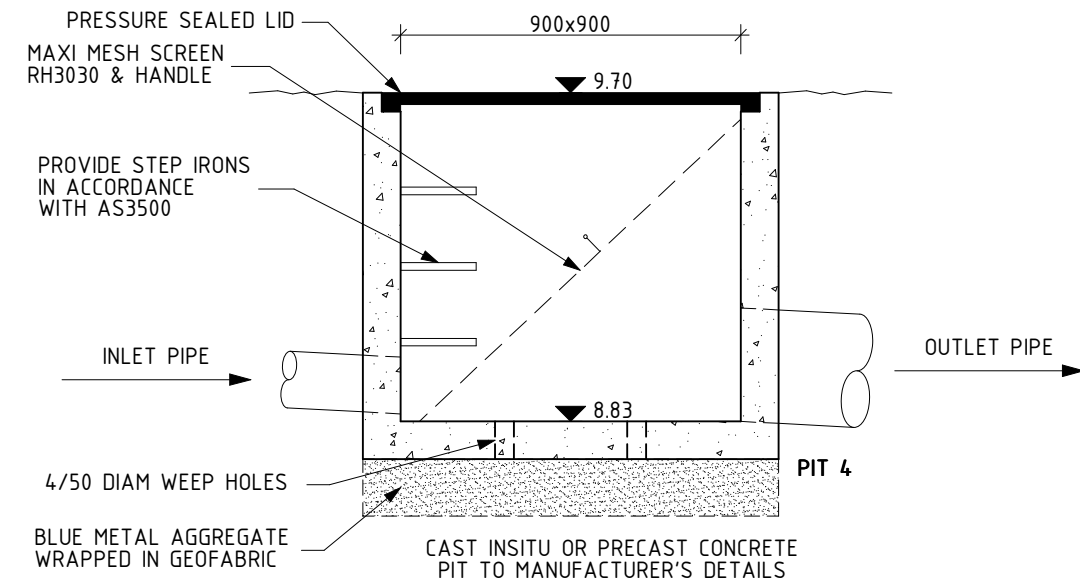
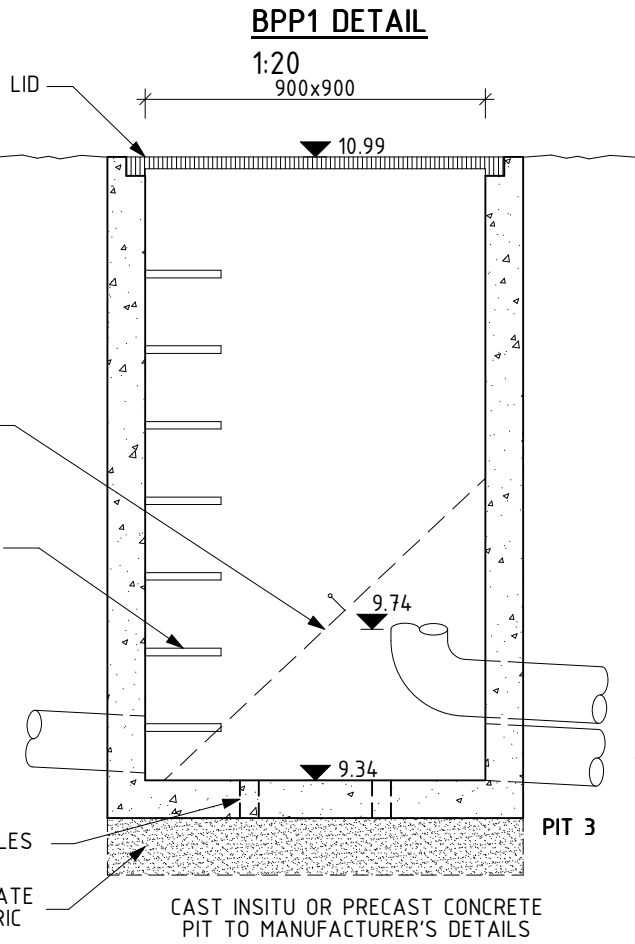
