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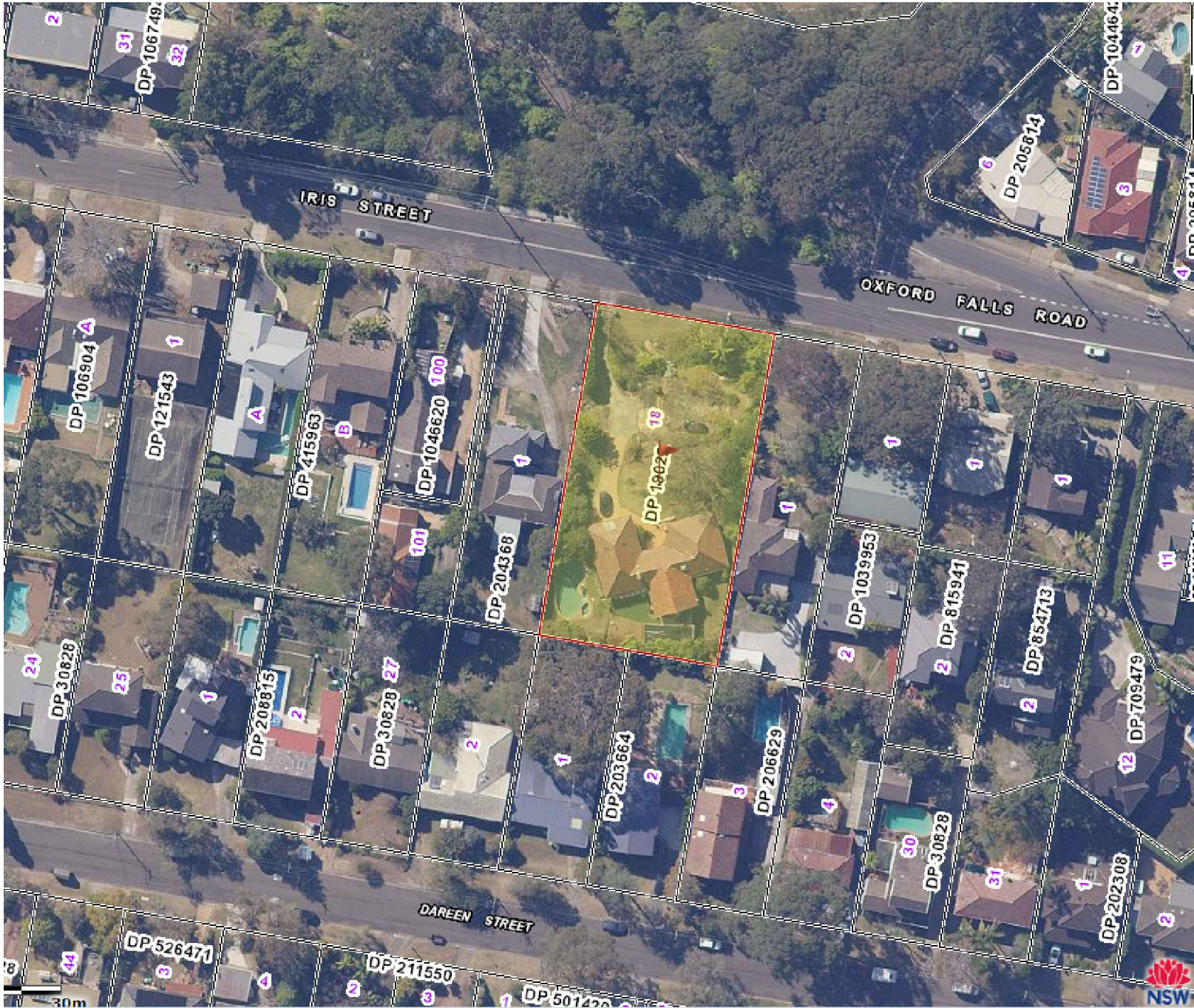
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FOR: **Maree Jaloussis Hayes**

JOB NO: SW -152-2307
DATE: 10/09/2023

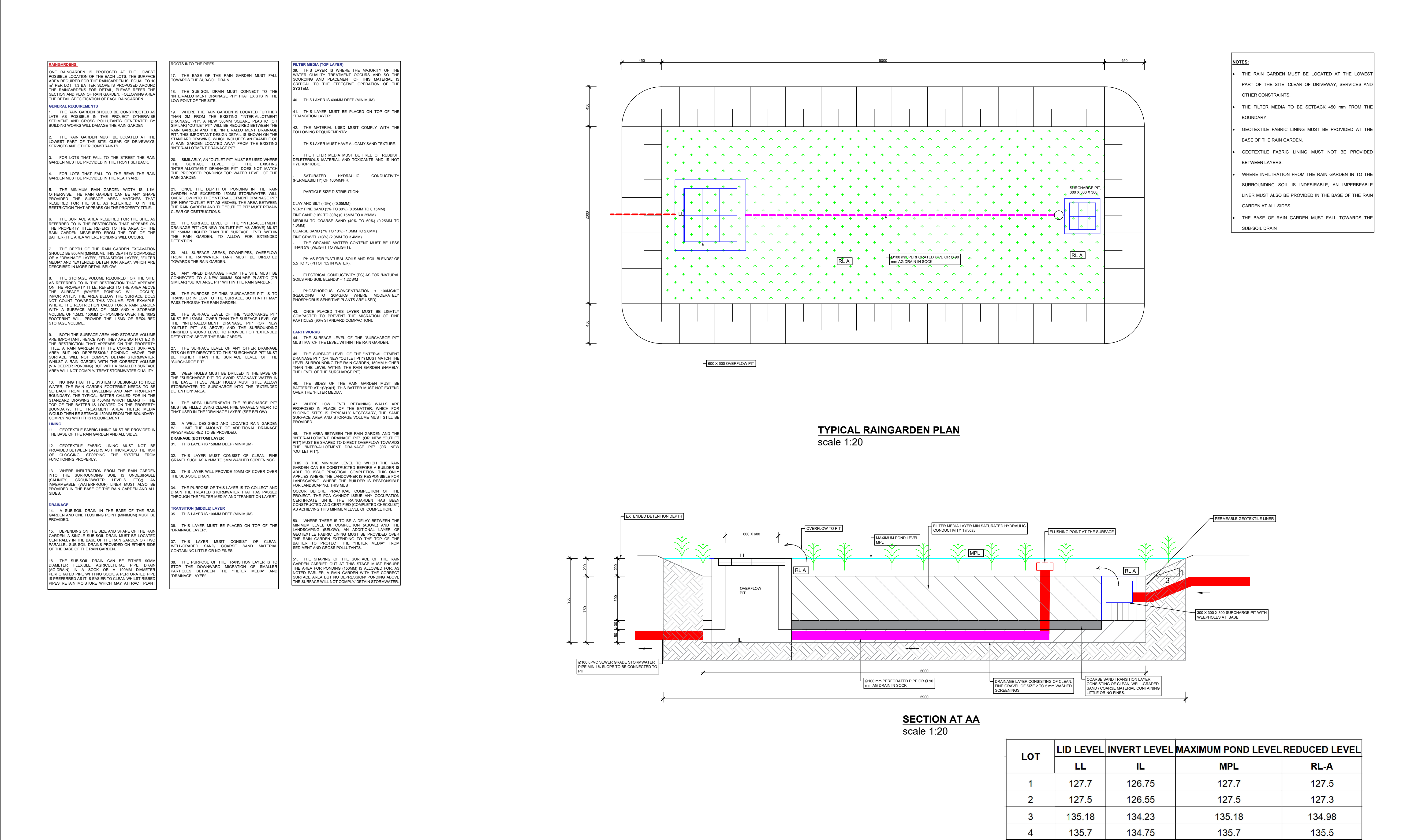
DRAWING NO	DRAWING TITLE
1	COVERPAGE
2	STORMWATER REPORT
3	GENERAL NOTES
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6,7,8	RAINGARDEN DETAIL
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11	EROSION AND SEDIMENT CONTROL PLAN
12	EROSION AND SEDIMENT CONTROL DETAIL

