

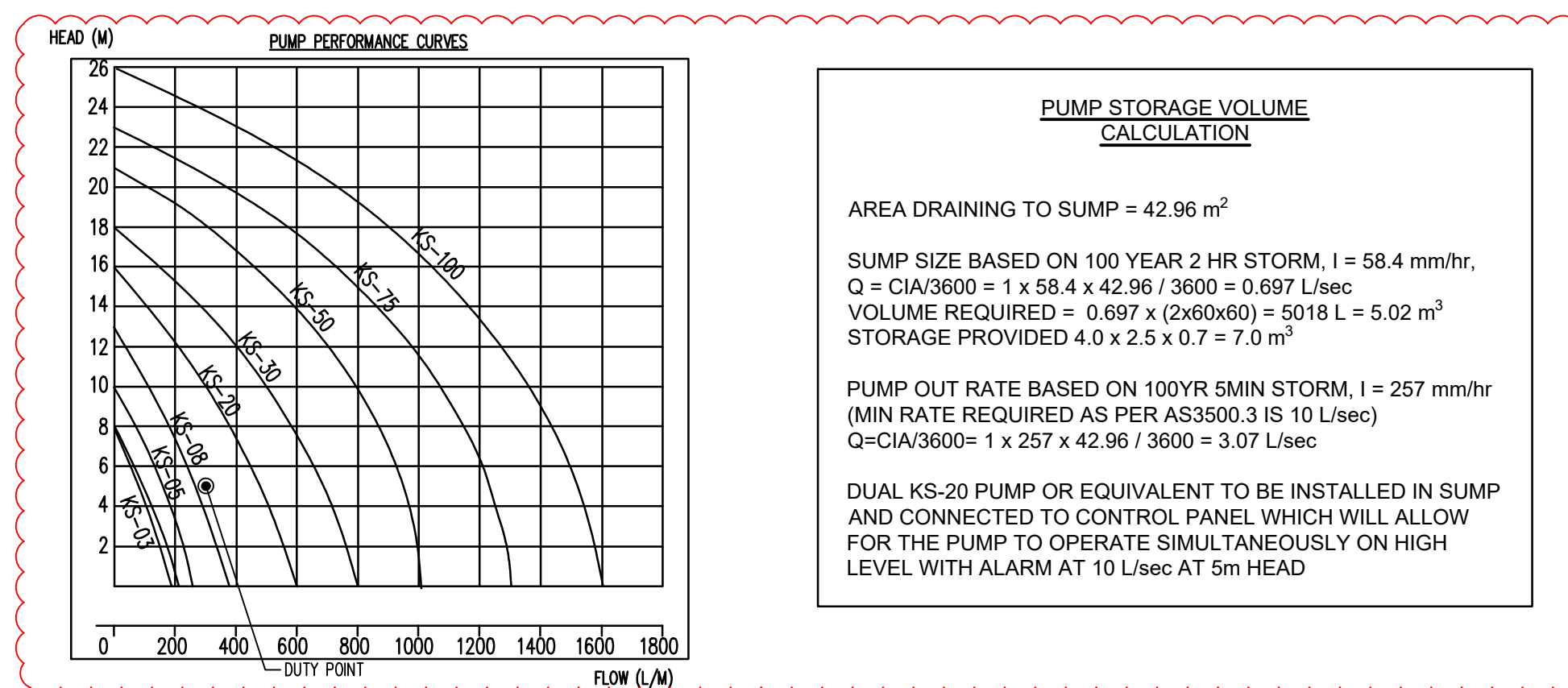
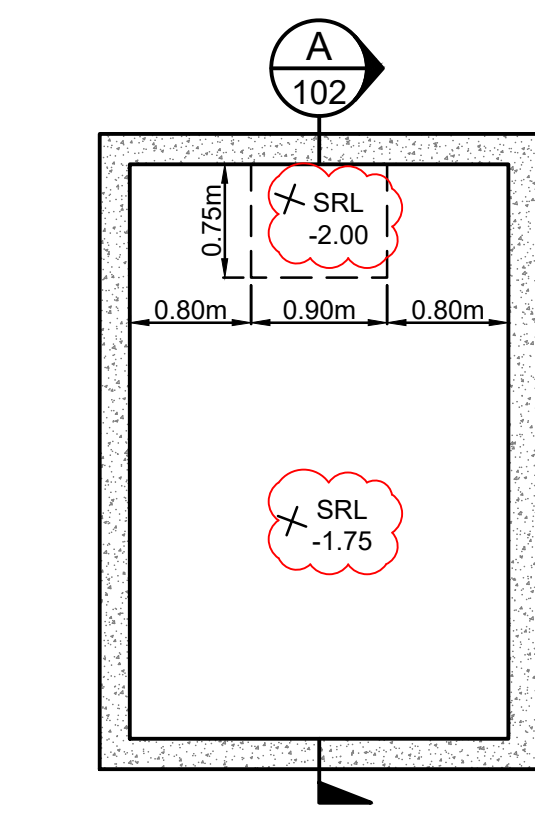
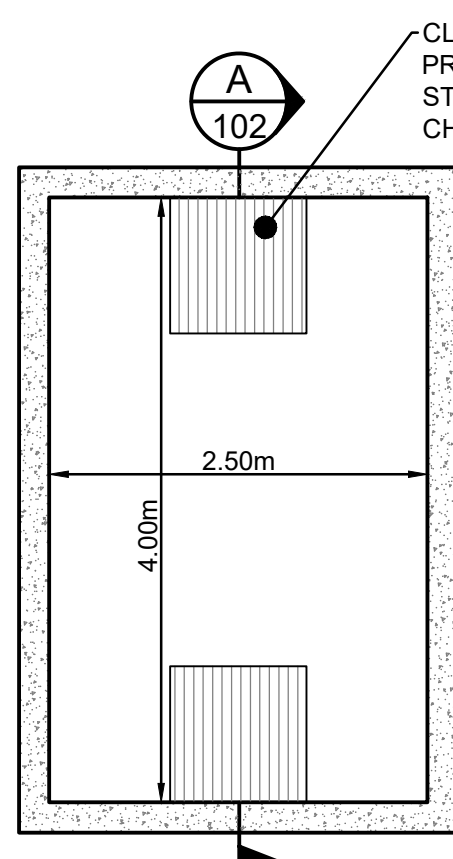
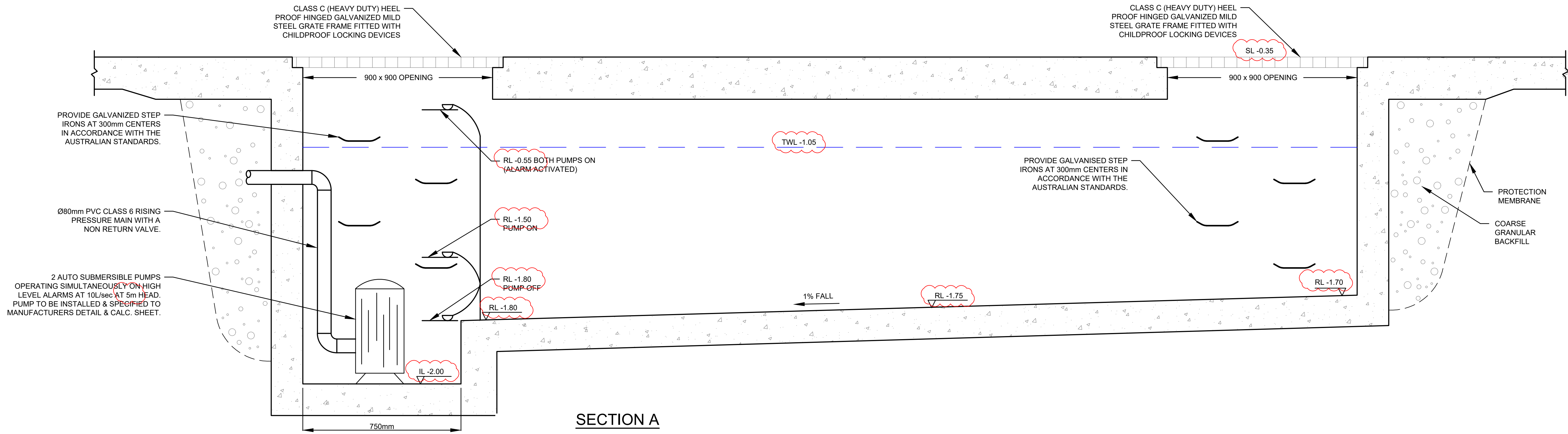
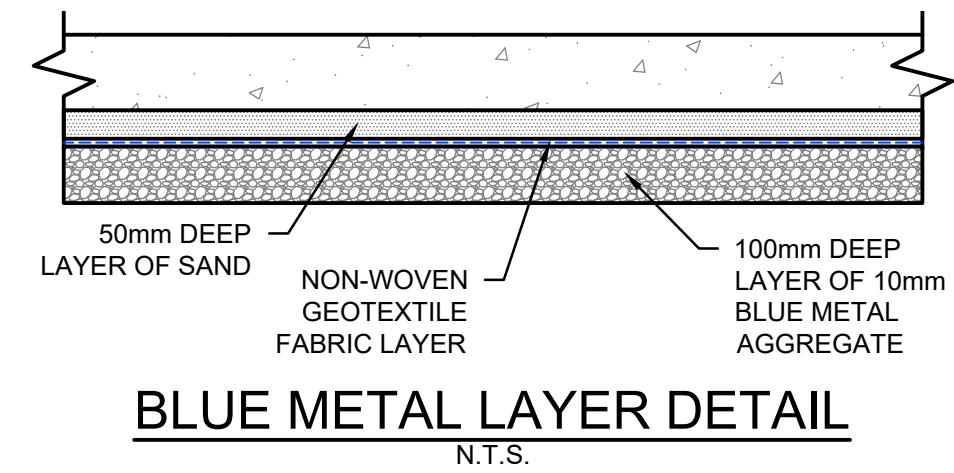
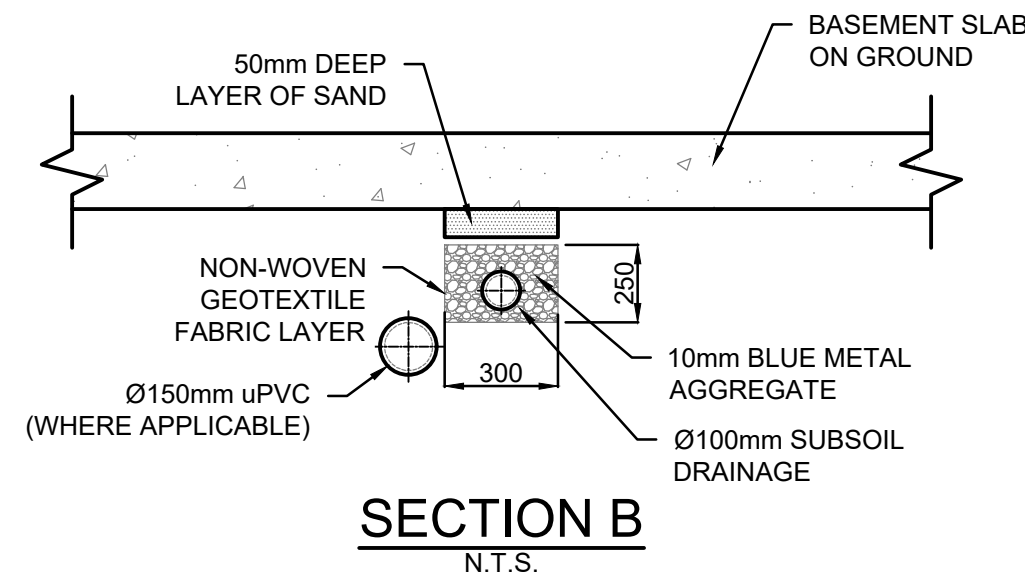
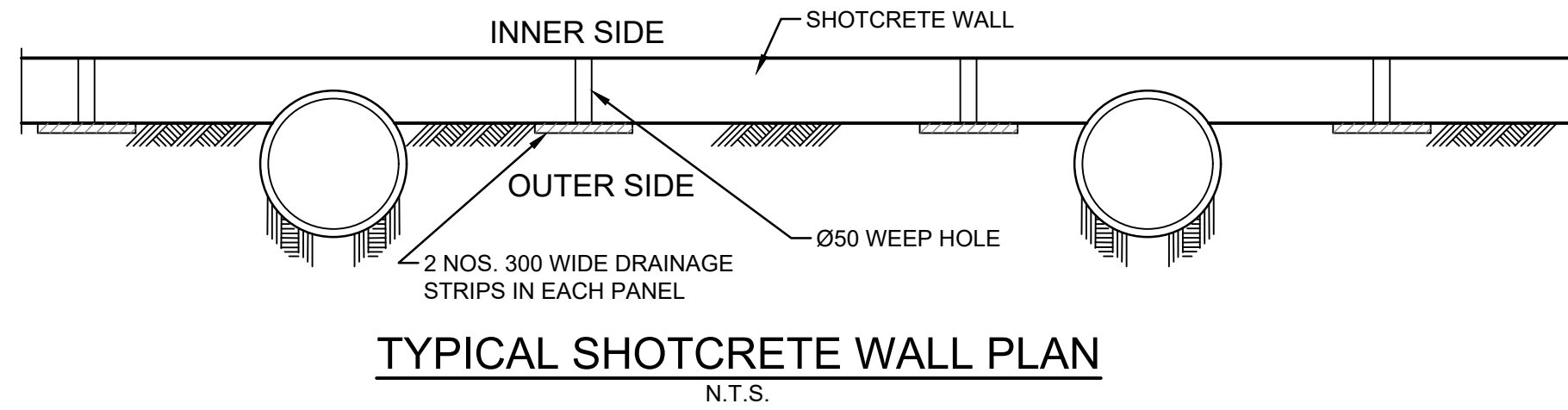
STORMWATER CONCEPT PLANS



