

OVERFLOWS EQUALLY SPACED TO ALLOW

FLOW FROM RAINWATER TANK TO OSD

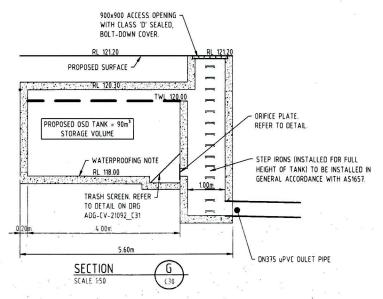
PROPOSED OSD TANK = 90m³ STORAGE VOLUME

STEP IRONS (INSTALLED FOR FULL HEIGHT

OF TANK) TO BE INSTALLED IN GENERAL ACCORDANCE WITH AS1657.

WATERPROOFING NOTE

SECTION



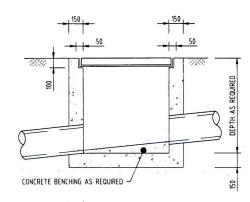
WATERPROOFING NOTE \

RL 118.30

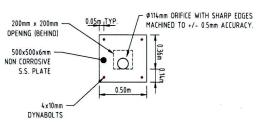
- PUMP-OUT SUMP

- STEP IRONS (INSTALLED FOR FULL

HEIGHT OF TANK) TO BE INSTALLED IN GENERAL ACCORDANCE WITH



TYPICAL CONCRETE INLET PIT DETAIL



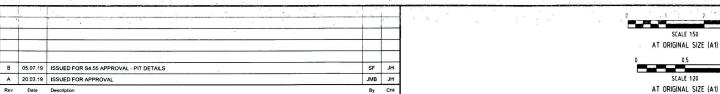
ORIFICE PLATE DETAIL SCALE 1:20

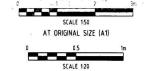
REFERENCE POINT LOCATION FOR STORMWATER DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (REFERENCE POINT LOCAT	VERTICAL CONTROL (ION) (REFERENCE LEVEL)
FIELD INLET PIT	+ CENTRE O	F GULLY TOP OF GRATE OR COVER
MANHOLE	CENTRE O	F MH. TOP OF GRATE OR COVER
ROAD GULLY	CENTRE O	F GULLY TOP OF GRATE OR COVER