STORMWATER MANAGEMENT PLAN
FOR PROPOSED SUBDIVISION
107 IRIS STREET, BEACON HILL, NSW



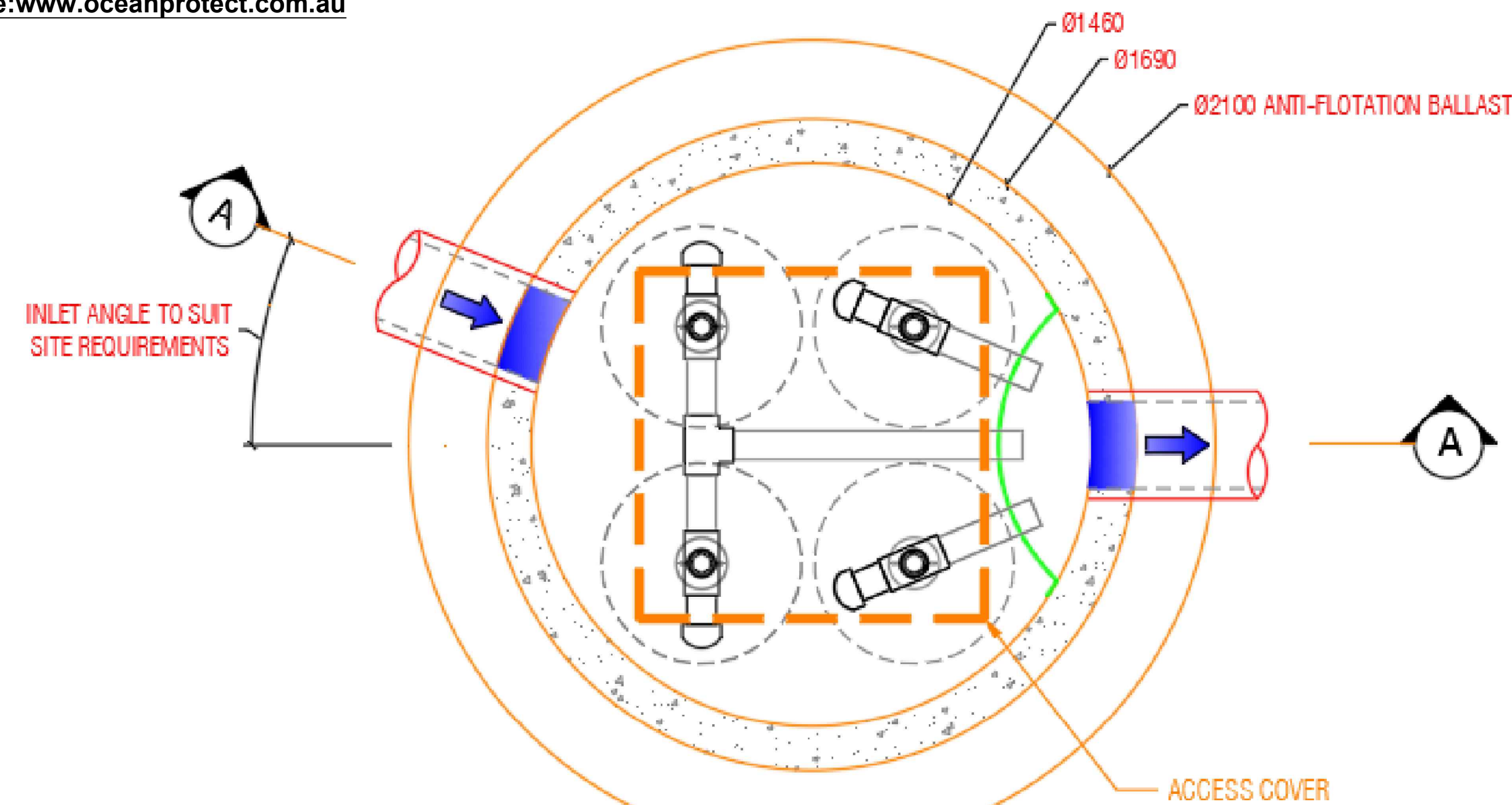
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STORMWATER DRAINAGE GENERAL				ENGINEER IS TO BE NOTIFIED AT THE EARLIEST POSSIBLE CONVENIENCE				• PROVIDE CONCRETE BENCHING ACROSS PIT TO SUIT INLET AND OUTLET PIPES AS DETAILED				• RAINWATER TANK TO BE CONNECTED TO ALL TOILETS, LAUNDRY AND AT LEAST ONE (1) OUTDOOR TAP.			
• THESE DRAWINGS SHALL BE READ IN CONJUCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK				• THE CONTRACTOR TO VERIFY THE INVERT LEVELS AT POINT OF CONNECTION TO EXISTING STORMWATER SYSTEM AND REPORT ANY CONFLICT OF LEVELS				• DIA 100 SUBSOIL DRAINAGE PIPE 3.0 M LONG WRAPPED IN FABRIC SOCK TO BE PLACED ADJACENT TO INLET PIPES ON BOTH SIDES AND 100 MM MIN. ABOVE PIT FLOOR				DESIGN NOTES			
• DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THESE DRAWINGS. REFER TO ARCHITECT'S FINAL DRAWINGS.				• ALL BUILDINGS HAVE RAISED SO THERE IS AT LEAST 150 mm STEP UP INTO THE BUILDING TO ALLOW SUFFICIENT FREEBOARD FOR OVERLAND FLOWS IN THE CASE OF PIPE BLOCKAGE				• SUB SOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS AND EMBANKMENTS WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.				• ALL EVE GUTTERS AND DOWNPIPES ARE DESIGNED FOR 10 YEAR ARI STORM EVENT.			
• THE BUILDER SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING AND NEW SERVICES, AND SHALL BE RESPONSIBLE FOR DAMAGE TO THE SAME.				• DOWNPIPES AND PITS LOCATIONS AND LEVELS MAY BE VARIED TO SUIT THE SITE CONDITIONS, AFTER ENGINEERING APPROVAL				• SELECTED GRANULAR BACKFILL IS TO BE PLACES AGAINST THE FULL HEIGHT OF THE PIT VERTICAL FACES AND FOR A HORIZOONTAL DISTANCE EQUAL TO ONE-THIRD THE HEIGHT OF THE STRUCTURE.				• BOX GUTTER AND RAINWATER HEADS ARE DESIGNED FOR 100 YEAR ARI STORM EVENT			
• ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSA CODES, AND THE BY-LAWS AND ORDINANCES OF THE COUNCIL EPA AND WORKCOVER AS 3500 PART 2 & 3				• DOWNPIPES SHOWN ARE INDICATIVE ONLY. ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS				• MORTAT BASES TO BE SHAPED TO GIVE MIN 20 mm FALL ACROSS PITS				• INTENSITY FREQUENCY DURATION (IFD) DESIGN CHART OBTAINED FROM BUREAU OF METEOROLOGY HAS BEEN USED TO DESIGN ON SITE DETENTION SYSTEM.			
• PREPARE PROGRESSIVELY AND FURNISH TO THE ENGINEER WORK AS EXECUTED DRAWINGS OF THE SAME SIZE AND QUALITY AS THIS DRAWING BUT ACCORDANCE WITH DA CONDITIONS AND CC REQUIREMENTS.				• DRAINAGE PIPES TO BE CONCRETE ENCASED WHERE LOCATED UNDER DRIVEWAY OR BUILDING				• MORTAR BASES TO BE DISHED TO SUIT ADJOINING PIPE SIZES TO GICE SELF CLEANSING PITS.				• CONSTRUCT A SILT BARRIER FENCE AS SHOWN ON PLAN AND TO DETAILS AS ABOVE.			
• GIVE SUFFICIENT NOTICE SO THAT INSPECTION MAY BE CARRIED OUT AT THE FOLLOWING STAGES: WORK READY FOR SPECIFIED TESTING, WORK READY TO BE COVERED OR CONCEALED.				• ALL PIPES TO BE FULLY HOUSED INTO PIT WALLS AND JOINED / SEAL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.				• WHERE PIT DEPTH EXCEEDS STANDARD DEPTH, CONCRETE SHALL BE USED AS PIT BASE, AND ALSO TO GAIN REQUIRED INLET/ OUTLET LEVELS.				• SEDIMENT CONTROL DEVICES ARE TO BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF ALL SITE WORKS OR TO THE SATISFACTION OF THE COUNCIL SUPERVISING OFFICER.			
• OBTAIN APPROVAL BEFORE INTERRUPTING AN EXISTING SERVICE. KEEP THE NUMBER OF INTERRUPTIONS TO A MINIMUM.				• GRADE ALL PAVED AND GRASSED AREAS AWAY FROM THE BUILDING.				• THE INLET PIPE OBVERT IS TO BE HIGHER THAT THE OUTLET PIPE OBVERT				• ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN			
• LAY PIPES TO THE LEVELS SHOWN ON THE DRAWINGS AND IN ANY CASE NOT LESS THAN THE FOLLOWING:				• TOP OF GRATE TO BE POSITIONED TO CATCH ALL UPSTREAM SURFACE FLOWS AS INDICATED BY PLANS.				• ALL SWAYLES SHALL HAVE A TURFED INVERT EXTENDING 0.5 m UP THE SIDE SLOPES				SEDIMENT BARRIER AROUND PIT:			
DIA. 100 MM @ 1.0%, DIA 150 MM @ 1.0%, DIA 225 MM @ 0.5%, DIA 300 MM @ 0.5%				• ALL PIPES WITHIN THE PROPERTY TO BE MIN. OF 150 DIA, @ 1% MIN. GRADE, UNO.				• HAND EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS				• FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE.			
• ENDS OF PIPES AND STUB CONNECTIONS TO BE SEALED WITH AN APPROVED SEALED DISC.				• ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULHEADS AT ALL JOINTS.				• FOOTHPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS				• SUPPORT GEOTEXTILE WITH MESH TIED TO THE POSTS AT 1000 MM CENTERS.			
• MILD STEEL STAR PICKET 1200 mm LONG WITH 300 mm PAINTED GREEN EXTENDED ABOVE GROUND LEVEL TO BE PLACED AT EACH INTERLOTMENT DRAINAGE CONNECTION POINT.				• ALL PITS WITHIN THE PROPERTY AREA TO BE FITTED WITH WELDOK OR APPROVED EQUIVALENT GRATES TO AS3996:				• ALL FENCES MUST BE RAISED 150 mm FROM THE FINISHED GROUND LEVELS SO THAT OVERLAND FLOWS FROM UPSTREAM PROPERTIES ARE NOT RESTRICTED OR BLOCKED.				• DONOT COVER INLET WITH GEOTEXTILE			
• GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION				○ LIGHT DUTY FOR LANDSCAPE AREAS				RAINWATER TANK NOTES:				STANDARD PIPE TRENCH			
				○ HEAVY DUTY WHERE SUBJECTED TO VEHICULAR CROSSING				• THE SYSTEM TO BE INSTALLED WITH THE FOLLOWING CONSIDERATIONS:				• SAND FREE FROM ROCK OR OTHER HARD AND SHARP OBJECTS THAT WOULD RETAINED ON 13.2 SEIVE			
				• ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, UNO.				• A 'FIRST FLUSH' DIVERSION TO REMOVE ROOF CONTAMINANTS				• CRISHED ROCK OR GRAVEL OF APPROVED GRADING UP TO MAX SIZE OF 14 mm			
				• ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINEOUS HINGE				• ADEQUATE SCREENING TO PROVIDE MOSQUITO BREEDING AND ENTRY OF ANIMAL OR FLOATING MATTER				• THE EXCAVATED MATERIAL MAY BE USED IF IT IS FREE FROM ROCK OR HARD MATTER AND BROKEN UP SO STHAT IT CONTAINS NO SOIL LUMPS HAVING ANY DIMENSION GREATER THAN 75 mm WHICH WOULD PREVENT ADEQUATE COMPACTION OF THE BEDDING			
				• ALL COURTYARD AND LANDSCAPE PITS TO BE 400 SQUARE, UNO				• TANKS TO BE PLUMBED TO TOP-UP FROM THE POTABLE WATER SUPPLY DURING DRY PERIOD WHEN THE TANK IS 80% EMPTY.				• MATERIAL FOR PIPE SIDE SUPPORT SHOULD BE ADEQUATELY TAMPED IN LAYERS OF NOT MORE THAN 150 mm.			
				• ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.				• NO DIRECT CROSS-CONNECTION WITH THE POTABLE WATER SUPPLY AND AN AIR GAP MAINTAINED ABOVE THE OVERFLOW IN THE TANK.				• PIPE OVERLAY MATERIAL SHOULD BE LEVELLED AND TAMPED IN LAYERS TO A MINIMUM HEIGHT OF 150 mm ABOVE THE CROWN OF THE PIPE			
STORMWATER DRAINAGE NOTES:				• PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.								• FOR MIN COVER REFER TO AS3500			
• CONTRACTOR IS TO VERIFY THE LEVEL AND LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION.				• COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE MIN. 25 MPa											
• THE CONTRACTOR IS TO VERIFY ANY CONFLICT OF SERVICES IN THE ROAD RESERVE OR SUBJECT PROPERTY AND THE															

