PROPOSED SECONDARY DWELLING
AT 3 PATRICK ST, AVALON BEACH NSW 2107

GENERAL NOTES

G1 ALL WORKS SHALL BE IN ACCORDANCE WITH B.C.A AND AS3500.3.

G2 ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.

G3 THE BUILDER SHALL ENSURE THAT THE STORMWATER ENGINEERS DRAWINGS CORRESPOND TO THE ARCHITECTURAL, STRUCTURAL, AND LANDSCAPING DRAWINGS. IF THERE EXISTS ANY DISCREPANCIES BETWEEN THE DRAWINGS, THE BUILDER SHALL REPORT THE DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORKS.

G4 PRIOR TO COMMENCING ANY WORKS, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTS INTO THE COUNCILS KERB/DRAINAGE SYSTEM MATCHED THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER.

G5 THE DRAINAGE CONTRACTOR IS TO LOCATE AND RELOCATE AS NECESSARY ALL SERVICES ON SITE.

G6 ALL LEVELS SHALL RELATE TO THE ESTABLISHED BENCH MARK. THIS IS TYPICALLY METRES TO AUSTRALIAN HEIGHT DATUM (AHD).

G7 ALL DOWNPIPES TO BE 100MM DIAMETER UNLESS NOTED OTHERWISE.

G8 ALL DOWN PIPES TO HAVE LEAF GUARDS.

G9 ALL LINES ARE TO BE 100MM DIAMETER uPVC AT A MINIMUM 1.0% SLOPE UNLESS NOTED OTHERWISE. LINES ARE TO BE SEWER-GRADE AND SEALED.

G10 ALL PIPES TO HAVE MINIMUM 150MM COVER IF LOCATED WITHIN PROPERTY.

G11 ALL THE CLEANING EYES (OR INSPECTION EYES) FOR THE UNDERGROUND PIPES HAVE TO BE TAKEN UP TO THE FINISHED GROUND LEVEL FOR EASY IDENTIFICATION AND MAINTENANCE PURPOSES.

G12 ALL SUB-SOIL DRAINAGE SHALL BE OF A MINIMUM 100MM DIAMETER AND SHALL BE PROVIDED WITH A FILTER SOCK. THE SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS TO BE PROVIDED BY THE LANDSCAPE ARCHITECT OR STORMWATER ENGINEER.

G13 ALL RETAINING WALLS SHALL BE CONSTRUCTED COMPLETELY WITHIN THE PROPERTY BOUNDARY LIMITS TO DETAILS PREPARED BY THE STRUCTURAL ENGINEER. WALLS FORMING THE ON-SITE DETENTION SYSTEM SHALL BE OF MASONARY/BRICK/CONCRETE CONSTRUCTION AND WATER TIGHT.

G14 ALL MULCHING TO BE USED WITHIN THE AREA DESIGNATED AS ON-SITE DETENTION STORAGE SHALL BE OF A NON-FLOTABLE MATERIAL SUCH AS DECORATIVE RIVER GRAVEL. PINE PARK MULCHING SHALL NOT BE USED WITHIN THE DETENTION STORAGE AREA.

G15 ALL DRAINAGE WORKS ARE TO AVOID TREE ROOTS. ROOT BARRIER TO BE INSTALLED ADJACENT TO TREE ZONES WHERE DRAINAGE MAY BE AT RISK.

G16 ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.

G17 COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.

RAINWATER TANKS

R1 RAINWATER TANK, DRAINED ROOF AREAS AND REUSE PLUMBING TO COMPLY WITH BASIX REQUIREMENTS AND CERTIFICATE.

R2 ADEQUATE SCREENING TO PREVENT MOSQUITO BREEDING AND ENTRY OF ANIMAL OR FLOATING MATTER.

R3 A 'FIRST FLUSH' DIVERSION TO REMOVE ROOF CONTAMINANTS MUST BE PROVIDED.

R4 TANKS TO BE PUMPED TO TOP-UP FROM THE POTABLE WATER SUPPLY DURING DRY PERIOD WHEN THE TANK IS 80% EMPTY.

R5 PUMP TO BE SUITABLY SOUNDPROOFED.

