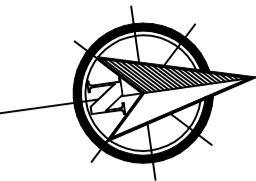


NOT FOR CONSTRUCTION



- NOTES:**
1. U.N.O REFER TO THE COVERPAGE 001 SERIES FOR DETAILED NOTES AND CALCULATIONS.
 2. ALL DIMENSIONS SHALL BE VERIFIED ONSITE BY BUILDER BEFORE COMMENCING WITH WORK.

SEDIMENT AND EROSION CONTROL NOTES:

1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.
2. GEOTECHNICAL ENGINEER IS TO PROVIDE SITE STABILITY REQUIREMENTS. CUTS ARE TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. AS A GUIDE, INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0m VERT. TO 1.7m HORIZ. (AS PER GEOTECHNICAL REPORT). ANY BATTERS GREATER THAN 1.0m VERT. TO 1.7m HORIZ. ARE TO BE ADEQUATELY SHORED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
6. CONTRACTOR TO MINIMISE DISTURBED AREAS.
7. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
8. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
9. ROADS AND FOOTPATH TO BE SWEEP DAILY.
10. CONSTRUCTION VEHICLES ARE TO LEAVE AND ENTER THE SITE OVER THE ALL WEATHER SURFACE CONSISTING OF COURSE CRUSHED STONE OR BLUE METAL CONSTRUCTED WITHIN THE FRONT SETBACK AREA OPPOSITE THE EXISTING FOOTPATH CROSSING UNLESS NOTED OTHERWISE.
11. EXCAVATION MACHINERY ARE TO BE UNLOADED AND LOADED UPON THIS ALL WEATHER SURFACE. CONCRETE PUMPS AND TRUCKS WILL ALSO UTILISE THE ALL WEATHER SURFACE FOR THEIR OPERATIONS.
12. MATERIALS WILL BE UNLOADED UPON THE ALL WEATHER SURFACE WITHIN THE FRONT SETBACK AREA BY MEANS OF CRANES MOUNTED ON THE BACK OF DELIVERY TRUCKS OR UNLOADED BY HAND. A MOBILE CRANE MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS.
13. SOME STOCKPILING OF TOPSOIL REMOVED FROM THE BUILDING AREA MAY BE STORED ON THE SITE DURING THE CONSTRUCTION WITHIN THE PROPERTY IN AN AREA ENCLOSED WITHIN THE SEDIMENT CONTROL FENCING.
14. ALL EXCAVATED & CONSTRUCTION MATERIALS, SHED, SKIP BINS, TEMPORARY WATER CLOSETS, SPOIL AND EQUIPMENT, ETC SHALL BE KEPT WITHIN THE PROPERTY. NO VEHICLES OR MACHINES SHALL BE KEPT WITHIN THE PROPERTY. NO VEHICLES OR MACHINES SHALL STAND ON COUNCIL FOOTPATHS FOR LARGE LENGTHS OF TIME.
15. ALL RUBBISH & RECYCLABLE MATERIAL SHALL BE STOCKPILED IN WASTE BINS IN THE AREA NOMINATED ON THE SITE PLAN WITHIN THE SITE BOUNDARY. PUBLIC PROPERTY SHALL BE KEPT FREE OF RUBBISH AND RECYCLABLES AT ALL TIMES ANY WASTE MATERIALS SHALL BE REGULARLY COLLECTED FROM THE SITE AND DISPOSED OF IN AN APPROPRIATE FASHION.
16. ANY BUILDING OR DEMOLITION WORKS INVOLVING ASBESTOS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT STANDARDS.
17. VEHICLES LEAVING THE SITE WILL DO SO VIA THE ALL WEATHER BALLAST DRIVEWAY MADE OF COURSE AGGREGATE OR SIMILAR LOCATED WITHIN THE FRONT SETBACK AREA OF THE DEVELOPMENT. ANY DIRT OR MATERIAL DEPOSITED ON THE ROAD RESERVE OR ROADWAY IS TO BE PROMPTLY CLEANED.
18. ANY EXCAVATED AREA REQUIRING SUPPORT WILL BE UNDERTAKEN BY THE OWNER USING STRUCTURALLY APPROVED RETAINING STRUCTURES.
19. ADEQUATE SAFETY SIGNAGE MUST BE ERECTED IN A PROMINENT POSITION ON THE WORK SITE, WARNING OF UNAUTHORIZED ENTRY TO WORK SITE AND INTENDING DANGERS.
20. SAFETY FENCES SHALL BE PROVIDED AROUND ALL BOUNDARIES UNLESS A CONTINUOUS STRUCTURALLY ADEQUATE FENCE PRESENTLY EXISTS. THE FENCING SHALL BE ADEQUATE TO RESTRICT PUBLIC ACCESS TO THE SITE WHEN BUILDING WORK IS NOT IN PROGRESS OR THE SITE IS UNOCCUPIED.
21. NOISE LEVELS SHALL NOT EXCEED COUNCIL REGULATION LEVELS. BUILDING AND DEMOLITION WORKS SHALL ONLY BE CARRIED OUT BETWEEN HOURS AND DAYS SPECIFIED BY COUNCIL.
22. GEOTEXTILE FABRIC SHALL BE PLACED ON THE INSIDE OF THE SITE FENCING PRIOR TO SITE DISTURBANCE TO PREVENT SEDIMENT WASHING FROM CLEARED AND DISTURBED AREAS OF THE SITE INTO THE STORMWATER SYSTEM. DURING CONSTRUCTION, UNLESS OTHERWISE NOTED, UNCONTAMINATED RUNOFF FROM CLEARED OR DISTURBED AREAS ARE TO BE DIRECTED TO A TEMPORARY SILT ARRESTOR PIT THAT SHALL BE PROVIDED WITHIN THE SITE AT THE STREET BOUNDARY PROCESSING SITE STORMWATER BEFORE IT IS DISCHARGED TO THE STREET DRAINAGE SYSTEM OR WATERCOURSE.
23. ALL TOP SOIL STRIPPED & STOCKPILED ONSITE IS TO BE PLACED IN NOMINATED AREAS ON PLAN OR TO COUNCIL REQUIREMENTS. ALL DISTURBED AREAS ARE TO BE STABILISED UPON THE COMPLETION OF BUILDING WORKS.
24. ALL SEDIMENT CONTROL STRUCTURES ARE TO BE CONTINUALLY MAINTAINED DURING CONSTRUCTION AND INSPECTED FOR STRUCTURAL DAMAGE AFTER EACH RAINFALL EVENT, WITH TRAPPED SEDIMENT BEING REMOVED TO THE TOPSOIL STOCKPILE.
25. WHERE THERE IS THE POTENTIAL OF SITE EROSION TO PRODUCE EXCESSIVE SEDIMENT RUNOFF, SUITABLE GEOTEXTILE BARRIERS SHALL BE PLACED TO ALLEVIATE THE RISK ACCORDINGLY. BARE SURFACES SHALL BE KEPT MOIST TO REDUCE DUST LEVELS. GEOTEXTILE FABRIC LOCATED ON THE INSIDE OF FENCES SHALL ALSO BE UTILISED FOR DUST CONTROL WHERE NECESSARY.
26. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:
 - a) LOCAL AUTHORITY REQUIREMENTS
 - b) EPA - POLLUTION CONTROL MANUAL FOR URBAN STORMWATER
 - c) LANDCOM NSW - MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION ("BLUE BOOK")
27. PRIOR TO DISCHARGE OF SITE STORMWATER, GROUNDWATER AND SEEPAGE WATER INTO COUNCIL'S STORMWATER SYSTEM, CONTRACTORS MUST UNDERTAKE WATER QUALITY TESTS IN CONJUNCTION WITH A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT OUTLining THE FOLLOWING:
 - a) COMPLIANCE WITH THE CRITERIA OF THE AUSTRALIAN AND NEW ZEALAND GUIDELINES FOR FRESH AND MARINE WATER QUALITY (2000)
 - b) IF SUBJECT TO THE ENVIRONMENTAL CONSULTANTS ADVICE, PROVIDE REMEDIAL MEASURES TO IMPROVE THE QUALITY OF WATER THAT IS TO BE DISCHARGED INTO COUNCIL'S STORMWATER DRAINAGE SYSTEM. THIS SHOULD INCLUDE COMMENTS FROM A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT CONFIRMING THE SUITABILITY OF THESE REMEDIAL MEASURES TO MANAGE THE WATER DISCHARGED FROM THE SITE INTO COUNCIL'S STORMWATER DRAINAGE SYSTEM. OUTLINING THE PROPOSED, ONGOING MONITORING, CONTINGENCY PLANS AND VALIDATION PROGRAM THAT WILL BE IN PLACE TO CONTINUALLY MONITOR THE QUALITY OF WATER DISCHARGED FROM THE SITE. THIS SHOULD OUTLINE THE FREQUENCY OF WATER QUALITY TESTING THAT WILL BE UNDERTAKEN BY A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT.

SCHEDULE OF WORKS:

1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.
2. CUTS TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0 m VERT. TO 1.7 m HORIZ. (AS PER GEOTECHNICAL REPORT). ANY BATTERS GREATER THAN 1.0 m VERT. TO 1.7 m HORIZ. ARE TO BE ADEQUATELY SHORED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.

NOTE:
THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THAT THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.

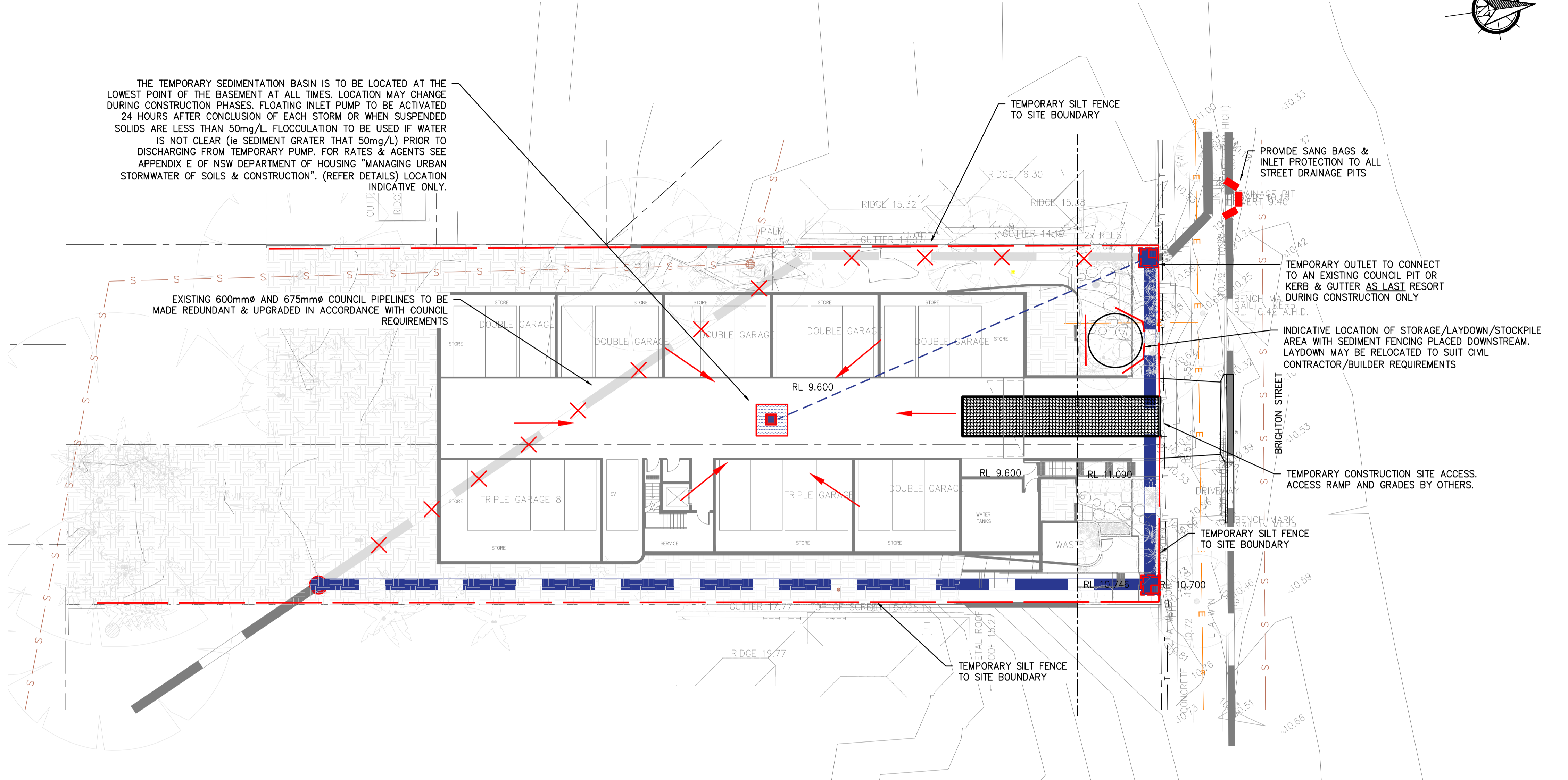
NOTE: PIT, PIPE & DOWNPIPE LOCATIONS ARE INDICATIVE ONLY & MAY VARY DUE TO CONSTRAINTS. IF IN DOUBT, ASK!

WARNING! CARE WHEN DIGGING AROUND TREE ROOTS. HAND DIGGING ONLY! MAY REQUIRE ARBORIST SUPERVISION.

EROSION CONTROL NOTES:

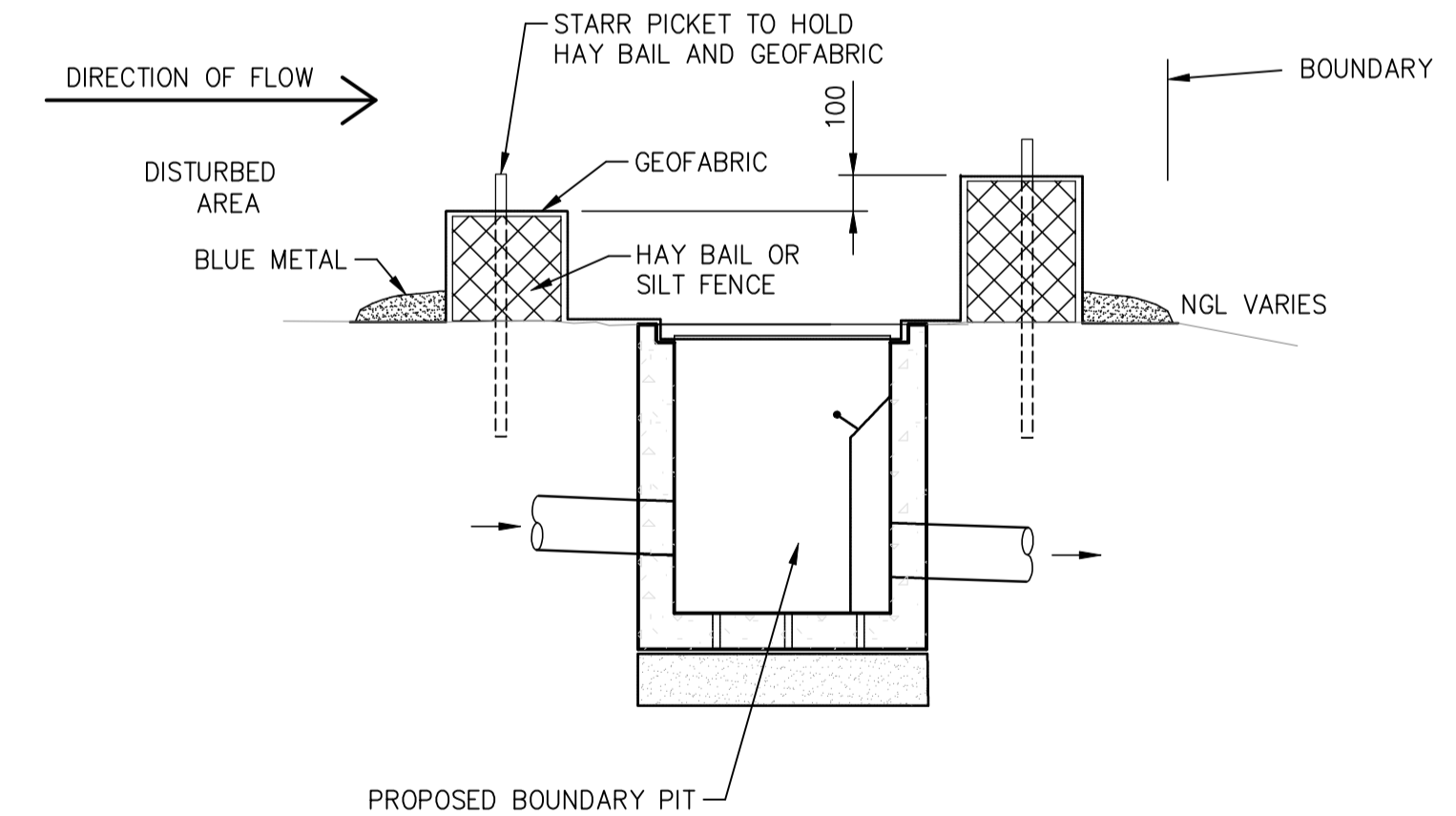
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4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
6. CONTRACTOR TO MINIMISE DISTURBED AREAS.
7. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
8. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
9. ROADS AND FOOTPATH TO BE SWEEP DAILY.

WARNING!
EXPOSED EXCAVATION FACES SHOULD BE EXPECTED TO RECEIVE SEEPAGE FROM SURFACE AND SUBSURFACE WATER FLOW EMANATING FROM THE SOIL. THIS CAN RESULT IN RELAXATION OF EXCAVATION FACES CAUSING INSTABILITY. THEREFORE, EXCAVATION FACES SHOULD NOT REMAIN OPEN FOR LONG PERIODS OF TIME UNLESS ASSESSED TO BE STABLE BY A GEOTECHNICAL PROFESSIONAL. AN EXCAVATION TRENCH SHOULD ALSO BE INSTALLED AT THE BASE OF EXCAVATION CUTS TO BELOW FLOOR SLAB LEVELS TO REDUCE THE RISK OF LONG-TERM DAMPNESS. TRENCHES, AS WELL AS ALL NEW BUILDING GUTTERS, DOWNPIPES AND STORMWATER INTERCEPT TRENCHES SHOULD BE CONNECTED TO A STORMWATER SYSTEM DESIGNED BY A HYDRAULIC ENGINEER WHICH DISCHARGES TO THE COUNCIL'S STORMWATER SYSTEM OFF SITE.