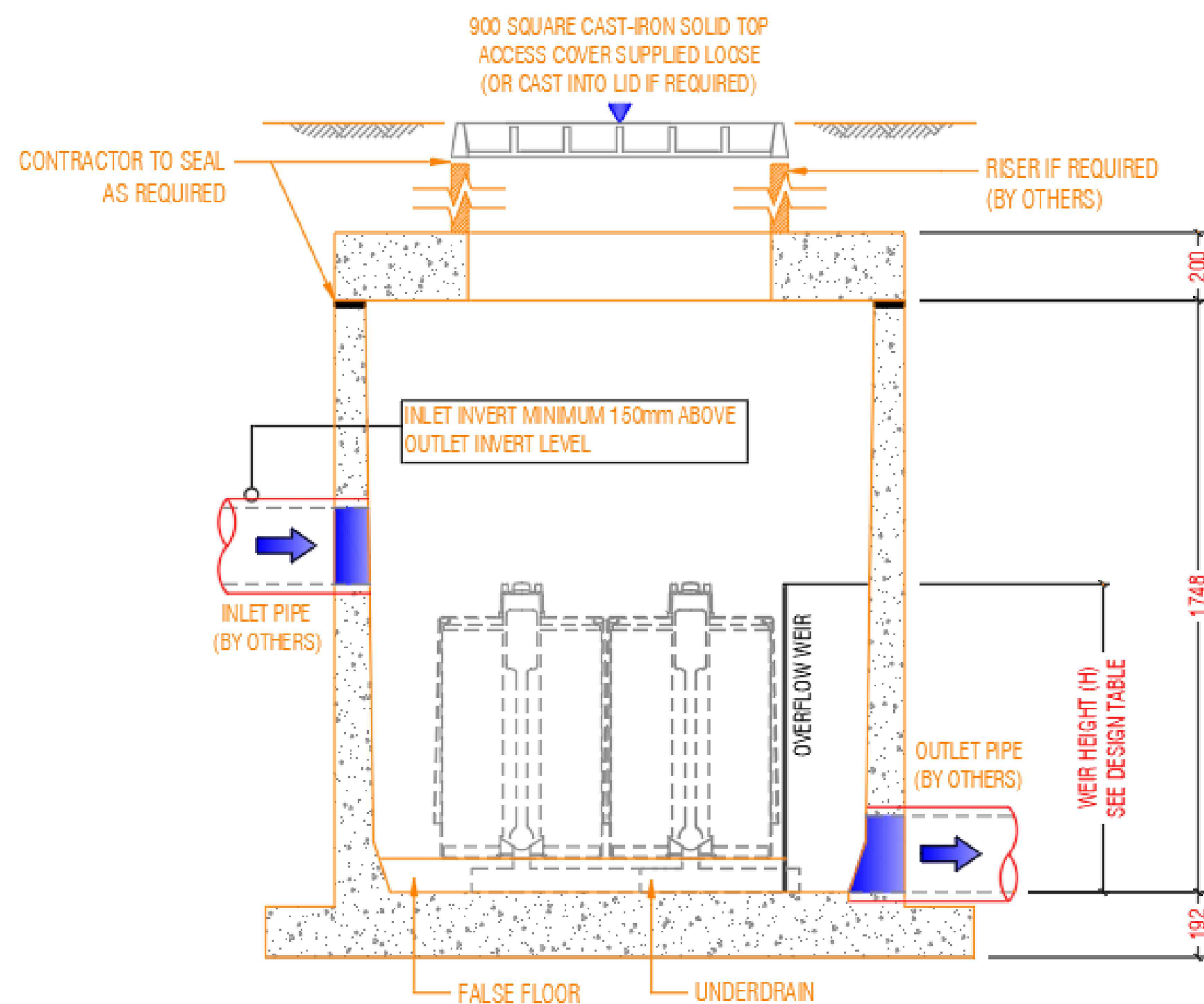


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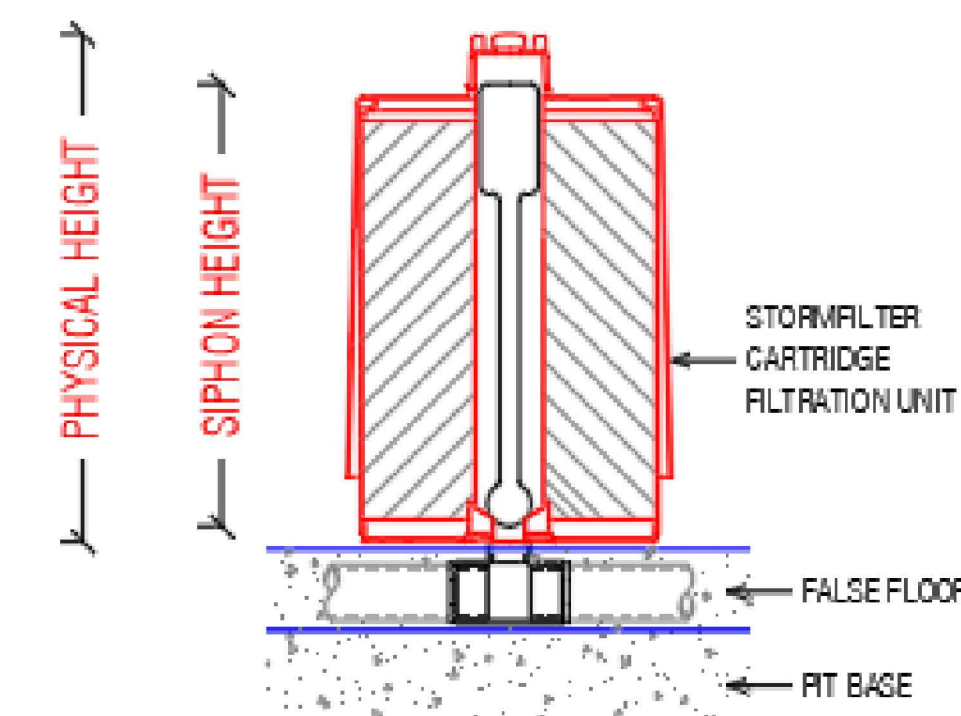
SECTION A-A

LAST MODIFIED: 09-11-18

STORMFILTER DESIGN TABLE

- STORMFILTER TREATMENT CAPACITY VARIES BY NUMBER OF FILTER CARTRIDGES INSTALLED.
- THE STANDARD CONFIGURATION IS SHOWN. ACTUAL CONFIGURATION OF THE SPECIFIED STRUCTURE(S) PER CERTIFYING ENGINEER WILL BE SHOWN ON SUBMITTAL DRAWING(S).
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 178mm.

CARTRIDGE NAME / SIPHON HEIGHT (mm)	690	460	310
CARTRIDGE PHYSICAL HEIGHT (mm)	840	600	600
TYPICAL WEIR HEIGHT [H] (mm)	920	690	540
CARTRIDGE FLOW RATE FOR ZPG MEDIA (L/s)	1.6	1.1	0.7
CARTRIDGE FLOW RATE FOR PSORB MEDIA (L/s)	0.9	0.46	0.39



STORMFILTER CARTRIDGE DETAIL

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
NUMBER OF CARTRIDGES REQ'D	4
SIPHON HEIGHT (310 / 460 / 690)	460
MEDIA TYPE (ZPG / PSORB)	PSORB
WATER QUALITY FLOW RATE (L/S)	0.46
HYDRAULIC CAPACITY (L/S)	90

PIPE DATA:	I.L.	MATERIAL	DIAMETER
INLET PIPE #1			
INLET PIPE #2			
INLET PIPE #3			
OUTLET PIPE			

PRECAST MANHOLE WEIGHT	4100kg
PRECAST LID WEIGHT	1100kg

GENERAL NOTES

- PRECAST STRUCTURE SUPPLIED WITH CORE HOLES TO SUIT OUTER DIAMETER OF NOMINATED PIPE SIZE / MATERIAL.
- PRECAST STRUCTURE SHALL MEET W80 WHEEL LOAD RATING ASSUMING A MAXIMUM EARTH COVER OF 2.0m AND A GROUND WATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CERTIFYING ENGINEER TO CONFIRM ACTUAL GROUNDWATER ELEVATION. PRECAST STRUCTURE SHALL BE IN ACCORDANCE WITH AS3600.
- IF THE PEAK FLOW RATE, AS DETERMINED BY THE SITE CERTIFYING ENGINEER, EXCEEDS THE PEAK HYDRAULIC CAPACITY OF THE SYSTEM, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.
- ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
- SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
- DRAWING NOT TO SCALE.

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.



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OCEAN PROTECT
4 CARTRIDGE STORMFILTER SYSTEM
DN1460 MANHOLE
SPECIFICATION DRAWING