R6 A SIGN IS TO BE INSTALLED NEAR THE RAINWATER TANK HIGHLIGHTING "NOT FOR HUMAN CONSUMPTION".

LEGEND

PRESSURE PIPE (CHARGED LINE)

GRAVITY PIPE AT MIN. 1% SLOPE U.N.O.

AG. LINE AT MIN. 1% SLOPE

DOWNPIPE MIN. Ø100 U.N.O. — DP

GRATED PIT
SL: SURFACE LEVEL
IL: INVERT LEVEL

CLEANING EYE (INSPECTION EYE)

OVERLAND FLOW PATH

GRATED TRENCH

EXISTING RL — +RL 26.05

DESIGN RL — +RL 26.05

SEDIMENT & EROSION CONTROL

S1 PLANS ARE MINIMUM REQUIREMENTS AND ARE TO BE USED AS A GUIDE ONLY. EXACT MEASURES USED SHALL BE DETERMINED ON SITE IN CONJUNCTION WITH PROGRAM OF CONTRACTORS WORKS.

S2 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 MEASURE 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.

S3 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.

S4 PROVIDE GULLY GRATE INLET SEDIMENT TRAPS AT ALL GULLY PITS.

S5 PROVIDE SILT FENCING ALONG PROPERTY LINE AS DIRECTED BY SUPERINTENDENT.

S6 ADDITIONAL CONTROL DEVICES TO BE PLACED WHERE DIRECTED BY THE PRINCIPLE.

S7 ALTERNATIVE DESIGNS TO BE APPROVED BY SUPERINTENDENT PRIOR TO CONSTRUCTION.

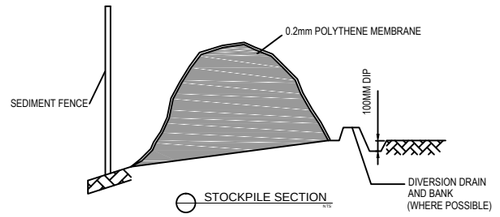
S8 WASH DOWN/RUMBLE AREA TO BE CONSTRUCTED WITH PROVISIONS RESTRICTING ALL SILT AND TRAFFICKED DEBRIS FROM ENTERING THE STORMWATER SYSTEM.

S9 NO WORK OR STOCKPILING OF MATERIALS TO BE PLACED OUTSIDE OF SITE WORK BOUNDARY.

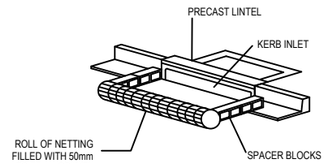
S10 APPROPRIATE EROSION AND SEDIMENT CONTROLS TO BE USED TO PROTECT STOCKPILES AND MAINTAINED THROUGHOUT CONSTRUCTION.

S11 IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE DUE CARE OF NATURAL VEGETATION. NO CLEARING IS TO BE UNDERTAKEN WITHOUT PRIOR APPROVAL FROM THE SUPERINTENDENT.

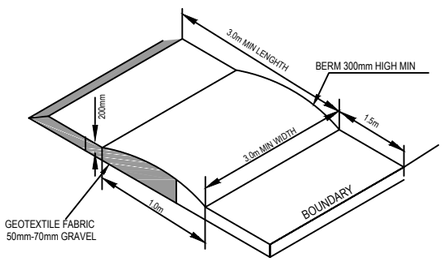
S12 TO AVOID DISTURBANCE TO EXISTING TREES, EARTHWORKS WILL BE MODIFIED AS DIRECTED ON SITE BY THE SUPERINTENDENT.



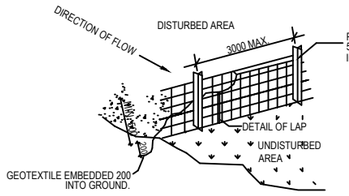
STOCKPILE SECTION

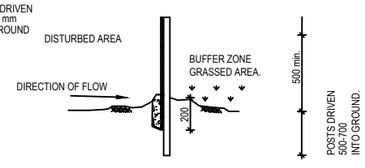


KERB INLET PROTECTION DETAIL



TEMPORARY CONSTRUCTION EXIT





SEDIMENT FENCE DETAIL

SEDIMENT FENCE

F1 FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH GALVANISED WIRE TIES, STAPLES OR ATTACHMENT BELTS.