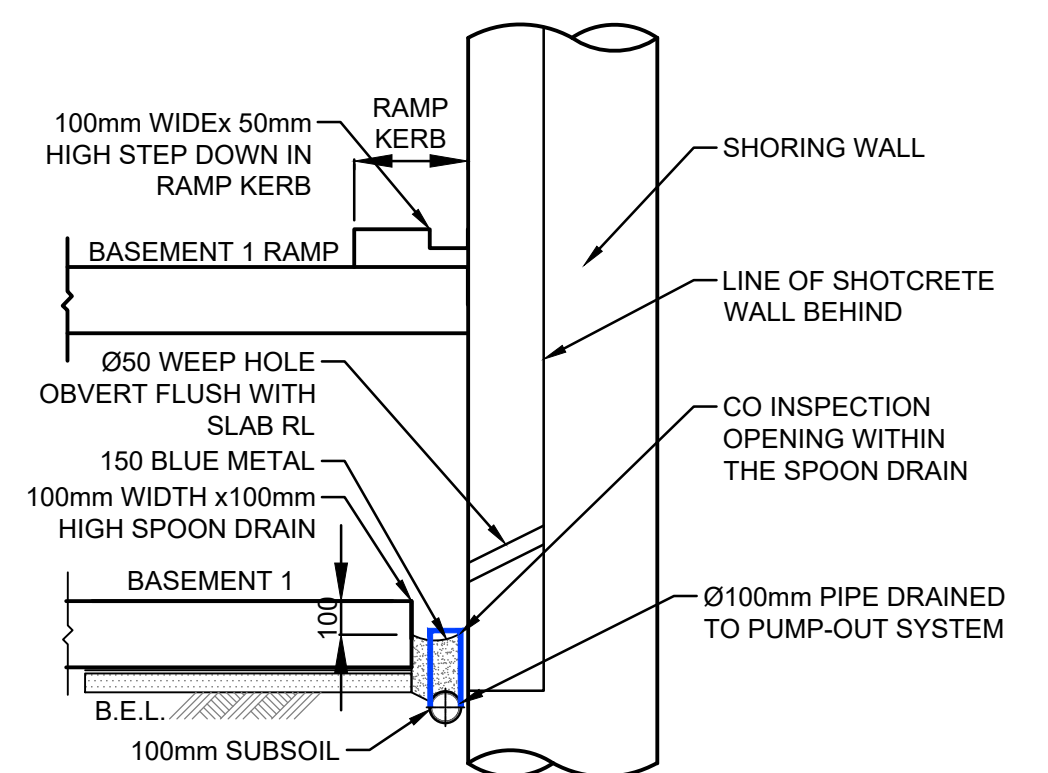
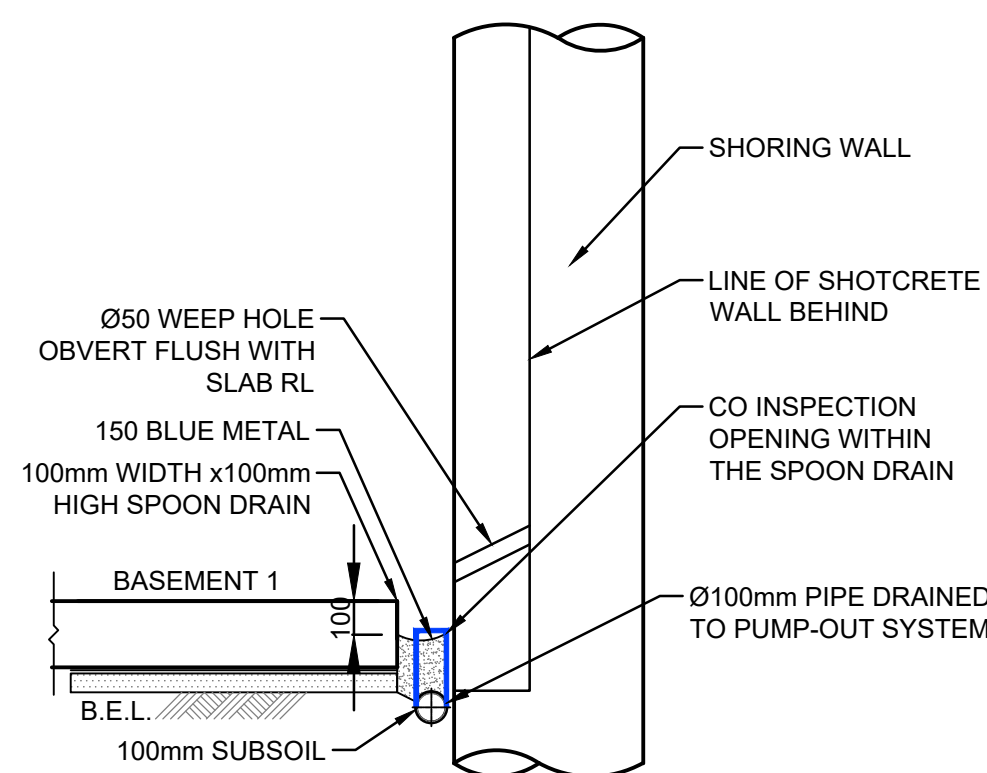
DRAWING INDEX	
Drawing No.	DESCRIPTION
000	COVER SHEET PLAN
101	STORMWATER CONCEPT PLAN BASEMENT LEVEL SHEET 1 OF 2
102	STORMWATER CONCEPT PLAN BASEMENT LEVEL SHEET 2 OF 2
103	STORMWATER CONCEPT PLAN GROUND LEVEL
104	NOT USED
105	NOT USED
106	NOT USED
107	SEDIMENT & EROSION CONTROL PLAN & DETAILS
108	MAINTENANCE SCHEDULE & MISCELLANEOUS DETAILS SHEET