SITE SEDIMENT & EROSION CONTROL PLAN

SCALE = 1 : 200



SEDIMENT TRAP CONSTRUCTION SPECIFICATION:

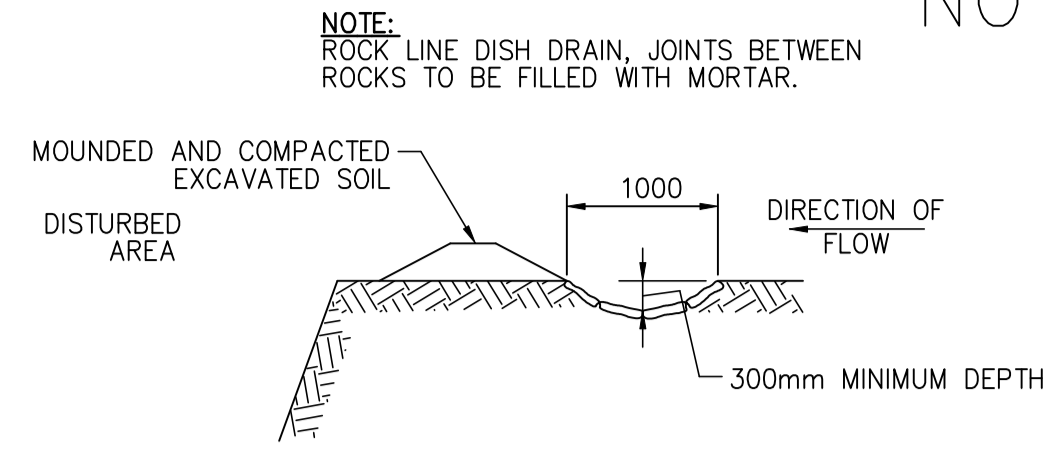
- 1 - SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- 2 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
- 3 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER, THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
- 4 - THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



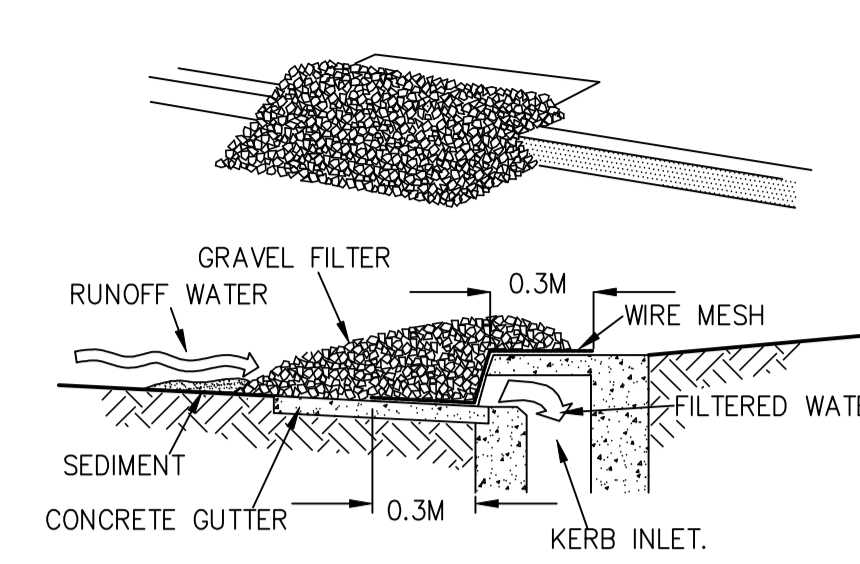
A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION	Title: DESIGN	Initial: R.M.	Date: 20.07.2023	<p>STORMWATER • CIVIL • FLOOD MITIGATION</p> <p>ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au</p>	Architect: WALSH ARCHITECTS	Project and Drawing Title: 52-54 BRIGHTON STREET, FRESHWATER		Local Council: NORTHERN BEACHES	
Rev:	Date:	Description:	Reviewed:	Date:	Checked:		Client: LAXLAND 3 PTY LTD	SEDIMENT & EROSION CONTROL PLAN		Project Number: 230203	Drawing ID: SE100

- NOTES:**
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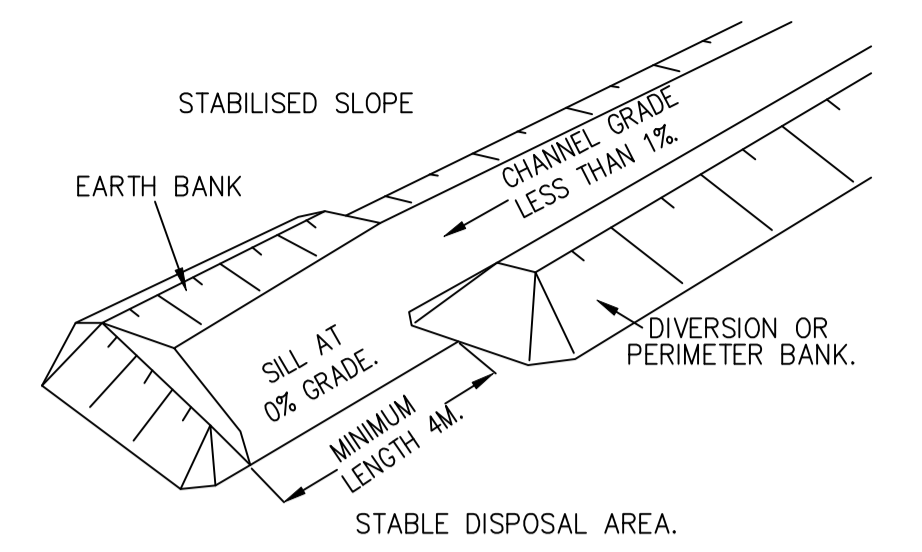
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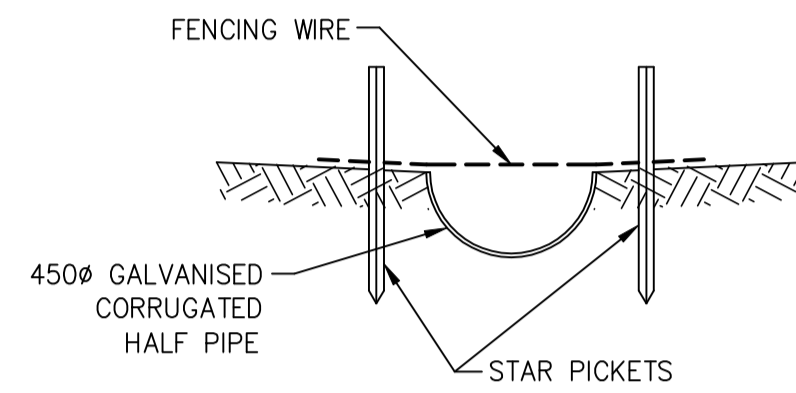
CATCH DRAIN – ROCK LINED
SCALE = N.T.S.



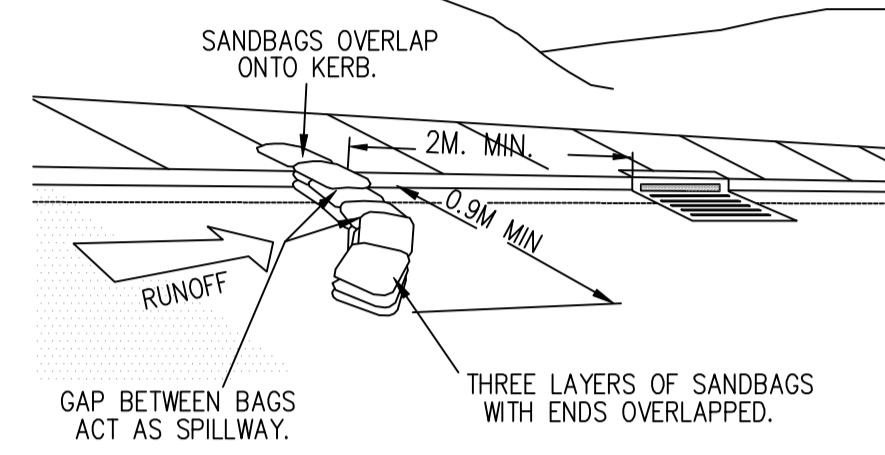
GRAVEL KERB INLET SEDIMENT TRAP
SCALE = N.T.S.



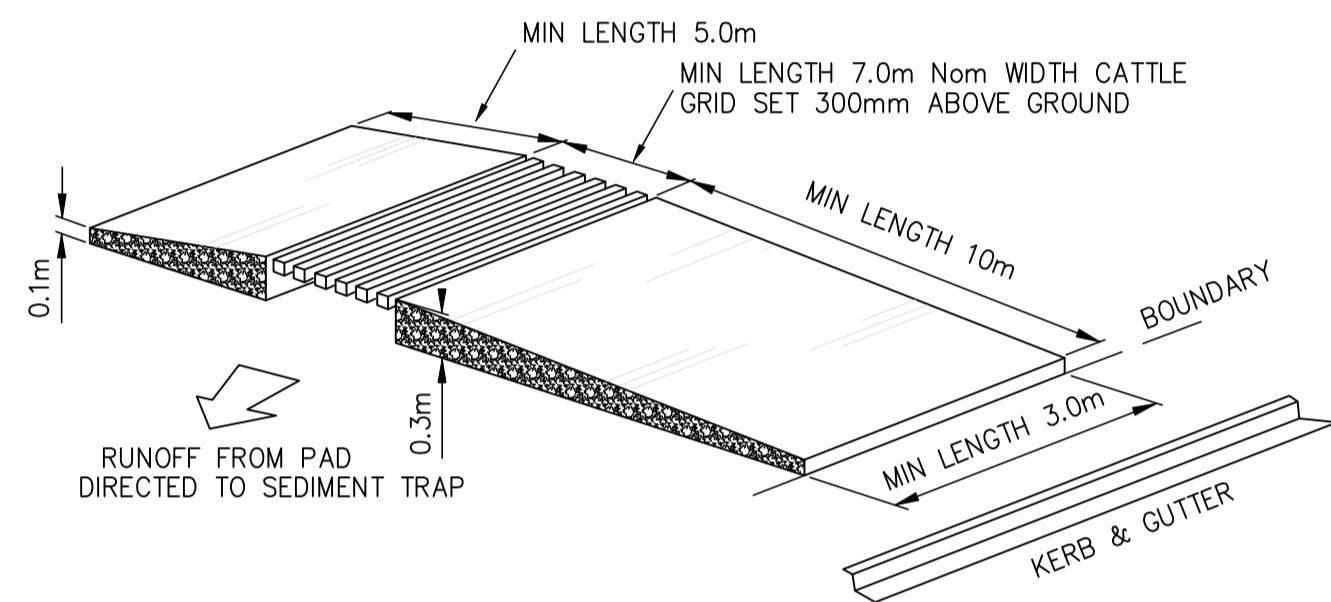
TYPICAL SPREADER DETAIL
SCALE = N.T.S.



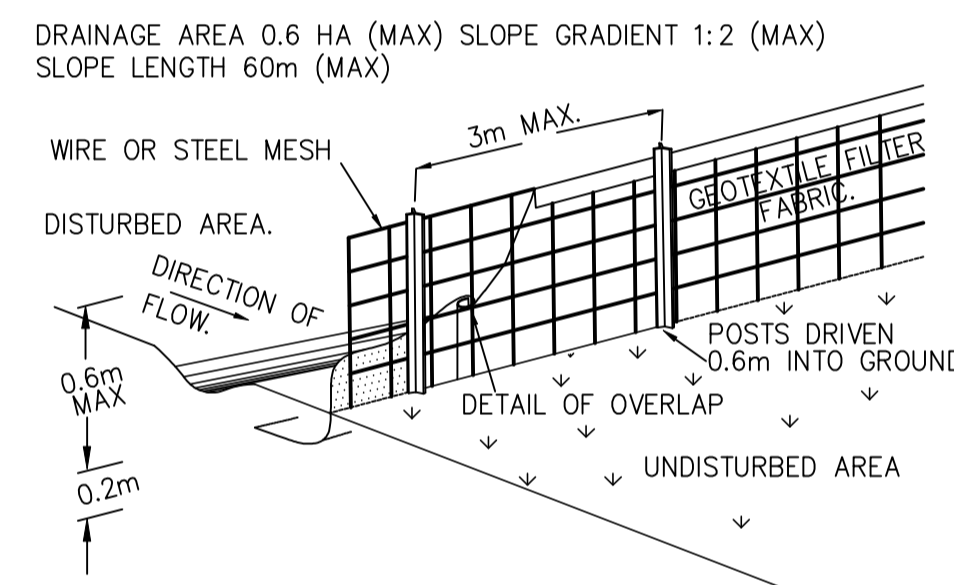
TEMPORARY DISH DRAIN
SCALE = N.T.S.



SEDIMENT TRAP SANDBAGS AT KERB INLETS
SCALE = N.T.S.

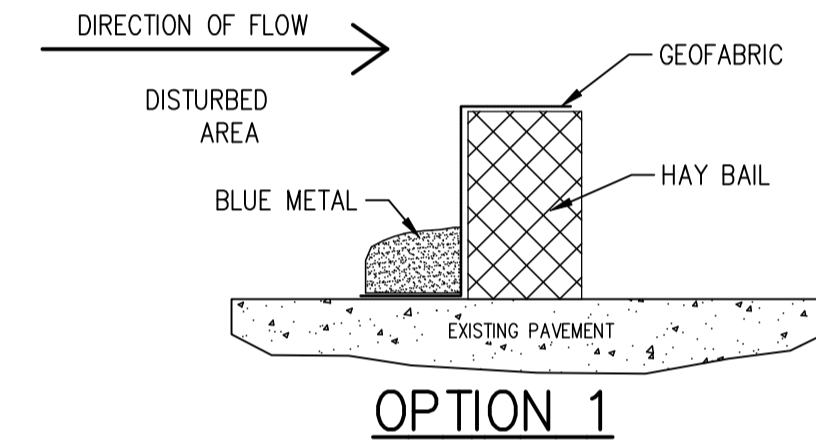


TYPICAL TEMPORARY CONSTRUCTION ENTRY & EXIT DETAIL (TYPE 2)

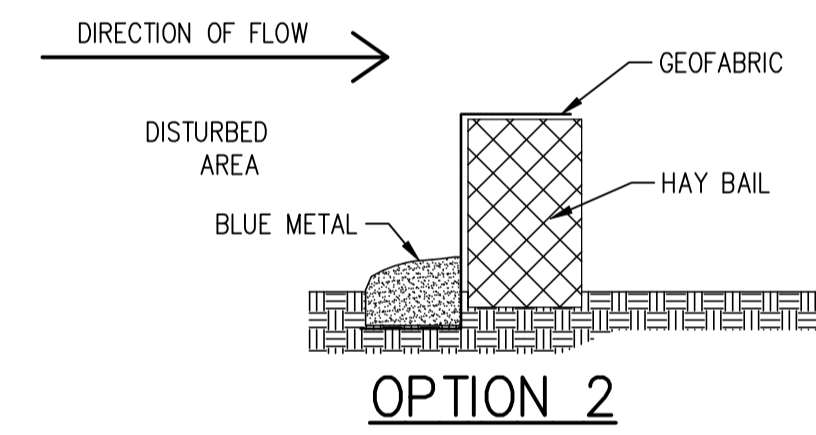


TYPICAL TEMPORARY SEDIMENT (SILT) FENCE

- NOTE:**
 1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
 2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
 3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 4. BACKFILL TRENCH OVER BASE OF FABRIC.
 5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
 6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.



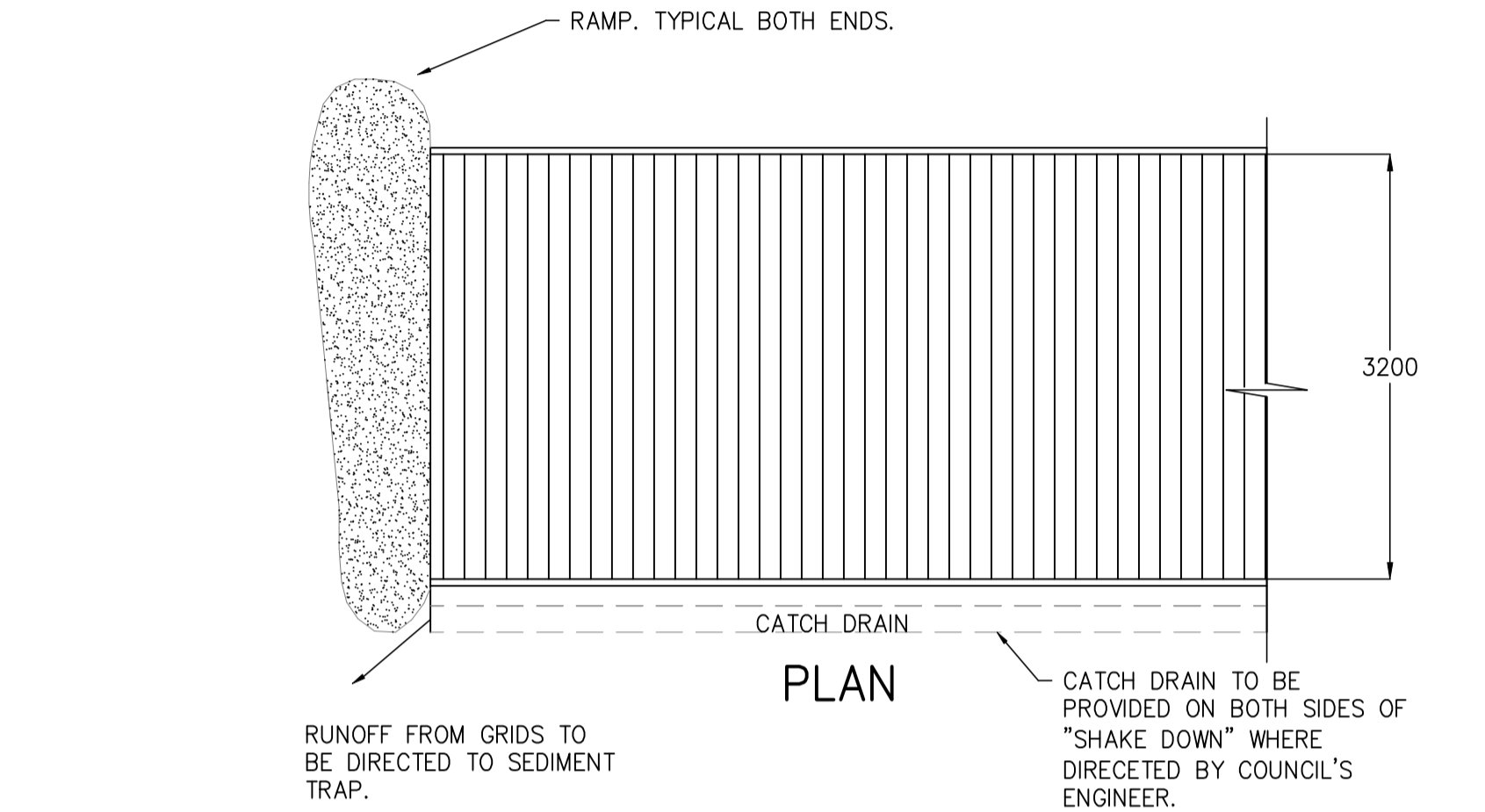
OPTION 1



OPTION 2

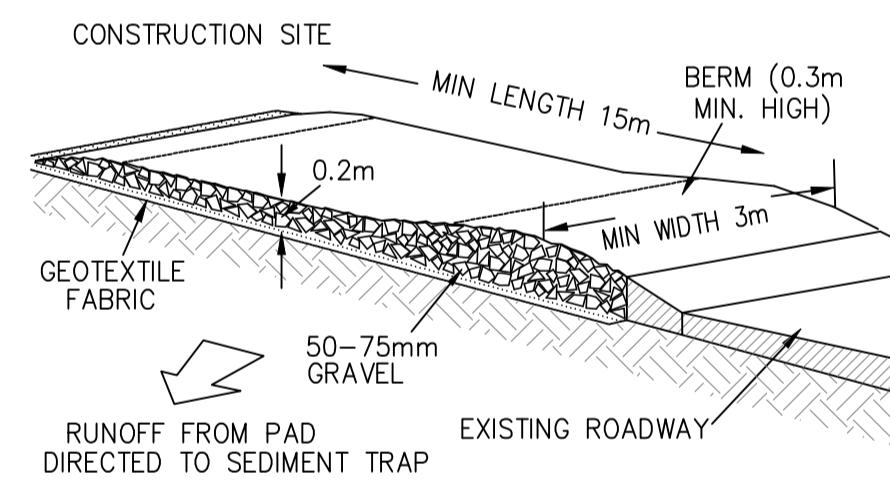
REMOVABLE HAY BAIL DETAIL
SCALE = N.T.S.

- NOTE:**
 1. ALL EROSION AND SEDIMENT CONTROL ARE MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
 2. CONTRACTOR TO MINIMISE DISTURBED AREAS WHERE POSSIBLE.
 3. ALL STOCKPILES ARE TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
 4. DRAINAGE IS TO BE CONNECTED TO SITE STORMWATER DRAINAGE SYSTEM AS SOON AS POSSIBLE.
 5. ROADS AND FOOTPATH AREA TO BE SWEEP DAILY.
 6. ALL WORKS ARE TO COMPLY WITH LOCAL COUNCIL SPECIFICATIONS.



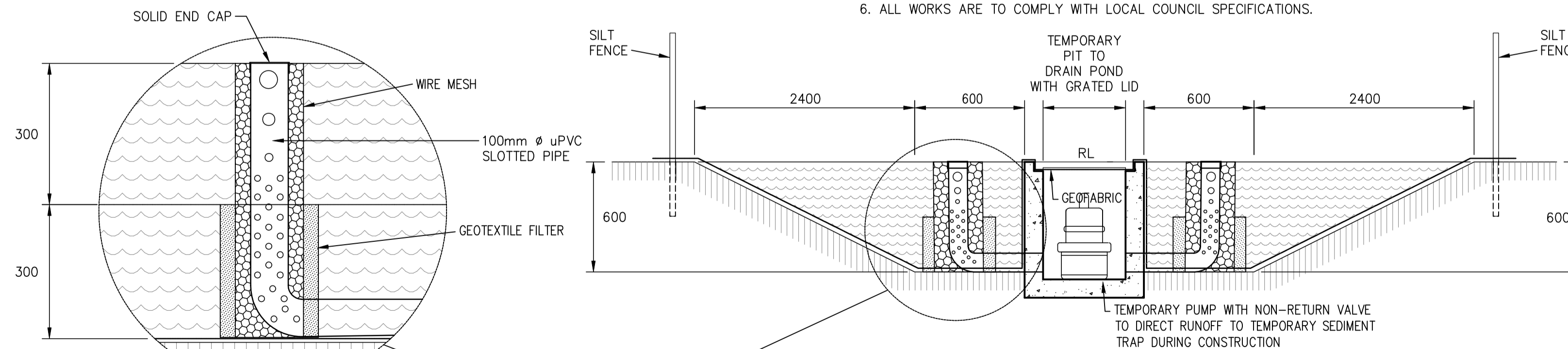
CATTLE GRID ENTRY & EXIT ALTERNATIVE

SCALE = 1:20



TYPICAL TEMPORARY CONSTRUCTION ENTRY & EXIT DETAIL (TYPE 1)

- NOTE:**
 1. STRIP TOPSOIL AND LEVEL SITE.
 2. COMPACT SUBGRADE AS REQUIRED.
 3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
 4. CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3m.
 5. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.
 6. OR CONSTRUCT A CATTLE GRID LOCATED AT ANY POINT WHERE TRAFFIC ENTERS OR LEAVES THE SITE.



TEMPORARY SEDIMENT BASIN (SETTLING POND) TYPICAL DETAILS

SCALE = 1:20

NOTE:
 THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THAT THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.