Rev	Description	By	Date
A	ISSUE FOR DA	CS	10/09/2023

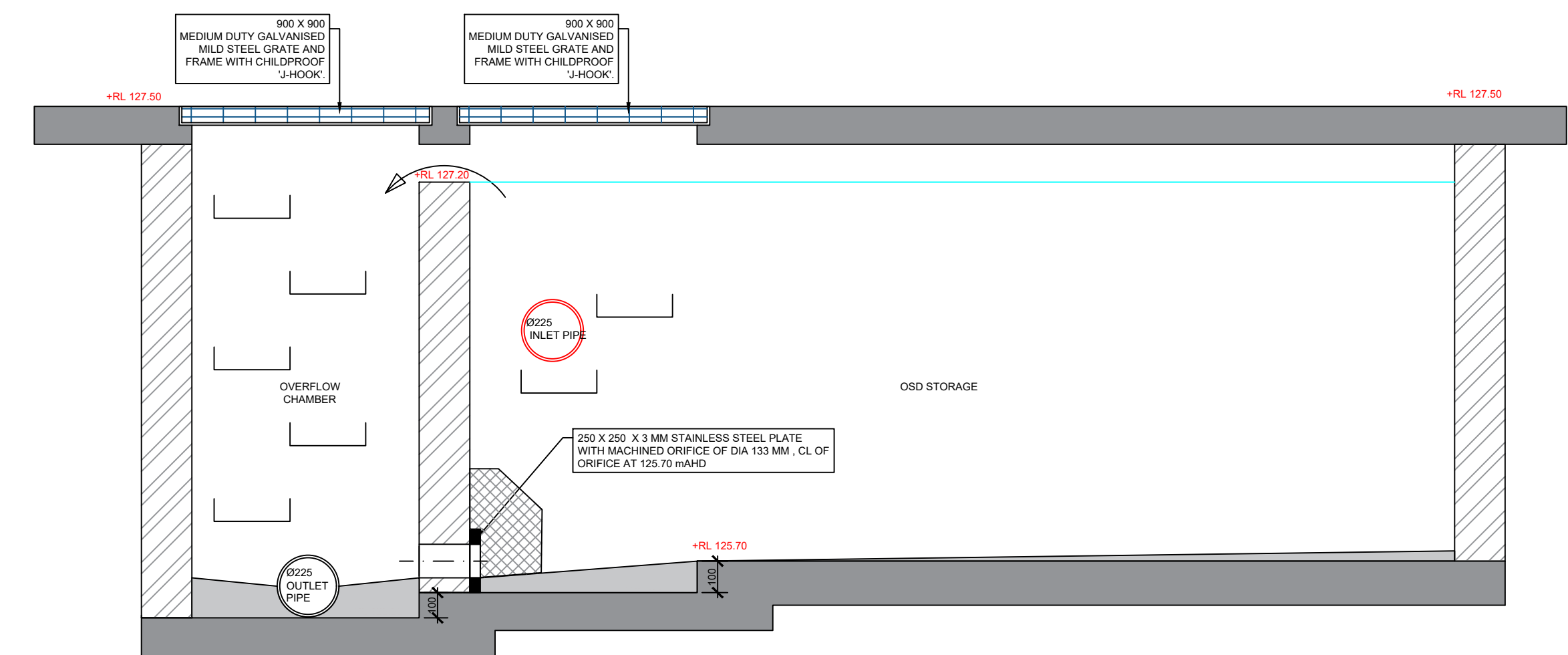
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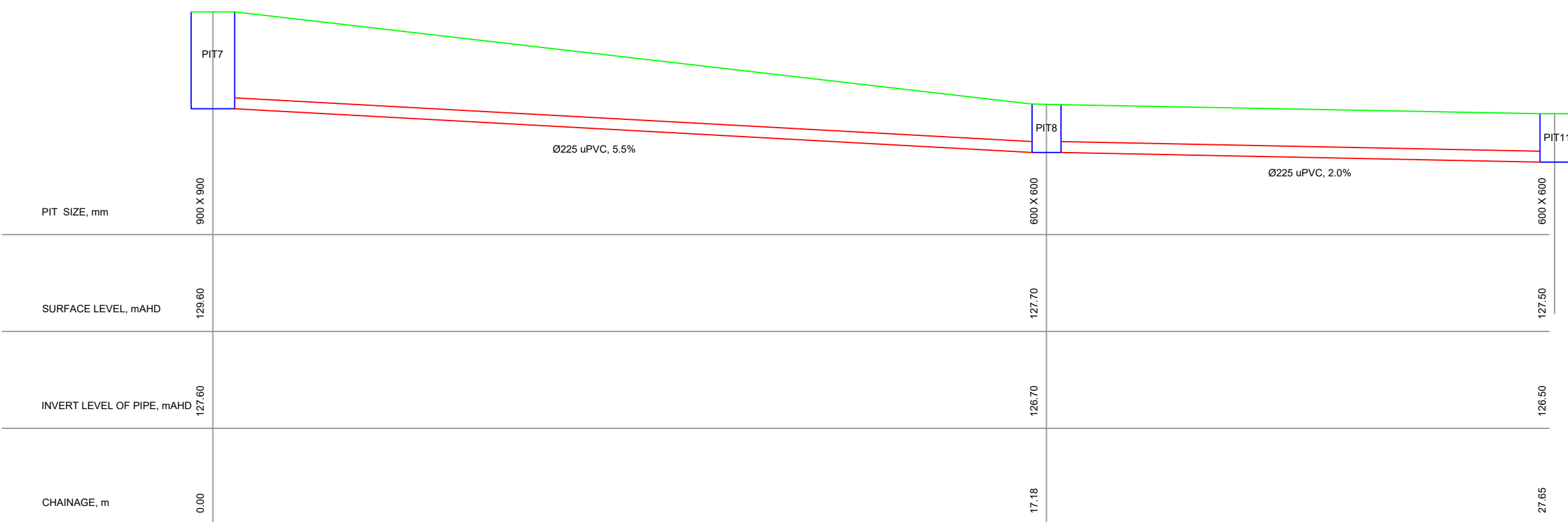
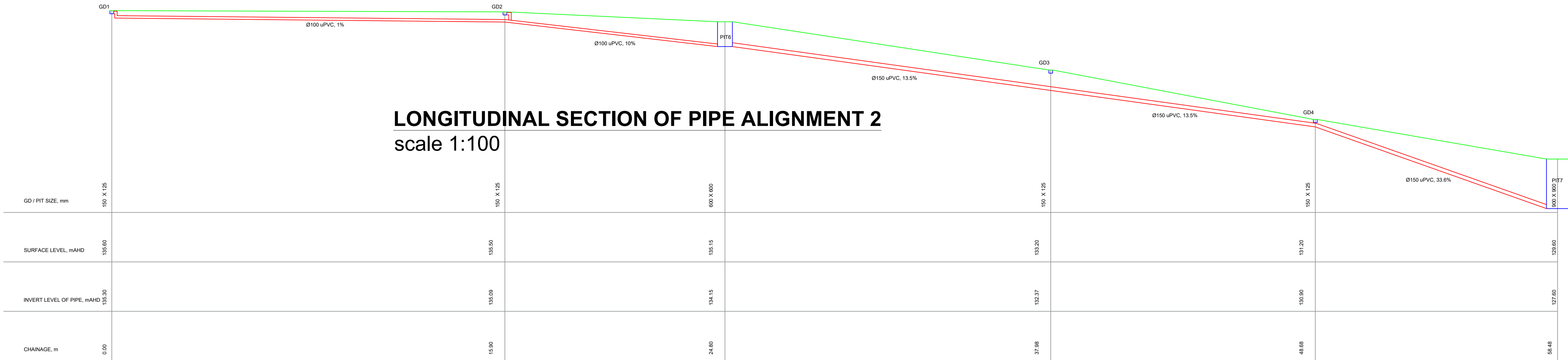
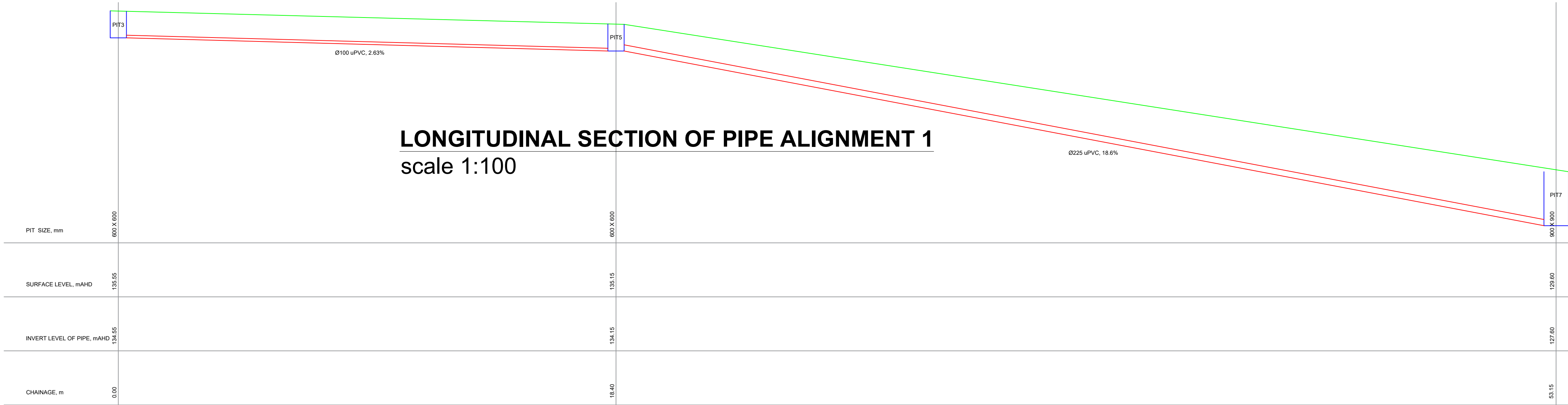
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Client: Maree Jaloussis Hayes
Project: Proposed Development at 107 Iris Street, Beacon Hill NSW

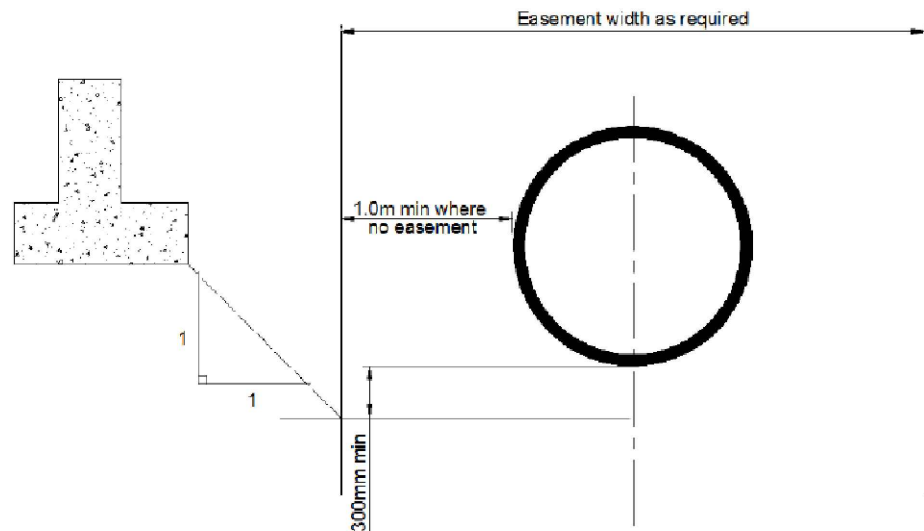