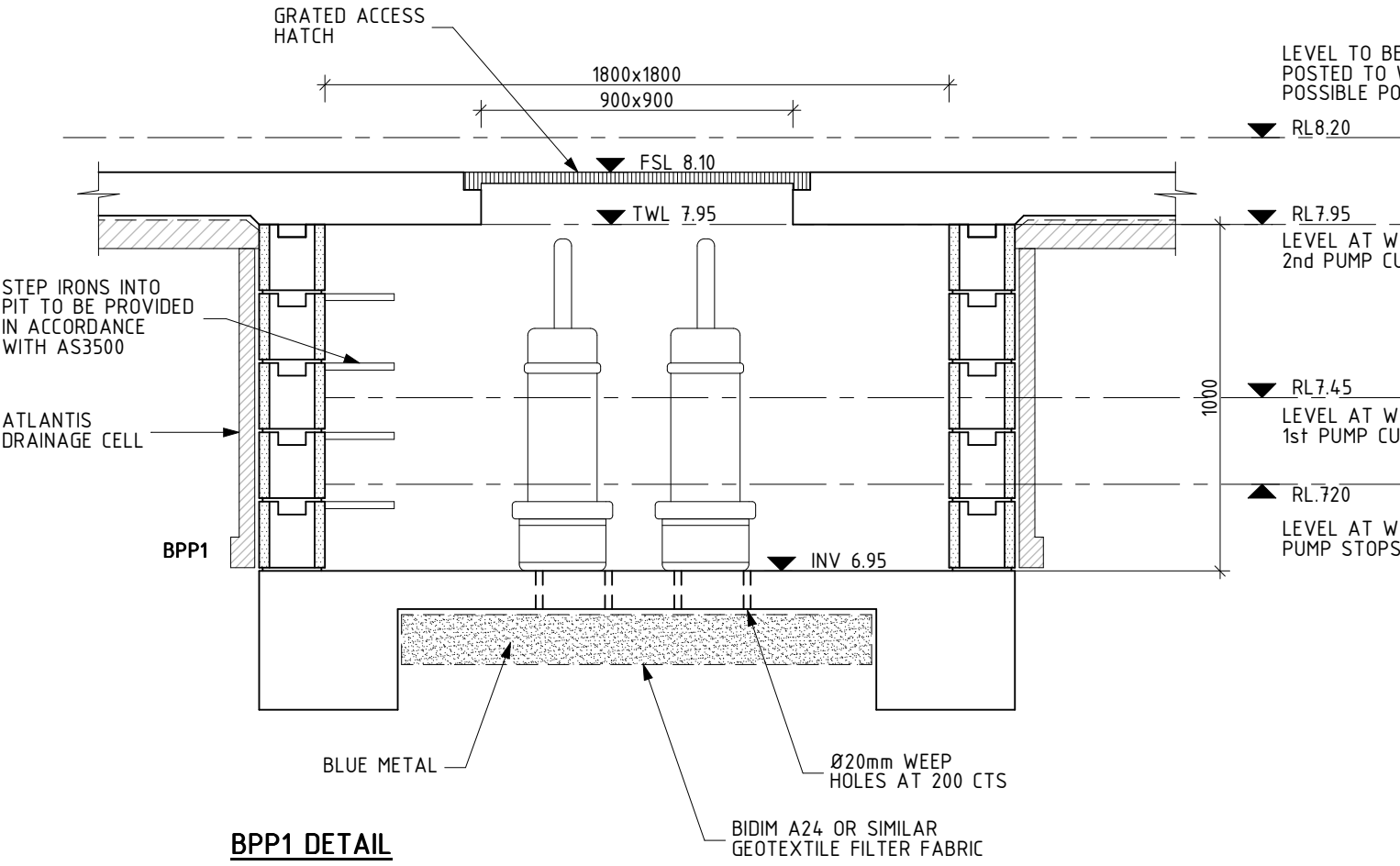
• RL65.15 DENOTES EXISTING LEVELS
• RL65.15 DENOTES PROPOSED LEVELS