- NOTES:**
 1. EXCAVATE AREA APPROX. 3.3m WIDE BY 2.2m LENGTH. THE FLOOR OF THE EXCAVATION MUST BE FLAT, WITHOUT HIGH POINTS. AN EXCAVATED DEPTH OF 100mm ACCOMMODATES A BEDDING LAYER 50mm THICK AND GRID SET DOWN OF 50mm. THE LATTER MINIMISES SILT UP OF GRID AND SLOWS DOWN TRAFFIC.
 2. BEDDING MATERIAL SHALL BE SAND OR OTHER SUITABLE APPROVED MATERIAL. BEDDING MATERIAL SHALL BE EVENLY RAKED OVER FLOOR OR EXCAVATION TO A DEPTH SLIGHTLY MORE THAN 50mm. ENSURE BEDDING IS LEVEL IN BOTH DIRECTIONS.
 3. LOWER CATTLE GRID ONTO THE PREPARED BASE. ENSURE THAT NO PART OF THE UNIT IS SITTING ON ANY HIGH POINTS.
 4. BACKFILL AND COMPACT AROUND GRID. GRADE EXCAVATED ROAD MATERIAL UP TO GRID EACH SIDE TO FORM A RAMP. IF DEPRESSIONS OCCUR ON THESE RAMPS WITH USE, ADD ADDITIONAL MATERIAL.



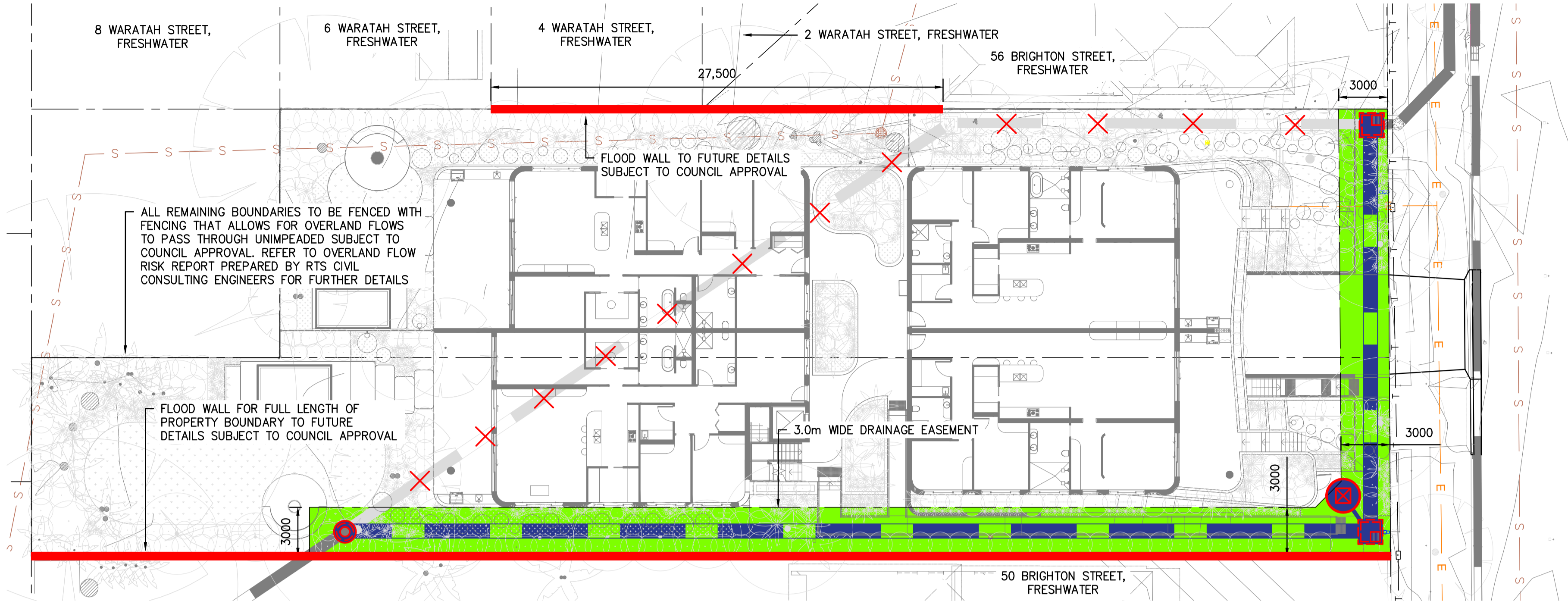
A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION	Title: DESIGN	Initial: R.M.	Date: 20.07.2023	 STORMWATER • CIVIL • FLOOD MITIGATION ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au	Architect: WALSH ARCHITECTS	Project and Drawing Title: 52-54 BRIGHTON STREET, FRESHWATER SEDIMENT & EROSION CONTROL PLAN DETAILS	Local Council: NORTHERN BEACHES	
A		Approved by: Rhys Mikhail	DRAWN	S.M.	20.07.2023		Cient: LAXLAND 3 PTY LTD	Project Number: 230203	Drawing ID: SE200	Issue: A
Rev:	Date:	Description:	CHECKED	R.M.	20.07.2023		APPROVED	R.M.	20.07.2023	

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LEGEND

- STORMWATER PIT
- NEW STORMWATER PIPE
- STORMWATER PIPE FLOW DIRECTION
- NEW STORMWATER PIPE TO RAINWATER TANK
- NEW STORMWATER PIPE TO BIO-RETENTION PLANTERS
- BOUNDARY LINE
- EXISTING SEWER MAIN
- EXISTING OVERHEAD POWER LINES
- EXISTING ELECTRICITY LINE
- EXISTING WATER MAINS
- EXISTING TELECOMMUNICATIONS LINE
- EXISTING GAS MAINS
- DENOTES DOWNPIPE
- DENOTES SIZE OF DOWNPIPE
- DP1 DOWNPIPE TO RWT1/RWT2
- DP2 DOWNPIPE TO SQID1
- GD1 150mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- GD2 100mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- PP1 6,000L PUMP OUT PIT
- AH1/AH2 600x600 GRATED ACCESS HATCH
- FD1 100#/80 RAINWATER OUTLET (SPS TRUFLO)
- FD2 100#/80 RAINWATER OUTLET WITH PLANTER ADAPTOR (SPS TRUFLO)
- O/F PROVIDE OVERFLOW SPS SCUPPER DRAIN 80mm
- RWO RAINWATER OUTLET
- RWT1/RWT2 15,000L MIN. TOTAL VOLUME RAINWATER TANKS (SQID5)
- O/F OVERFLOW POINT - TO ARCHITECTURAL DETAILS
- FDB1 100#mm BASEMENT PERIMETER DRAIN
- DR1 100mm MIN. WIDE INTERNAL OPEN DISH DRAIN
- SQID1 'SPEL' STORMSACK OR APPROVED EQUIVALENT & 5m² INFILTRATION
- SQID2 12m² BIO-RETENTION PLANTER
- SQID3 21m² BIO-RETENTION PLANTER
- SQID4 'SPEL' STORMSACK OR APPROVED EQUIVALENT

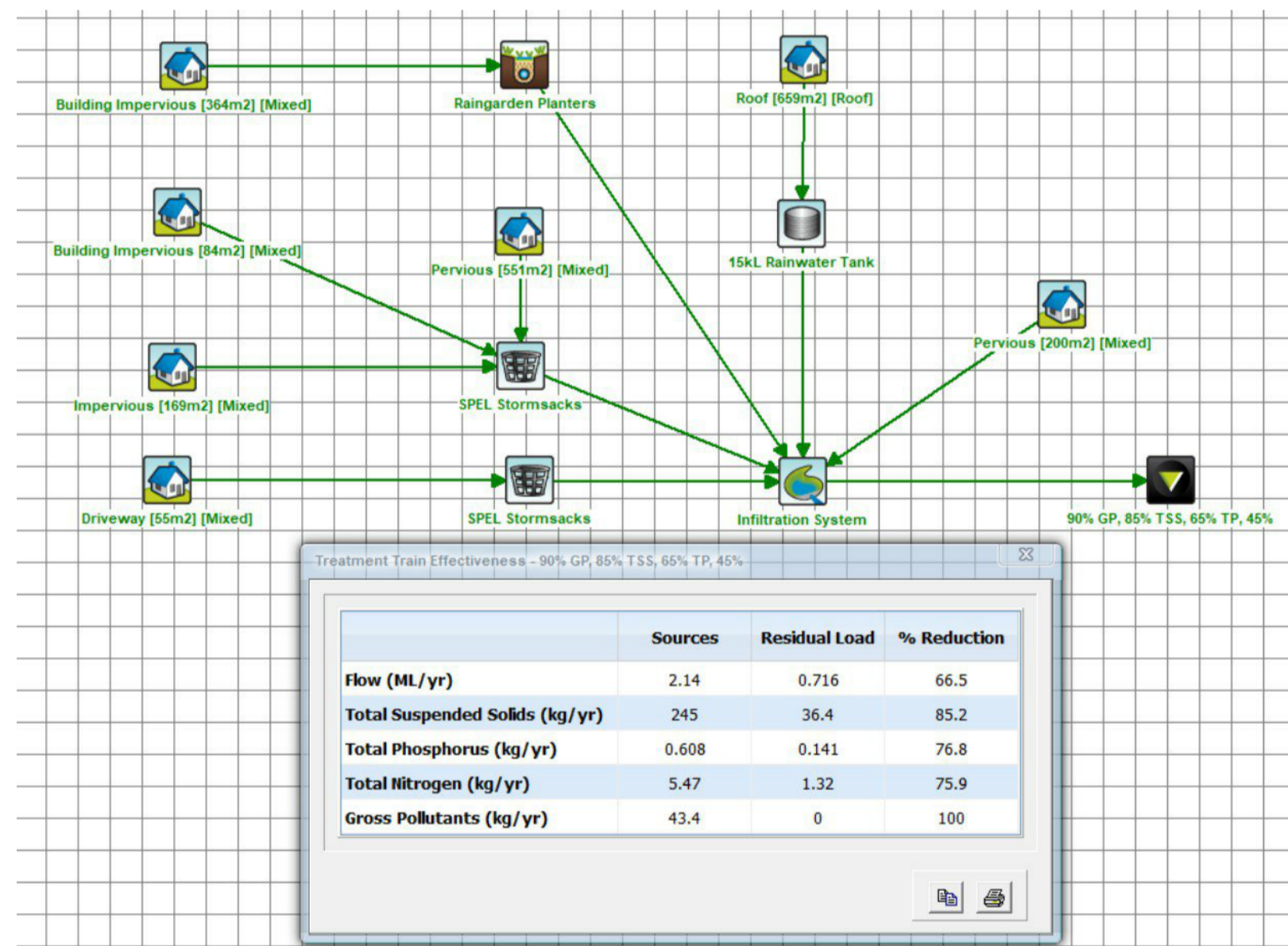
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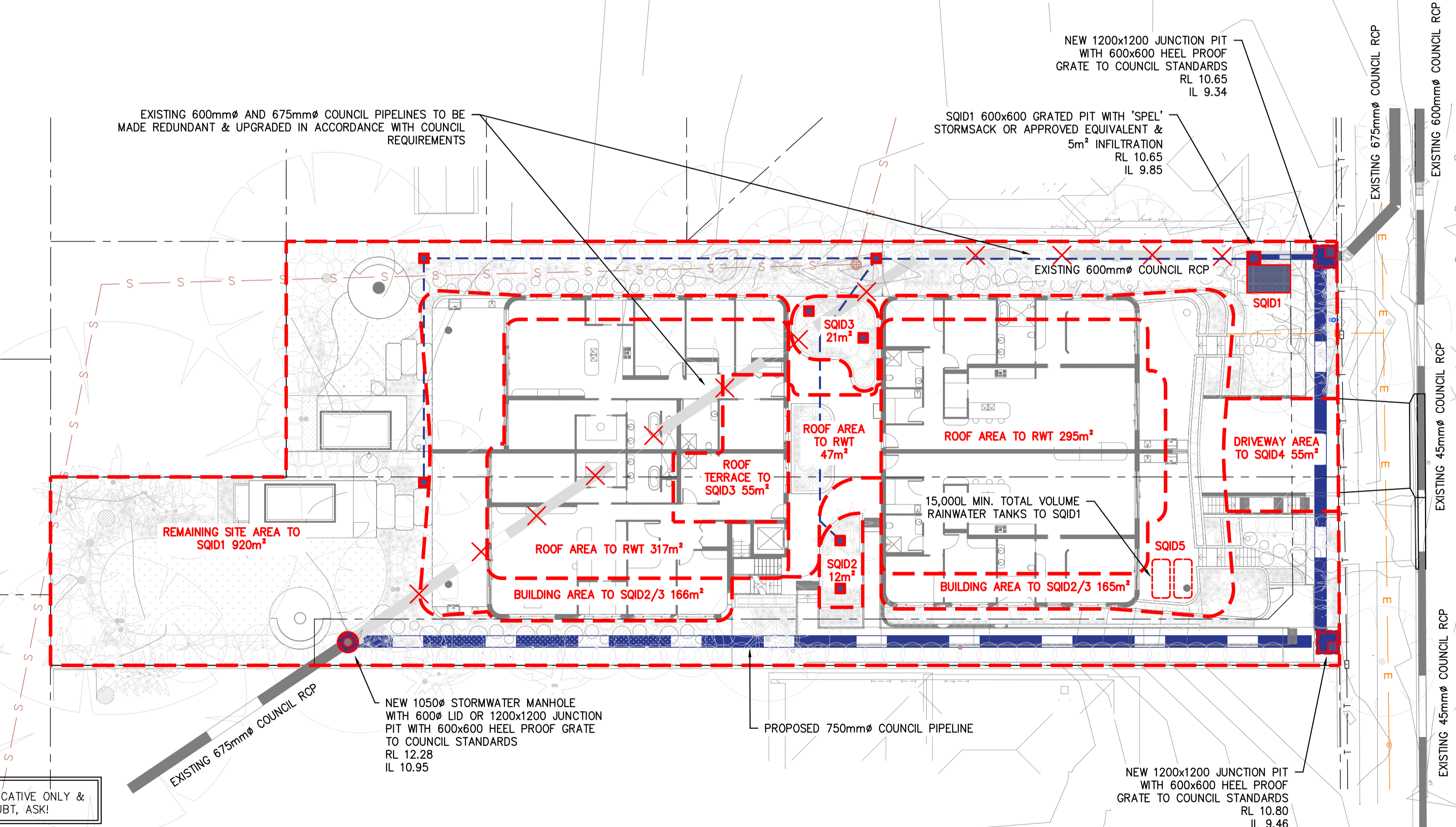
PROPOSED FLOOD WALLS & EASEMENT PLAN

SCALE = 1 : 200

WARNING!
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MUSIC MODEL SUMMARY



SITE STORMWATER CATCHMENT PLAN

SCALE = 1 : 200

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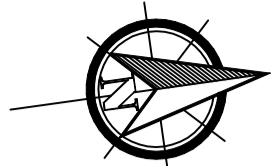
NOTE: PIT, PIPE & DOWNPIPE LOCATIONS ARE INDICATIVE ONLY & MAY VARY DUE TO CONSTRAINTS. IF IN DOUBT, ASK!

WARNING! CARE WHEN DIGGING AROUND TREE ROOTS. HAND DIGGING ONLY! MAY REQUIRE ARBORIST SUPERVISION.



A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION		Title:	Initial:	Date:		Architect:	Project and Drawing Title:		Local Council:	
B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	R.M	DESIGN	R.M	09.05.2023		WALSH ARCHITECTS	52-54 BRIGHTON STREET, FRESHWATER SITE STORMWATER CATCHMENT PLAN, EASEMENT & FLOOD WALL PLAN		NORTHERN BEACHES	
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	R.M	DRAWN	S.M	09.05.2023		Client:			Project Number:	Drawing ID:
Rev:	Date:	Description:	Reviewed:	CHECKED	R.M	18.05.2023		LAXLAND 3 PTY LTD			230203	SW100
		Approved by:		APPROVED	R.M	18.05.2023	The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.				Issue:	B

NOT FOR CONSTRUCTION



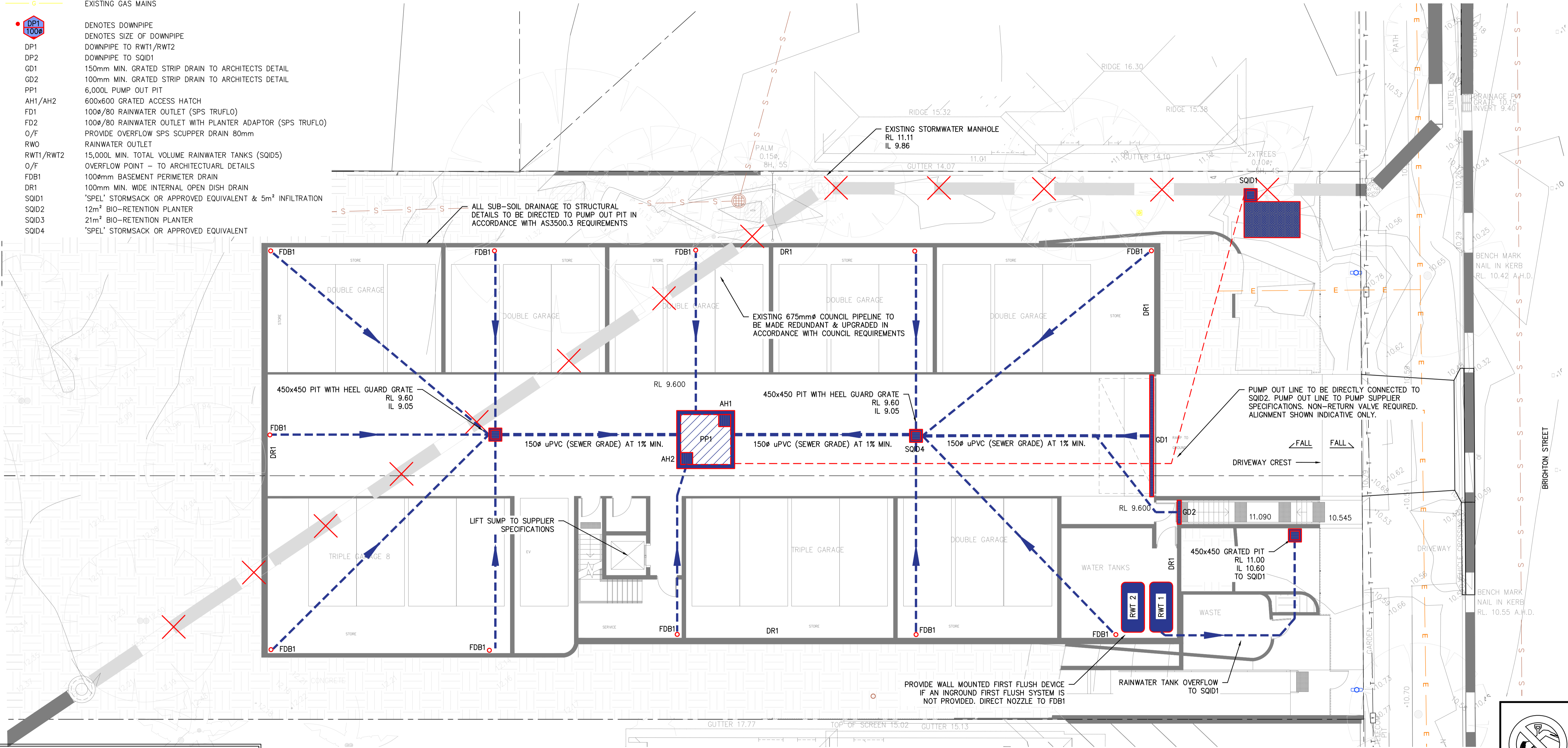
NOTES:
 1. U.N.O REFER TO THE COVERPAGE 001 SERIES FOR DETAILED NOTES AND CALCULATIONS.
 2. ALL DIMENSIONS SHALL BE VERIFIED ONSITE BY BUILDER BEFORE COMMENCING WITH WORK.

LEGEND

- STORMWATER PIT
- NEW STORMWATER PIPE
- STORMWATER PIPE FLOW DIRECTION
- NEW STORMWATER PIPE TO RAINWATER TANK
- NEW STORMWATER PIPE TO BIO-RETENTION PLANTERS
- BOUNDARY LINE
- EXISTING SEWER MAIN
- EXISTING OVERHEAD POWER LINES
- EXISTING ELECTRICITY LINE
- EXISTING WATER MAINS
- EXISTING TELECOMMUNICATIONS LINE
- EXISTING GAS MAINS
- DENOTES DOWNPIPE
- DENOTES SIZE OF DOWNPIPE
- DP1 DOWNPIPE TO RWT1/RWT2
- DP2 DOWNPIPE TO SQID1
- GD1 150mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- GD2 100mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- PP1 6,000L PUMP OUT PIT
- AH1/AH2 600x600 GRATED ACCESS HATCH
- FD1 100#/80 RAINWATER OUTLET (SPS TRUFLO)
- FD2 100#/80 RAINWATER OUTLET WITH PLANTER ADAPTOR (SPS TRUFLO)
- O/F PROVIDE OVERFLOW SPS SCUPPER DRAIN 80mm
- RWO RAINWATER OUTLET
- RWT1/RWT2 15,000L MIN. TOTAL VOLUME RAINWATER TANKS (SQID5)
- O/F OVERFLOW POINT - TO ARCHITECTURAL DETAILS
- FDB1 100#mm BASEMENT PERIMETER DRAIN
- DR1 100mm MIN. WIDE INTERNAL OPEN DISH DRAIN
- SQID1 'SPEL' STORMSACK OR APPROVED EQUIVALENT & 5m² INFILTRATION
- SQID2 12m² BIO-RETENTION PLANTER
- SQID3 21m² BIO-RETENTION PLANTER
- SQID4 'SPEL' STORMSACK OR APPROVED EQUIVALENT

WARNING!
 EXPOSED EXCAVATION FACES SHOULD BE EXPECTED TO RECEIVE SEEPAGE FROM SURFACE AND SUBSURFACE WATER FLOW EMANATING FROM THE SOIL. THIS CAN RESULT IN RELAXATION OF EXCAVATION FACES CAUSING INSTABILITY. THEREFORE, EXCAVATION FACES SHOULD NOT REMAIN OPEN FOR LONG PERIODS OF TIME UNLESS ASSESSED TO BE STABLE BY A GEOTECHNICAL PROFESSIONAL. AN EXCAVATION TRENCH SHOULD ALSO BE INSTALLED AT THE BASE OF EXCAVATION CUTS TO BELOW FLOOR SLAB LEVELS TO REDUCE THE RISK OF LONG-TERM DAMPNES. TRENCHES, AS WELL AS ALL NEW BUILDING GUTTERS, DOWNPIPES AND STORMWATER INTERCEPT TRENCHES SHOULD BE CONNECTED TO A STORMWATER SYSTEM DESIGNED BY A HYDRAULIC ENGINEER WHICH DISCHARGES TO THE COUNCIL'S STORMWATER SYSTEM OFF SITE.

DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR Width	RECTANGULAR Length	CIRCULAR Diameter ϕ
≤ 450	350	350	-
≤ 600	450	450	600
$> 600 \leq 900$	600	600	900
$> 900 \leq 1200$	600	900	1000
> 1200	900	900	1000



NOTE:
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WARNING! CARE WHEN DIGGING AROUND TREE ROOTS. HAND DIGGING ONLY! MAY REQUIRE ARBORIST SUPERVISION.

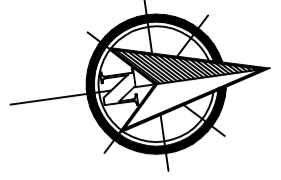
BASEMENT STORMWATER MANAGEMENT PLAN

SCALE = 1 : 100



A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION		Title:	Initial:	Date:		Architect:	Project and Drawing Title:		Local Council:	
B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	R.M	DESIGN	R.M	09.05.2023		WALSH ARCHITECTS	52-54 BRIGHTON STREET, FRESHWATER		NORTHERN BEACHES	
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	R.M	DRAWN	S.M	09.05.2023	STORMWATER • CIVIL • FLOOD MITIGATION	Client:	BASEMENT STORMWATER MANAGEMENT PLAN		Project Number:	Drawing ID:
Rev:	Date:	Description:	Reviewed:	CHECKED	R.M	18.05.2023	ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au		LAXLAND 3 PTY LTD	STORMWATER MANAGEMENT PLAN		230203
		Date : 05.08.23		APPROVED	R.M	18.05.2023	The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.		Issue:		B	

NOT FOR CONSTRUCTION



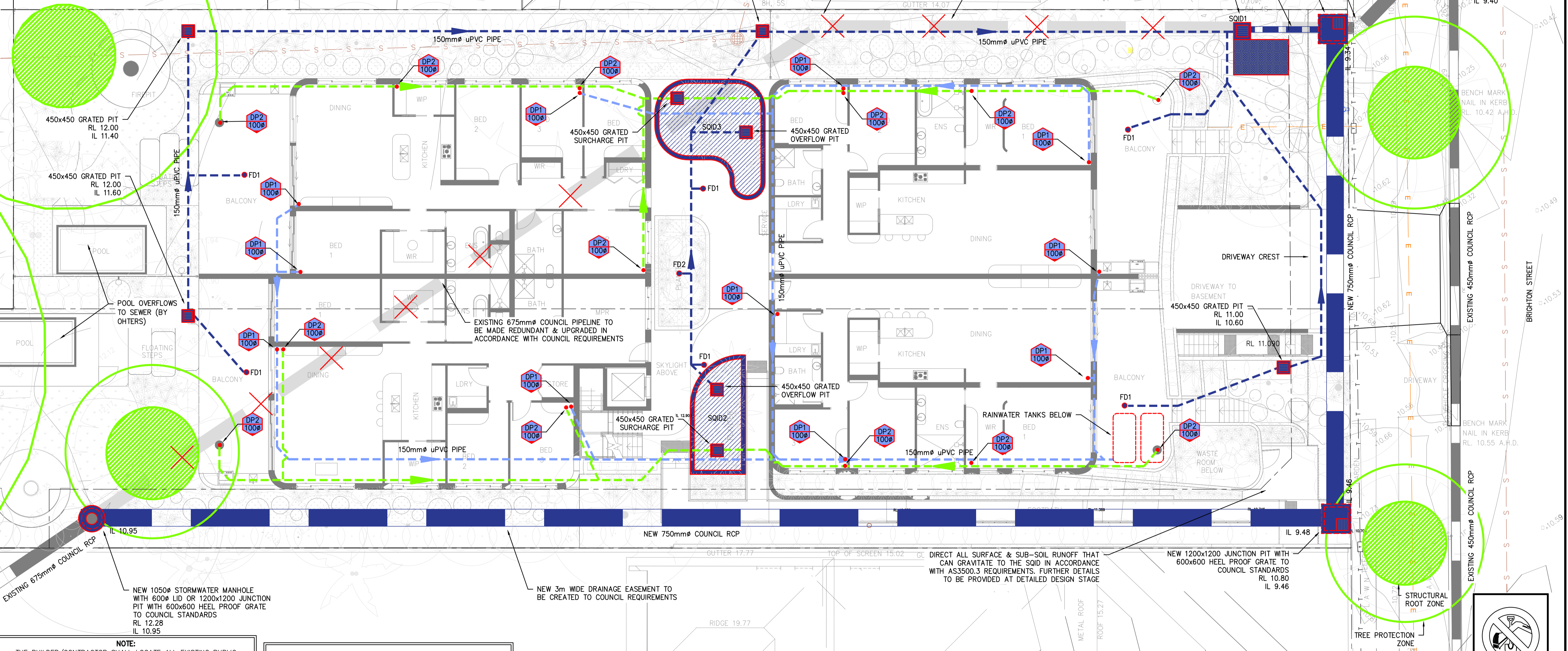
- NOTES:**
1. U.N.O REFER TO THE COVERPAGE 001 SERIES FOR DETAILED NOTES AND CALCULATIONS.
 2. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.

LEGEND

- STORMWATER PIT
- NEW STORMWATER PIPE
- STORMWATER PIPE FLOW DIRECTION
- NEW STORMWATER PIPE TO RAINWATER TANK
- NEW STORMWATER PIPE TO BIO-RETENTION PLANTERS
- BOUNDARY LINE
- EXISTING SEWER MAIN
- EXISTING OVERHEAD POWER LINES
- EXISTING ELECTRICITY LINE
- EXISTING WATER MAINS
- EXISTING TELECOMMUNICATIONS LINE
- EXISTING GAS MAINS
- DP1 1000 DENOTES DOWNPIPE
- DP1 DENOTES SIZE OF DOWNPIPE
- DP1 DOWNPIPE TO RWT1/RWT2
- DP2 DOWNPIPE TO SQID1
- GD1 150mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- GD2 100mm MIN. GRATED STRIP DRAIN TO ARCHITECTS DETAIL
- PP1 6,000L PUMP OUT PIT

LEGEND

- AH1/AH2 600x600 GRATED ACCESS HATCH
- FD1 100x80 RAINWATER OUTLET (SPS TRUFLO)
- FD2 100x80 RAINWATER OUTLET WITH PLANTER ADAPTOR (SPS TRUFLO)
- O/F PROVIDE OVERFLOW SPS SCUPPER DRAIN 80mm
- RWO RAINWATER OUTLET
- RWT1/RWT2 15,000L MIN. TOTAL VOLUME RAINWATER TANKS (SQID5)
- O/F OVERFLOW POINT - TO ARCHITECTURAL DETAILS
- FDB1 100mm BASEMENT PERIMETER DRAIN
- DR1 100mm MIN. WIDE INTERNAL OPEN DISH DRAIN
- SQID1 'SPEL' STORMSACK OR APPROVED EQUIVALENT & 5m² INFILTRATION
- SQID2 12m² BIO-RETENTION PLANTER
- SQID3 21m² BIO-RETENTION PLANTER
- SQID4 'SPEL' STORMSACK OR APPROVED EQUIVALENT



GROUND STORMWATER MANAGEMENT PLAN

SCALE = 1 : 100

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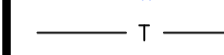






WARNING! CARE WHEN DIGGING AROUND TREE ROOTS. HAND DIGGING ONLY! MAY REQUIRE ARBORIST SUPERVISION.



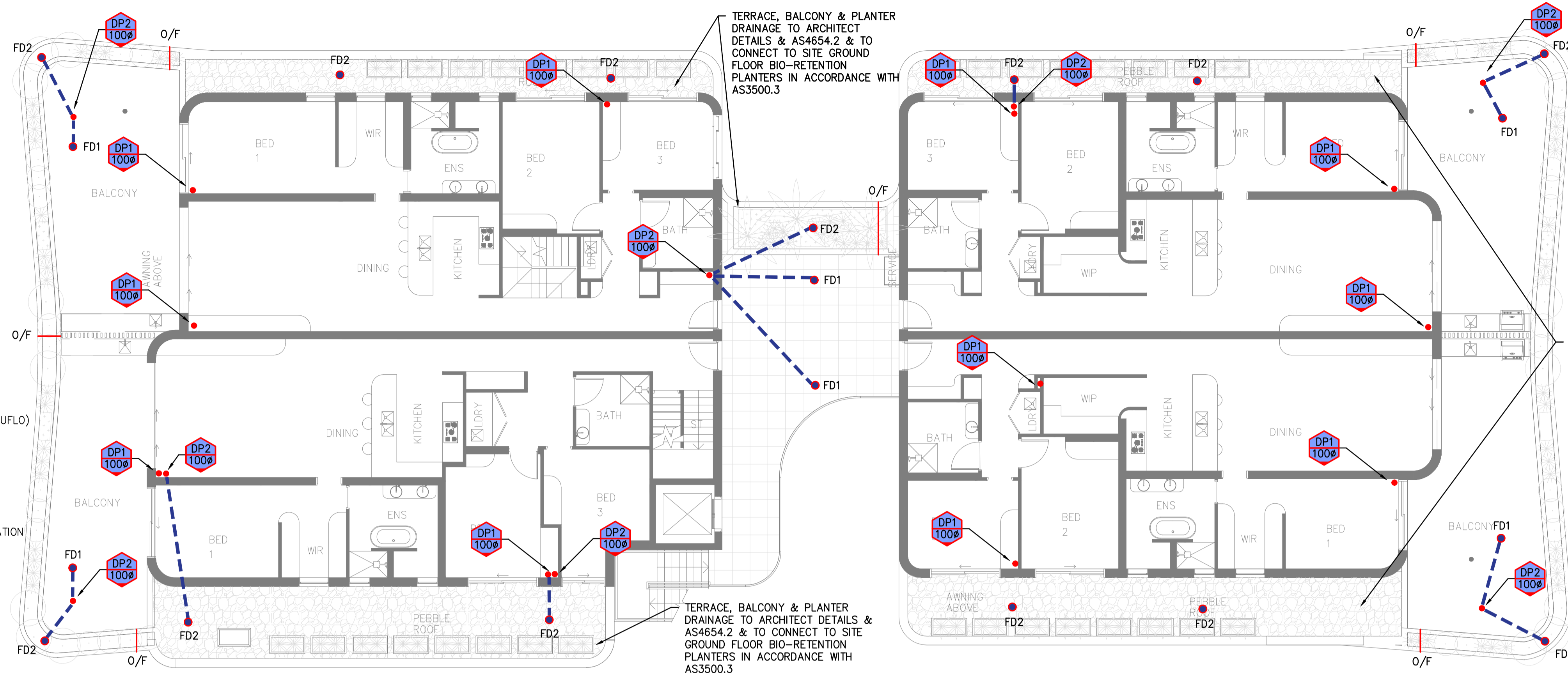
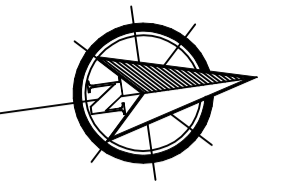
A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION	Title: DESIGN	Initial: R.M.	Date: 09.05.2023	<p>STORMWATER • CIVIL • FLOOD MITIGATION</p> <p>ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au</p> <p>The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.</p>	Architect: WALSH ARCHITECTS	Project and Drawing Title: 52-54 BRIGHTON STREET, FRESHWATER GROUND STORMWATER MANAGEMENT PLAN	Local Council: NORTHERN BEACHES		
B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	DRAWN	S.M.	09.05.2023		Client: LAXLAND 3 PTY LTD		Project Number: 230203	Drawing ID: SW102	Issue: B
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	CHECKED	R.M.	18.05.2023						
Rev:	Date:	Description:	APPROVED	R.M.	18.05.2023						

NOTES:
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LEGEND

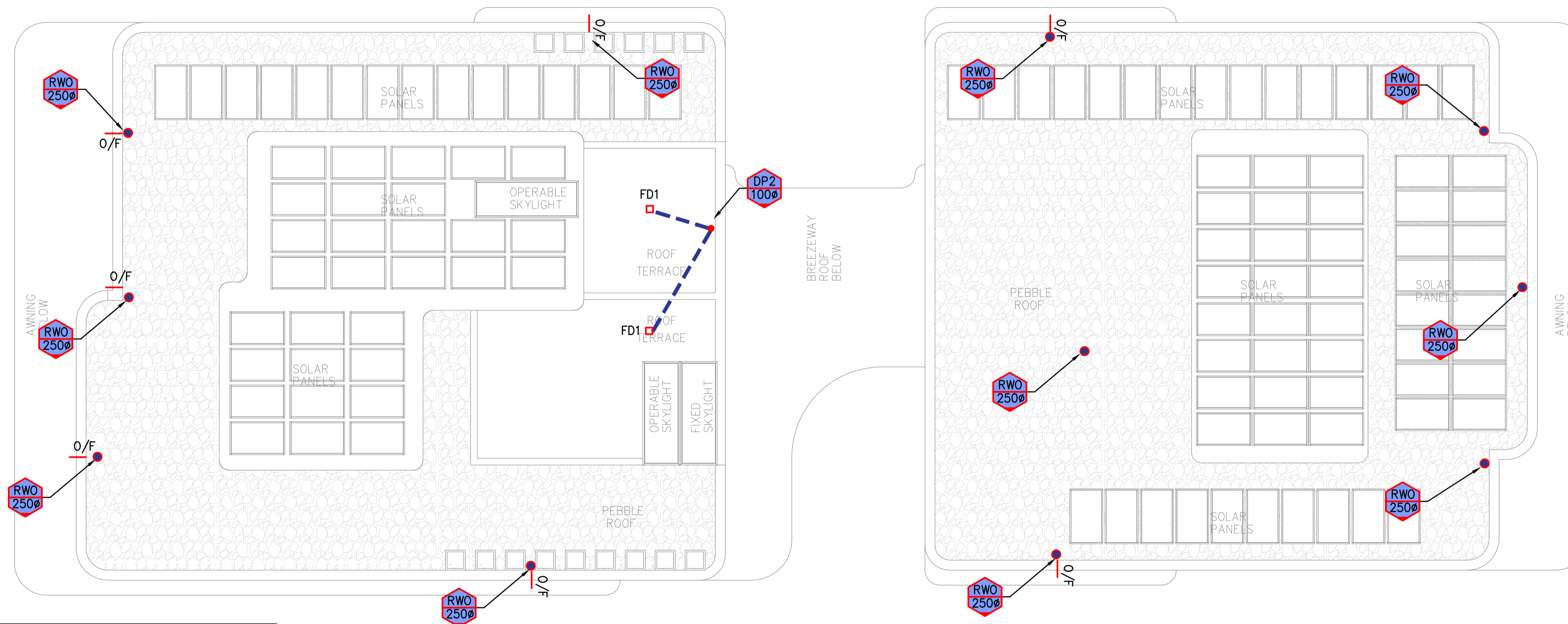
-  STORMWATER PIT
-  NEW STORMWATER PIPE
-  STORMWATER PIPE FLOW DIRECTION
-  NEW STORMWATER PIPE TO RAINWATER TANK
-  NEW STORMWATER PIPE TO BIO-RETENTION PLANTERS
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NOT FOR CONSTRUCTION



LEVEL 1 STORMWATER MANAGEMENT PLAN

SCALE = 1 : 100



ROOF STORMWATER MANAGEMENT PLAN

SCALE = 1 : 100

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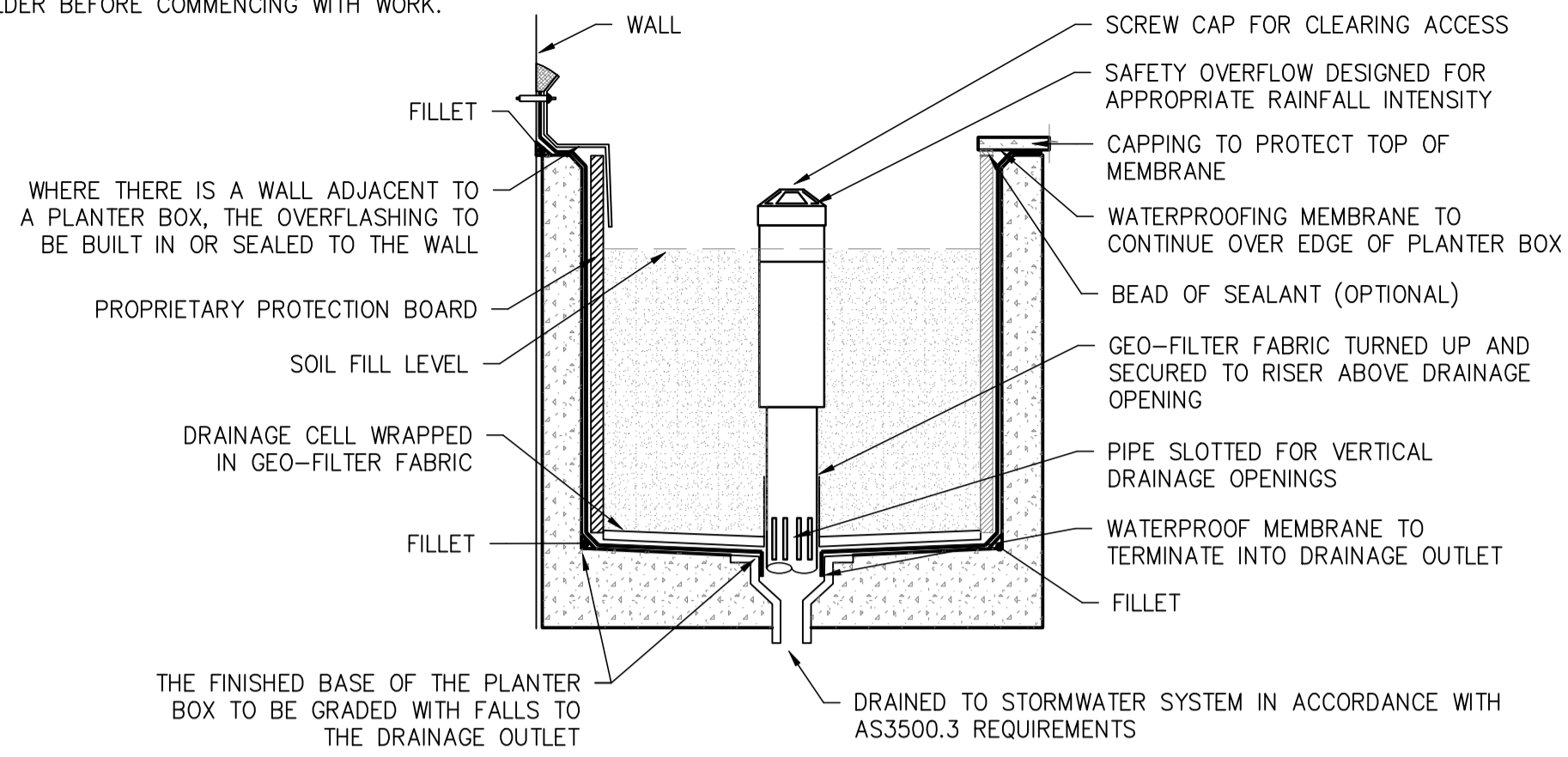
WARNING! CARE WHEN DIGGING AROUND TREE ROOTS. HAND DIGGING ONLY! MAY REQUIRE ARBORIST SUPERVISION.