PIT ID	DESCRIPTION	D/S PIPE IL.	PROPOSED SL.	DEPTH TO INVERT (
	1/1 U UESCRIPTION 1/1 600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE		132.00	1.00
2/1	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	131.00 129.35	130.35	1.00
3/1	900x900 CHAMBER WITH 850x850 CLASS 'B' HEELSAFE GRATE, CONCRETE INFILL TO MATCH SURROUND.	126.60	128.25	1.65
4/1	450x450 (HAMBER WITH CLASS 'D' TRAFFICABLE, CONCRETE INFILL TO MATCH SURROUND.	TANK	TANK	
5/1	450x450 CHAMBER WITH CLASS 'D' TRAFFICABLE, CONCRETE INFILL TO MATCH SURROUND.	TANK	TANK	
6/1	600x600 CHAMBER WITH 550x550 CLASS 'B' - NON TRAFFICABLE GRATE	126.59	127.20	0.61
7/1	600x600 CHAMBER WITH 550x550 CLASS 'B' - NON TRAFFICABLE GRATE	125.56	126.38	0.82
8/1	450x450 CHAMBER WITH 500x500 CLASS 'B' - NON TRAFFICABLE GRATE	125.50	125.70	0.2
1/2	450x450 CHAMBER WITH 500x500 CLASS 'B' HEELSAFE - NON TRAFFICABLE GRATE	REFER HYD. ENGINEERS	REFER HYD, ENGINEERS	REFER HYD. ENGINEER
2/2	450x450 CHAMBER WITH 500x500 CLASS 'B' HEELSAFE - NON TRAFFICABLE GRATE	REFER HYD. ENGINEERS	REFER HYD. ENGINEERS	REFER HYD. ENGINEER
1/3	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	131.90	132.90	1.0
1/4	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	127.95	129.00	1.05
2/4	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	124.35	126.70	2.35
3/4	600x600 CHAMBER WITH 550x550 CLASS 'B' - NON TRAFFICABLE GRATE	122.60	123.90	13
4/4	900x900 CHAMBER WITH 950x950 CLASS 'B' - NON TRAFFICABLE GRATE	117.50	119.00	1.50
5/4	600×900 CHAMBER WITH 550×950 CLASS B - NON TRAFFICABLE GRATE	120.25	121.20	0.95
1/5	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	124.80		
2/5	600×900 CHAMBER WITH 550×850 CLASS 'B' - NON TRAFFICABLE GRATE	121.00	125.80	1.0
3/5	600×900 CHAMBER WITH 550×850 CLASS 'B' - NON TRAFFICABLE GRATE	117.30	118.30	
3A/5	900x900 CHAMBER WITH 950x950 CLASS 'B' - NON TRAFFICABLE GRATE	117.20	116.50	1.0
4/5	900×900 CHAMBER WITH 950×950 CLASS 'B' - NON TRAFFICABLE GRATE	116.10	114.71	
1/6	900x900 CHAMBER WITH 950x950 CLASS B - NON TRAFFICABLE GRATE	126.40	128.80	1.39
2/6	MANHOLE - AS PER IPWEA STD. DRG. No. DS-020			2.40
		126.15		· · · · · · · · · · · · · · · · · · ·
3/6	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	123.70	124.70	1.0
4/6	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	121.10	122.10	1.0
5/6	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	120.67	122.10	1.43
6/6	600X900 CHAMBER WITH 550X850 CLASS 'B' - NON TRAFFICABLE GRATE	120.07	121.05	0.98
7/6	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	117.50	121.20	3.7
1/7	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	127.80	128.80	1.0
2/7	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	126.40	127.40	1.0
3/7	600x900 CHAMBER WITH SS0x850 CLASS 'B' - NON TRAFFICABLE GRATE	126.25	127.40	1.15
1/8	600x900 CHAMBER WITH S50x850 CLASS 'B' - NON TRAFFICABLE GRATE	119.95	121.05	1.1
2/8	600x900 CHAMBER WITH SSOx850 CLASS 'B' - NON TRAFFICABLE GRATE	120.20	121.10	0.9
1/9	600x900 CHAMBER WITH 550x850 CLASS 'B' - NON TRAFFICABLE GRATE	120.20	121.10	0.9
1/RW	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE. CONCRETE INFILL TO MATCH SURROUND.	TANK	TANK	
2/RW	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE. CONCRETE INFILL TO MATCH SURROUND.	TANK	TANK	-
3/RW	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE. CONCRETE INFILL TO MATCH SURROUND.	TANK	121.20	
4/RW	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE. CONCRETE INFILL TO MATCH SURROUND.	TANK	121.20	*
1/0SD	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE CONCRETE INFILL TO MATCH SURROUND.	TANK	122 10 ·	ray - H
2/0SD	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE, CONCRETE INFILL TO MATCH SURROUND.	TANK	121.20	
3/0SD · ·	900x900 CHAMBER WITH CLASS 'D' TRAFFICABLE CONCRETE INFILL TO MATCH SURROUND."	TANK	121.20	
4/0SD	900x900 CHAMBER WITH 950x950 CLASS 'B' - NON TRAFFICABLE GRATE	116.30	117.00	0.7
HW/1 .	PRECAST CONCRETE HEADWALL	N/A	N/A	N/A
HW/2	PRECAST CONCRETE HEADWALL	N/A	N/A	N/A
HW/3	PRECAST CONCRETE HEADWALL	N/A	N/A	N/A