ON-SITE DETENTION (OSD) CALCULATION SHEET			
DEVELOPMENT TYPE:	SEPP - HSPD APARTMENTS		
SITE AREA:	841.3	m ²	
PRE DEVELOPMENT IMPERVIOUS AREA:	374.3	m ²	
POST DEVELOPMENT IMPERVIOUS AREA:	641.8	m ²	
INCREASE IN IMPERVIOUS AREA:	267.5	m ²	
SITE STORAGE REQUIREMENT (SSR):	18	m ³	
PERMISSIBLE SITE DISCHARGE (PSD):	9	l/s	
BASIX RAINWATER TANK VOLUME REQUIRED:	10000	l	
RAINWATER TANK VOLUME PROVIDED:	18700	l	
OSD VOLUME (CREDITED):	8700 x 0.25 = 2100l		
OSD VOLUME REQUIRED:	15.9	m ³	
TYPE OF CONTROL:	BELOW GROUND TANK		
DIMENSIONS OF OSD:	4.0m x 3.8m (AVERAGE WIDTH) x 107m (AVERAGE DEPTH)		
OSD VOLUME PROVIDED:	16.2	m ³	
DEPTH TO CENTRE OF ORIFICE:	1.11	m	
ORIFICE SIZE:	63	mm Ø	

