



TYPICAL DISCHARGE CONTROL PIT (DCP)

CATCHMENT 1			
Detention Sizing By WSUD Technical Design Guidelines - Infiltration Measures			
Ksat =	300.00	mm/hr	Infiltration rate (Ksat)
I =	245.00	mm/hr	Rainfall Intensity
Ainf =	6.71		Infiltration Area
P =	11.48	m	Perimeter Length of Infiltration Area
d =	0.82	m	Depth of infiltration system
U =	0.50		Soil hydraulic conductivity factor
D =	5.00	min	Storm duration
p =	1.00		porosity (void = 1, gravel = 0.35)
Post Development			
<u>Catchment Areas</u>			
New Roof Area (Ar) =	0	m ²	Coefficient of runoff (Cr) = 1.00
New Paved Area (Ap) =	300	m ²	Coefficient of runoff (Cp) = 0.90
Vegetated Area (Av) =	0	m ²	Coefficient of runoff (Cv) = 0.53
Total Area =	300	m ²	(must equal pre-development area)
<u>Design Storm Flow, Q20</u> (20 Year, 5 minute Design Storm)			
Duration =	5	minutes	
Intensity =	245	mm/hr	
Stormwater Flow (Q20) = 1.05*(Ar*cr + Ap*cp + Av*cv) * I / 3600000			
Q20 =	0.019	m ³ /s	
Inflow Volume, Vi	5.79	m ³	
Outflow Volume, Vo	0.14	m ³	Qo 0.00047 m ³ /s
Required Detention Volume, Vd = Vi - Vo / p			
	5.65	m ³	
	5646	L	

CATCHMENT 2			
Detention Sizing By WSUD Technical Design Guidelines - Infiltration Measures			
Ksat =	300.00	mm/hr	Infiltration rate (Ksat)
I =	245.00	mm/hr	Rainfall Intensity
Ainf =	87.20	m ²	Infiltration Area
P =	59.96	m	Perimeter Length of Infiltration Area
d =	0.82	m	Depth of infiltration system
U =	0.50		Soil hydraulic conductivity factor
D =	5.00	min	Storm duration
p =	1.00		porosity (void = 1, gravel = 0.35)
Post Development			
<u>Catchment Areas</u>			
New Roof Area (Ar) =	1930	m ²	Coefficient of runoff (Cr) = 1.00
New Paved Area (Ap) =	1120	m ²	Coefficient of runoff (Cp) = 0.90
Vegetated Area (Av) =	950	m ²	Coefficient of runoff (Cv) = 0.53
Total Area =	4000	m ²	(must equal pre-development area)
<u>Design Storm Flow, Q20</u> (20 Year, 5 minute Design Storm)			
Duration =	5	minutes	
Intensity =	245	mm/hr	
Stormwater Flow (Q20) = 1.05*(Ar*cr + Ap*cp + Av*cv) * I / 3600000			
Q20 =	0.239	m ³ /s	
Inflow Volume, Vi	71.81	m ³	
Outflow Volume, Vo	1.40	m ³	Qo 0.00465 m ³ /s
Required Detention Volume, Vd = Vi - Vo / p			
	70.41	m ³	
	70411	L	

Project: **PROPOSED NEIGHBOURHOOD CENTRE**
"THE CORSO"
94 KINGSFORD DRIVE BRUNSWICK HEADS

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Client: **THE KOLLECTIVE**

Title: **DETENTION CALCULATION & DCP DETAILS**

NORTHERN RIVERS
STRUCterre
 consulting engineers

Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
 5 / 61 Centennial Circuit, Byron Bay 2481 P.O. Box 362
 TEL (02) 66807510 EMAIL: admin@nrsce.com.au

C	13.10.20	Amendment to Buildings	GC	GC	BH
B	30.09.20	Amendment to Buildings	GC	GC	BH
A	15.09.20	Development Application	GC	GC	BH
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Scale at A3		NA	Datum		NA
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BB20184-SW2			Sheet No.		S2 of 2
			Issue		C