ISSUED FOR





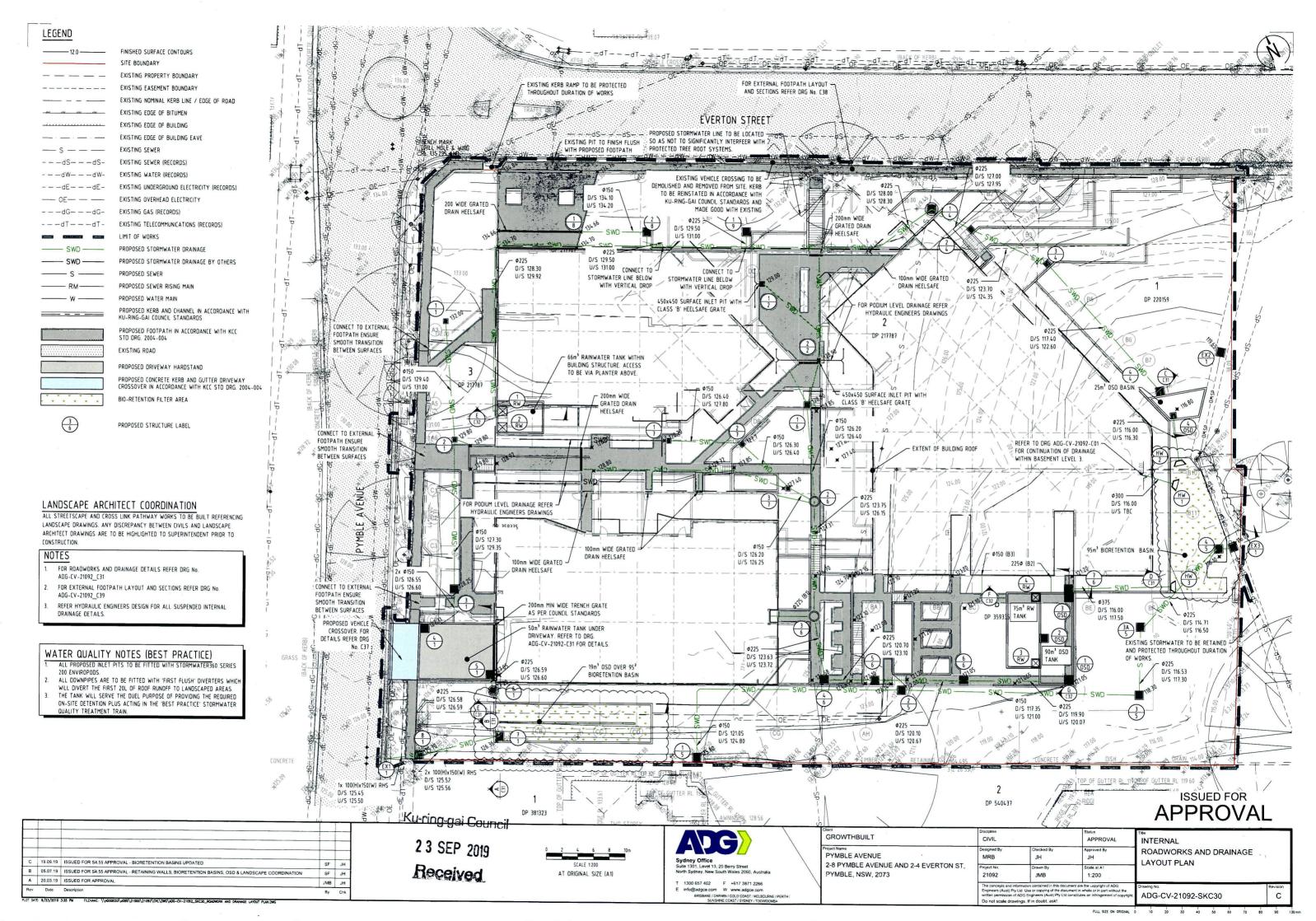
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SUNSHINE COAST / SYDNEY / TOOMCOME