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Designed By: Chij Shrestha
MIEAust, CPEng, NER
Reviewed By: C.L.A.
Scale: as shown (A1)
Date: 10/09/2023
Issue: A
Job No: SW -152-2307



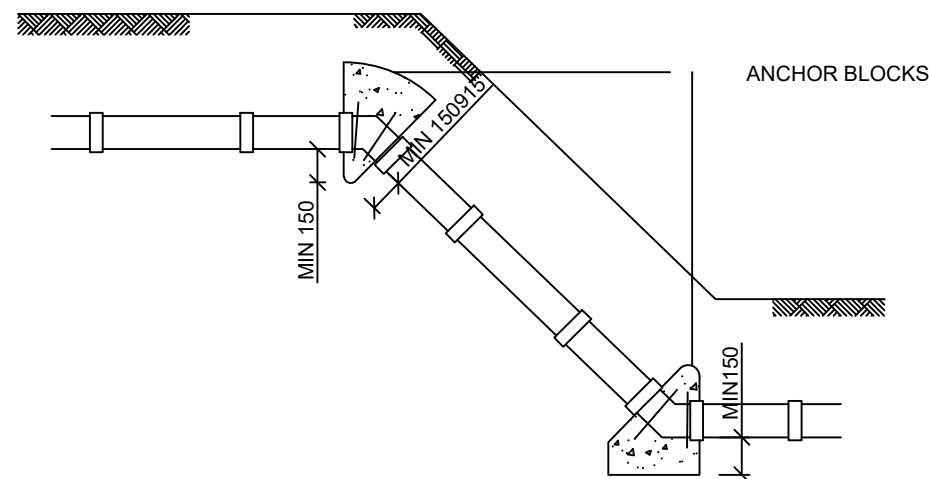
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Designed By:	Chij Shrestha MIEAust, CPEng, NER	Date:	10/09/2023
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Scale:	as shown (A1)		