F2 WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 150MM AND FOLDED.

F3 POSTS SHALL NOT BE SPACED MORE THAN 3.0 METRES APART.

F4 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

F5 INSPECTIONS SHALL BE PROVIDED ON A REGULAR BASIS, SPECIALLY AFTER RAINFALL AND EXCESSIVE SILT DEPOSITS REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE
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

NOTE
DO NOT SCALE OF DRAWINGS. REFER TO ARCHITECTURAL PLANS FOR LEVELS, STEPS, DIMENSIONS AND SETOUT. VERIFY DIMENSIONS ON SITE. THE ENGINEER SHALL BE NOTIFIED OF ANY VARIATIONS TO THAT SHOWN ON STRUCTURAL PLANS BEFORE COMMENCEMENT OF WORKS

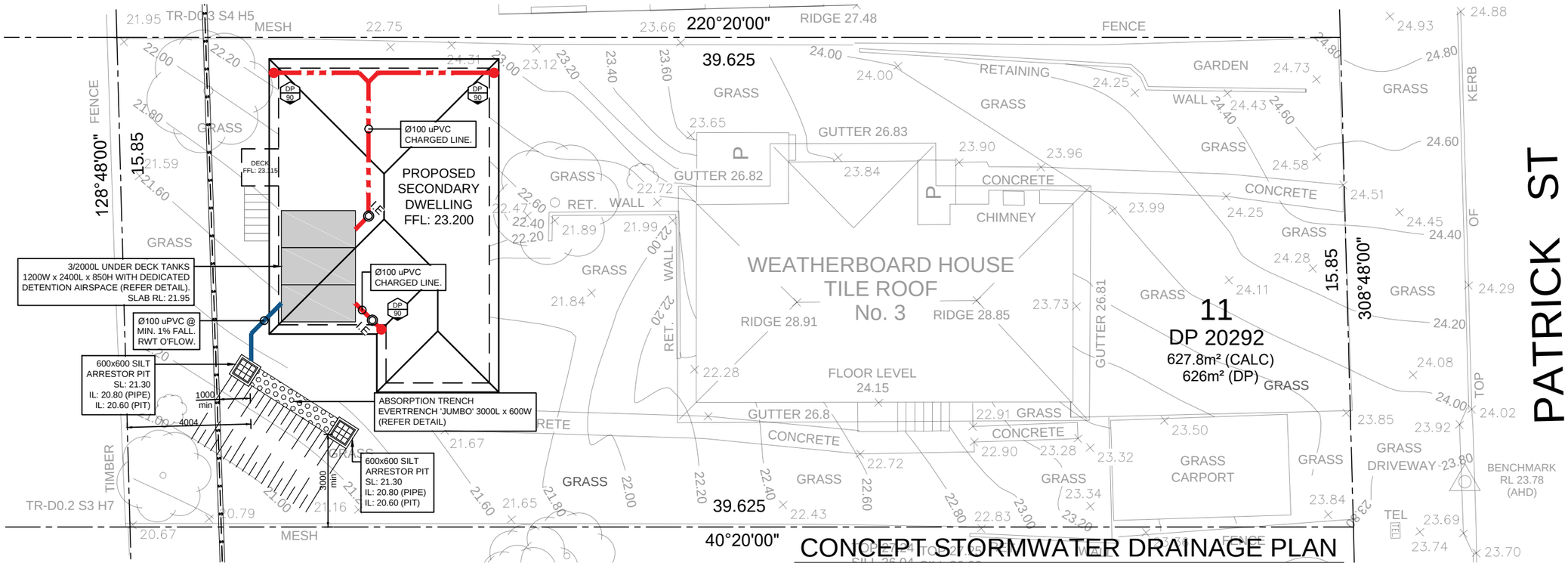
REV	DATE	DESCRIPTION	BY
A	16.01.2020	ISSUED FOR DA	M.Y

SDSEngineering
Suite 403/5 Celebration Drive
Bella Vista, NSW 2153
www.sdsengineering.com.au