Projec	t Name
PY	MBLE AVENUE
	PYMBLE AVENUE AND 2-4 EVERTON ST,
PY	MBLE, NSW, 2073

GROWTHBUILT

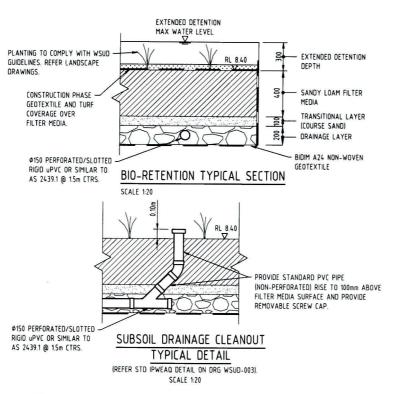
	Discintne CIVIL		Status APPROVAL	ROADWORKS AND DRA	
	Designed By MRB	Checked By JH	Approved By JH	MANAGEMENT DETAILS	
,	Project No. 21092	Drawn By JMB	Scale at A1 AS SHOWN		
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COADWORKS AND DRAINAGE MANAGEMENT DETAILS



ROADWORKS AND DRAINAGE NOTES

- FOR GENERAL NOTES REFER DRG No. ADG-CV-21092_C01, WHICH IS TO BE REQUESTED AND VIEWED PRIOR TO COMMENCEMENT OF CONSTRUCTION IF NOT SUPPLIED.
- REFER HYDRAULIC DRAWINGS FOR BASEMENT, ROOF AND UPPER LEVEL TERRACES DRAINAGE
- 3. ALL ROADWORKS AND ORAINAGE (EXTERNAL TO SITE BOUNDARIES AND/OR COUNCIL OWNED DRAINAGE PIPES INTERNAL TO THE SITE BOUNDARIES) CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH KU-RING-GAI COUNCIL DEVELOPMENT GUIDELINES, DRAWINGS AND SPECIFICATIONS
- 4. ALL DRAINAGE CONSTRUCTION (PRIVATELY OWNED DRAINAGE LINES INTERNAL TO THE SITE BOUNDARIES) CONSTRUCTED AND TESTED TO BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS
- ALL ROOFWATER PITS SHALL BE PROVIDED WITH 1500 STUB TO SERVICE THE LOT AT 50mm ABOVE INVERT OF PIT
- 6. DRAINAGE PITS TO BE PROVIDED WITH \$150 STUB FOR FUTURE HYDRAULIC CONNECTION TO BE MINIMUM 50mm ABOVE INVERT OF PIT
- 7. ALL STORMWATER DRAINAGE PIPES INTERNAL TO SITE SHALL BE: a) 225 DIA TO 375 DIA uPVC SN8 RUBBER RING JOINTED, BLACKMAX OR APPROVED **EQUIVALENT**
- b) 450 DIA TO 600 DIA PP SN8 RUBBER RING JOINTED, BLACKMAX OR APPROVED **EQUIVALENT**
- 8. ALL STORMWATER DRAINAGE PIPES EXTERNAL TO SITE SHALL BE: a) 300 DIA AND GREATER CLASS 2 OR 3 R.C. RUBBER RING JOINTED
- ALL STORMWATER PIPES ARE TO BE MANUFACTURED TO RELEVANT AUSTRALIAN STANDARDS INCLUDING BUT NOT LIMITED TO AS4058 AND AS1992.
- 10. STORMWATER DRAINAGE AND STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ONLY. CONTRACTOR TO CONSIDER CONSTRUCTION LOADINGS AND ENSURE NO EXCESSIVE LOADS ARE PLACED ON STORMWATER DRAINAGE OR STRUCTURES.
- 11. ALL PRECAST END STRUCTURES TO BE CONSTRUCTED WITH REINFORCED CONCRETE END
- 12. CONTRACTOR TO CONFIRM LOCATION AND LEVEL OF EXISTING STORMWATER DRAINAGE WHERE CONNECTING ON TO EXISTING
- 13. CONTRACTOR TO NOTIFY THE SUPERINTENDENT OF ANY UNSUITABLE FOUNDING MATERIAL WITHIN DRAINAGE TRENCH OR STORMWATER STRUCTURES AND AWAIT DIRECTION PRIOR TO LAYING OF PIPES.
- 14. TRENCH BACKFILL UNDER PAVEMENT TO BE COMPACTED TO 100% STANDARD DRY DENSITY (AS1289 5.1.1) IN LAYERS NOT EXCEEDING 150mm OF CBR 15 MATERIAL OR APPROVED EQUIVALENT. TRENCH BACKFILL IN ROADS TO BE MINIMUM CBR15 MATERIAL UP TO ROAD