NOT FOR CONSTRUCTION

				Architect CDArchitects				Council Northern Beaches Council				Scale				 CIVIL & STORMWATER ENGINEERING SERVICES PTY LTD ABN: 27 644 422 506 Shop 1, 143-147 Parramatta Road, Concord, NSW 2137 P:(02) 8397 6500 E:info@esaconsult.com.au				Project 1 CAREEL HEAD ROAD AVALON BEACH PROPOSED MIXED USE DEVELOPMENT STORMWATER CONCEPT PLAN				Drawing Title COVER SHEET PLAN			
				Level 2, 60 Park Street, Sydney NSW 2000																							
B				ISSUE FOR DEVELOPMENT APPLICATION				22/07/2024				YRM				EH				OC							
A				ISSUE FOR DEVELOPMENT APPLICATION				20/06/2024				YRM				EH				OC							
Issue				Description				Date				Designed				Engineer				Checked							
																											
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Type	Output		Outlet		Rated Head Capacity		Maximum Head Capacity		Weigh	Dimension			
	HP	kW	mm	Inch	M	LPM	M	LPM		L(mm)	W(mm)	H(mm)	
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305	
KS-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359	
KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	375	
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425	
KS-20	2	1.5	80	3"	10	300	16	600	31	278	182	475	
KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450	
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530	
KS-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590	
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610	



NOTE:
ALL THE AGG LINES BEHIND BASEMENT WALLS TO BE CONNECTED TO PUMP-OUT SUMP.

PUMP-OUT SUMP DETAIL PLAN VIEW
SCALE 1:50

PUMP-OUT SUMP DETAIL SRL
SCALE 1:50

TYPICAL SPOON DRAIN DETAILS SECTION A1
N.T.S.

TYPICAL SPOON DRAIN DETAILS AT BASEMENT RAMP SECTION A2
N.T.S.

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— ExW — EXISTING WATER MAIN
— ExS — EXISTING SEWER MAIN
— ExT — EXISTING TELSTRA
— ExE — EXISTING ELECTRICAL
— ExG — EXISTING GAS
— ExOP — EXISTING OPTIC FIBER
— 26.45 — EXISTING CONTOUR

