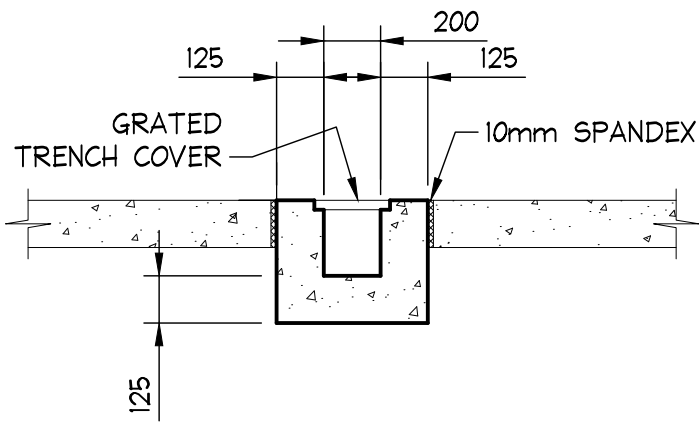
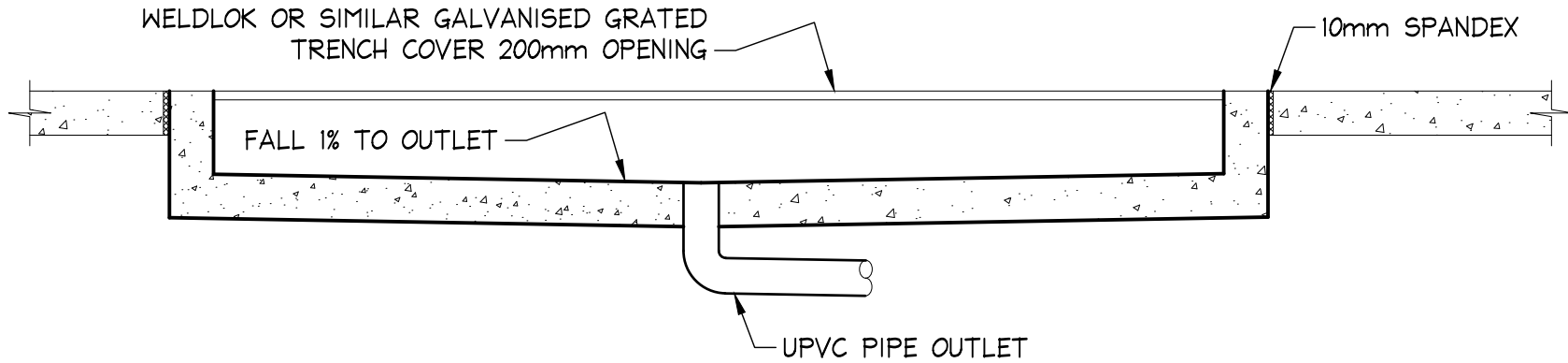


STORMWATER NOTES:

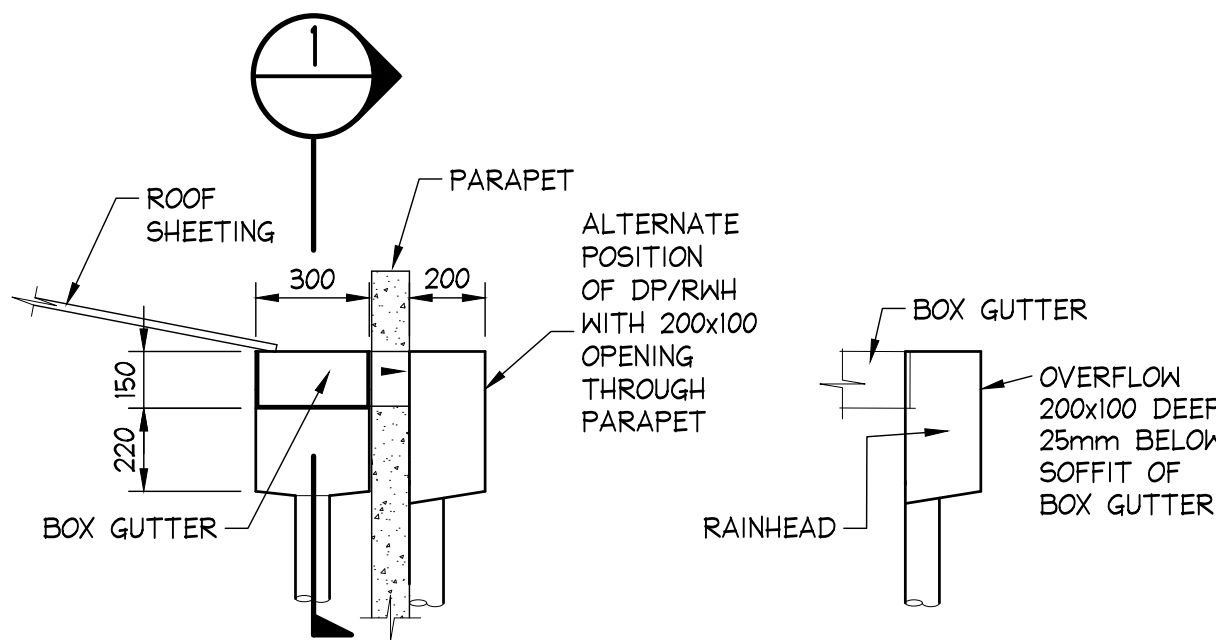
- ALL PIPES TO BE 100mm ϕ SEWER GRADE uPVC UNLESS NOTED OTHERWISE.
- ALL PIPES TO BE uPVC TO AS 1254-2002 UNLESS NOTED OTHERWISE.
- ALL PIPES TO BE LAID AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE.
- ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS.
(NO COMPACTION REQUIRED BELOW LANDSCAPING)
COVER TO SURFACE FROM TOP OF PIPE TO BE AS PER AS3500.
BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
- DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
- PROVIDE CLEANING EYES AT ALL DOWNPIPES.
- ALL PITS TO BE PRECAST, PREFORMED OR HDPE, IN ACCORDANCE WITH LOCAL COUNCIL SPECIFICATIONS.
- ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
- ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
- PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
- ALL LEVELS SHOWN ARE TO AHD
- ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.
- ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.
- ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2015 NATIONAL PLUMBING DRAINAGE CODE PART 3 - STORMWATER DRAINAGE.
AND ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2012 NATIONAL PLUMBING DRAINAGE CODE PART 5 - HOUSING INSTALLATIONS.



TYPICAL GRATED DRAIN
SCALE = 1 : 20
PRECAST OR HDPE GRATED DRAIN
ALTERNATIVE



LONGITUDINAL SECTION TYPICAL GRATED DRAIN
SCALE = 1 : 20




CROSS SECTION RWH
SECTION 1
TYPICAL RAIN HEAD DETAIL
SCALE = 1 : 20

ONSITE DETENTION SYSTEM SUMMARY NOTES - NORTHERN BEACHES COUNCIL - REGION 1	
COUNCIL'S "WATER MANAGEMENT FOR DEVELOPMENT POLICY, 26-02-2021" USED	
SECTION 5.5 - FOR REGION 1 - NORTHERN CATCHMENTS	
TOTAL SITE AREA	902.7 m ²
DESIGN METHOD USED	N/A
PRE DEVELOPMENT IMPERVIOUS AREA	328.8 m ²
POST DEVELOPMENT IMPERVIOUS AREA (LESS POOL OVERFLOW TO SEWER)	352.8 m ²
ADDITIONAL IMPERVIOUS AREA	24.0 m ²
9.3.1 - LESS THAN 50 SQ METRES ADDITIONAL	
OSD NOT REQUIRED - RUN DRAINAGE TO ABSORPTION TRENCH	