A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION	Title:	Initial:	Date:	 <p>STORMWATER • CIVIL • FLOOD MITIGATION</p> <p>ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au</p> <p><small>The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.</small></p>	Architect:	Project and Drawing Title:	Local Council:	
		Approved by:	DESIGN	R.M	09.05.2023		WALSH ARCHITECTS	52-54 BRIGHTON STREET, FRESHWATER LEVEL 1 & ROOF STORMWATER MANAGEMENT PLAN	NORTHERN BEACHES	
B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	DRAWN	S.M	09.05.2023		LAXLAND 3 PTY LTD		Project Number:	Drawing ID:
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	CHECKED	R.M	18.05.2023			230203	SW103	B
Rev:	Date:	Description:	Reviewed:							

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NOT FOR CONSTRUCTION

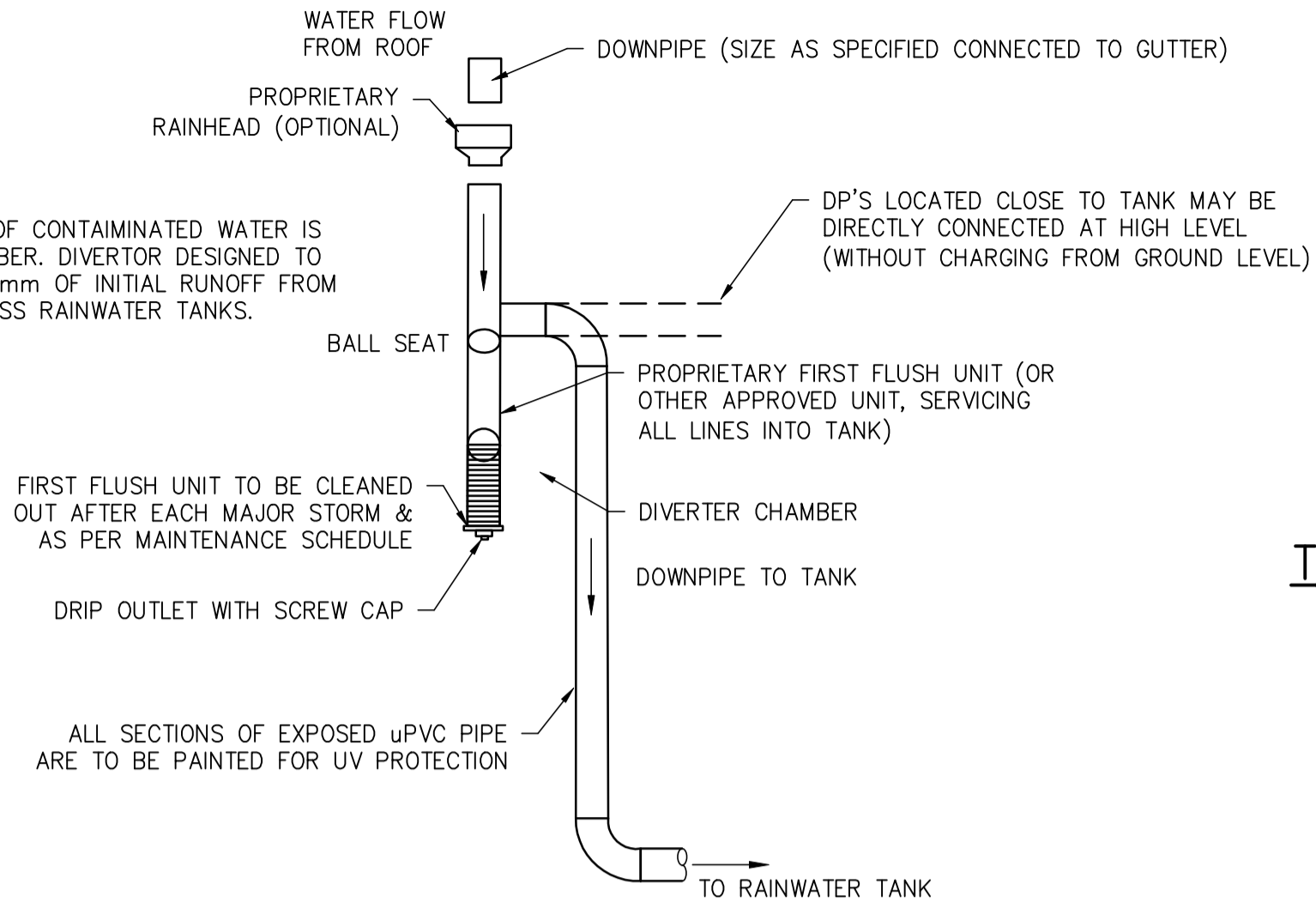


TYPICAL PLANTER BOX CONSTRUCTION

SCALE = N.T.S.

NOTE: REFER TO ARCHITECT FOR SITE SPECIFIC DETAILS.

NOTE: FIRST FLUSH OF CONTAMINATED WATER IS DIVERTED INTO CHAMBER. DIVERTOR DESIGNED TO CAUSE MINIMUM OF 1mm OF INITIAL RUNOFF FROM ROOF AREA TO BYPASS RAINWATER TANKS.



TYPICAL WALL MOUNTED FIRST FLUSH DETAIL

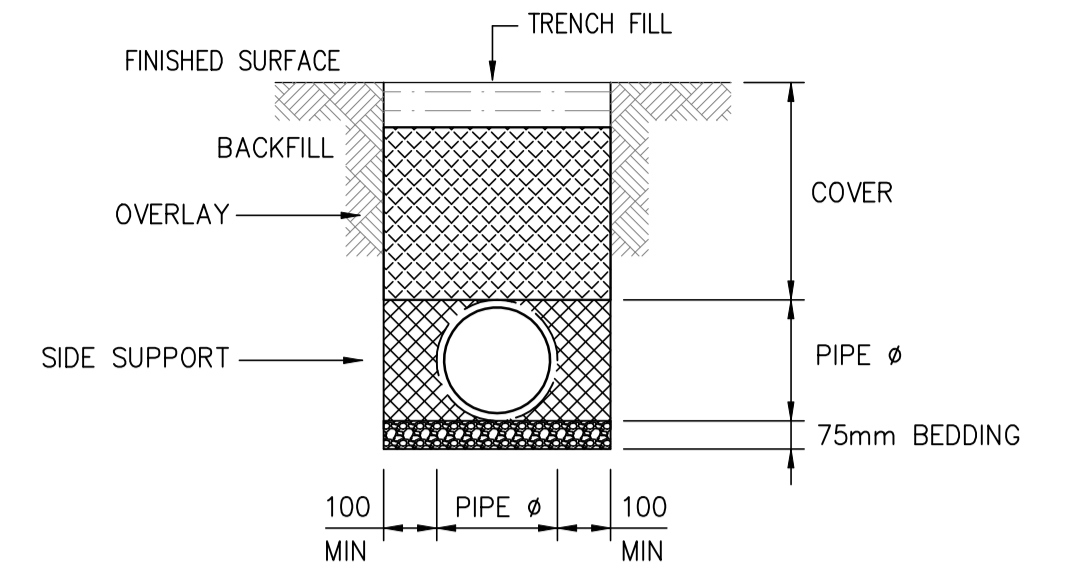
NOT TO SCALE

TYPICAL SUB-SOIL TRENCH DETAIL

SCALE = N.T.S.

NOTE: PRECAST OR CAST INSITU PIT. REFER STORMWATER NOTES OR PROVIDE ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER IF APPROVED BY ENGINEER

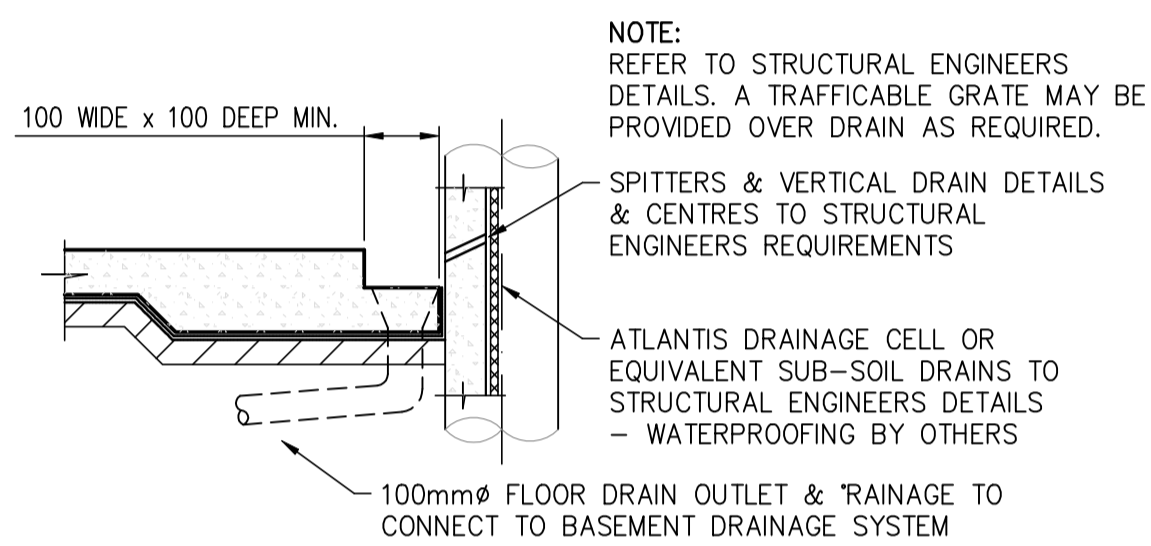
NOTE: THIS CAN BE ANY TYPICAL PIT PROVIDED OR IF NEEDED TO BE FITTED AT LOW POINT OF SITE AND THERE IS NO ADEQUATE DISCHARGE POINT NEARBY, PROVIDE 300mm SUMP. CONTACT ENGINEER IF IN DOUBT.



TYPICAL uPVC PIPE TRENCH DETAIL

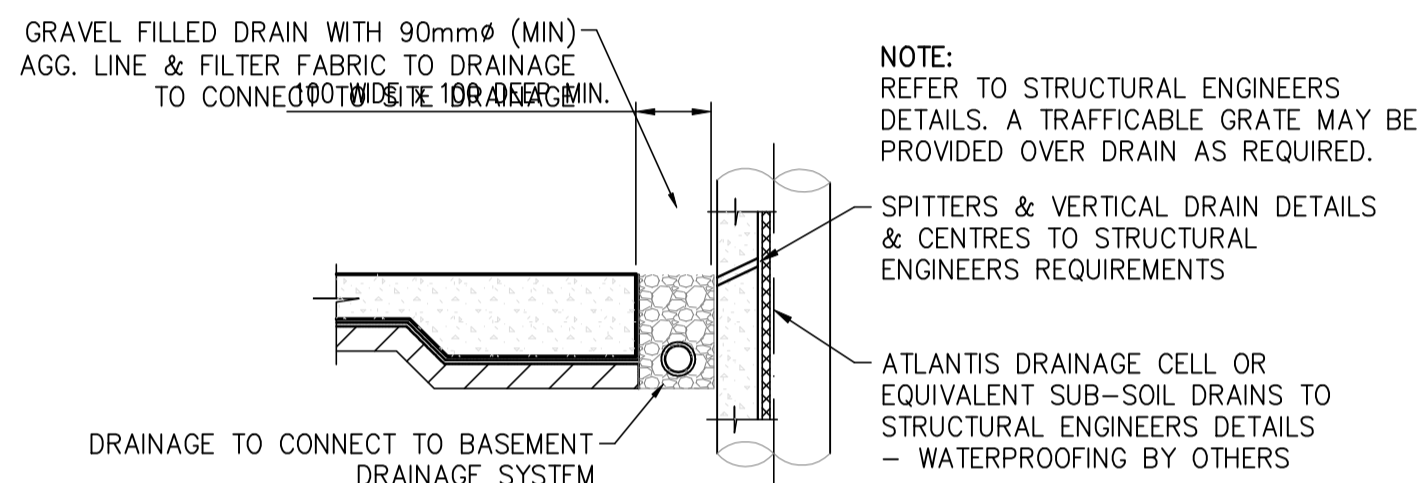
SCALE = N.T.S.

NOTE - STANDARD uPVC PIPE TRENCH: SUITABLE BEDDING TO AS2032:
 1. SAND FREE FROM ROCK OR OTHER HARD AND SHARP OBJECTS THAT WOULD BE RETAINED ON 13.2 SIEVE.
 2. CRUSHED ROCK OR GRAVEL OF APPROVED GRADING UP TO MAXIMUM SIZE OF 14mm.
 3. THE EXCAVATED MATERIAL MAY BE USED IF IT IS FREE FROM ROCK OR HARD MATTER AND BROKEN UP SO THAT IT CONTAINS NO SOIL LUMPS HAVING ANY DIMENSIONS GREATER THAN 75mm WHICH WOULD PREVENT ADEQUATE COMPACTION OF THE BEDDING.
 SIDE SUPPORT: MATERIAL FOR PIPE SUPPORT SHOULD BE ADEQUATELY TAMPED IN LAYERS OF NOT MORE THAN 150mm.
 OVERLAY: PIPE OVERLAY MATERIAL SHOULD BE LEVELED AND TAMPED IN LAYERS TO A MINIMUM HEIGHT OF 150mm ABOVE THE CROWN OF PIPE.
 COVER: FOR MIN COVER REFER TO AS3500.3:2018.



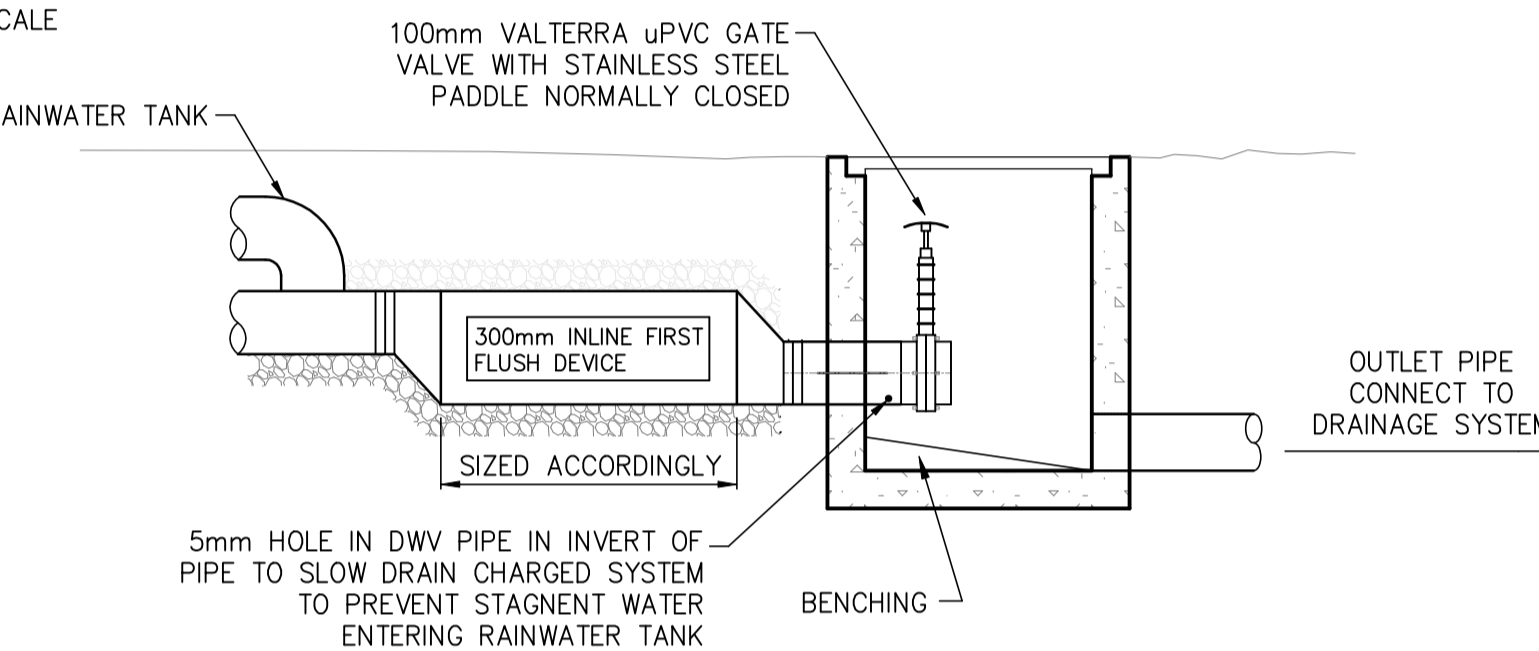
BASEMENT DRAIN (DR1) DETAIL

SCALE = 1 : 20



BASEMENT DRAIN (DR1) ALTERNATIVE DETAIL

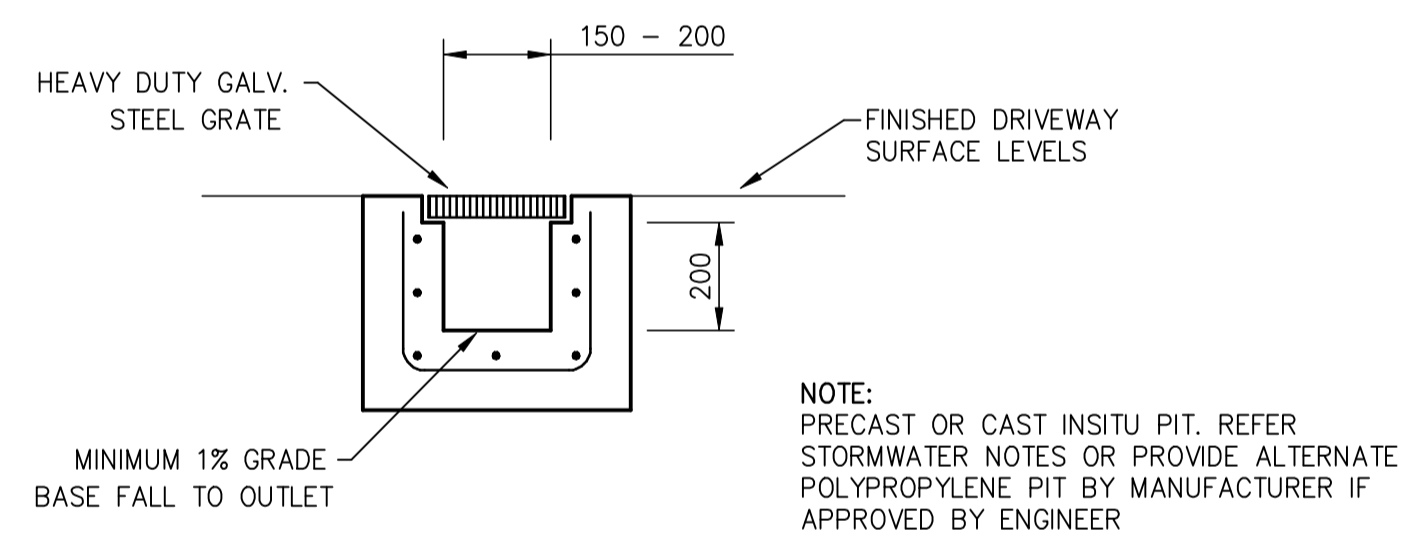
SCALE = 1 : 20



FIRST FLUSH DETAIL - INGROUND (OPTIONAL)

SCALE = 1 : 20

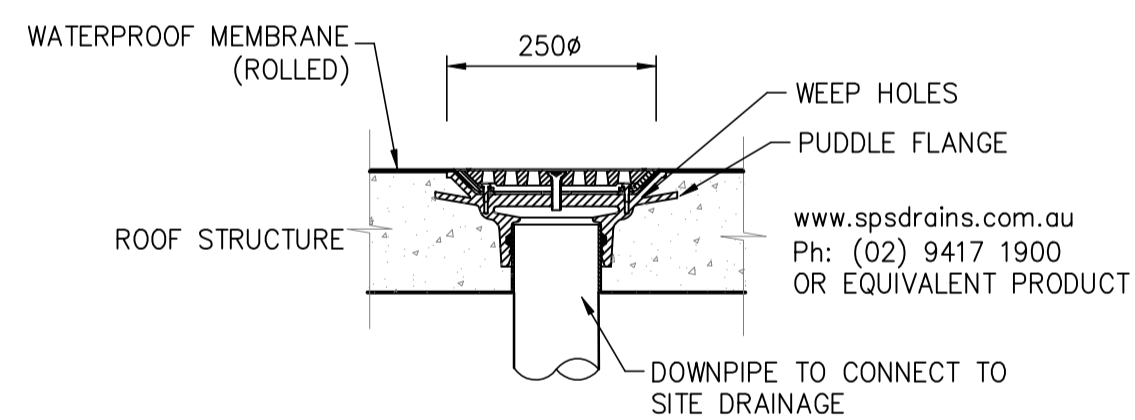
NOTE: PRECAST OR CAST INSITU PIT. REFER STORMWATER NOTES OR PROVIDE ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER IF APPROVED BY ENGINEER



TYPICAL DRIVEWAY GRATED DRAIN (GD)