PROPOSED SECONDARY DWELLING
AT 3 PATRICK ST, AVALON BEACH NSW 2107
FOR GRANNY FLAT SOLUTIONS

GENERAL NOTES

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
19372	C000	A3
DESIGNED BY: M.Y	DATE: 16.01.2020	
DRAWN BY: M.Y	SCALE: AS SHOWN	



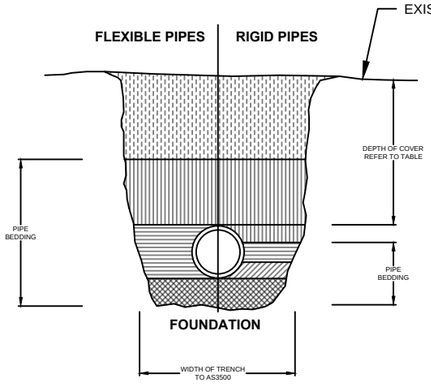
CONCEPT STORMWATER DRAINAGE PLAN

1:150

DIAL 1100 BEFORE YOU DIG

LEGEND - TRENCH BACKFILL

SYMBOL	FLEXIBLE PIPES	RIGID PIPES
	BACKFILL	
	PIPE OVERLAY	
	PIPE SIDE SUPPORT	SIDE ZONE
	–	HAUNCH ZONE
	PIPE UNDERLAY	BED ZONE



TYPICAL PIPE LAYING DETAIL NTS

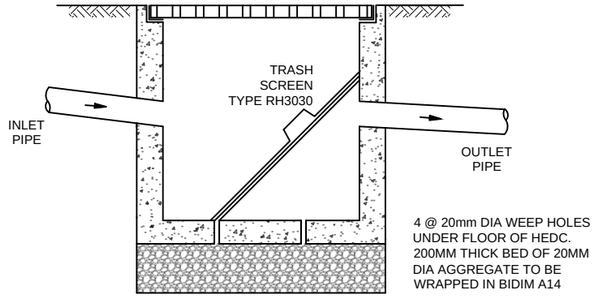
NOTE:
STORMWATER DRAINS CONSTRUCTED OF OTHER THAN CAST IRON, DUCTILE IRON OR GALVANISED STEEL HAVING COVER LESS THAN THAT SPECIFIED IN THE TABLE SHALL BE COVERED WITH AT LEAST 50 mm OVERLAY AND SHALL BE PAVED WITH AT LEAST:

a. 100mm THICKNESS OF REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICULAR LOADING.

MINIMUM PIPE COVER
(FROM FINISHED SURFACE TO TOP OF PIPE)

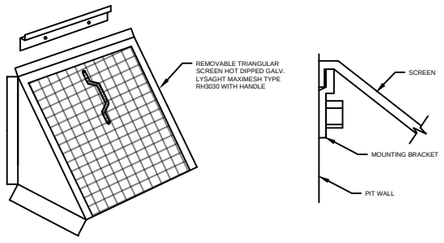
LOCATION	MINIMUM COVER (mm)	
	CAST/DUCTILE IRON GAL STEEL	OTHER AUTHORISED PRODUCTS (*)
1. NOT SUBJECT TO VEHICULAR LOADING:		
A. WITHOUT PAVEMENT:		
i. FOR SINGLE DWELLINGS -	0	100
ii. OTHER THAN SINGLE DWELLINGS -	0	300
B. WITH PAVEMENT OF BRICK/UNREINFORCED CONCRETE -	0 (**)	50 (**)
2. SUBJECT TO VEHICULAR LOADING:		
A. OTHER THAN ROADS:		
i. WITHOUT PAVEMENT -	300	450
ii. WITH PAVEMENT OF:		
- REINF. CONC. FOR HEAVY VEHICLES -	0 (** #)	100 (** #)
- BRICK/UNREINF. CONC LIGHT VEHICLES -	0 (** #)	75 (** #)
B. ROADS		
i. SEALED	300	500 (#)
ii. UNSEALED	300	500 (#)
3. SUBJECT TO CONSTRUCTION VEHICLES OR IN EMBANKMENT CONDITIONS	300	500 (#)