- 15. ALL STORMWATER GRATES/LIDS WITHIN TRAFFICABLE AREAS TO BE CLASS "D" IN ACCORDANCE WITH AS3996.
- 16. ALL GRATES AND LIDS SHALL SIT FLAT WITH ITS SURROUND AND NOT BE LOOSE OR MOVE UNDER WHEEL LOADS
- ALL STORMWATER STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH PROJECT SPECIFICATION, AND LOCAL AUTHORITY GUIDELINES AND SPECIFICATIONS. WHERE STRUCTURES EXCEED MAXIMUM DEPTH AS IDENTIFIED WITHIN STANDARD DRAWINGS THE CONTRACTOR WILL ENSURE AN ADEQUATE STRUCTURAL DESIGN IS UNDERTAKEN FOR THE SUBJECT STRUCTURE TO BE CONSTRUCTED TO.
- 18. CONTRACTOR TO ENSURE ALL MANHOLE STRUCTURES COMPLY WITH THE MAXIMUM DEPTH SPECIFIED IN THE PROJECT SPECIFICATION OR LOCAL AUTHORITY FROM FINISHED SURFACE LEVEL TO UNDERSIDE OF ROOF SLAB. ANY NON CONFORMANCE IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- 19. FOR STORMWATER SETOUT DETAILS REFER DRG ADG-CV-21092 C31.
- 20. CONTRACTOR TO INSTALL STEP IRONS WITHIN MANHOLES/FIELD INLETS WHERE REQUIRED BY LOCAL AUTHORITY
- 21. ALL FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH ARCHITECTURAL/LANDSCAPING DRAWINGS AND RELEVANT AUTHORITY STANDARD DRAWINGS AND SPECIFICATIONS. FOOTPATHS TO BE CONSTRUCTED WITH MAXIMUM 2% CROSSFALL SHOULD CONSTRUCTED FOOTPATHS EXCEED 2.5% CROSSFALL, THE CONTRACTOR WILL BE REQUIRED TO RECTIFY BY REMOVING AND REPLACING AT THEIR COST.
- 22. WHERE A STORMWATER DRAINAGE TRENCH HAS BEEN CONSTRUCTED LONGITUDINALLY IN THE ROAD, THEN THE FINAL PAVEMENT SURFACE REPAIR WIDTH IS TO MATCH THE EXISTING LANE WIDTH AND TERMINATE SOMM CLEAR OF THE ROAD CENTERLINE OR LANE LINE LINEMARKING TO ALLOW FOR THE BITUMEN EMULSION JOINT SEAL. REINSTATEMENT OF SURFACE ADJACENT TO THE KERB OR ROAD PAVEMENT EDGE TO EXTEND FULLY TO THE KERB LINE OR EDGE OF PAVEMENT
- 23. THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO LAYING STORMWATER DRAINAGE, ALL TRENCH EXCAVATION AND CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011.
- 24. REMOVE ANY REDUNDANT DRAINAGE OUTLETS FROM THE KERB AND CHANNEL INCLUDING ANY ASSOCIATED PIPEWORK ACROSS THE FOOTWAY AND REINSTATE THE KERB AND CHANNEL AND THE FOOTWAY AREA IN ACCORDANCE WITH COUNCIL GUIDELINES.
- 25. CONTRACTOR TO UNDERTAKE ROADWORKS TESTING IN ACCORDANCE WITH COUNCIL GUIDELINES, DRAWINGS AND SPECIFICATIONS.
- 26. CONTRACTOR TO UNDERTAKE AND PROVIDE CCTV OF ALL STORMWATER LINES AT ON MAINTENANCE AND OFF MAINTENANCE. SHOULD THE CCTV IDENTIFY DAMAGE OR CRACKING WITHIN THE STORMWATER PIPES, THE CONTRACTOR WILL RECTIFY THE DAMAGE WITHIN THE PIPES BY MEANS DIRECTED BY THE SUPERINTENDENT WHICH MAY INCLUDE BUT NOT BE LIMITED TO PIPE RELINING OR PIPE REPLACEMENT.