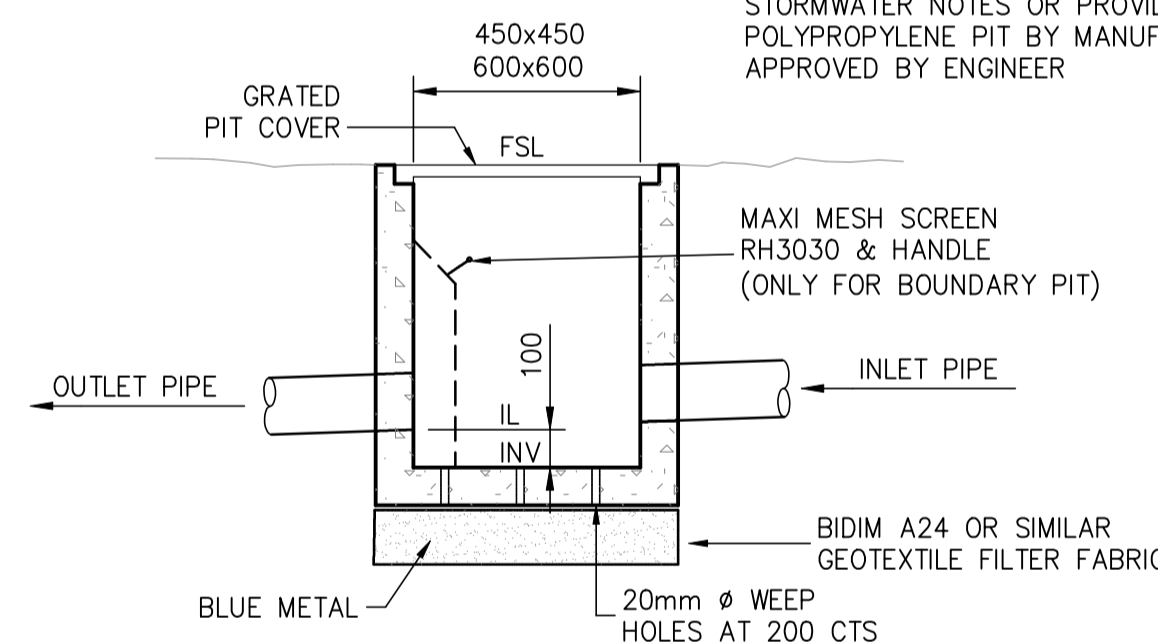
SCALE = 1 : 20

NOTE: PRECAST OR CAST INSITU PIT. REFER STORMWATER NOTES OR PROVIDE ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER IF APPROVED BY ENGINEER



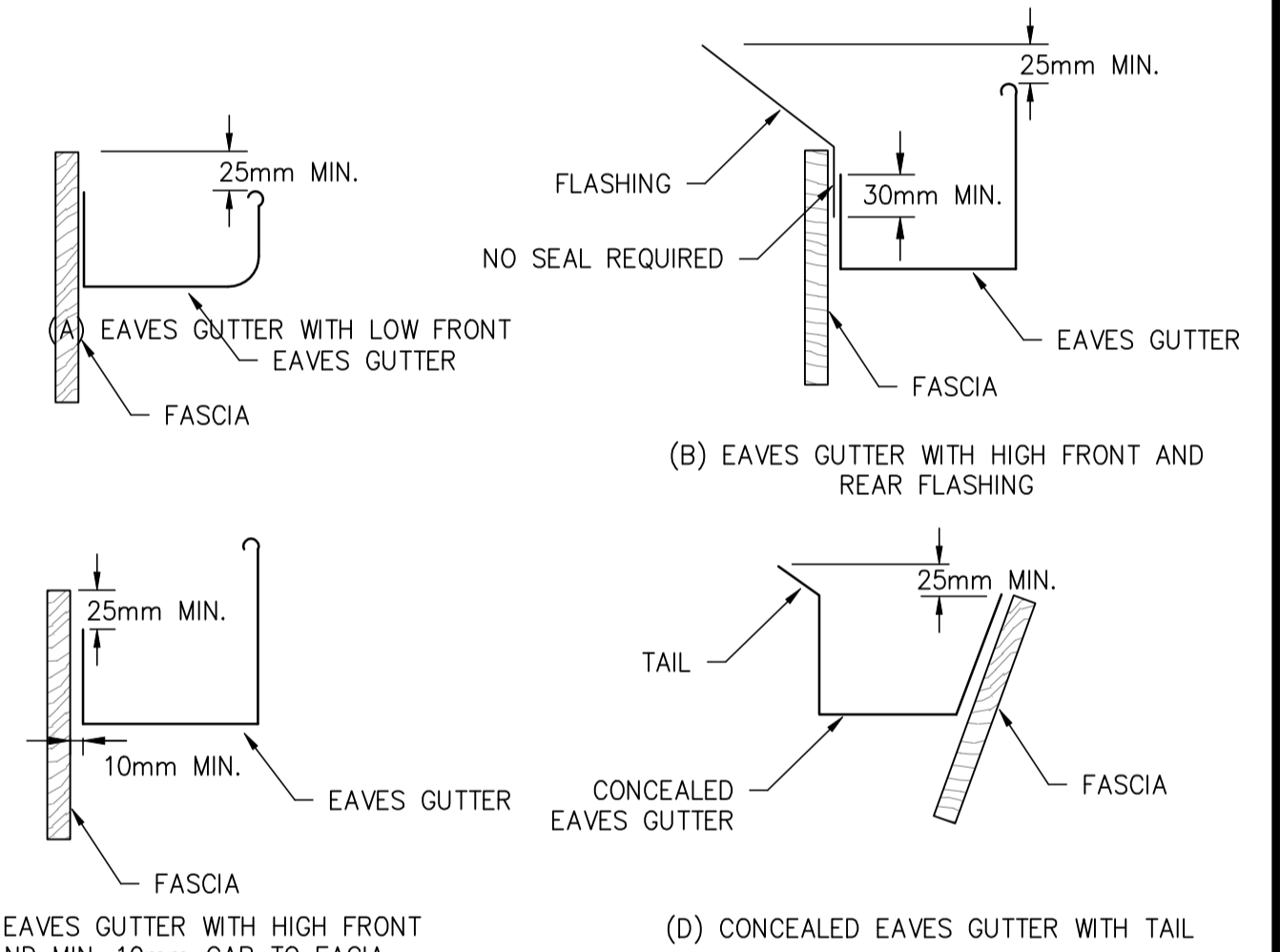
TYPICAL RAINWATER OUTLET (RWO) DETAIL

SCALE = 1 : 20



TYPICAL PIT DETAIL

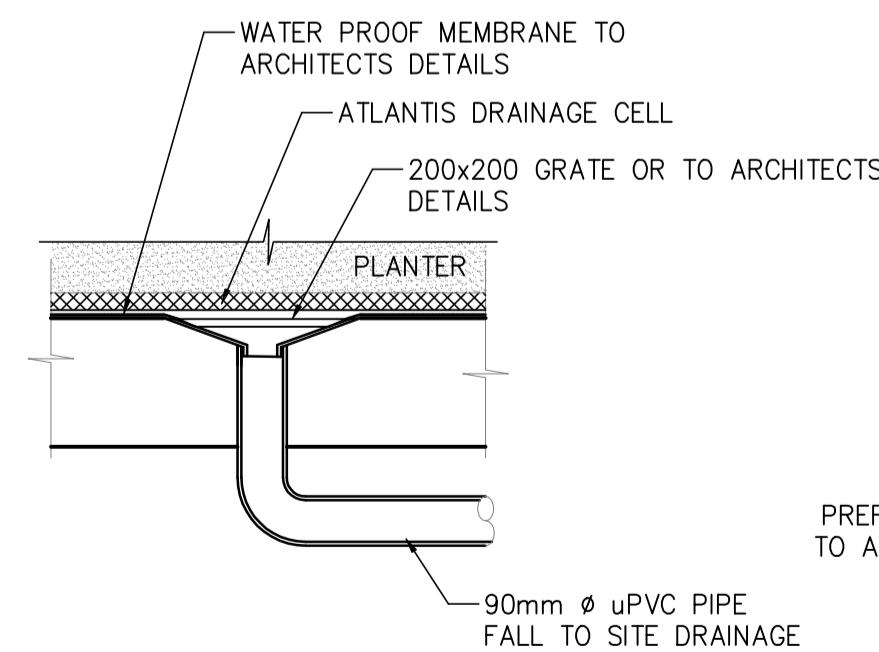
SCALE = 1 : 20



EAVES GUTTER OVERFLOW METHODS

SCALE: 1:20

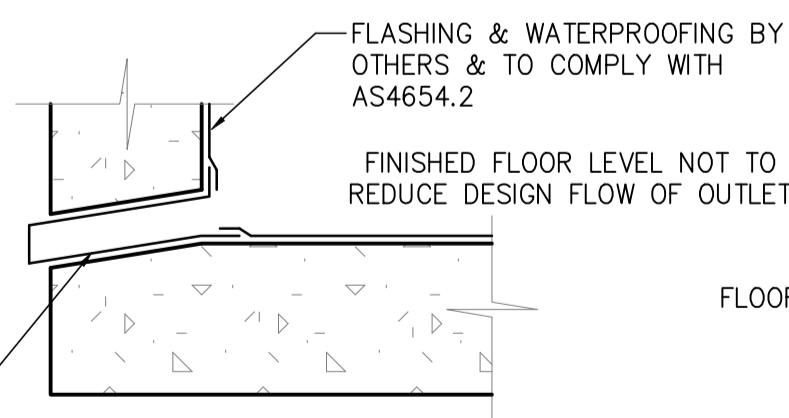
NOTE: FLOOR DRAINS TO BE INSTALLED WITHIN ALL PLANTERS AND PATIOS TO ARCHITECTS DETAILS AND AS3500.3 REQUIREMENTS. FLOOR DRAINS ARE TO DRAIN BY GRAVITY TO THE NEAREST DRAINAGE STRUCTURE AND MUST BE LOCATED AT LEAST 500mm ABOVE CONNECTION POINT. BALCONY HOB TO ARCHITECT DETAILS. ENSURE ALL BALCONIES ARE FITTED WITH 2 x 50mm SPITTER PIPES TO ACT AS OVERFLOW POINT IN ACCORDANCE WITH AS4564.2:2012 REQUIREMENTS. IF IN DOUBT, CONTACT THE ENGINEER.



STANDARD FLOOR DRAIN

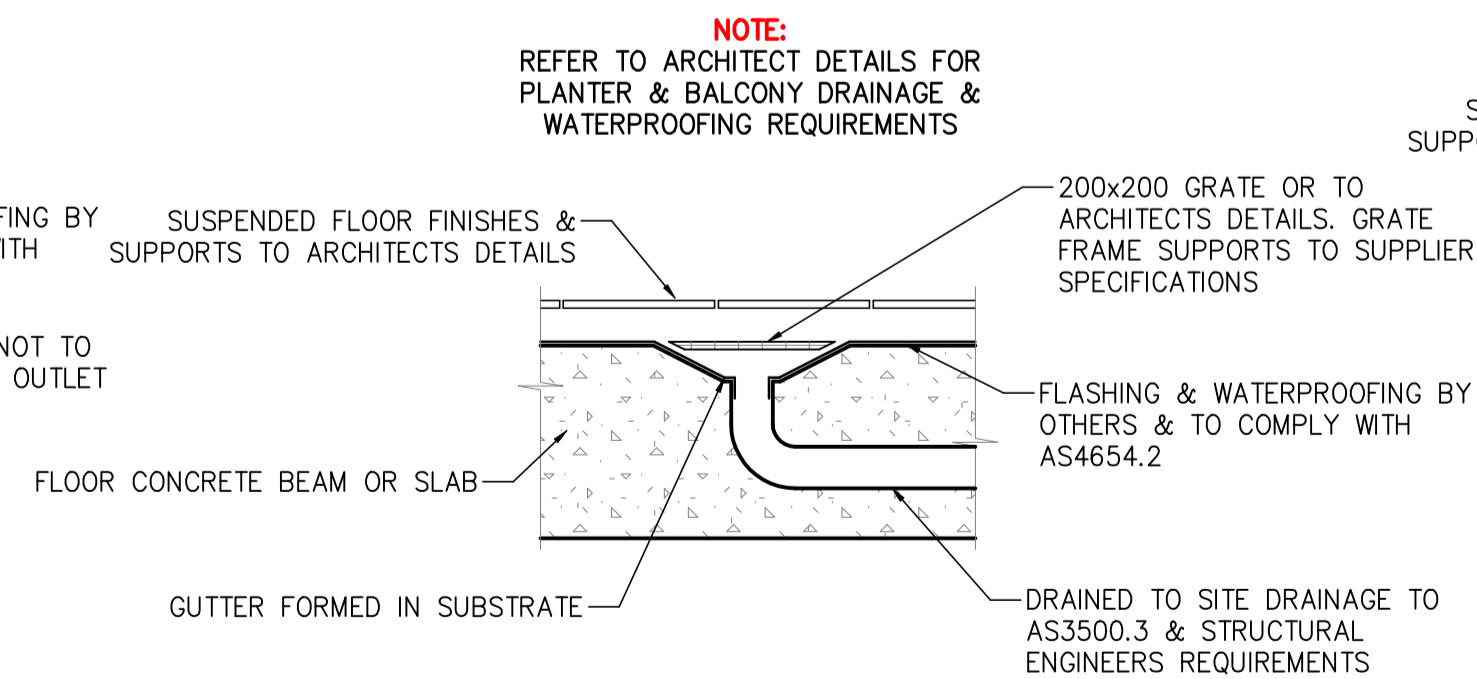
SCALE = 1 : 20

PREFORMED OUTLET WITH FACE FLANGE TO AS3500.3, AS4654.2 & STRUCTURAL ENGINEERS REQUIREMENTS



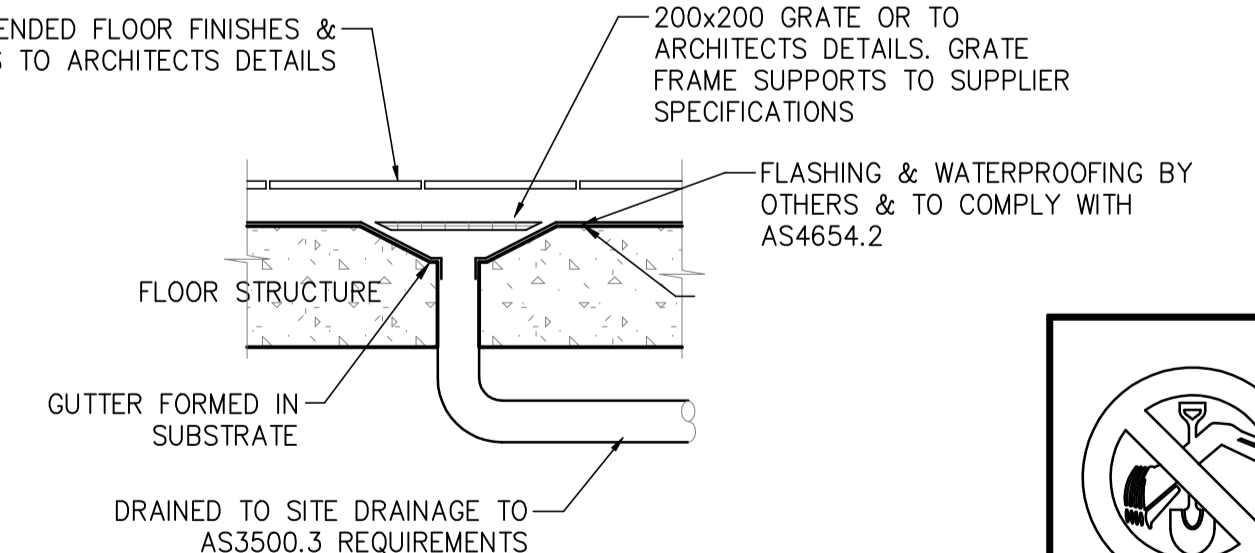
PREFORMED OUTLET TO PARAPET OR BALCONY OVERFLOW

NOT TO SCALE



STANDARD FLOOR PATIO DRAIN

SCALE = 1 : 20



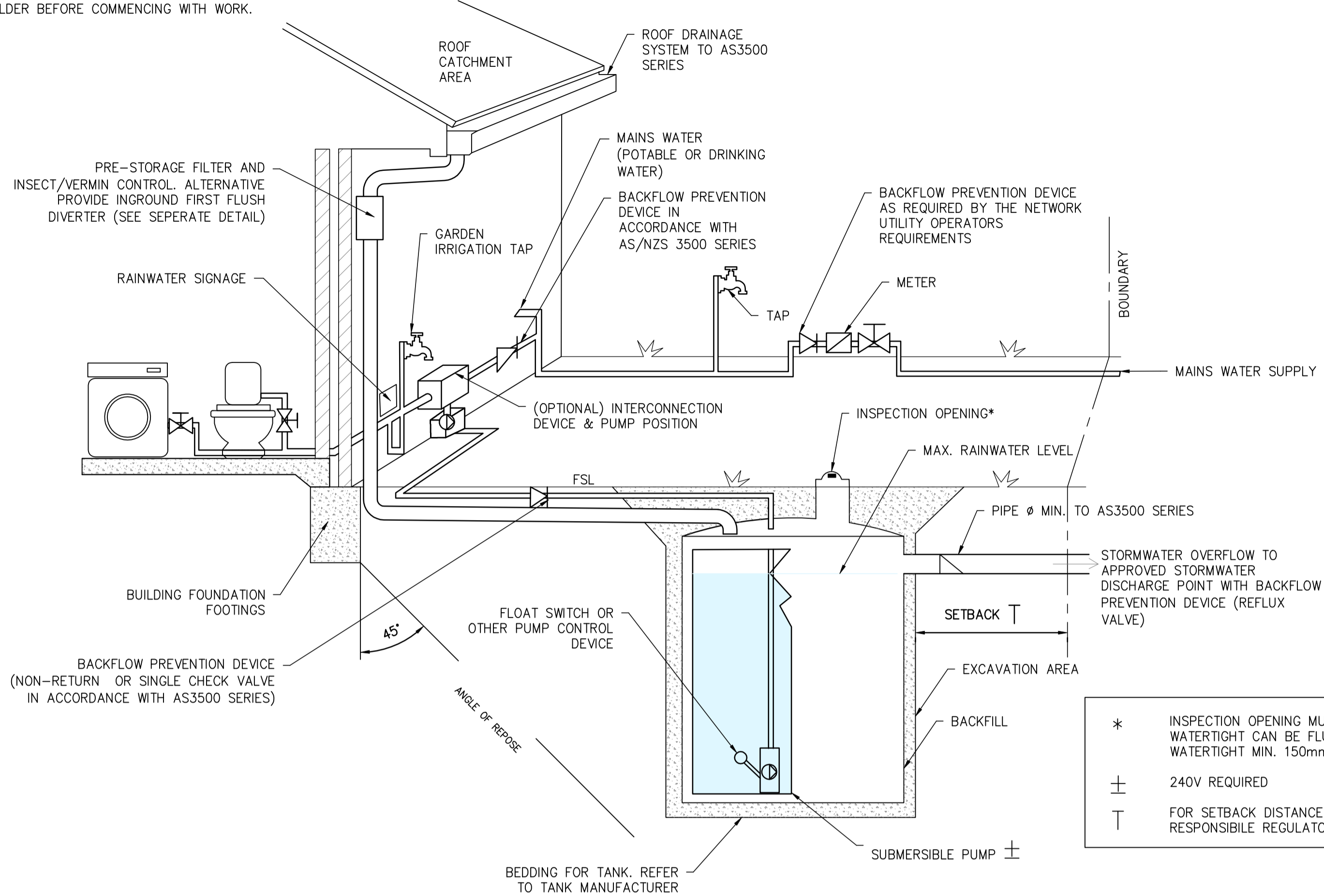
STANDARD FLOOR DRAIN (OPTION FOR BALCONIES ONLY)

SCALE = 1 : 20



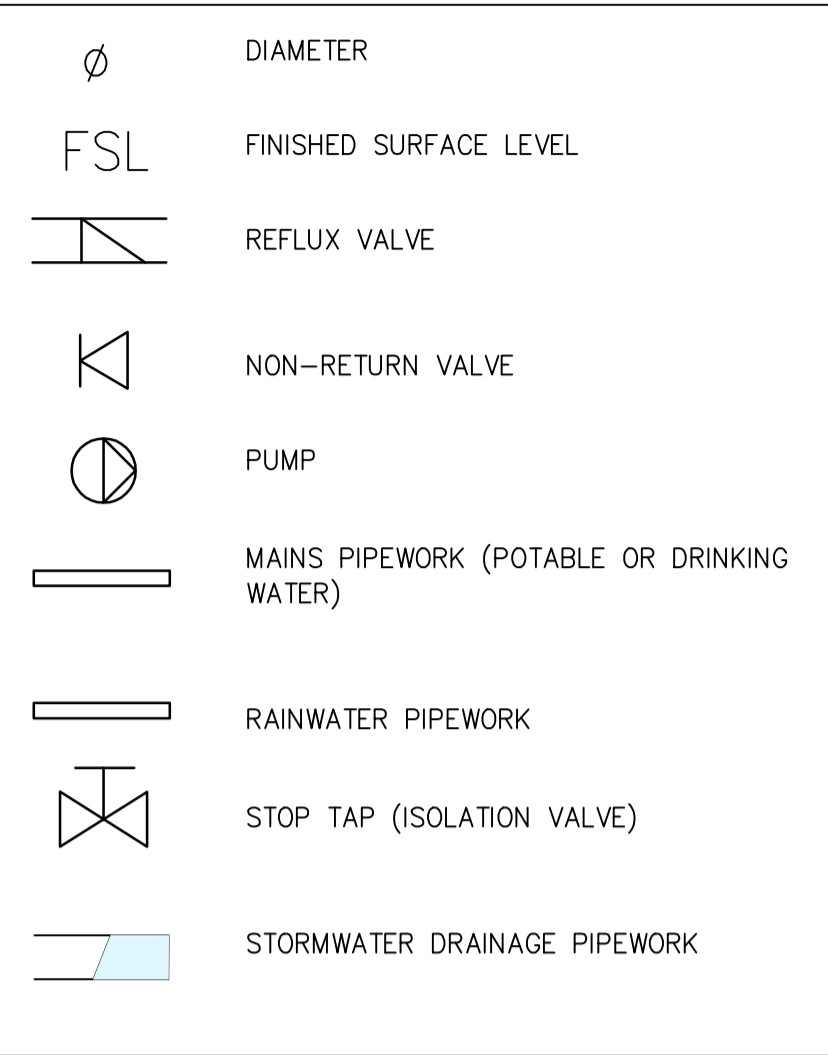
A1 ORIGINAL		Issued for: DEVELOPMENT APPLICATION	Title: DESIGN	Initial: R.M.	Date: 09.05.2023	<p>STORMWATER • CIVIL • FLOOD MITIGATION</p> <p>ABN: 81 615 065 588 Phone: 0490 507 300 Email: admin@rtscivil.com.au Web: rtscivil.com.au</p>	Architect: WALSH ARCHITECTS	Project and Drawing Title: 52-54 BRIGHTON STREET, FRESHWATER STORMWATER DRAINAGE DETAILS SHEET 1 OF 3	Local Council: NORTHERN BEACHES		
B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	R.M.				<p>The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.</p>	LAXLAND 3 PTY LTD	Project Number: 230203	Drawing ID: SW200	Issue: B
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	R.M.								
Rev:	Date:	Description:	Reviewed:								

NOTES:
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 2. ALL DIMENSIONS SHALL BE VERIFIED ONSITE BY BUILDER BEFORE COMMENCING WITH WORK.