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Note: Concrete encasing of Council's drainage system will not be permitted

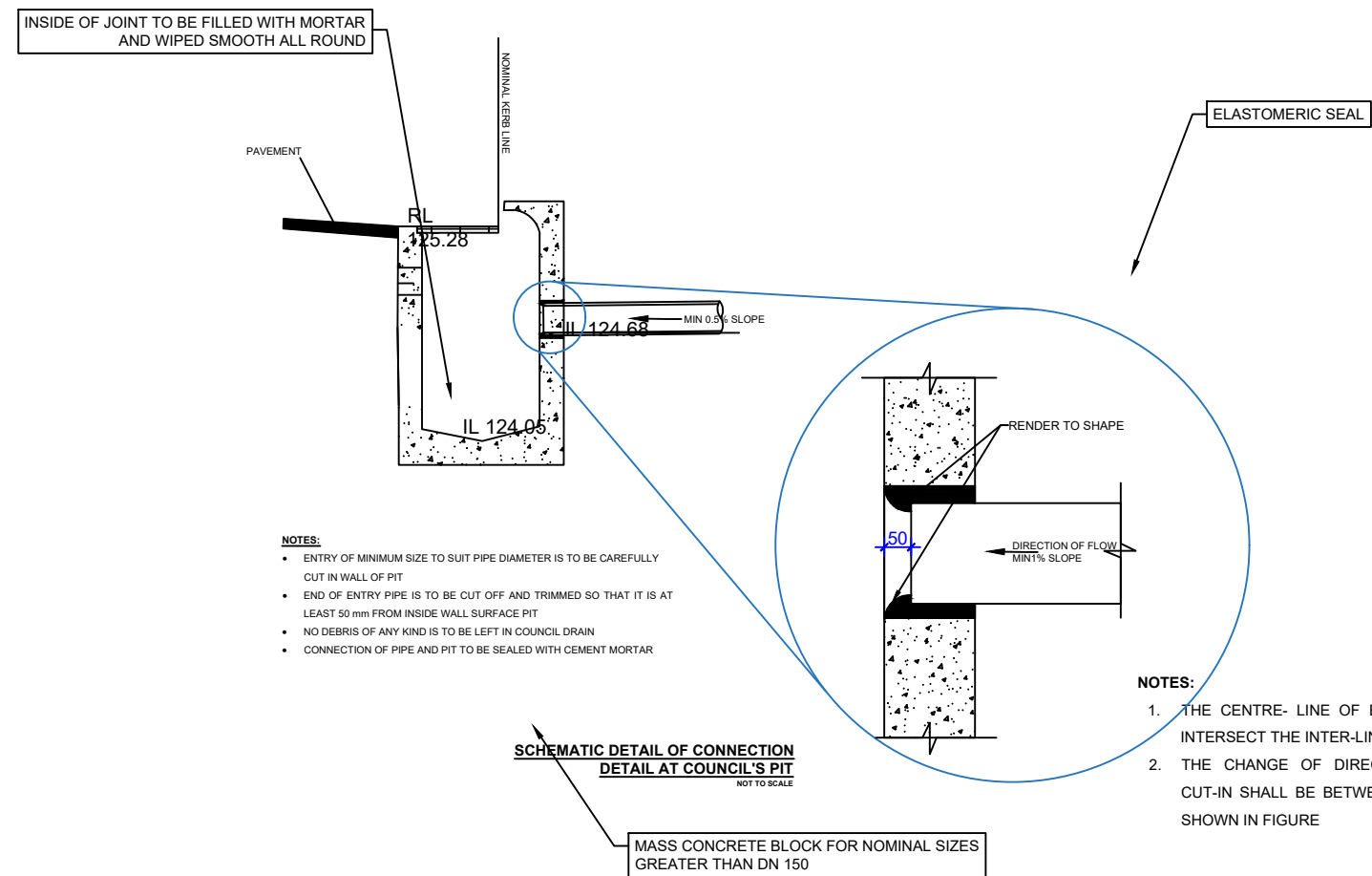


TYPICAL ANCHOR BLOCK DETAIL FOR SLOPE GREATER THAN 1:5
not to scale

NOTE:

WHERE THE GRADIENT OF A SITE OF STORMWATER DRAIN EXCEEDS 1:5, ANCHOR BLOCKS SHALL BE INSTALLED:

- AT THE BEND OR JUNCTION AT THE TOP AND BOTTOM OF THE STORMWATER DRAIN
- AT INTERVAL NOT EXCEEDING 3.0 m
- THICKNESS OF ANCHOR BLOCKS SHOULD NOT BE LESS THAN 150 mm
- TWO STEEL REINFORCEMENT BAR BARS NOT LESS THAN 10 mm DIA BENT TO A RADIUS ABOUT 200 mm SHALL BE PROVIDED TO ANCHOT BLOCKS
- ANCHOR BLOCKS SHOULD NOT COVER ANY FLEXIBLE JOINTS



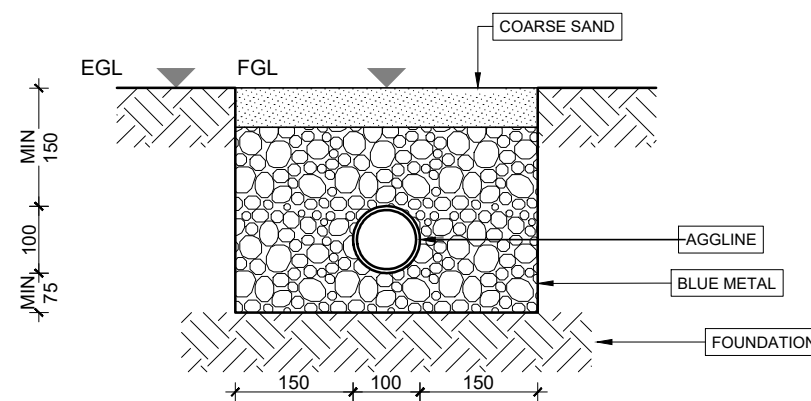
NOTES:

- ENTRY OF MINIMUM SIZE TO SUIT PIPE DIAMETER IS TO BE CAREFULLY CUT IN WALL OF PIT
- END OF ENTRY PIPE IS TO BE CUT OFF AND TRIMMED SO THAT IT IS AT LEAST 50 mm FROM INSIDE WALL SURFACE PIT
- NO DEBRIS OF ANY KIND IS TO BE LEFT IN COUNCIL DRAIN
- CONNECTION OF PIPE AND PIT TO BE SEALED WITH CEMENT MORTAR

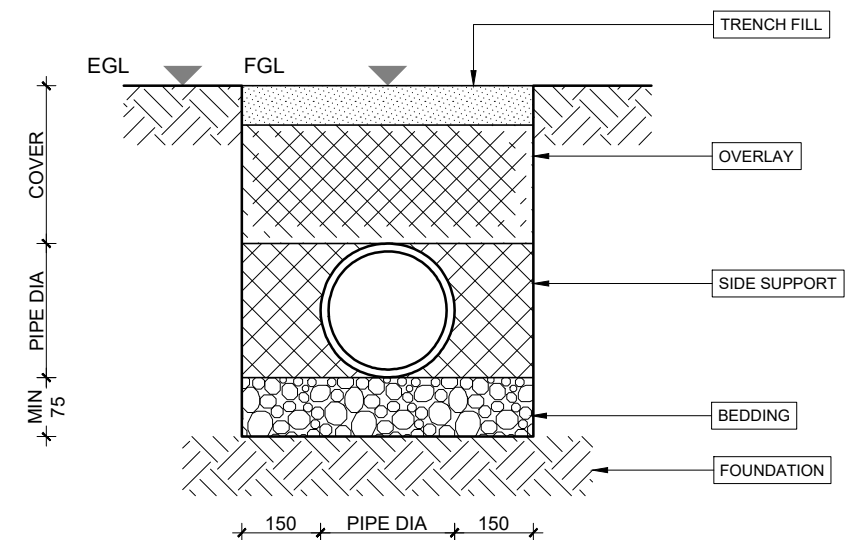
NOTES:

- THE CENTRE- LINE OF EACH BRACH SHALL INTERSECT THE INTER-LINE OF THE MAIN LINE
- THE CHANGE OF DIRECTION OF FLOW A CUT-IN SHALL BE BETWEEN 45° AND 90°, AS SHOWN IN FIGURE

JUNCTION CONNECTION DETAIL
not to scale



AGGLINE TRENCH DETAIL
scale 1:10



STANDARD PIPE TRENCH DETAIL
scale 1:10

A	ISSUED FOR DA	CS	10/09/2023
Rev	Description	By	Date

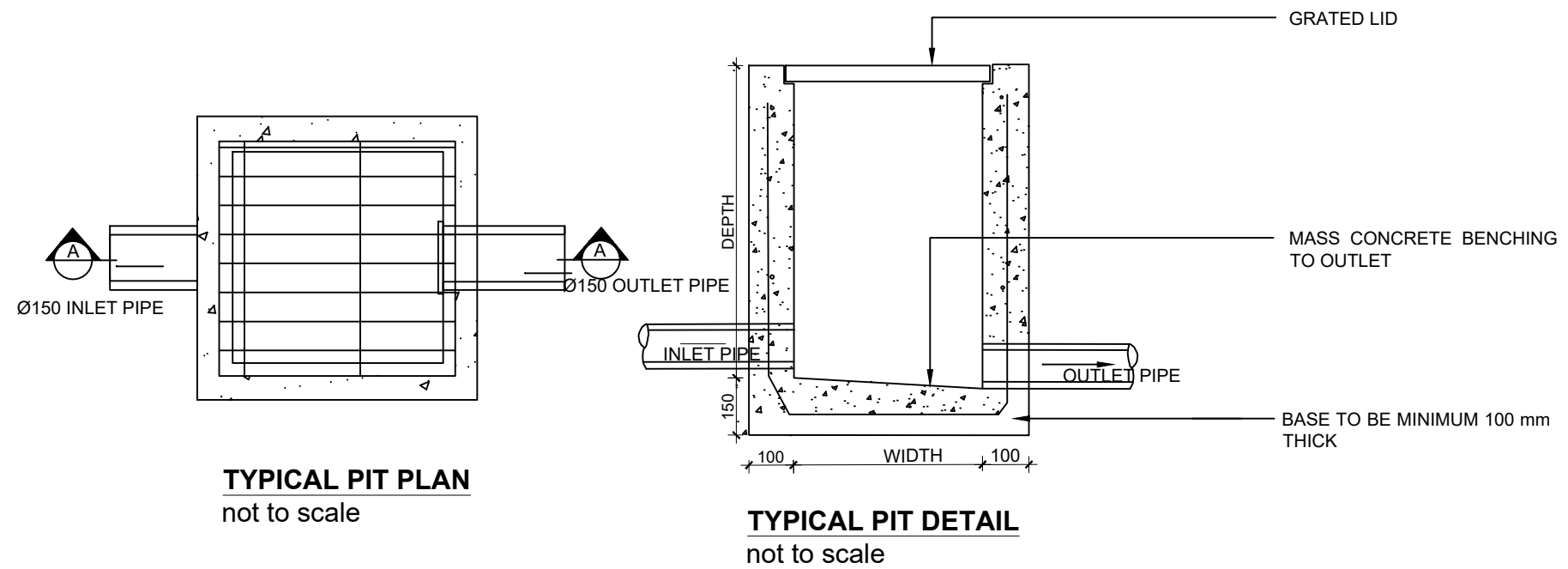
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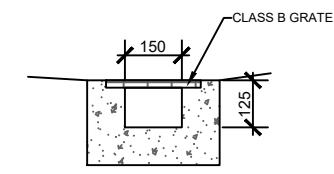
Client: Maree Jaloussis Hayes
Project: Proposed Development at 107 IRIS STREET, BEACON HILL, NSW

Title: PIPE CONNECTION AND TRENCH DETAIL SH8
Designed By: Chij Shrestha
MIEAust, CPEng, NER
Reviewed By: C.L.A
Scale: as shown (A3)
Date: 10/09/2023
Issue: A
Job No: SW -152-2307