700

23

_____ CULT FENCE

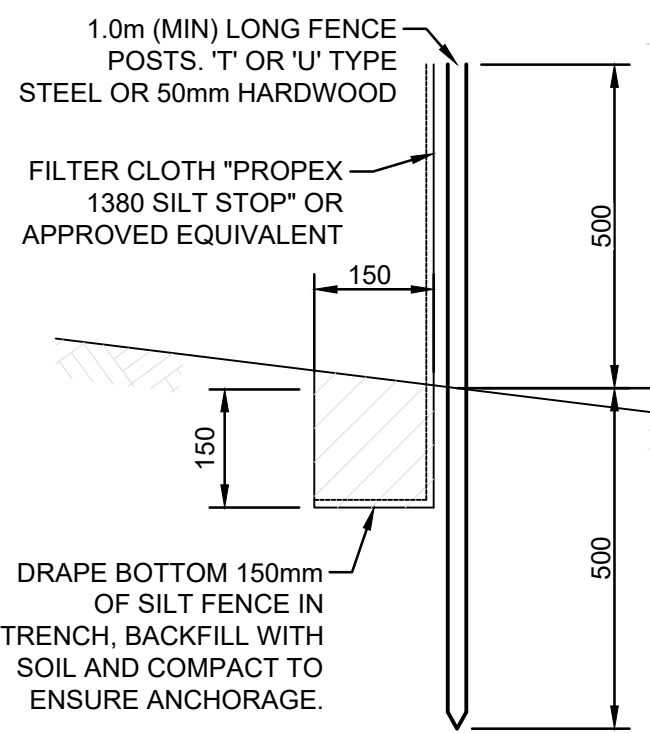


STABILISED SITE ACCESS

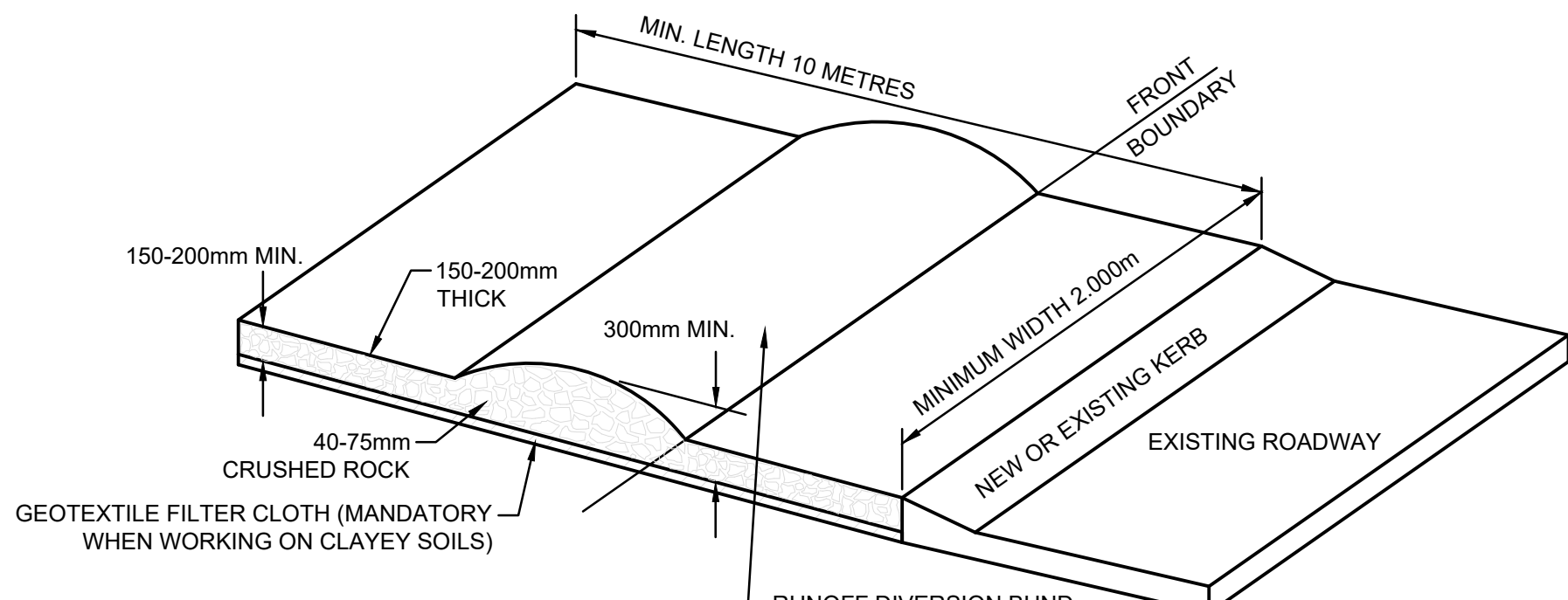
 TREES TO BE REMOVED INLET PROTECTION

1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.
2. POSTS SHOULD NOT BE SPACED MORE THAN 3.0m APART.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150mm AND FOLDED.
4. FOR EXTRA STRENGTH TO SILT FENCE, WOVEN WIRE (14mm GAUGE, 150mm MESH SPACING) TO BE FASTENED SECURELY BETWEEN FILTER CLOTH AND POSTS BY WIRE TIES OR STAPLES.
5. INSPECTIONS SHALL BE PROVIDED ON A REGULAR BASIS, ESPECIALLY AFTER RAINFALL AND EXCESSIVE SILT DEPOSITS REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.
6. SEDIMENT FENCES SHALL BE CONSTRUCTED WITH SEDIMENT TRAPS AND EMERGENCY SPILLWAYS AT SPACINGS NO GREATER THAN 40m ON FLAT TERRAIN DECREASING TO 20m SPACINGS ON STEEP TERRAIN

N.T.S.