MARK	SIZE/TYPE	FSL	INV
AH1	600x600 GRATED ACCESS HATCH	11.70	-
AH2	600x600 GRATED ACCESS HATCH	11.70	-
PIT 1	450x450 PIT WITH GRATED LID	11.30	11.00
PIT 2	450x450 PIT WITH GRATED LID	11.30	11.00
PIT 3	900x900 PIT WITH GRATED LID	11.70	9.34
PIT 4	900x900 PIT WITH PRESSURE SEALED LID	9.70	8.83
PIT 5	450x450 PIT WITH GRATED LID	10.37	9.87
PIT 6	450x450 PIT WITH GRATED LID	10.37	9.87
PIT 7	600x600 PIT WITH GRATED LID	8.10	7.60
PIT 8	600x600 PIT WITH GRATED LID WITH OCEANGUARD BASKET TO OCEAN PROTECT'S DETAIL	8.10	7.60
BPP1	MIN 3m ³ BASEMENT PUMP OUT PIT - REFER DETAIL	8.10	6.95
GD1	100 WIDE x 100 DEEP GRATED DRAIN	11.19	11.09
GD2	100 WIDE x 100 DEEP GRATED DRAIN	8.10	8.00
GD3	100 WIDE x 100 DEEP GRATED DRAIN	8.10	8.00
FD	200 DIAMETER FLOOR DRAIN	-	-
DP	100 DIAMETER PVC DOWNPIPE	-	-
RWT	18700 LITRE ABOVE GROUND RAINWATER RE-USE TANK (5000Lx1500Wx2500D). TANK TO COLLECT RAINWATER RUNOFF FROM ALL ROOF AREAS AS SHOWN & BE RE-USED FOR GARDEN IRRIGATION, TOILET FLUSHING & LAUNDRIES. TANK TO BE FITTED WITH FIRST FLUSH DEVICE & WATER FILTRATION DEVICES & INSTALLED IN ACCORDANCE WITH AS3500, BASIX & SYDNEY WATER REQUIREMENTS. ALL CONNECTIONS INTO & OUT OF RWT TO BE FULLY SEALED.	-	-
OSD	MIN 16200 LITRE BELOW GROUND ON-SITE DETENTION TANK (4000Lx3800W(AVERAGE)x10700D (AVERAGE))	-	-