Northern Beaches Council Gutter Calculations -20 & 100 yr ARI Storm Alterations & Additions 28 Delecta Avenue Clareville							
To AS 3500.3 - 2021 & AS 3500.5 - 2012 & NCC2022							
Eaves & Box Gutters	Horizontal Area A _h	Slope Factor	Area A _c	From Figure	Downpipe From Table	Flow in Box Gutters	
		from		²⁰ I ₅	5.6.4.1.b	in	
				from		¹⁰⁰ I ₅	
		Table		Appendix 12	gutter size reqd	size reqd	L/sec
	m ²		m ²	mm/hr	mm ²	mm	
DP1	37	1.2	44.4	201	8500	100 dia or 100x75	
DP2	28.8	1.2	34.6	201	7000	100 dia or 100x75	
DP3	22.4	1.2	26.9	201	5500	90 dia or 100x50	
DP4	16.4	2.2	36.1	201	7500	90 dia or 100x50	
DP5	16.4	1.2	19.7	201	5000	90 dia or 100x50	
DP6	12.9	1.2	15.5	201	4000	90 dia or 100x50	
DP7	12.9	1.2	15.5	201	4000	90 dia or 100x50	
DP8	15.5	1.1	17.1	201	4500	90 dia or 100x50	
RWH/DP9	36.3	N/A	N/A	271	N/A	90 dia or 100x50	2.7
DP10	16	1.2	19.2	201	4500	90 dia or 100x50	
DP11	13	1.2	15.6	201	4000	90 dia or 100x50	
DP12	13	1.2	15.6	201	4000	90 dia or 100x50	
DP13	16.1	1.2	19.3	201	4500	90 dia or 100x50	
DP14	16.1	1.2	19.3	201	4500	90 dia or 100x50	
	272.8						
new Eaves Gutters Lysaght Half Round on Lower Floor & Garage							
Area -				9400	mm ²		
Existing Custom Gutter to be continued on Upper Floor							
All underground Pipes to be 100 Dia Sewer Grade PVC UNO							

GUTTER CALCULATIONS

A1	<div>CHARTERED MEMBER</div>	DOCUMENT CERTIFICATION			<div>Peninsula Consulting Engineers</div> <div>PO Box 6491, Frenchs Forest, NSW, 2086 Ph: 0424 253 818 Fax: (02) 9982 4722 E : bruce@peninsulaconsulting.com.au A.B.N. 60 493 390 399</div>		The copyright of this drawing remains with Peninsula Consulting Engineers.		Drawing Title:		
		Date: NOV. 2024					Project:		PROPOSED WORKS at: 28 DELECTA AVENUE, CLAREVILLE for: MR & MRS BELGIOVANE		
		Bruce Lewis									
		(Principal : Peninsula Consulting Engineers) BE(Civil), CPEng, MIEAust., NPER, Institute of Engineers Membership No. 879131									
NOTES:											
1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.											
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.											

Northern Beaches Council			
28 Delecta Avenue Clareville			
Alterations & Additions			
On Site Drainage Calculations			
Area Calculation - Existing	m ²	Area Calculation -Proposed	m ²
Block	902.7	Main Roof	273.3
Main Roof	242.2	External Driveway	21.9
External Driveway	7.8		
Timber Paths -50% Impervious	20.2	Timber Pool Surround - 50% Impervious	30.4
Timber Pool Surround - 50% Impervious	31.6	Timber Decks -50% Imp	27.2
Timber Decks -50% Imp	27	All Impervious	352.8
All Impervious	328.8	Pervious	549.9
Pervious	573.9	Percent Impervious Proposed	39.1
Percent Impervious Existing	36.4		
Impervious Area Increase	24.0		
Under Northern Beaches Council Conditions, "Water Management for Development Policy" revised 26/2/2021			
9.3.1 Onsite Stormwater Disposal Requirements for Region 1 Northern Catchments			
All development creating additional hard [impervious] area of more than 50m ² must provide an onsite detention system [for additions only]			
Not Applicable - extensions will increase hard surface area by only 24.0m ² But Low Level Property			
And assuming an absorption rate of 0.25L/m ² /sec, or 0.00025m/sec			
Absorption Trench to be provided as shown - will absorb up to 2% AEP Storm			