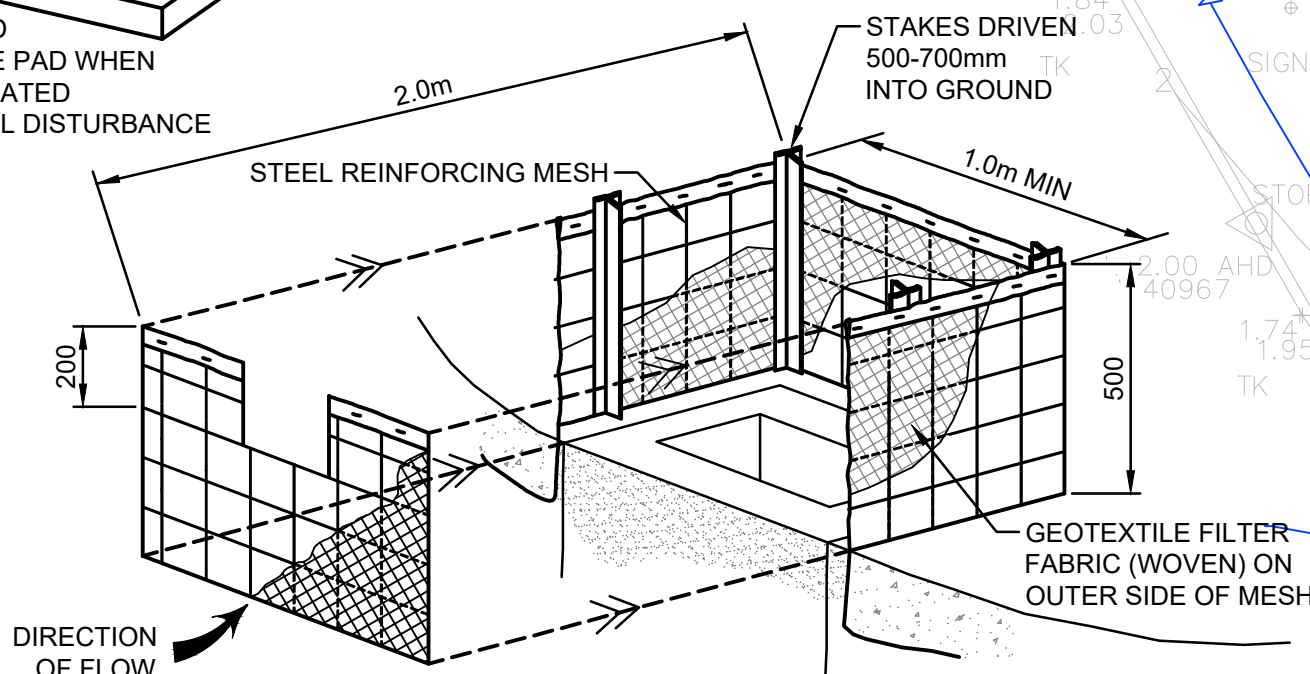


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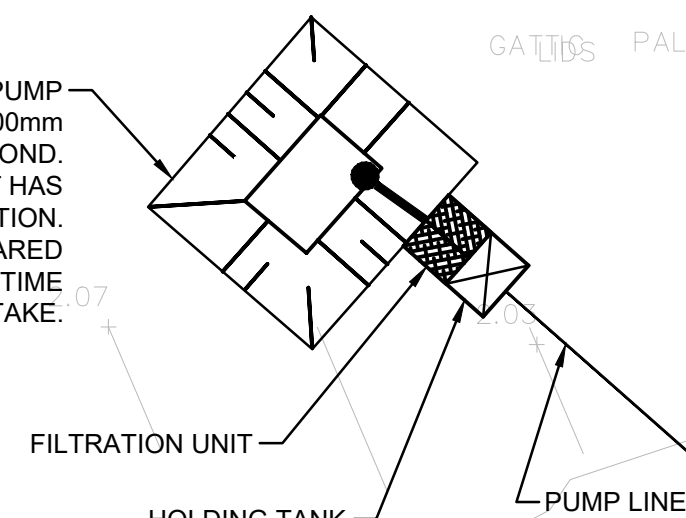
SAG GULLIES

N.T.S.			
	Architect		Council



SCALE 1:100

MANUALLY ACTIVATED SUBMERSIBLE PUMP -
TO BE PLACED ON PLINTH AT MIN 600mm
FROM INVERT OF STILLING POND.
CONTRACTOR IS TO ENSURE SEDIMENT HAS
SETTLED PRIOR TO PUMP OPERATION.
SEDIMENT MATERIAL IS TO BE CLEARED
REGULARLY AND SHALL NOT AT ANY TIME
REACH THE LEVEL OF THE PUMP INTAKE.



1. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO NOMINATE THE LOCATIONS AND TYPES OF SEDIMENT AND EROSION CONTROL MEASURES TO BE ADOPTED. THESE MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CLEARING OR EARTHWORKS AND MAINTAINED UNTIL THE WORKS ARE COMPLETED AND NO LONGER POSE AN EROSION HAZARD, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
2. IMMEDIATELY FOLLOWING SETTING OUT OF THE WORKS, BUT PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORKS, THE CONTRACTOR AND SUPERINTENDENT SHALL WALK THE SITE TO IDENTIFY AND MARK TREES WHICH ARE TO BE PRESERVED. NOTWITHSTANDING THE ABOVE, THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO MINIMISE DISTURBANCE TO EXISTING VEGETATION AND GROUND COVER OUTSIDE THE MINIMUM AREAS REQUIRED TO COMPLETE THE WORKS AND SHALL BE RESPONSIBLE FOR RECTIFICATION, AT ITS OWN COST, OF ANY DISTURBANCE BEYOND THOSE AREAS.
3. PROVIDE GULLY GRATE INLET SEDIMENT TRAPS AT ALL GULLY PITS.
4. PROVIDE SILT FENCING ALONG PROPERTY LINE AS DIRECTED BY SUPERINTENDENT.
5. ADDITIONAL CONTROL DEVICES TO BE PLACED WHERE DIRECTED BY THE PRINCIPLE.
6. ALTERNATIVE DESIGNS TO BE APPROVED BY SUPERINTENDENT PRIOR TO CONSTRUCTION.
7. WASH DOWN/RUMBLE AREA TO BE CONSTRUCTED WITH PROVISIONS RESTRICTING ALL SILT AND TRAFFICKED DEBRIS FROM ENTERING THE STORMWATER SYSTEM.
8. NO WORK OR STOCKPILING OF MATERIALS TO BE PLACED OUTSIDE OF SITE WORK BOUNDARY.
9. APPROPRIATE EROSION AND SEDIMENT CONTROLS TO BE USED TO PROTECT STOCKPILES AND MAINTAINED THROUGH OUT CONSTRUCTION.
10. IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE DUE CARE OF NATURAL VEGETATION. NO CLEARING IS TO BE UNDERTAKEN WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.
11. TO AVOID DISTURBANCE TO EXISTING TREES, EARTHWORKS WILL BE MODIFIED AS DIRECTED ON-SITE BY THE SUPERINTENDENT.
12. THE LOCATION OF EROSION AND SEDIMENTATION CONTROLS WILL BE DETERMINED ON SITE BY THE SUPERINTENDENT.
13. ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK COMMENCING.
14. ALL SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE. THE SUPERINTENDENT'S SURVEYOR SHALL PEG ALL ALLOTMENT BOUNDARIES. PROVIDE COORDINATE INFORMATION TO THESE PGS AND PLACE BENCH MARKS. THE CONTRACTOR SHALL SET OUT THE WORKS FROM AND MAINTAIN THESE PGS.

[illegible]

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Council
Northern Beaches
Council

Scale



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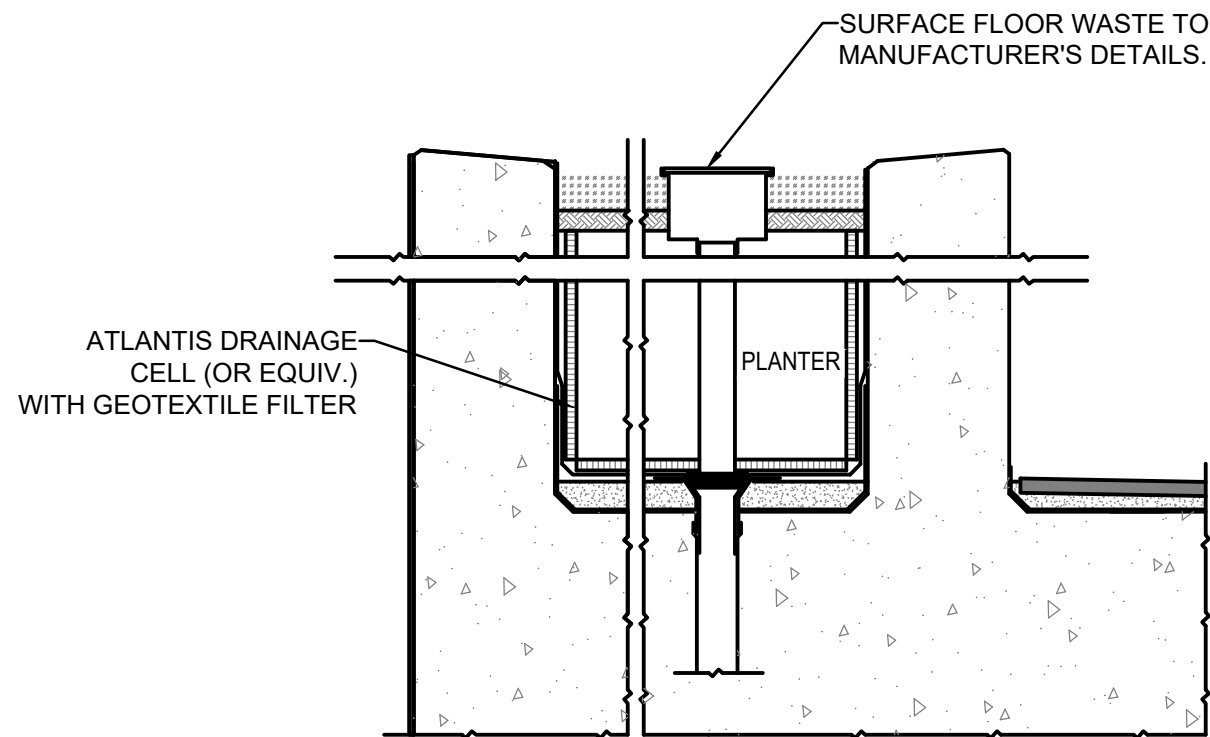
SCALE 1:100 @ A1