NOTE:
- ALL PIPES UNDER SUSPENDED FLOOR TO BE STRAPPED TO UNDERSIDE OF FLOOR STRUCTURE AT MIN 1%

- PUMP NOTES:**
1. PROVIDE DUAL SUBMERSIBLE, SELF ACTIVATING PUMP SET WITH EACH PUMP RATED AT 10L/s DISCHARGE RATE OVER 4.0m HEAD.
 2. VALUE OF HEAD TO BE CONFIRMED ONCE EXCAVATION COMPLETE & PRIOR TO ORDERING PUMPS.
 3. PUMP SIZE AND PRESSURE PIPE DIAMETER TO BE DETERMINED BY PUMP MANUFACTURER.
 4. SET PUMPS TO ALTERNATE PUMP ACTIVATION.
 5. PROVIDE HIGH LEVEL DUAL PUMP ACTIVATION.
 6. PROVIDE VISIBLE ALARM IN CASE OF PUMP FAILURE. ALARM SYSTEM SHALL BE PROVIDED WITH BATTERY BACK-UP IN CASE OF POWER FAILURE.
 7. PUMPS TO BE FITTED SECURELY INSIDE PUMP OUT WELL.
 8. PROVIDE GATE AND NON-RETURN VALVES TO DELIVERY SIDE OF EACH PUMP.
 9. LOCATE HIGH AND LOW LEVEL ALARMS CLEAR OF INLETS TO PREVENT FALSE ALARMS.
 10. PROVIDE LITTER SCREEN ABOVE PUMP SET.



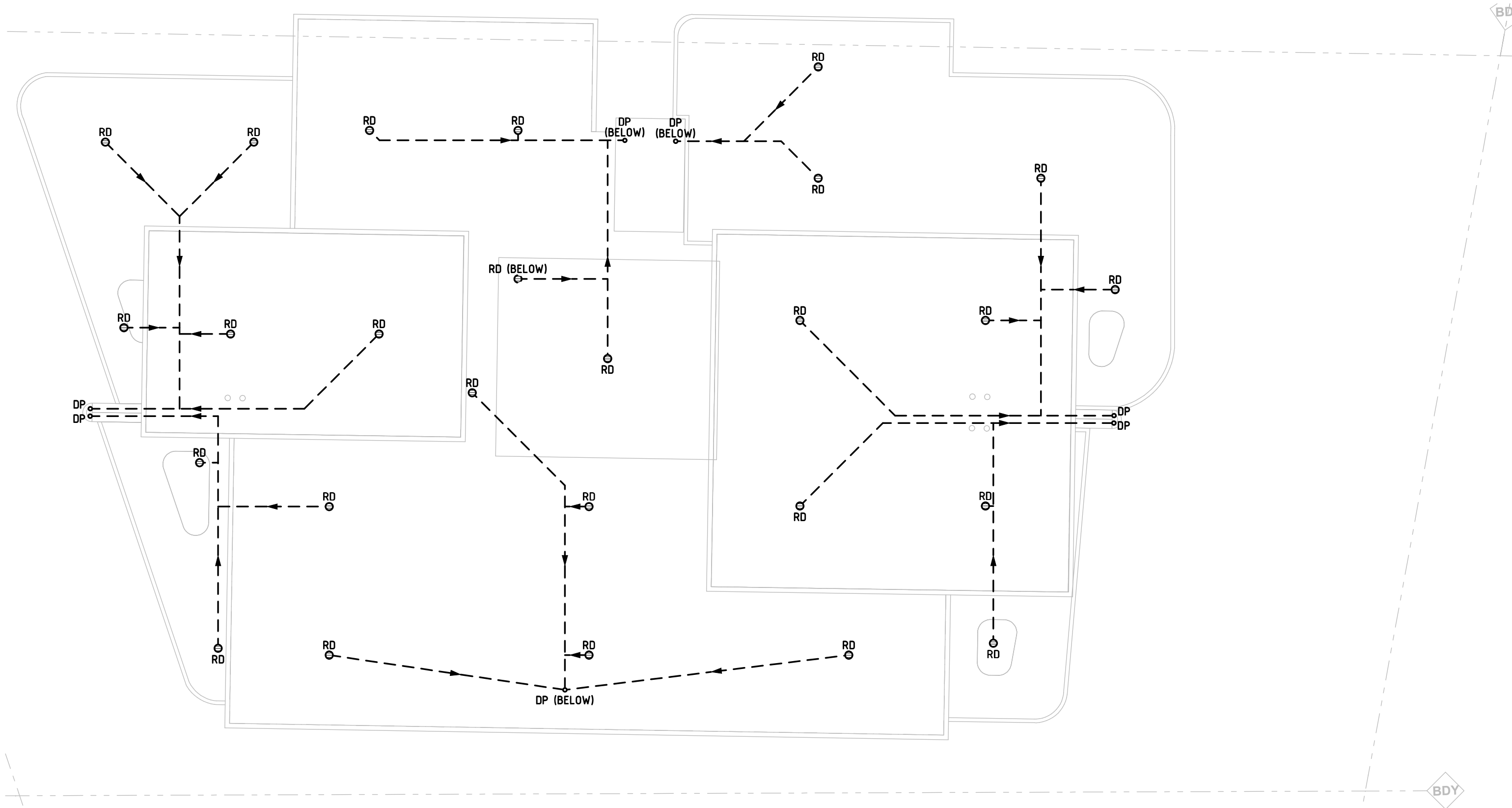
REV.	DATE	REVISION DESCRIPTION	BY	REV.	DATE	REVISION DESCRIPTION	BY
A	15.09.20	ISSUE FOR DA SUBMISSION	DI				
1	11.09.20	ISSUE FOR REVIEW ONLY	DI				