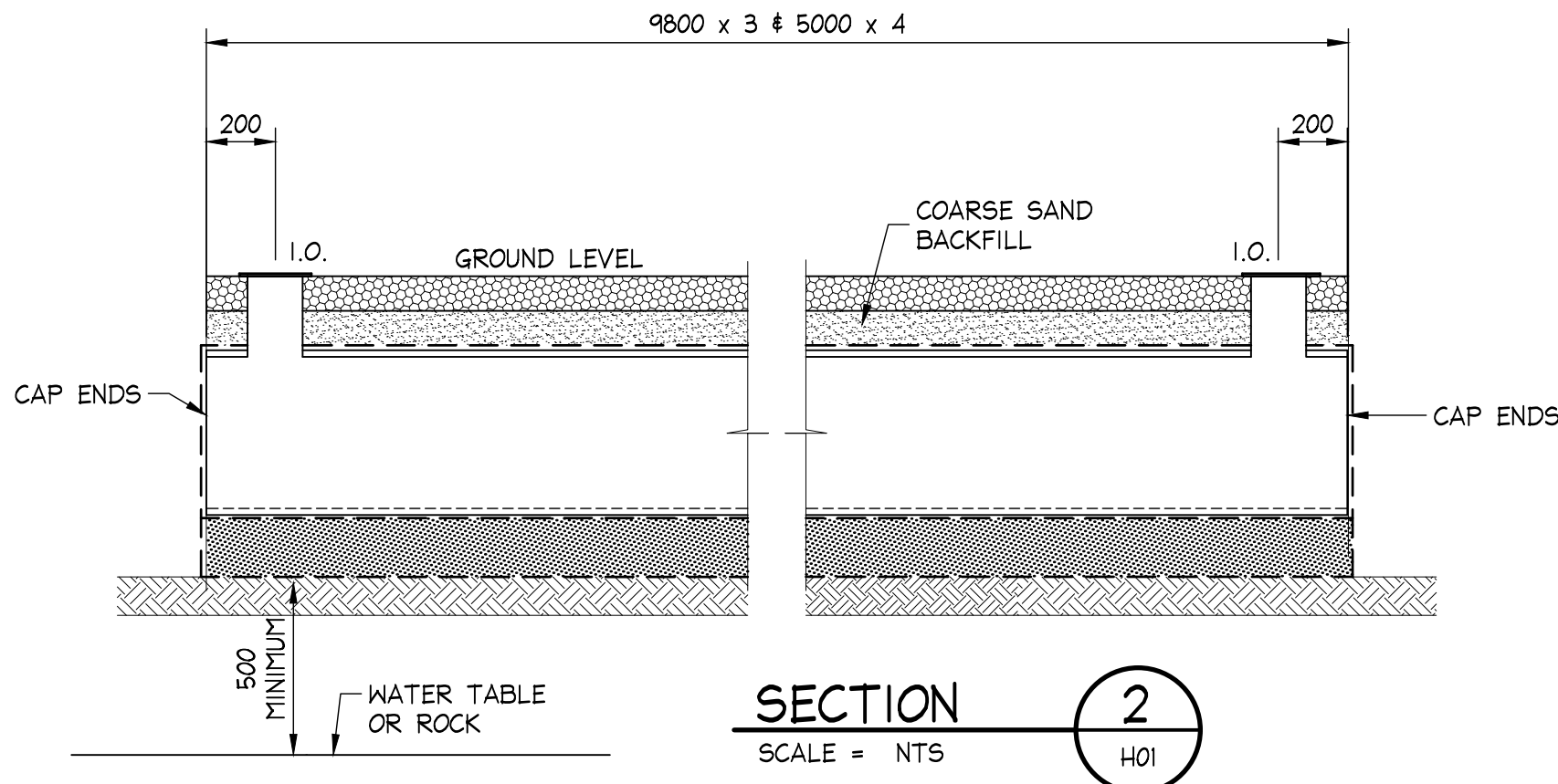
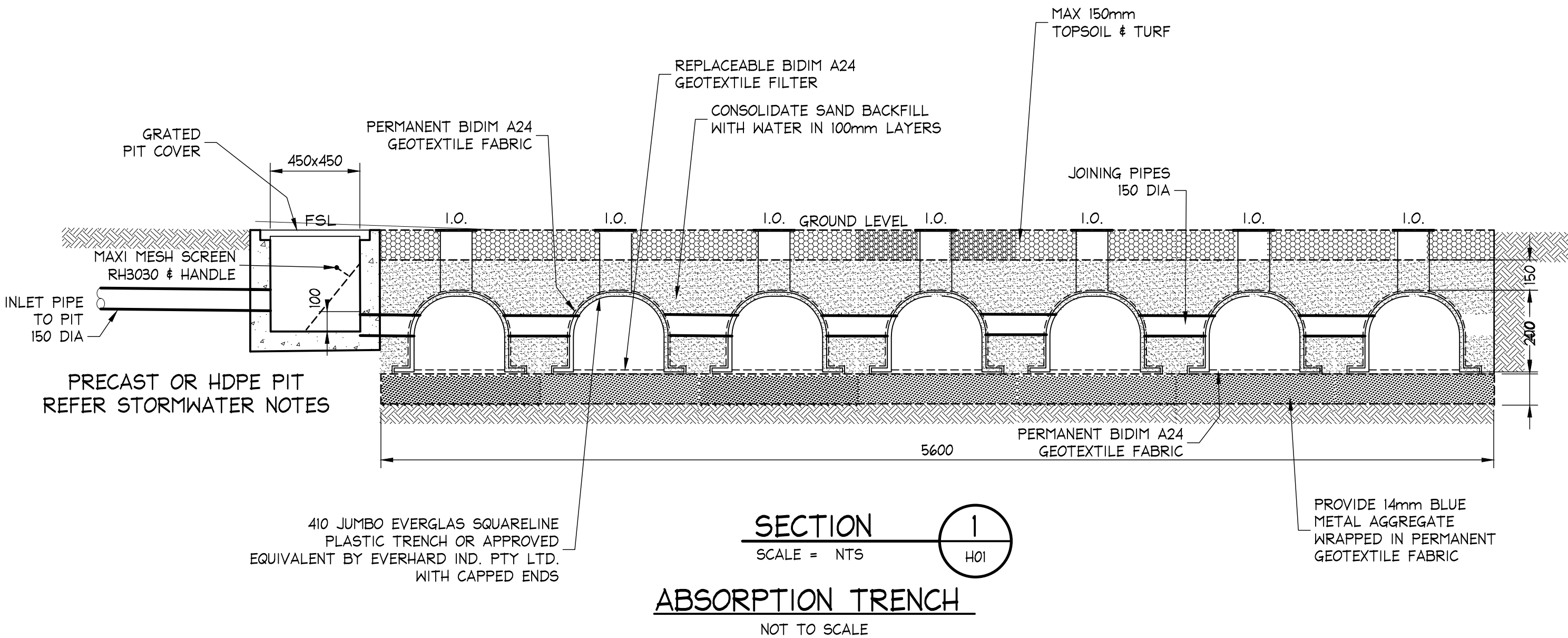