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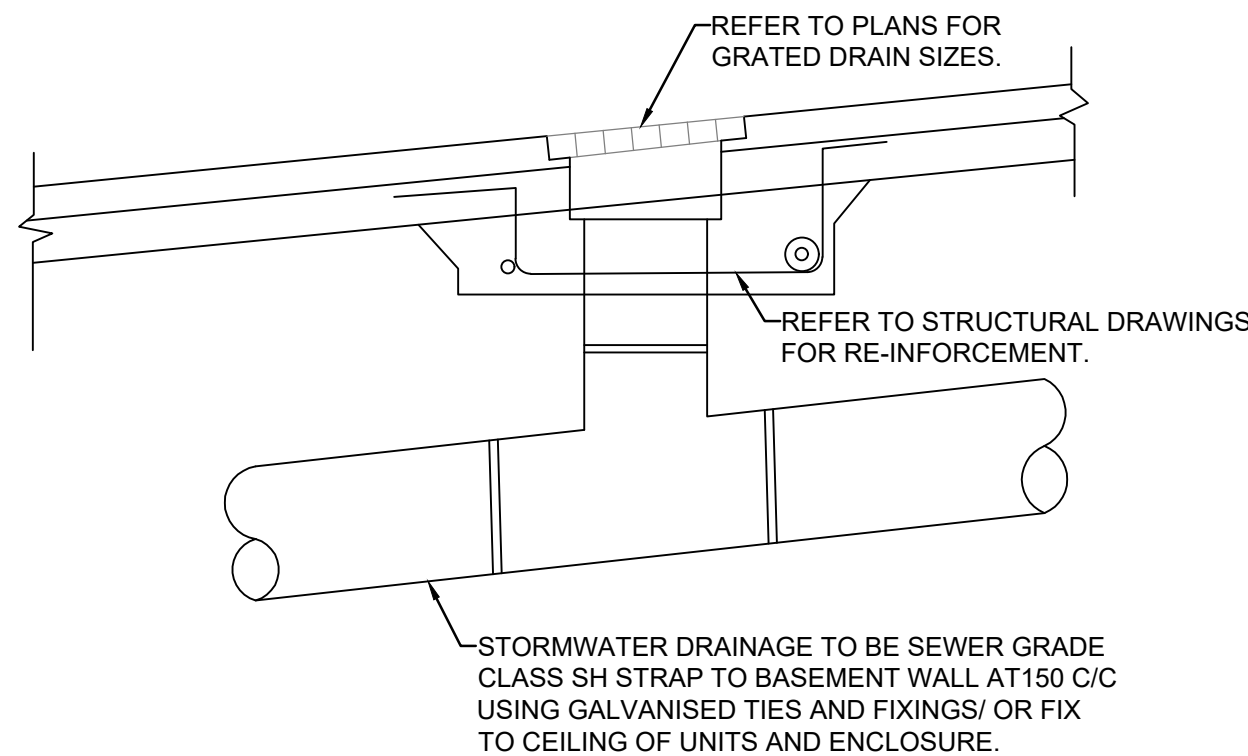
Project	1 CAREEL HEAD ROAD AVALON BEACH PROPOSED MIXED USE DEVELOPMENT STORMWATER CONCEPT PLAN
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Drawing Title			
SEDIMENT & EROSION CONTROL PLAN & DETAILS			
Scale	A1	Project No.	Dwg. No.
As Shown		240157	107
			Issue
			A

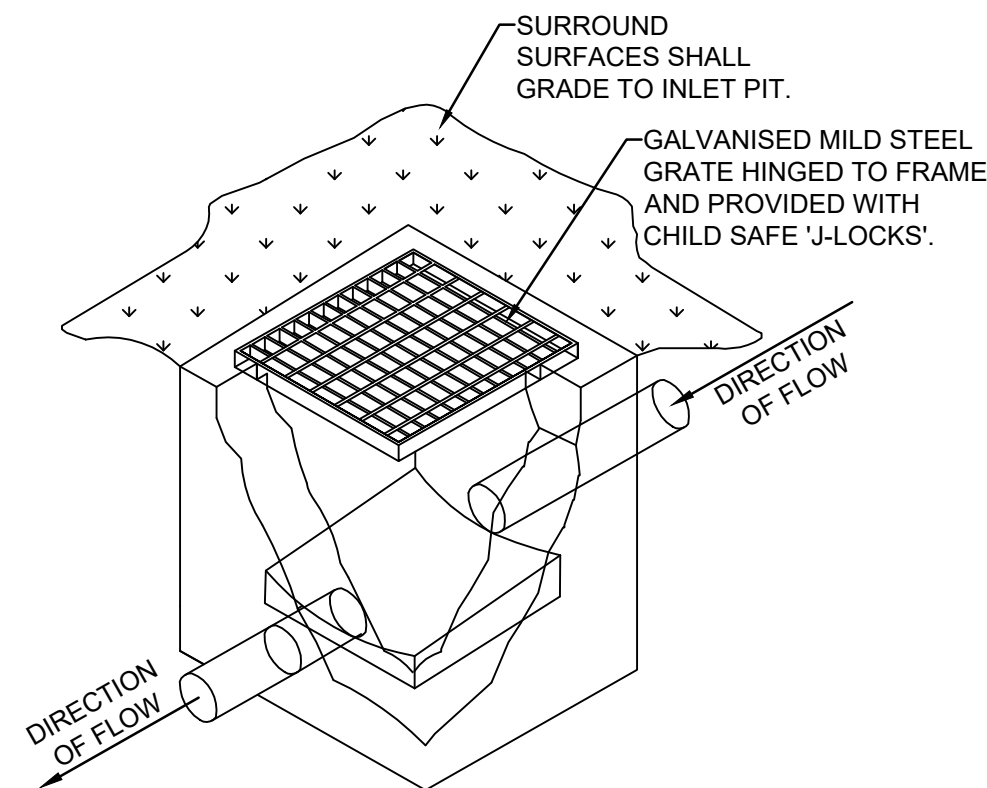
NOTE:
DETAIL TO BE CONFIRMED BY
WATERPROOFING CONSULTANT/ARCHITECT.