ARCHITECT	GARTNER TROVATO ARCHITECTS
CLIENT	1793 PITTWATER ROAD PTY LTD

STATUS	ISSUE FOR DA SUBMISSION	DATE	SEPT 2020
PROJECT	1793 PITTWATER ROAD, MONA VALE	DESIGNED	DM
DRAWING	GROUND FLOOR & BASEMENT DRAINAGE & SITE STORMWATER MANAGEMENT PLAN	SCALE	REFER DWG
		PAGE SIZE	A1
		REVISION	A
		DRAWING NUMBER	D01



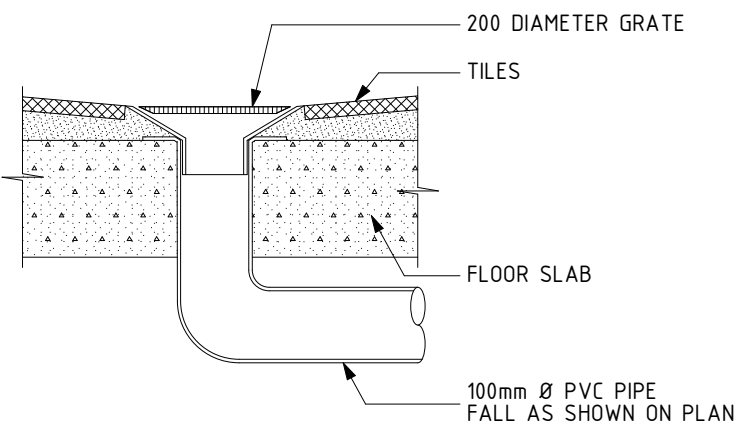
FIRST FLOOR DRAINAGE PLAN
1:100



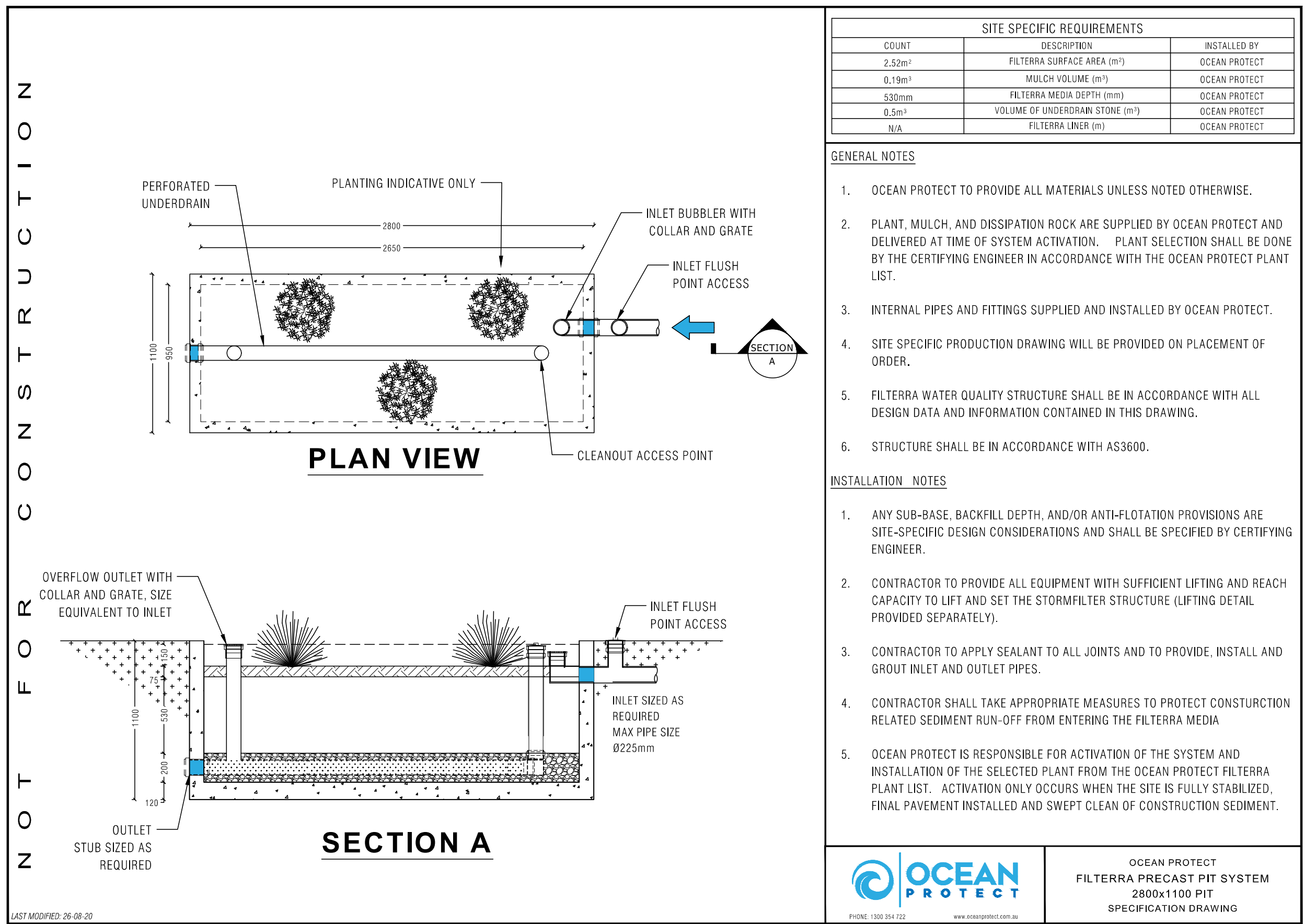
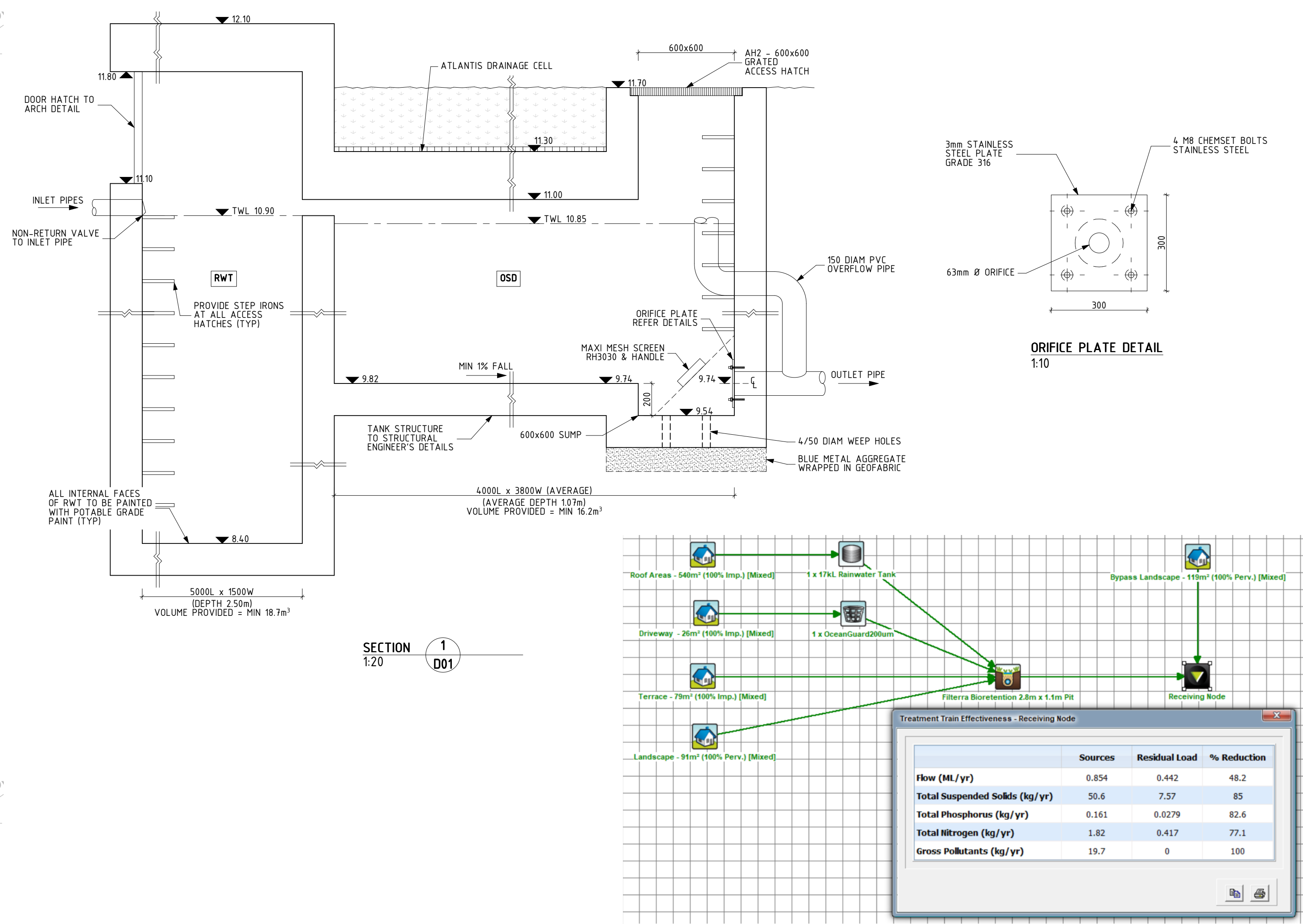
ROOF DRAINAGE PLAN
1:100