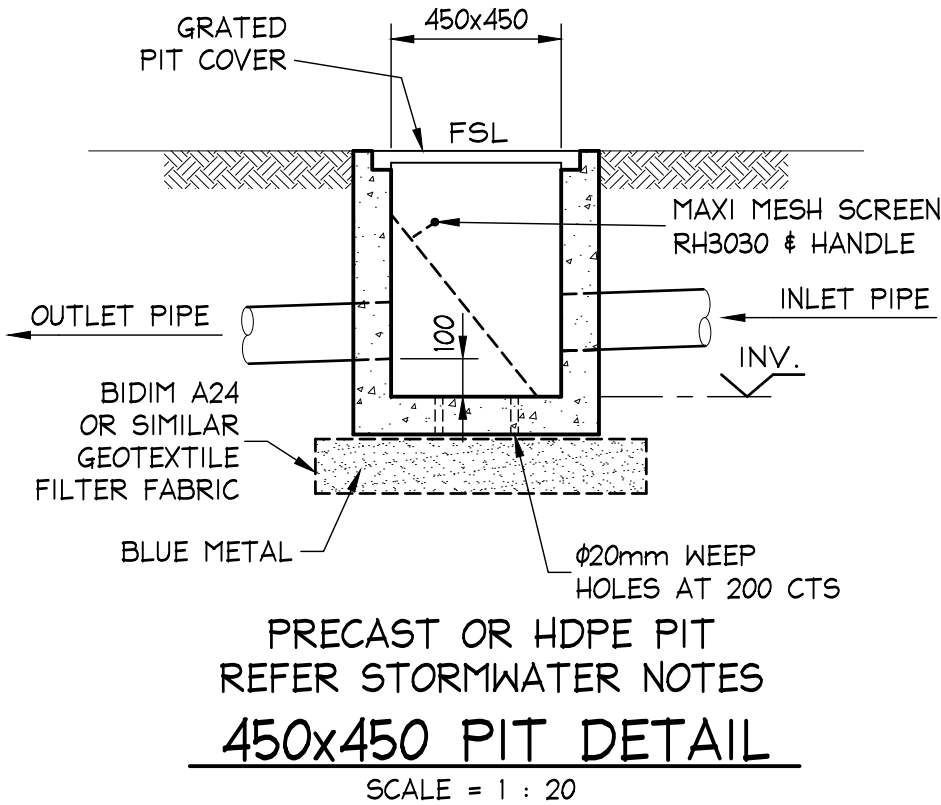
DRAINAGE CALCULATIONS