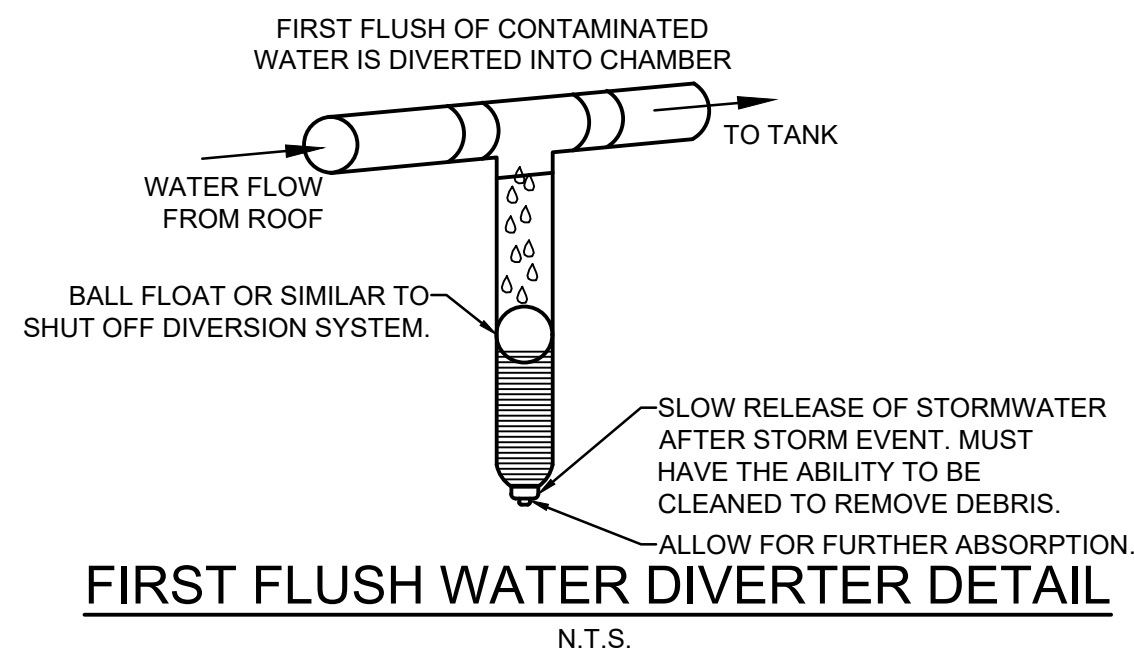
TYPICAL SUSPENDED PLANTER BOX FLOOR
WASTE DETAIL
N.T.S.



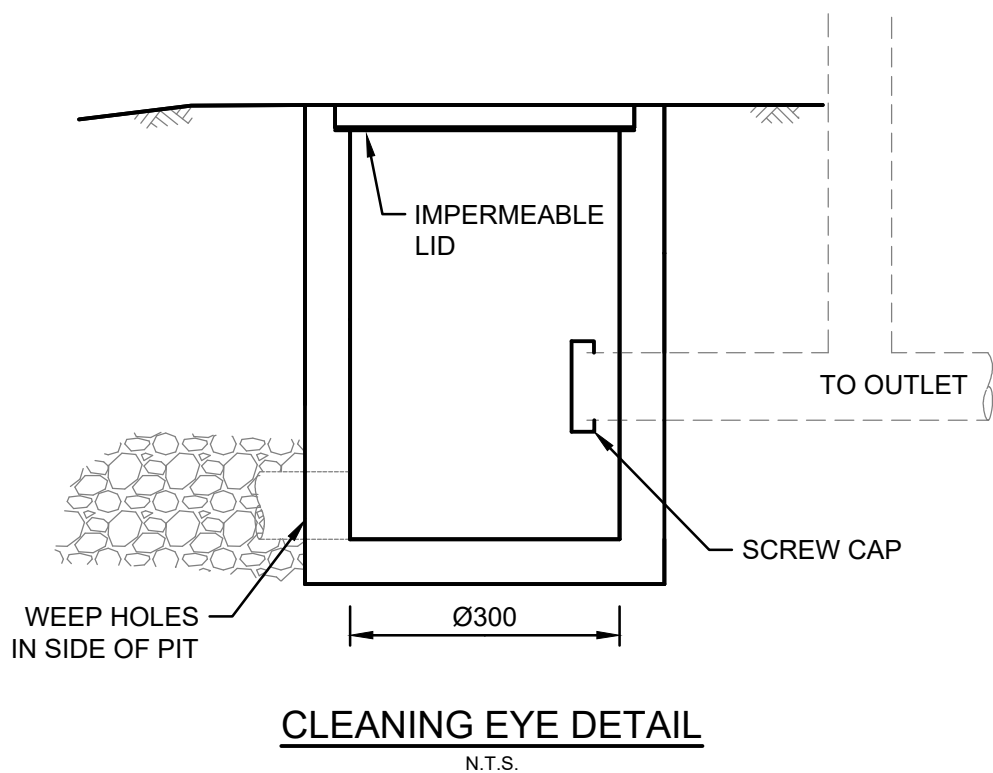
GRATED DRAIN DETAIL
N.T.S.



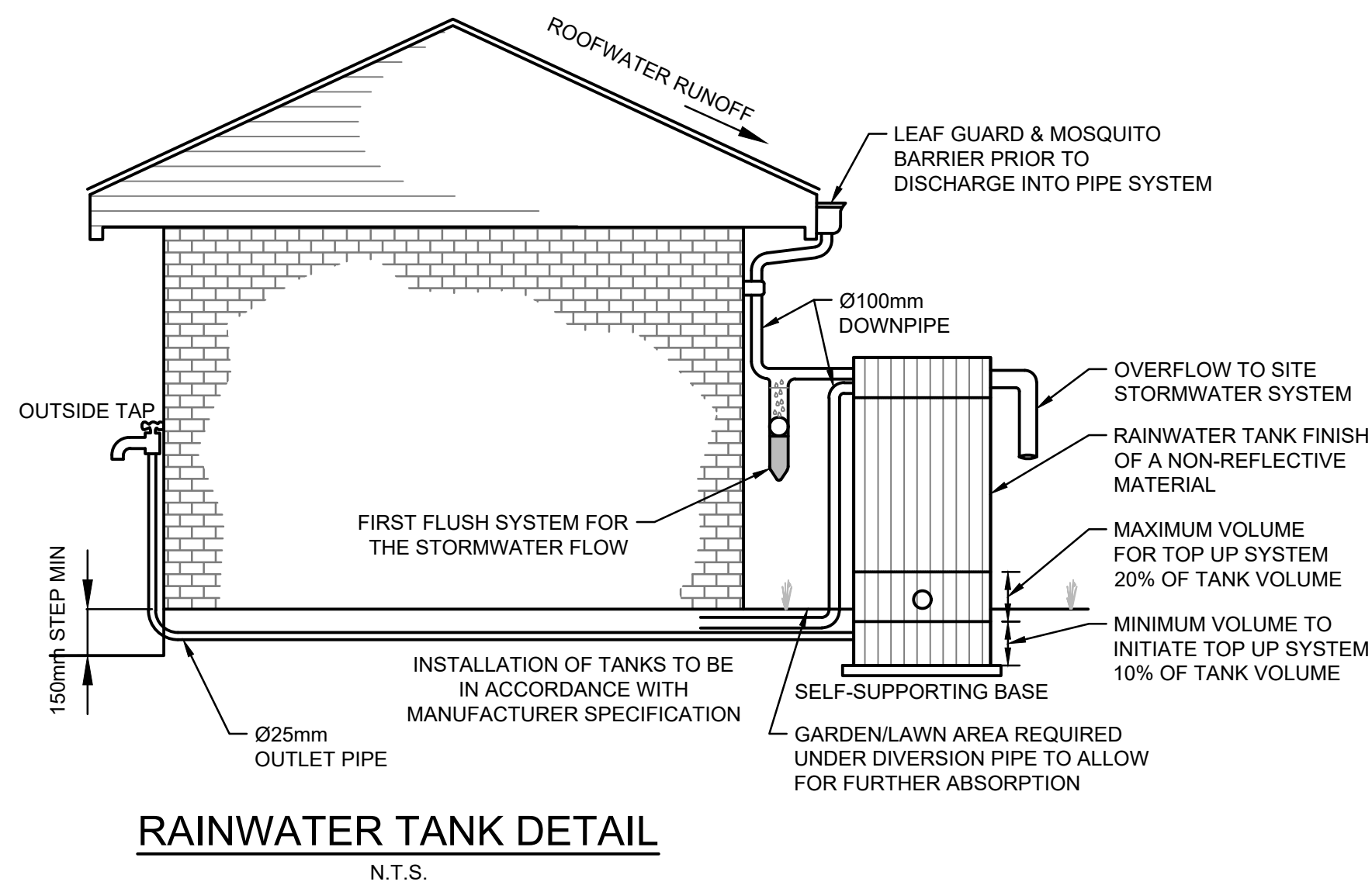
TYPICAL GRATED
INLET PIT DETAIL
N.T.S.