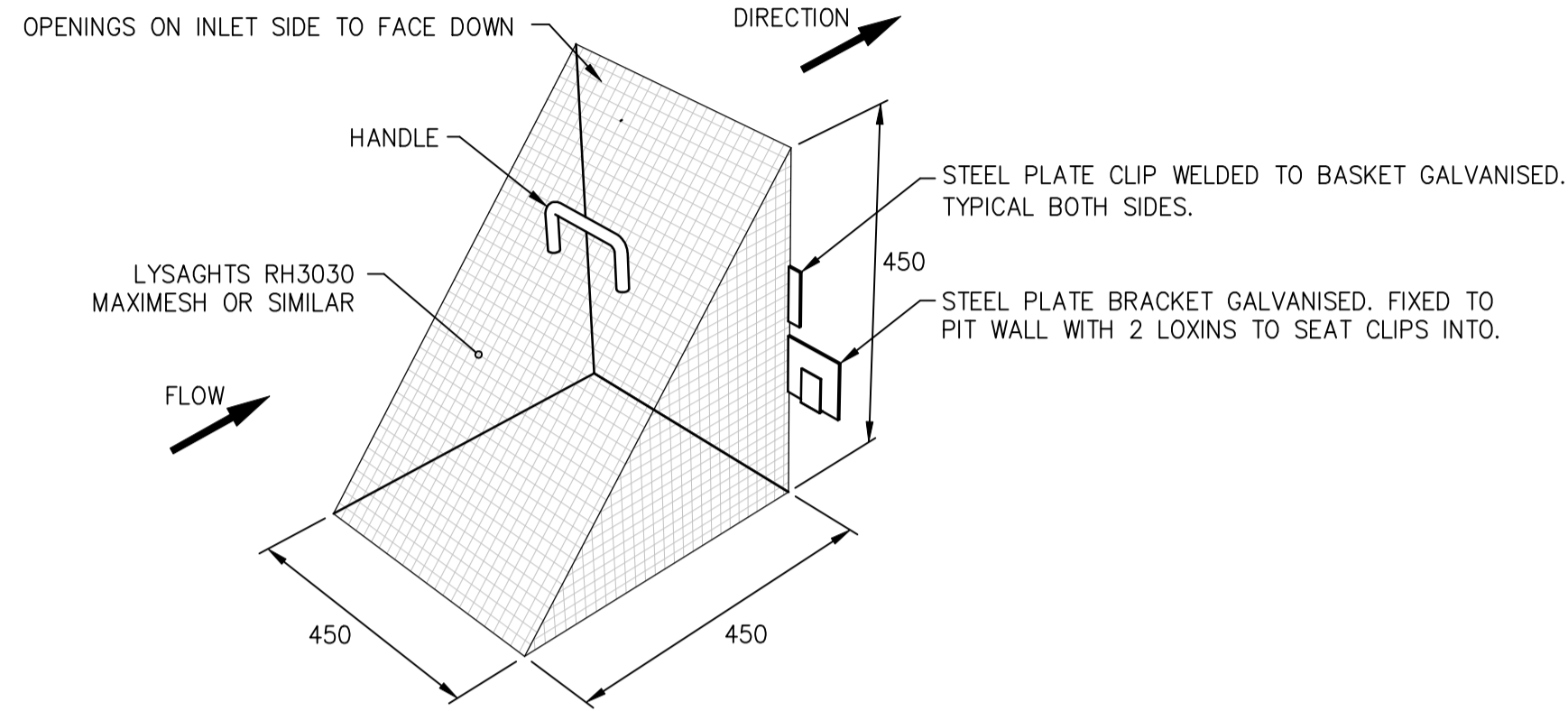


TYPICAL BELOWGROUND RAINWATER TANK INSTALLATION WITH RAINWATER SUPPLIED TO GARDEN AND APPLIANCES IN THE HOUSEHOLD (HB 230-2008)

NOT TO SCALE

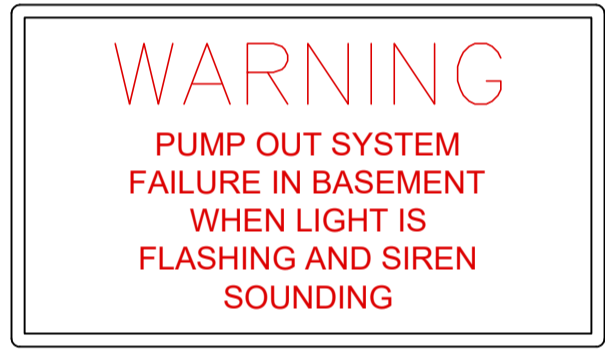


* INSPECTION OPENING MUST BE LOCKABLE. IF WATERTIGHT CAN BE FLUSH WITH FSL. IF NOT WATERTIGHT MIN. 150mm ABOVE FSL.
 ± 240V REQUIRED
 T FOR SETBACK DISTANCE PLEASE CONTACT RESPONSIBLE REGULATORY AUTHORITY



MAXI MESH SCREEN DETAIL

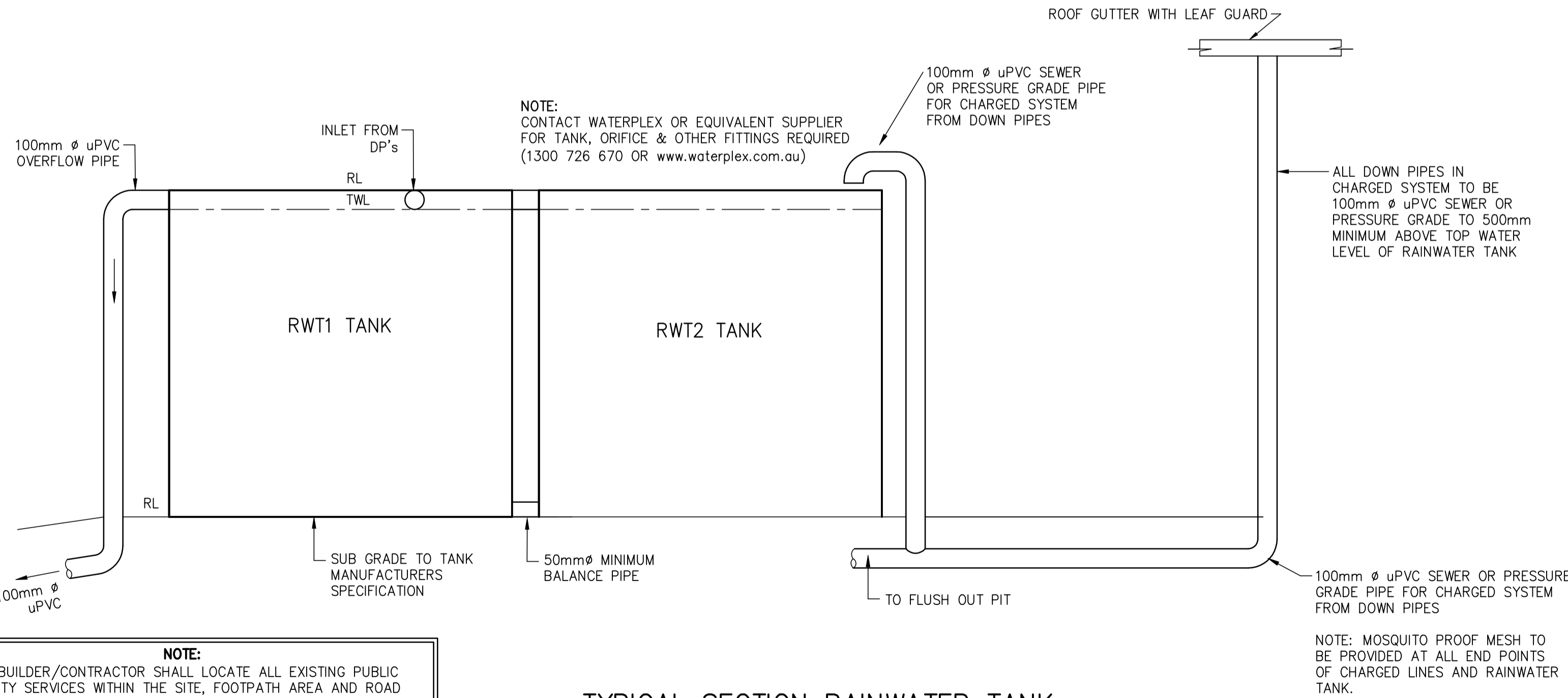
SCALE = N.T.S.



NOTE:
 1. WET-WELL STRUCTURE TO STRUCTURAL ENGINEERS DETAILS. REFER TO STRUCTURAL ENGINEERS PLAN.
 2. PUMP OUT LINE TO MANUFACTURERS SPECIFICATIONS TO DISCHARGE TO OSD TANK (HED CHAMBER) WITH A NON-RETURN VALVE.
 3. SUB-SOIL FLOW DETAILS MUST BE CONFIRMED BY ENGINEER PRIOR TO CONSTRUCTION SUBJECT TO GEOTECHNICAL AND STRUCTURAL RECOMMENDATIONS.
 4. ALL THE SUB-SOIL LINES BEHIND BASEMENT WALLS TO BE CONNECTED TO PUMP-OUT PIT (WET WELL).
 5. DETAILS TO BE CONFIRMED BY GEOTECHNICAL AND STRUCTURAL ENGINEERS.

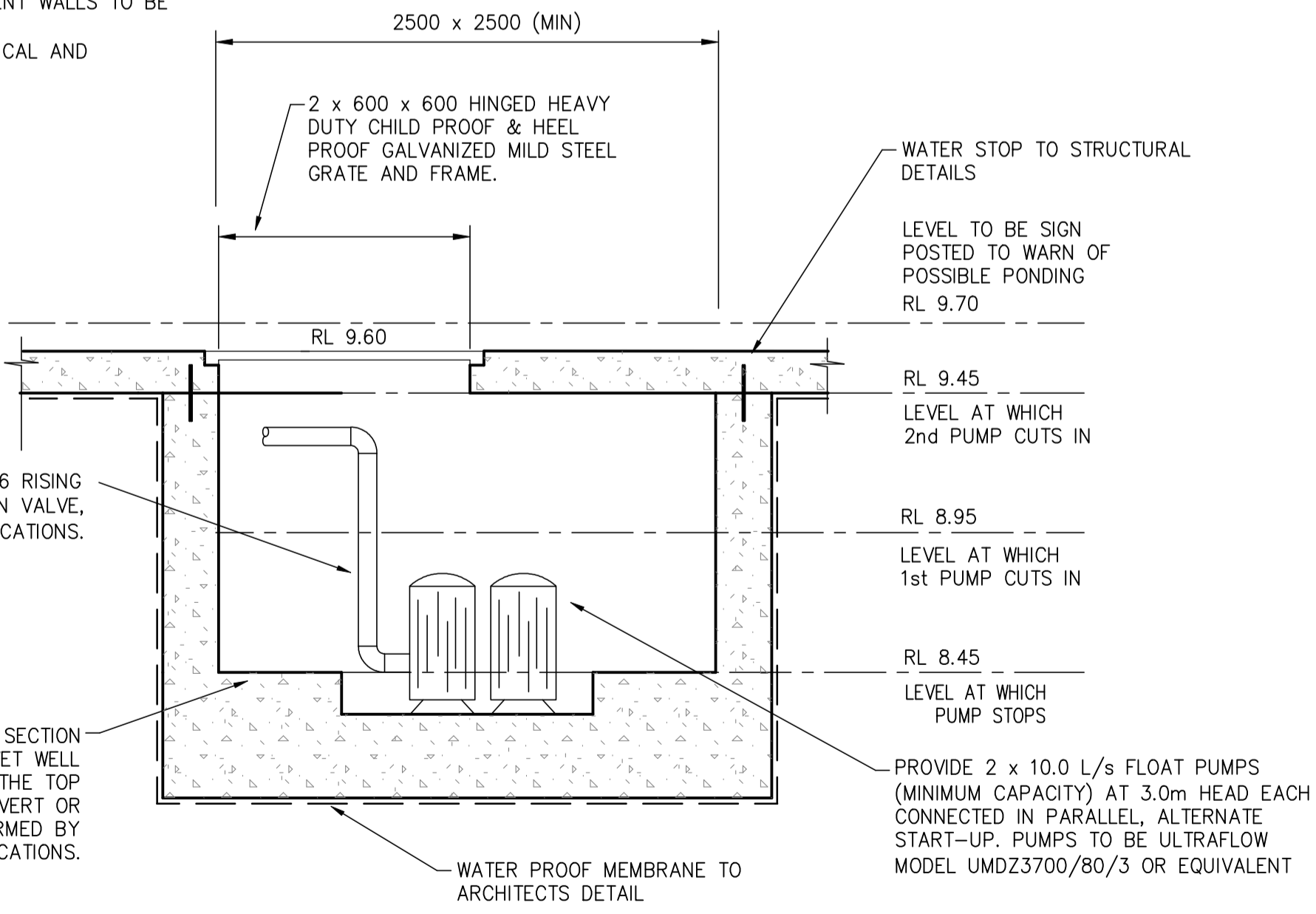
TYPICAL TANK SIGNAGE

N.T.S.



TYPICAL SECTION RAINWATER TANK

NOT TO SCALE



BASEMENT WET WELL (PUMP-OUT TANK) DETAIL

SCALE = 1 : 20

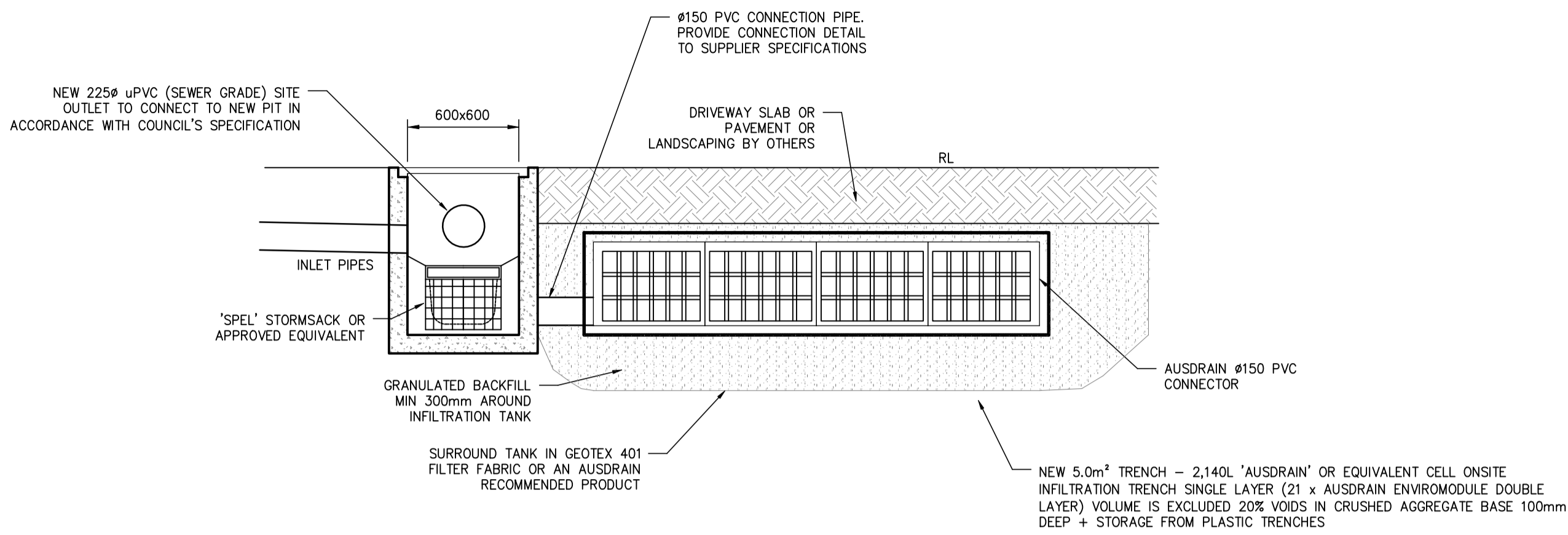


NOTE:
 THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THAT THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.

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B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	R.M.				Director Principal Engineer NER: 2570082 RPEQ: 17480 Rhys Mikhail			
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION	R.M.							
Rev:	Date:	Description:	Reviewed:				APPROVED			

NOT FOR CONSTRUCTION

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(SQID1) ONSITE INFILTRATION TRENCH

SCALE: 1:50

INFILTRATION/ABSORPTION TRENCH NOTES (METHOD 1):

- EXCAVATE THE TRENCH ALONG A LEVEL SITE CONTOUR TO PROVIDE AT LEAST 100mm COVER OVER THE TOP OF THE LINER.
- THE TRENCH FLOOR SHOULD BE LEVEL, EVENLY RAKED, AND HAVE NO LOW SPOTS WHICH WOULD ALLOW 'PONDING'.
- ALLOW AT LEAST 75mm OVERLAP FOR EACH LENGTH OF EVERTRENCH.
- IDEALLY, THREE SPREADER BARS (OPTIONAL) SHOULD BE FITTED INTO EACH STANDARD EVERTRENCH LINER, THE FIRST 220mm FROM THE INLET END, THEN EQUALLY SPACED ALONG THE EXCAVATION.
- CUT THE PIPE ENTRY HOLE IN ONE TRENCH LINER END CAP. AN EASYDRAIN™ PIT BOSS MAY BE USED TO ENSURE A SECURE CONNECTION. FIT THE CAPS TO THE LINER AND CONNECT THE PIPING FROM THE SEPTIC TANK OR SULLAGE DISTRIBUTOR.
- COVER THE EVERTRENCH WITH GEOTEXTILE FABRIC AND PLACE A QUANTITY OF 20-25mm AGGREGATE MATERIAL ALONG THE TRENCH LINER AND AT BOTH ENDS, SO THAT THE TOP OF THE LINER IS JUST COVERED. RAKE LEVEL.
- LAY GEOTEXTILE OVER THE AGGREGATE FOR THE FULL LENGTH OF THE TRENCH.
- COVER THE GEOTEXTILE WITH A LAYER OF APPROVED SANDY LOAM AND LEAVE A MOUND FOR NATURAL COMPACTION. TURF MAY BE LAID OVER THE TRENCH AREA. DO NOT COMPACT THE TRENCH AREA OR EXPOSE IT TO TRAFFIC.
- THESE TRENCHES ARE GENERALLY LIMITED TO SITES WHERE SOIL IS CONSIDERED PERMEABLE ENOUGH TO 'SOAK UP' THE EXPECTED AMOUNTS OF WASTE-WATER. THE TRENCH SHOULD BE WIDE ENOUGH TO ACCEPT THE SELECTED EVERTRENCH LINER AND DEEP ENOUGH SO THAT THE TOP OF THE SELECTED LINER IS AT LEAST 100mm BELOW THE SOIL SURFACE LEVEL.
- TRENCH TO BE HAND DUG AROUND TREE ROOT SYSTEM IN ACCORDANCE WITH ARBORIST AND/OR LOCAL COUNCIL REQUIREMENTS.
- A GEOTECHNICAL ENGINEERS REPORT OR RECOMMENDATIONS MAY BE REQUIRED FOR AREAS OF LOW SOIL INFILTRATION RATES OR FOR LARGER DEVELOPMENTS. THE ENGINEER SHOULD BE NOTIFIED DURING CONSTRUCTION AND EXCAVATION OF TRENCHES TO CONFIRM SUITABILITY OF SOILS.
- WHERE POSSIBLE, INSTALL HIGH LEVEL EMERGENCY OVERFLOW PIPE AND CONNECT TO SITE DRAINAGE SYSTEM OR NEAREST DISCHARGE POINT IN ACCORDANCE WITH AS3500.3.2 AND/OR COUNCIL REQUIREMENTS.
- DO NOT CONNECT SUB-SOIL DRAINAGE LINES THAT ARE LESS THAN 150mm ABOVE THE SURFACE LEVEL OF THE TRENCH. NOTIFY ENGINEER IF THE DEVELOPMENT HAS LOW LAYING SUB-SOIL DRAINAGE LINES.