Northern Beaches Council							
28 Delecta Avenue Clareville							
Alterations & Additions							
On Site Drainage Calculations							
DRAINS Results							
SUB-CATCHMENT DETAILS							
Name	Max	Paved	Grassed	Paved	Grassed	Supp.	Due to Storm
	Flow Q	Max Q	Max Q	Tc	Tc	Tc	
	(cu.m/s)	(cu.m/s)	(cu.m/s)	(min)	(min)	(min)	
							AR&R 50 year, 1.5 hours storm, average 66.0 mm/h, Zone 1
Cat1	0.056	0.024	0.032	5	5	5	
OVERFLOW ROUTE DETAILS							
Name	Max Q U/S	Max Q D/S					
OF1	0	0					
DETENTION BASIN DETAILS							
Name	Max WL	MaxVol					
Basin1	2.02	29.5					
CONTINUITY CHECK for AR&R 50 year, 1.5 hours storm, average 66.0 mm/h, Zone 1							
Node	Inflow	Outflow	Storage Change	Difference			
	(cu.m)	(cu.m)	(cu.m)	%			
Basin1	74.37	74.33	0	0.1			
N1	0	0	0	0			

DRAINS RESULTS

Northern Beaches Council							
28 Delecta Avenue Clareville							
Alterations & Additions							
On Site Drainage Calculations							
DRAINS Data							
PIT / NODE DETAILS			Version 13				
Name	Type	Surface					
		Elev (m)					
N1	Node	2.1					
DETENTION BASIN DETAILS							
Name	Elev	Surf. Area	Outlet Type				
Basin1	1.19	35.8	None				
	2.1	35.8					
SUB-CATCHMENT DETAILS							
Name	Pit or	Total	Paved	Grass	Supp	Paved	Grass
	Node	Area	Area	Area	Area	Time	Time
		(ha)	%	%	%	(min)	(min)
Cat1	Basin1	0.0902	41	59	0	5	5
OVERFLOW ROUTE DETAILS							
Name	From	To	Travel	Spill	Crest		
			Time	Level	Length		
			(min)	(m)	(m)		
OF1	Basin1	N1	0.1	2.1	2		

DRAINS DATA



AI

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