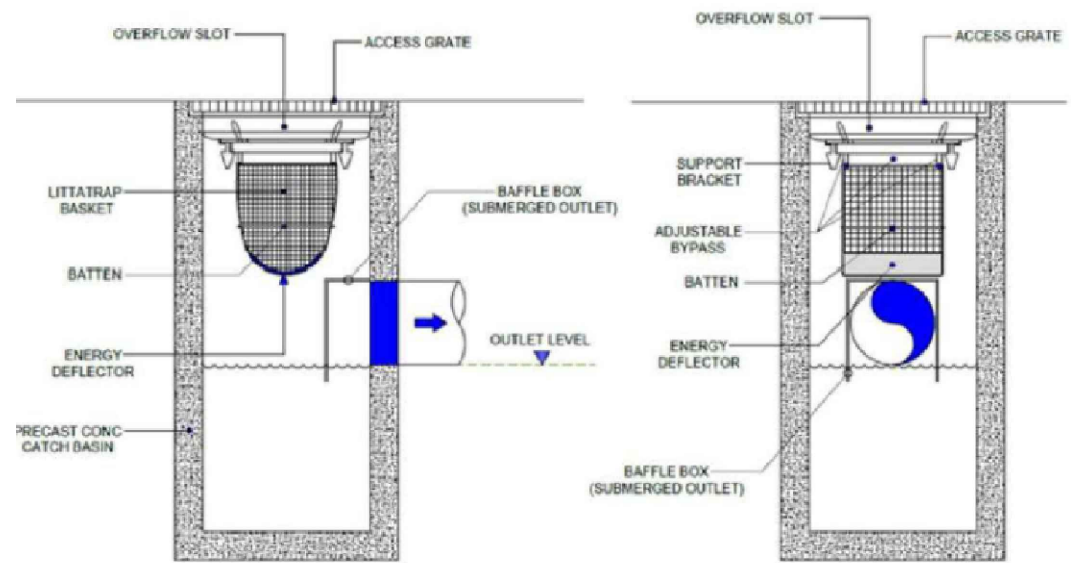


TYPICAL PIT PLAN
not to scale

TYPICAL PIT DETAIL
not to scale



TYPICAL GRATED DRAIN
not to scale

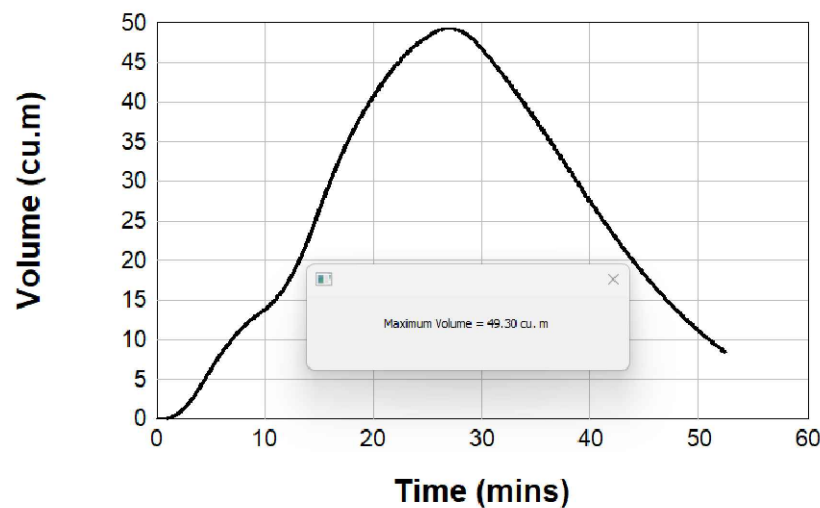
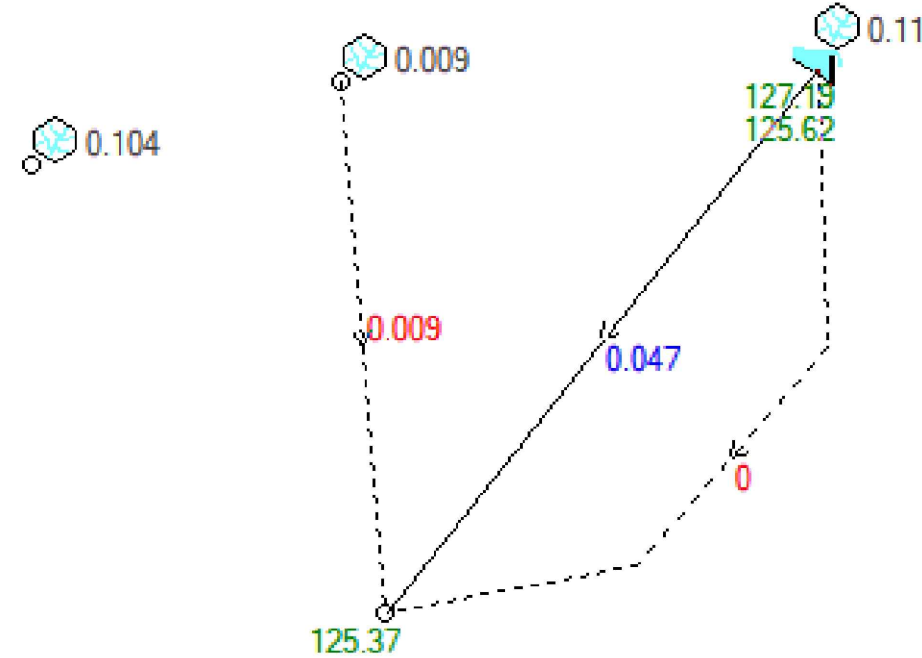
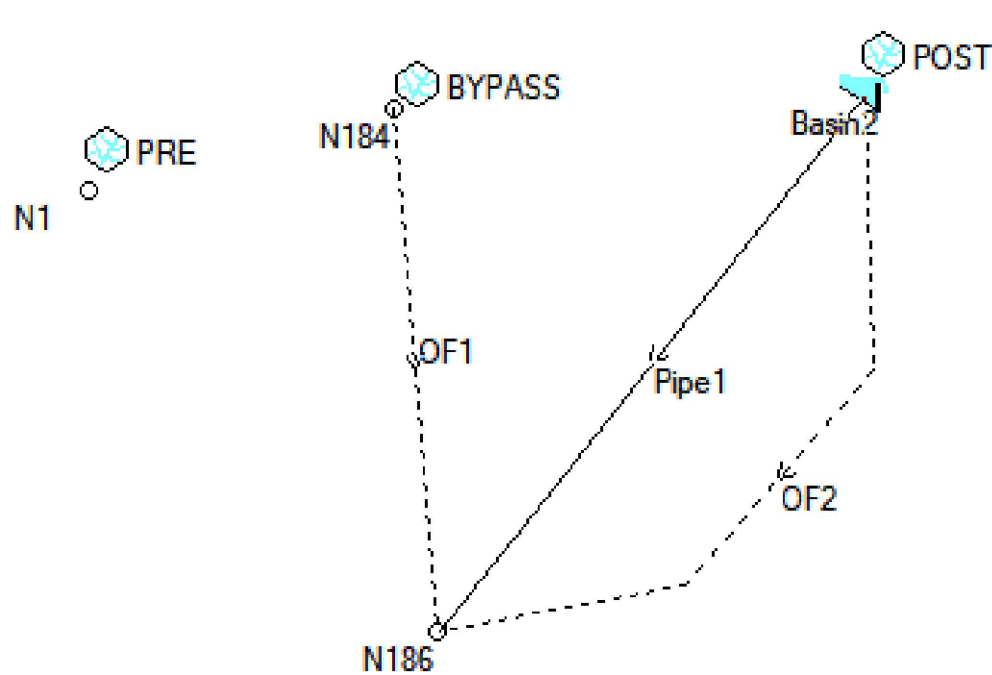


TYPICAL GPT DETAIL
not to scale



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										Designed By: Chij Shrestha MIEAust, CPEng, NER							
										Date: 10/09/2023 Issue: A							
										Reviewed By: C.L.A Job No: SW –152–2307							
										Scale: as shown (A3)							
A	ISSUED FOR DA		CS	10/09/2023													
Rev	Description		By	Date													

DRAINS MODEL FOR OSD AND RESULTS



Rainfall events	Pre Development flow	Post Development Flow				
		Without OSD	With OSD			OSD Volume
			Orifice flow	Bypass Flow	Total Flow Post Development	
% AEP	L/s	L/s	L/s	L/s	L/s	m³
20% AEP	41	60	28	4	32	18.73
5% AEP	71	85	37	6	43	31.31
1% AEP	104	119	47	9	56	49.3

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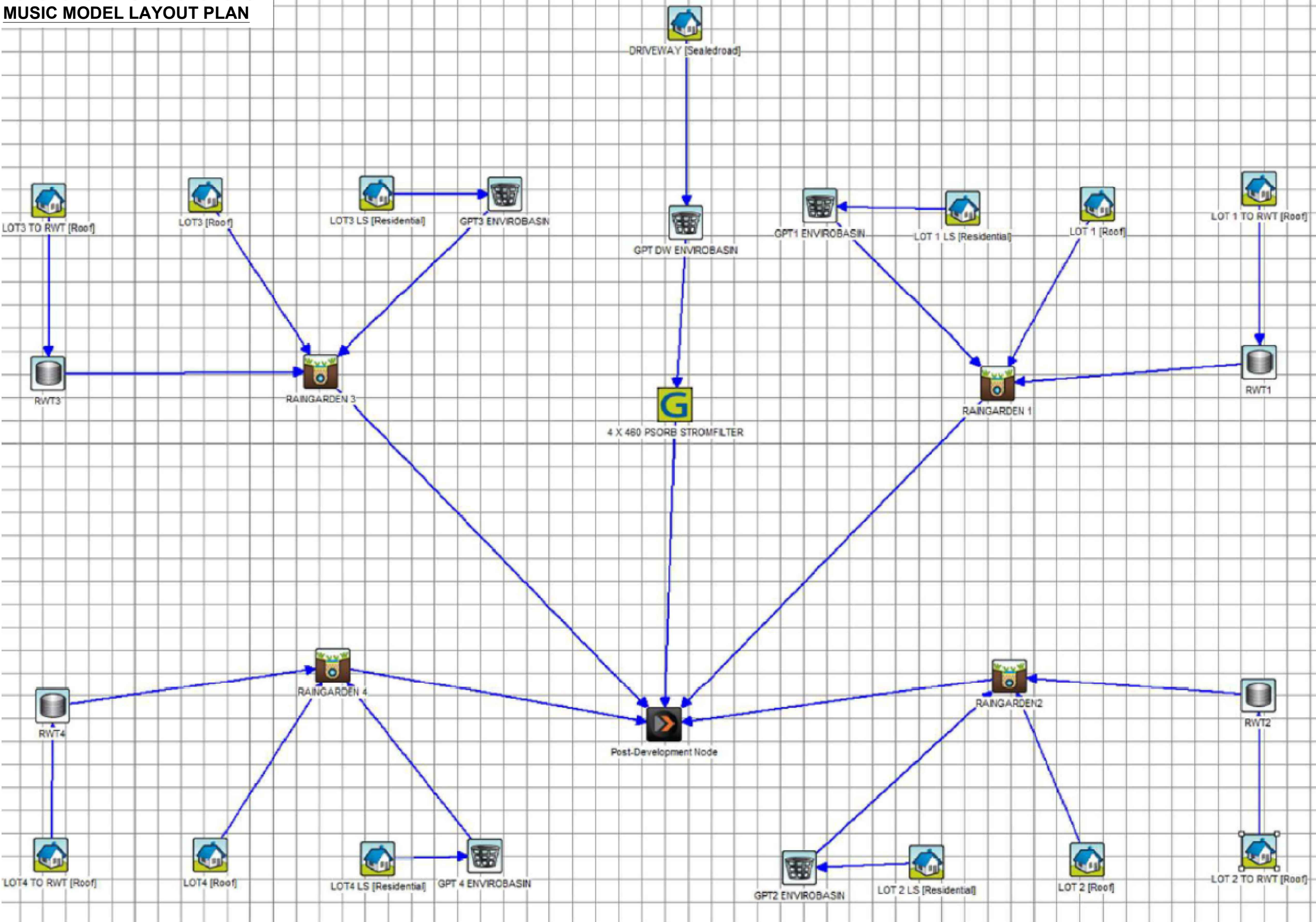


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Client: Maree Jaloussis Hayes
Project: Proposed Development at 107 IRIS STREET, BEACON HILL, NSW

Title: DRAINS MODEL SH10
Designed By: Chij Shrestha
MIEAust, CPEng, NER
Reviewed By: C.L.A
Scale: as shown (A3)
Date: 10/09/2023
Issue: A
Job No: SW -152-2307

MUSIC MODEL LAYOUT PLAN



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Client: Maree Jaloussis Hayes

Project: Proposed Development at
107 IRIS STREET, BEACON HILL, NSW

Title: MUSIC MODEL PLAN SH 11	
Designed By: Chij Shrestha MIEAust, CPEng, NER	Date: 10/09/2023 Issue: A
Reviewed By: C.L.A	Job No: SW -152-2307
Scale: as shown (A3)	