*) INCLUDES OVERLAY ABOVE THE TOP OF THE PIPE OF NOT LESS THAN 50mm THICK
**) BELOW THE UNDERSIDE OF THE PAVEMENT
#) SUBJECT TO COMPLIANCE WITH AS1762, AS2033, AS/NZS 2566.1, AS3725 OR AS 4060

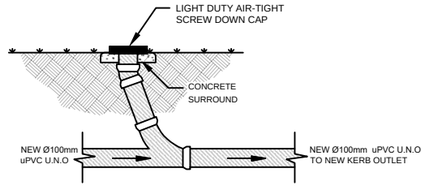


4 @ 20mm DIA WEEP HOLES UNDER FLOOR OF HEDC. 200MM THICK BED OF 20MM DIA AGGREGATE TO BE WRAPPED IN BIDIM A14

TYPICAL SILT ARRESTOR PIT DETAIL NTS



TYPICAL MULTI-PURPOSE FILTER SCREEN NTS



TYPICAL INSPECTION RISER DETAIL NTS

NOT FOR CONSTRUCTION

NOTE
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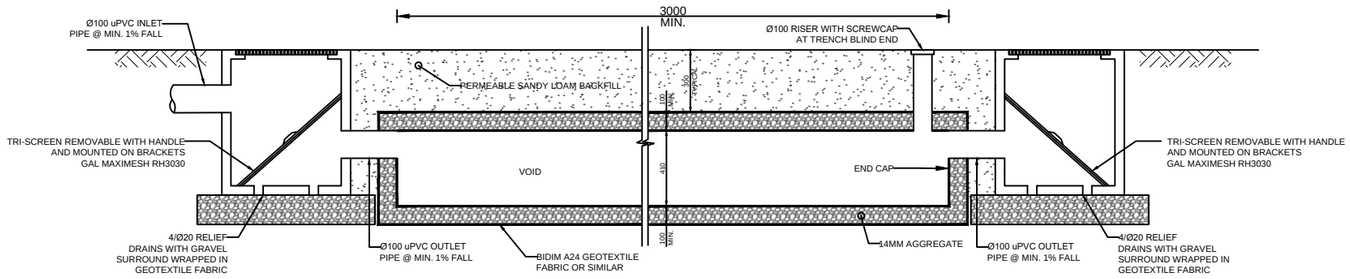
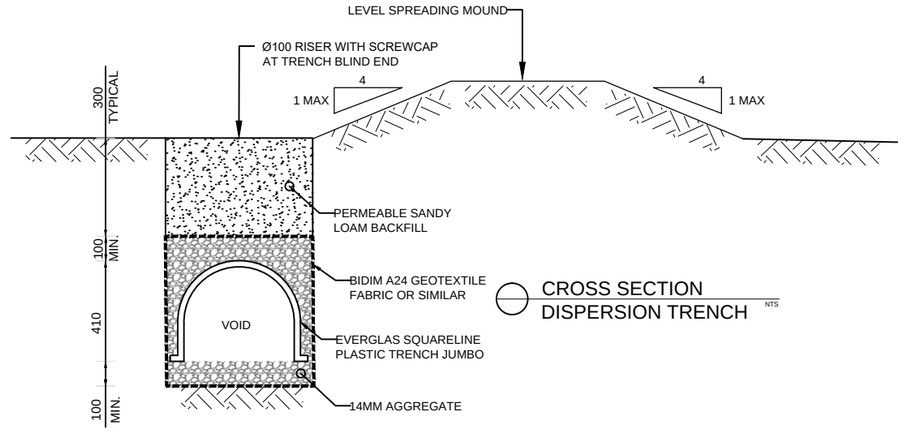
FOR GRANNY FLAT SOLUTIONS