BIO RETENTION NOTES:

INSPECTIONS

CONTRACTOR TO CONTACT ADG ENGINEERS AT LEAST 72 HOURS PRIOR TO PLACEMENT OF EACH LAYER TO ORGANISE INSPECTION. EACH LAYER IS NOT TO BE PLACED UNTIL WRITTEN CONFIRMATION PROVIDED BY ADG ENGINEERS.

FILTRATION LAYER:

- CONTRACTOR TO PROVIDE ADG ENGINEERS WITH TEST INFORMATION OF PROPOSED FILTER MEDIA TO CONFIRM THE BELOW PARAMETERS.
- MATERIAL TO CONSIST OF SANDY LOAM OR EQUIVALENT MATERIAL
- MATERIAL TO HAVE 5% 10% ORGANIC CONTENT IN ACCORDANCE WITH AS1289 4 11
- MATERIAL TO HAVE AN AVERAGE PARTICLE SIZE (D50) OF 0.45mm.
- SATURATED HYDRAULIC CONDUCTIVITY TO BE BETWEEN 100-300mm/HR DETERMINED IN ACCORDANCE WITH AS 4419-1998 APPENDIX H SOIL PERMEABILITY.
- OH BETWEEN 6 AND 7.
- TN CONTENT OF FILTER MEDIA TO BE <400mg/kg
- ORTHOPHOSPHATE CONTENT TO BE <40mg/kg

DRAINAGE LAYER:

- CONTRACTOR TO PROVIDE ADG ENGINEERS WITH TEST INFORMATION OF PROPOSED FILTER MEDIA TO CONFIRM THE BELOW PARAMETERS.
- MATERIAL TO CONSIST OF 2-5mm GRAVEL.

PERFORATED PIPE

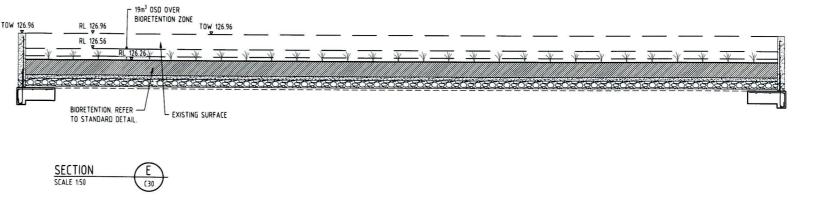
150¢ SLOTTED RIGID UPVC OR SIMILAR TO AS 2439.1 OR APPROVED EQUIVALENT MIN 0.5% GRADE @ 1.5m CTRS

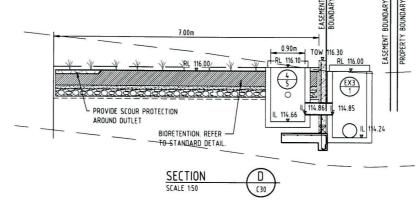
CONSTRUCTION PHASE

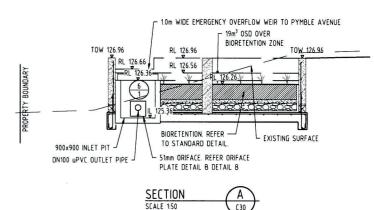
- IF BIO-RETENTION TO BE INSTALLED PRIOR TO STABILISATION OF UPSTREAM CATCHMENT, COVER FILTRATION LAYER IN GEOTEXTILE, SOmm TOPSOIL AND TURF STRIPS PERPENDICULAR TO FLOW
- GEOTEXTILE TO BE REMOVED ONLY WHEN UPSTREAM SEDIMENT LOADS ARE CONTROLLED.
- BASIN TO BE PLANTED AS PER THE APPROVED LANDSCAPE PLANS