FIRST FLUSH WATER DIVERTER DETAIL
N.T.S.



CLEANING EYE DETAIL
N.T.S.



RAINWATER TANK DETAIL
N.T.S.

STORAGE TANK NOTES:

1. TANK WATER TAPS SHALL BE MARKED "RAINWATER NOT TO HUMAN CONSUMPTION".
2. RAINWATER TANKS SHALL BE CONNECTED TO MAINS WATER SUPPLY AS BACKUP.
3. THE PUMPS ARE TO BE INSULATED IN ACCORDANCE WITH COUNCIL POLICY.
4. PUMPS SHALL PROVIDE MINIMUM 150 kPa PRESSURE.
5. EACH TANK TO BE CONNECTED TO AN OUTDOOR TAP FOR IRRIGATION USE.
6. RAINWATER TANKS TO BE CLEANED OUT EVERY 6 MONTHS.
7. WATER TANK AND ASSOCIATED STRUCTURE TO BE THE SAME COLOR, OR A COLOR COMPLEMENTARY TO THE DWELLING.
8. TOP TANK TO BE BELOW TOP OF NEAREST FENCE, OR 1.8 METERS WHICHEVER IS LESS.
9. THE WATER TANK SHOULD BE LOCATED AT LEAST 900mm FROM ANY PROPERTY BOUNDARY.
10. PLUMBING FROM THE WATER TANK IS TO BE KEPT SEPARATED FROM THE RETICULATED WATER SUPPLY SYSTEM.
11. TANK TO BE BUILT ON SELF-SUPPORTING BASE.
12. PROVIDE BACK-FLOW PREVENTION DEVICE AT MAINS WATER METER.
13. ROOF DRAINING TO TANK MUST NOT CONTAIN LEAD, TAR BASED PAINTS OR ASBESTOS.
14. WATER TO BE DRAWN FROM ANAEROBIC ZONE OF TANK.

Stormwater Drainage System Maintenance Schedule			
Maintenance Action	Frequency	Responsibility	Procedure
General			
Inspect roof drainage system of building and remove any debris/sludge	Six Monthly	Strata/Maintenance Contractor	Remove any leaves or debris and sludge from gutters of building and flush downpipes of building to remove any blockages. Pits downstream of downpipes to be cleaned of flushed debris.
Inspect pits and trench drains on site and remove debris/litter/sludge	Monthly or following Rain Period	Strata/Maintenance Contractor	Remove grate. Remove any debris/litter/sludge from within pits.
Inspect site for litter and floatable debris and remove	Fortnightly	Strata/Maintenance Contractor	Remove litter from site and sweep all driveway and pathways in order to remove leaves or sediments that may enter into the drainage system.
Basement Pump out			
Inspect and clean flap valve,	Six Monthly	Strata/Maintenance Contractor	Remove grate and check flap valve and pipe for blockages and clean. Check hinges for rust and test operation by moving flap to full extent.
Check hinge operation.	Annually	Strata/Maintenance Contractor	Inspect hinge and check its operation.
Check attachment of flap valve to wall pit.	Annually	Strata/Maintenance Contractor	Remove grate and ensure valve fixings are secure.
Check flap valve seal.	Six Monthly	Strata/Maintenance Contractor	Remove grate and fill pit with water, ensure flap seals against side of pit with minimal leakage.
Inspect walls for cracking or spalling.	Annually	Strata/Maintenance Contractor	Remove grate to inspect internal walls, remove vegetation to inspect external wall, repair as required.
Inspect sump and clean.	Six Monthly	Strata/Maintenance Contractor	Remove grate and clean sediment/sludge from sump.
Inspect grate for damage or blockage.	Six Monthly	Strata/Maintenance Contractor	Check both sides of grate for corrosion (particularly welds and corners); also check for damage and blockages
Inspect outlet pipe and remove blockages	Six Monthly	Strata/Maintenance Contractor	Remove grate and flush outlet pipe to ensure it drains freely. Check for debris on upstream side of return line.
Outlets			
Inspect & remove any blockage of orifices	Six monthly	Strata/Maintenance Contractor	Remove grate & screen to inspect orifice. See plan for location of outlets
Check attachment of orifice plates to wall of chamber and/or pit (gaps less than 5 mm)	Annually	Strata/Maintenance Contractor	Remove grate and screen. Ensure plates are mounted securely, tighten fixings if required. Seal gaps as required.
Check orifice diameters are correct and retain sharp edges	Five yearly	Strata/Maintenance Contractor	Compare diameter to design (see Work-as-Executed) and ensure edge is not pitted or damaged.
Inspect screen and clean	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screens if required to clean them.
Check attachment of screens to wall of chamber or pit	Annually	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Ensure screen fixings are secure. Repair as required.
Check screen(s) for corrosion	Annually	Strata/Maintenance Contractor	Remove grate(s) and examine screen(s) for rust or corrosion, especially at corners or welds.
Inspect walls (internal and external, if appropriate) for cracks or spalling	Annually	Strata/Maintenance Contractor	Remove grate(s) to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.
Inspect outlet sumps & remove any sediment/sludge	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Remove sediment/sludge build-up and check orifices are clear.
Inspect grate(s) for damage or blockage	Six monthly	Strata/Maintenance Contractor	Check both sides of a grate for corrosion, (especially corners and welds) damage or blockage.
Inspect outlet pipe & remove any blockage	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Ventilate underground storage if present. Check orifices and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line.
Check step irons for corrosion	Annually	Strata/Maintenance Contractor	Remove grate. Examine step irons and repair any corrosion or damage
Check fixing of step irons is secure	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and ensure fixings are secure prior to placing weight on step iron.
Storage			
Inspect storage & remove any sediment/sludge in pit	Six monthly	Strata/Maintenance Contractor	Remove grate(s) and screen(s). Remove sediment/sludge build-up.
Inspect internal walls of storage (and external, if appropriate) for cracks or spalling	Annually	Strata/Maintenance Contractor	Remove grate(s) to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.
Inspect & remove any debris/litter/mulch etc blocking grates	Six monthly	Strata/Maintenance Contractor	Remove blockages from grate(s) and check if storage is blocked.
Inspect areas draining to the storage(s) & remove debris/mulch/litter etc likely to block screens/grates	Six monthly	Strata/Maintenance Contractor	Remove debris and floatable material likely to be carried to grates.
Compare storage volume to volume approved. (Rectify if loss > 5%)	Annually	Strata/Maintenance Contractor	Compare actual storage available with Work-as Executed plans. If volume loss is greater than 5%, arrange for reconstruction to replace the volume lost. Council to be notified of the proposal.
Inspect storages for subsidence near pits	Annually	Strata/Maintenance Contractor	Check along drainage lines and at pits for subsidence likely to indicate leakages.

NOT FOR CONSTRUCTION

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A		ISSUE FOR DEVELOPMENT APPLICATION			20/06/2024	YRM	EH	OC					1 CAREEL HEAD ROAD AVALON BEACH PROPOSED MIXED USE DEVELOPMENT STORMWATER CONCEPT PLAN		MAINTENANCE SCHEDULE & MISCELLANEOUS DETAILS SHEET							
Issue	Description	Date	Designed	Engineer	Checked										Scale		Project No.		Dwg. No.		Issue	
1	Issue for Development Application	20/06/2024													N.T.S.		240157		108		A	