MARK	SIZE/TYPE
DP	100 DIAMETER PVC DOWNPIPE
RD	200 DIAMETER ROOF DRAIN

NOTE:
- ALL PIPES UNDER SUSPENDED FLOOR TO BE STRAPPED TO UNDERSIDE OF FLOOR STRUCTURE AT MIN 1%
- ALL LEVEL 1 FLOOR RUNOFF TO BE DRAINED TO OSD



'FD' FLOOR DRAIN DETAIL
1:10



SITE SPECIFIC REQUIREMENTS		
COUNT	DESCRIPTION	INSTALLED BY
2.52m ²	FILTERRA SURFACE AREA (m ²)	OCEAN PROTECT
0.19m ³	MULCH VOLUME (m ³)	OCEAN PROTECT
530mm	FILTERRA MEDIA DEPTH (mm)	OCEAN PROTECT
0.5m ³	VOLUME OF UNDERDRAIN STONE (m ³)	OCEAN PROTECT
N/A	FILTERRA LINER (m)	OCEAN PROTECT

GENERAL NOTES

- OCEAN PROTECT TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- PLANT, MULCH, AND DISSIPATION ROCK ARE SUPPLIED BY OCEAN PROTECT AND DELIVERED AT TIME OF SYSTEM ACTIVATION. PLANT SELECTION SHALL BE DONE BY THE CERTIFYING ENGINEER IN ACCORDANCE WITH THE OCEAN PROTECT PLANT LIST.
- INTERNAL PIPES AND FITTINGS SUPPLIED AND INSTALLED BY OCEAN PROTECT.
- SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
- FILTERRA WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL BE IN ACCORDANCE WITH AS3600.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY CERTIFYING ENGINEER.
- CONTRACTOR TO PROVIDE ALL EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING DETAIL PROVIDED SEPARATELY).
- CONTRACTOR TO APPLY SEALANT TO ALL JOINTS AND TO PROVIDE, INSTALL AND GROUT INLET AND OUTLET PIPES.
- CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROTECT CONSTRUCTION RELATED SEDIMENT RUN-OFF FROM ENTERING THE FILTERRA MEDIA
- OCEAN PROTECT IS RESPONSIBLE FOR ACTIVATION OF THE SYSTEM AND INSTALLATION OF THE SELECTED PLANT FROM THE OCEAN PROTECT FILTERRA PLANT LIST. ACTIVATION ONLY OCCURS WHEN THE SITE IS FULLY STABILIZED, FINAL PAVEMENT INSTALLED AND SWEEP CLEAN OF CONSTRUCTION SEDIMENT.



OCEAN PROTECT
FILTERRA PRECAST PIT SYSTEM
2800x1100 PIT
SPECIFICATION DRAWING

REV.	DATE	REVISION DESCRIPTION	BY	REV.	DATE	REVISION DESCRIPTION	BY
A	15.09.20	ISSUE FOR DA SUBMISSION	DI				
1	11.09.20	ISSUE FOR REVIEW ONLY	DI				

ARCHITECT
GARTNER TROVATO ARCHITECTS

CLIENT
1793 PITTWATER ROAD PTY LTD

STATUS
ISSUE FOR DA SUBMISSION

PROJECT
1793 PITTWATER ROAD, MONA VALE

DRAWING
FIRST FLOOR & ROOF DRAINAGE PLAN & OCEAN PROTECT DETAIL

DESIGNED
DM

SCALE
REFER DWG

DRAWN
DM

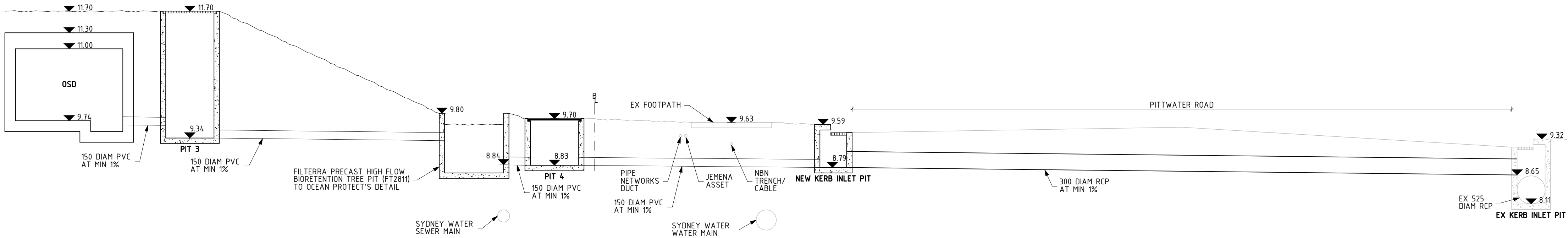
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REVISION
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DATE
SEPT 2020

PROJECT NUMBER
200813

DRAWING NUMBER
D02



PITTWATER ROAD LONG SECTION
1:50
NOTE:
- ALL EX UNDERGROUND SERVICES SHOWN
ARE INDICATIVE ONLY. REFER TO
DRAWINGS BY DBYD JOB NO. 20244810

REV.	DATE	REVISION DESCRIPTION	BY	REV.	DATE	REVISION DESCRIPTION	BY
A	15.09.20	ISSUE FOR DA SUBMISSION	DI				
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ARCHITECT	
GARTNER TROVATO ARCHITECTS	
CLIENT	
1793 PITTWATER ROAD PTY LTD	

STATUS	ISSUE FOR DA SUBMISSION			DATE	SEPT 2020
PROJECT	1793 PITTWATER ROAD, MONA VALE			PROJECT NUMBER	200813
DRAWING	PITTWATER ROAD LONG SECTION			DRAWING NUMBER	D03
DESIGNED	DM	SCALE	REFER DWG		
DRAWN	DM	PAGE SIZE	A1		
CHECKED	DI	REVISION	A		