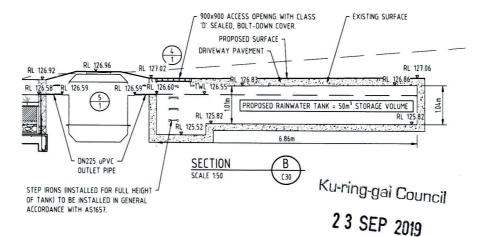
COMBINED TREATMENT/DETENTION BASIN NOTES

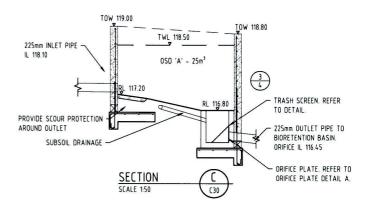
- THE BIO-RETENTION EXTENDED RETENTION DEPTHS AND ASSOCIATED VOLUME HAS BEEN EXCLUDED WHEN CALCULATING AVAILABLE DETENTION STORAGE VOLUME WITHIN TH RASIN
- BASIN DESIGN ALLOWS FOR 300mm FREEBOARD FROM Q100 WATER LEVEL TO CREST OF
- ALL BATTERS INTERNAL TO BASIN ARE DESIGNED WITH A MAXIMUM 1V:6H SLOPE U.N.O.
- CONTRACTOR TO ENSURE THE ENTIRE EMBANKMENT AREA IS STRIPPED OF ALL ORGANIC MATTER AND SOFT CLAYS TO A MINIMUM OF 300mm BELOW EXISTING SURFACE.
- THE STRIPPED SURFACE IS TO BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER.
- CONTRACTOR TO KEY EMBANKMENT IN TO EXISTING SURFACE BY MINIMUM DEPTH AS DIRECTED BY THE GEOTECHNICAL ENGINEER ON SITE.
- RESILIENT PLANTING TO BE PROVIDED TO COPE WITH 1.0m INUNDATION FOR PERIODS OF UP TO 1 HOUR IN DURATION (Q20 EVENT).
- IN ADDITION TO CONVEYING MAJOR FLOWS. THE WEIR IS PROVIDED AS AN EMERGENCY OVERFLOW IN THE EVENT THE RISER PIT AND/OR OUTLET CULVERTS BECOME BLOCKED, AND WILL TAKE THE ENTIRE 0100 FLOW





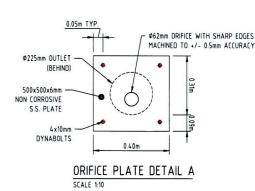






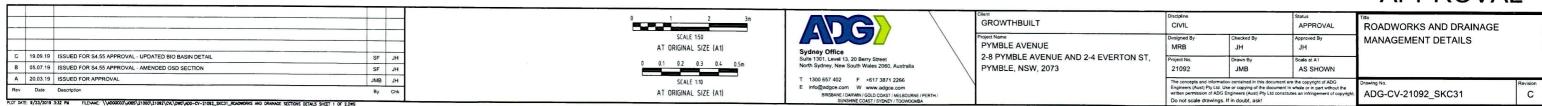
Received SCREEN TO BE ORIENTED SO THAT LYSAGHT MAXIMESH RH3030 (HOT OPENINGS ARE ANGLED FACING DIPPED GALVANISED) OR EQUIVALENT HANDLE/S TRIANGULAR MAXIMESH PANELS TO BE WELDED TO RECTANGULAR PANNEL TO FORM SCREEN MAX. 0.60m MAX. 0.60m

0.05m TYP. Ø51mm ORIFICE WITH SHARP EDGES MACHINED TO +/- 0.5mm ACCURACY Ø100mm OUTLET 500x500x6mr NON CORROSIVE S.S. PLATE 4x10mm DYNABOLTS ORIFICE PLATE DETAIL B



FULL SIZE ON ORIGINAL D

ISSUED FOR APPROVAL



TRASH SCREEN DETAIL