STORMWATER DRAINAGE PLAN/ DETAILS

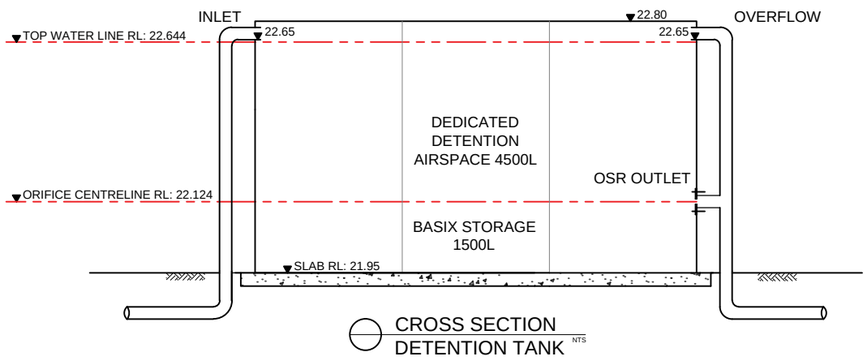
JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
19372	C001	A3
DESIGNED BY: M.Y	DATE: 16.01.2020	
DRAWN BY: M.Y	SCALE: AS SHOWN	



LONG SECTION
DISPERSION TRENCH NTS

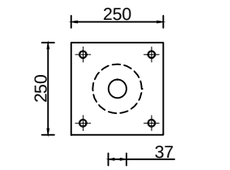


CROSS SECTION
DISPERSION TRENCH NTS



CROSS SECTION
DETENTION TANK NTS

OSD DATA	
VOLUME REQUIRED	**4.5m³**
VOLUME PROVIDED	**4.5m³**
P.S.D	**2L/S**
DEPTH OF TANK ABOVE ORIFICE CL:	**0.52m**
ORIFICE DIAMETER: (TABLE 1 - P21 DCP APPENDIC 11)	**37mm**



ORIFICE PLATE
DETAIL NTS

NOTE
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STORMWATER DRAINAGE DETAILS

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
19372	C002	A3
DESIGNED BY: M.Y	DATE: 16.01.2020	
DRAWN BY: M.Y	SCALE: AS SHOWN	

SDS Engineering 19372
16.01.2020

EAVES GUTTER AND DOWN PIPE DESIGN TO AS/NZS 3500.3: 2018
3 Patrick St, Avalon Beach NSW 2107
Proposed secondary dwelling

Horizontal catchment area	Ah	=	74	sq.m
Roof Average slope	S	=	15	degrees
Intensity	I	=	206	mm/hr
Is Gutter slope steeper than 1:500 ?			Yes	
Down pipe size selected	dia	=	90	mm
Cross referencing From Table 3.5.2 and Fig 3.5.2				
Theoretical number of DPs required	Tnum	=	2.63	
Selected Number of Down pipes	n	=	3	
from AS3500 Table 3.4.5.2, C'ment Area Multiplier	f	=	1.13	
Roof Area allowing for slope	Ac	=	Ah*f	
		=	83.6	sq.m
Catchment Area per DP	A	=	Ac/n	sq.m
		=	27.9	sq.m
Flow/DP	q	=	I*A/3600	litres/sec
		=	1.59	litres/sec
from AS/NZS 3500 fig 3.5.2(B), Gutter Area		=	5950	sq.mm
Gutter Area rounded to nearest 100sq.mm		=	6000	sq.mm
From AS/NZS 3500 Table 3.5.2,, Down Pipe size		=	90	mm
Down Pipe size selected		=	90	mm

Summary

This catchment requires :- number of DPs		=	**3**	
Downpipe size		=	**90**	mm
minimum eaves gutter cross sectional Area		=	**5950**	sq.mm

Notes: Catchment area of each DP to be roughly similar size.
Length of any gutter draining to a downpipe to be not longer than 12m.(NCC vol2).

POSSIBLE OPTIONS

	Number Req'd	Number Used	Gutter Area	Gutter Width	Gutter Depth
90 Dia:	2.63	3	5950	110	55
100 Dia:	2	2	8188	130	65
150 Dia:	0.74	1	14391	170	85
225 Dia:	0.27	1	14391	170	85
300 Dia:	0.13	1	14391	170	85

DOWNPIPE CAPACITY In terms of Plan area of roof.

	90 Dia	100 Dia	150 Dia	225 Dia	300 Dia
Max Catchment Area (sq.m)	28	37	100	313	640
Gutter Area (sq.mm)	6600	8200	18400	42310	76563