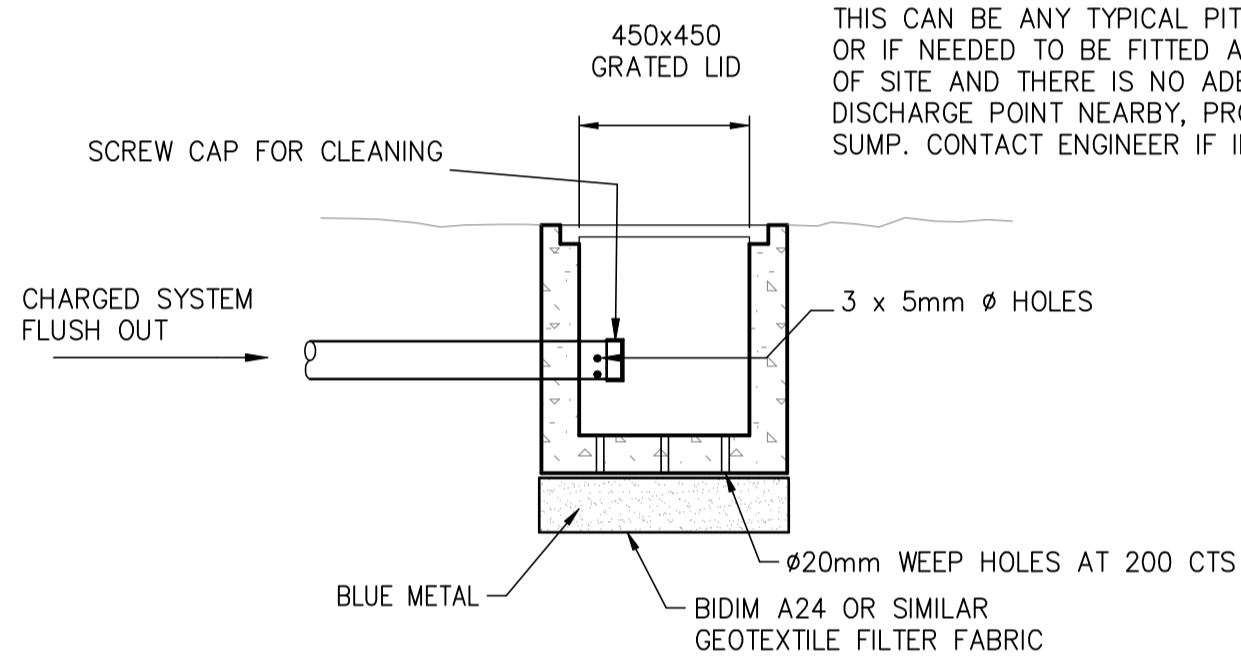
TRANSPIRATION/DISPERSION TRENCH NOTES (METHOD 2):

- EXCAVATE AN AREA 1800mm WIDE AND 300mm DEEP ALONG A LEVEL SITE CONTOUR.
- EXCAVATE A CENTRAL TRENCH ALONG THE FULL LENGTH OF THE PREPARED AREA FOR THE SELECTED LINER. THE TOP OF THE LINER SHOULD BE LEVEL WITH THE BOTTOM OF THE PREPARED AREA. THE FLOOR SHOULD BE LEVEL, EVENLY RAKED, WITH NO LOW SPOTS.
- CARRY OUT STEPS 3, 4, 5, 6 & 7 LISTED FOR METHOD 1 (ABSORPTION TRENCH).
- COVER THE GEOTEXTILE AND FLOOR OF THE WIDER EXCAVATION WITH 100mm OF 10mm AGGREGATE, THEN 100mm OF COARSE SAND, AND FINALLY WITH SANDY LOAM.
- LEAVE A MOUND FOR NATURAL COMPACTION. TURF MAY BE LAID OVER THE AREA. DO NOT COMPACT THE AREA OR EXPOSE IT TO TRAFFIC.
- THIS METHOD ARE GENERALLY USED WHERE LOCAL SOIL CONDITIONS CANNOT COPE WITH THE VOLUME OF WASTE-WATER IN THE NORMAL NARROW ABSORPTION TRENCH SYSTEMS. TRANSPIRATION ENCOURAGES TREATED WASTE-WATER TO BE TAKEN UP BY PLANT ROOTS OVER A WIDE AREA, AS WELL AS PERMEATING THE SOIL, OFFERING ADDITIONAL SAFETY FOR SOIL ABSORPTION SYSTEMS. BEDS CONSIST OF STANDARD WIDTH TRENCHES THAT ARE DEEPER THAN NORMAL, WITH THE AREA ABOVE THE SELECTED TRENCH LINER OF MUCH GREATER WIDTH, AND FILLED WITH AGGREGATE TO ALLOW EASIER MOVEMENT OF MOISTURE.

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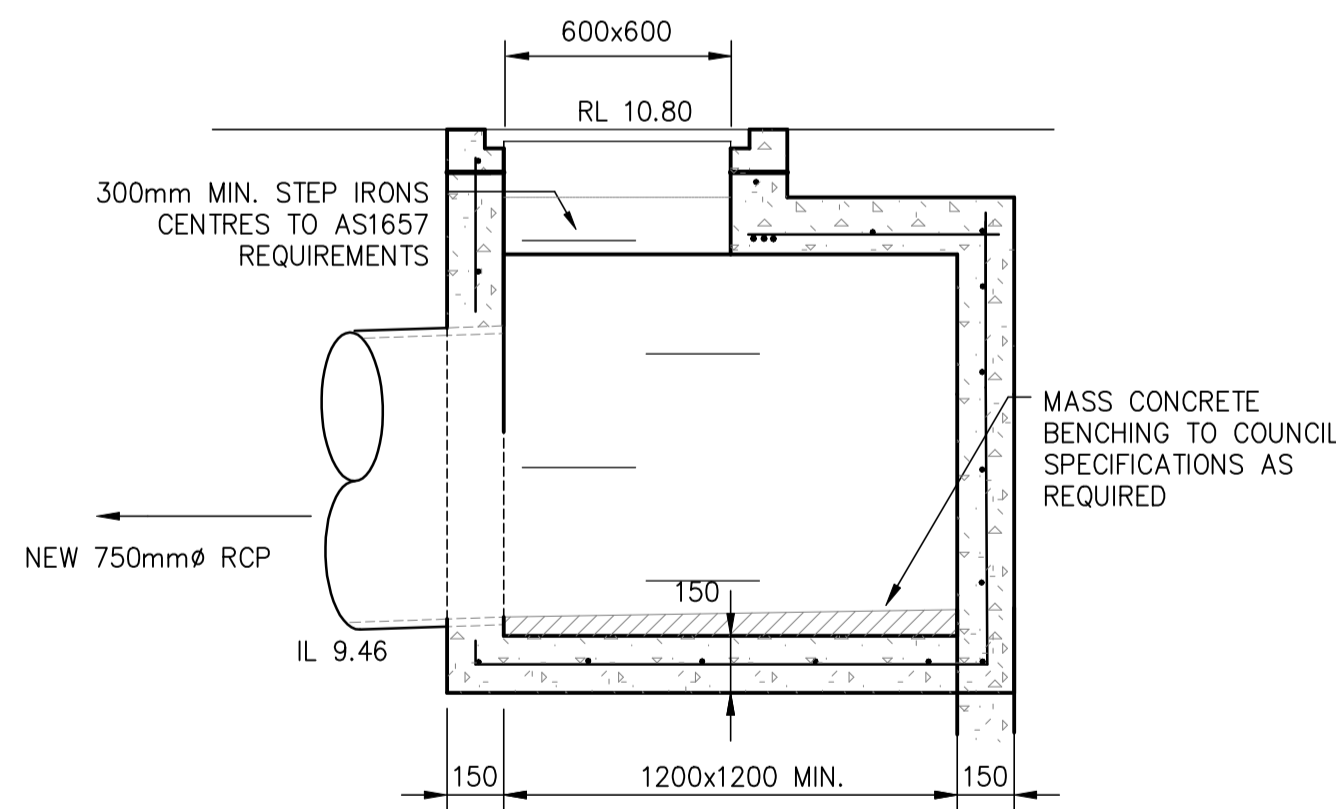
NOTE:
 PRECAST OR CAST INSITU PIT. REFER STORMWATER NOTES OR PROVIDE ALTERNATE POLYPROPYLENE PIT BY MANUFACTURER IF APPROVED BY ENGINEER

NOTE:
 THIS CAN BE ANY TYPICAL PIT PROVIDED OR IF NEEDED TO BE FITTED AT LOW POINT OF SITE AND THERE IS NO ADEQUATE DISCHARGE POINT NEARBY, PROVIDE 300mm SUMP. CONTACT ENGINEER IF IN DOUBT.



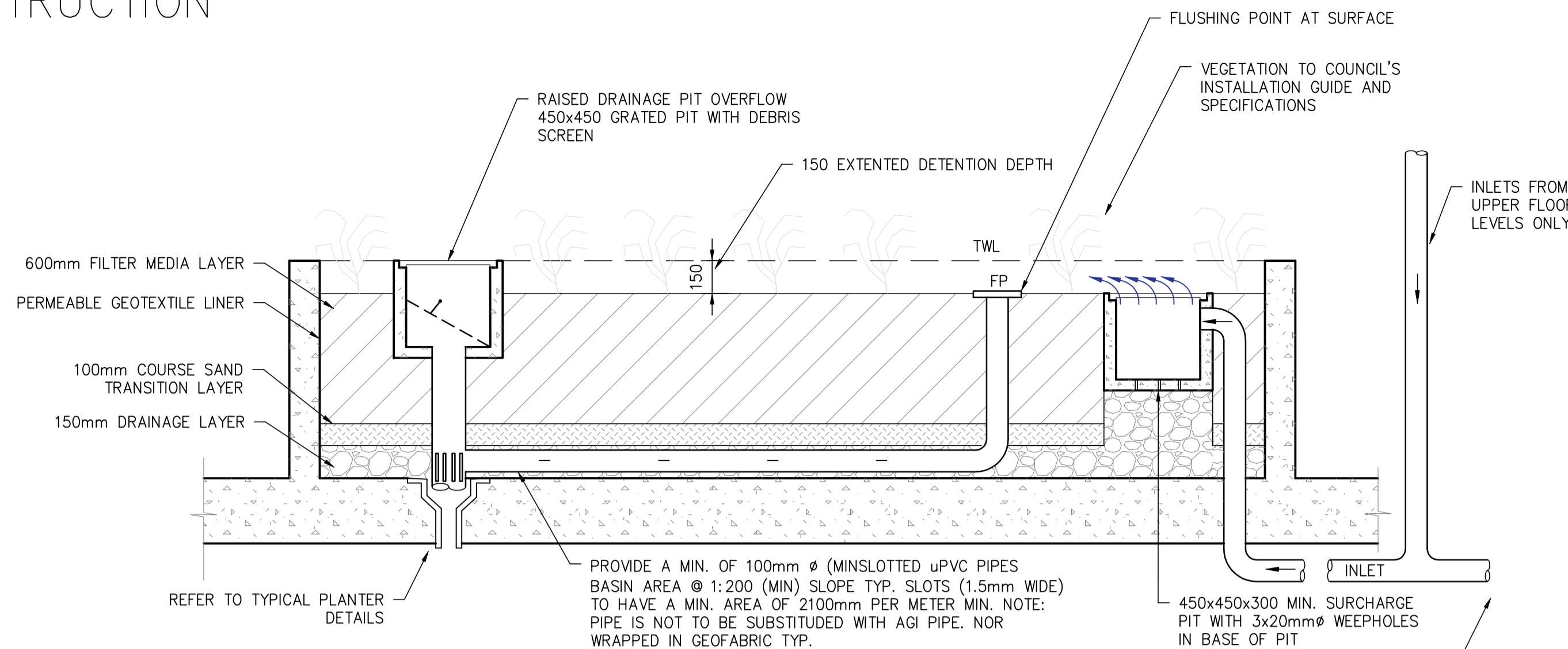
FLUSH OUT PIT DETAIL

SCALE = 1 : 20



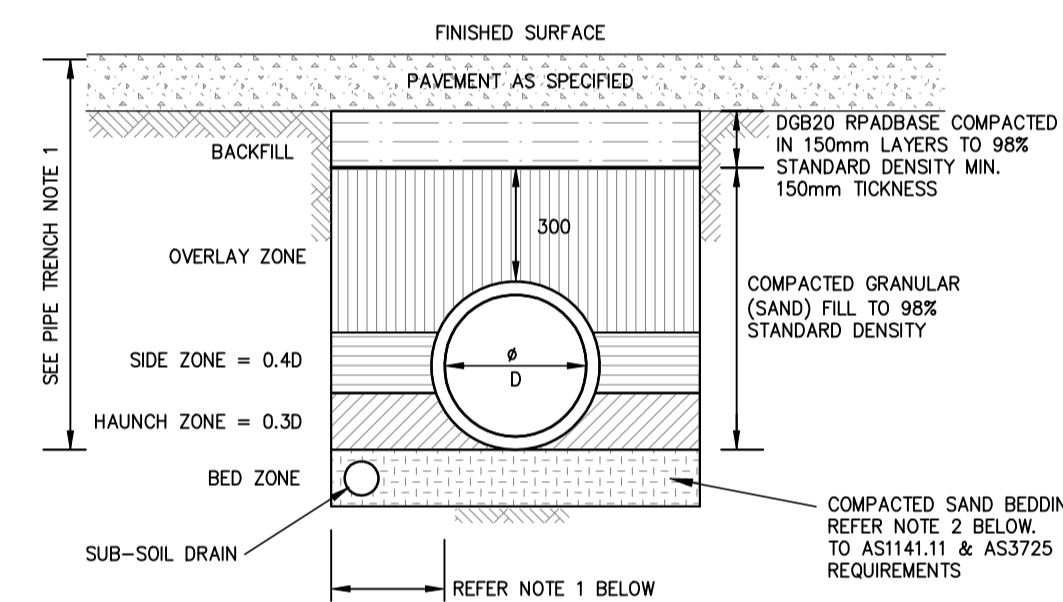
1200x1200 NEW PIT DETAIL (TYP.)

SCALE = 1 : 20



TYPICAL BIO-RETENTION PLANTER SECTION

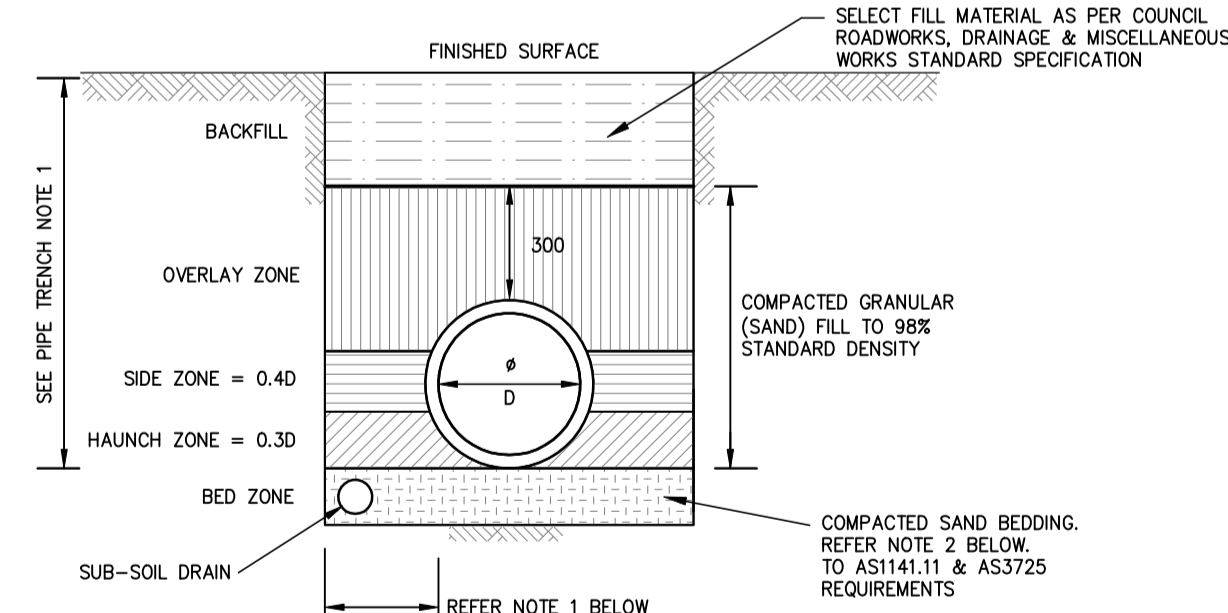
NOT TO SCALE



TYPICAL PAVEMENT PIPELINE TRENCH DETAIL

NOTE:
 1. $\geq 0.2D$ OR 0.3m (WHICHEVER IS GREATER)
 2. 100mm FROM PIPE $\phi \leq 1500$

SCALE = N.T.S.



TYPICAL LANDSCAPED PIPELINE TRENCH DETAIL

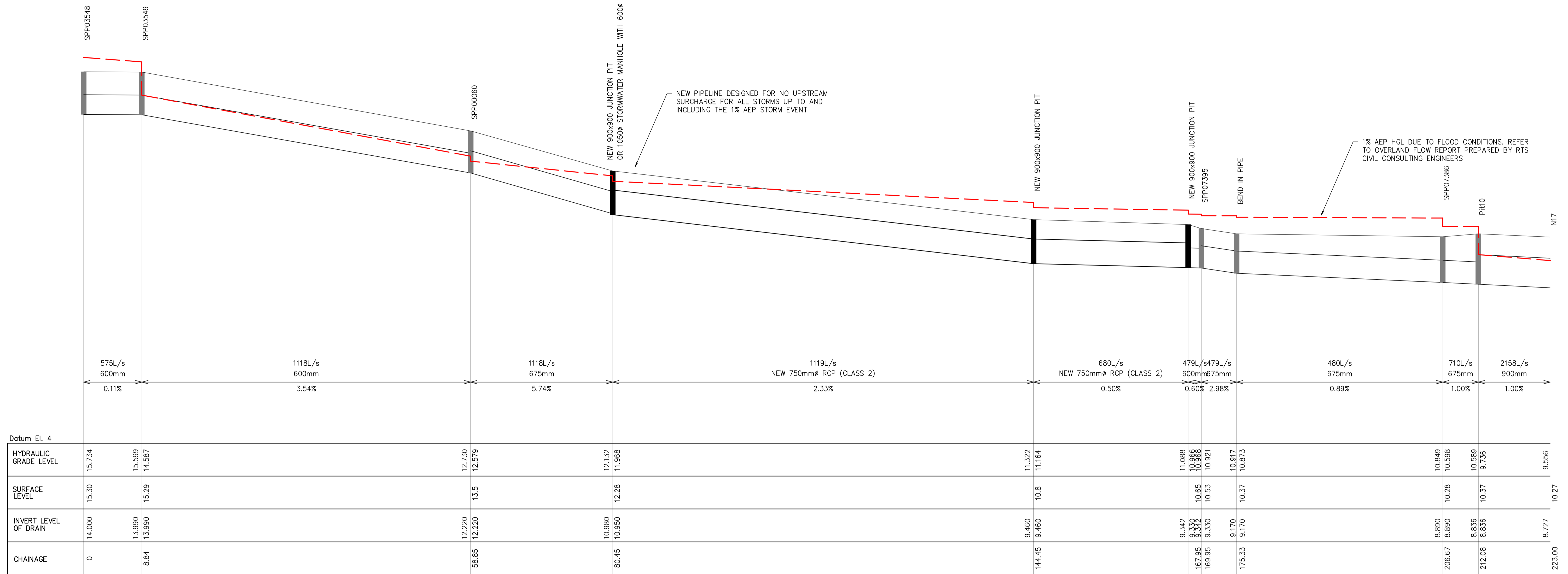
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B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI	DESIGNED BY	R.M.	09.05.2023		<p>Date : 05.08.23 Rhys Mikhail Director Principal Engineer NER: 2570092 RPEQ: 17490 BEng (Civil) Hons MIEAust. CPEng NER RPEQ APEC InPE(Aus)</p>	Client: LAXLAND 3 PTY LTD	Project Number: 230203	Drawing ID: SW202	Issue: B
A	-	-	CHECKED BY	R.M.	05.08.2023						
Rev:	Date:	Description:	APPROVED BY	R.M.	05.08.2023						

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STORMWATER DRAINAGE EASEMENT PIPELINE LONGITUDINAL SECTION

SCALE = 1 : 300 (Horz.) 1 : 60 (Vert.)

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B	05.08.23	WATER QUALITY MEASURES ADDED TO COUNCIL RFI		DRAWN	S.M.	09.05.2023		Client: LAXLAND 3 PTY LTD		Project Number: 230203	Drawing ID: SW300	Issue: B
A	20.07.23	STORMWATER MANAGEMENT PLAN FOR DA SUBMISSION		CHECKED	R.M.	18.05.2023						
Rev:	Date:	Description:	Reviewed:	APPROVED	R.M.	18.05.2023		The document is produced by RTS Civil Consulting Engineers Pty Ltd (RTS) solely for the benefit of and use by the client in accordance with the terms and conditions of RTS. RTS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.				