SEWERAGE FLOW SCHEDULE (EP Calculations)

Complied by: Kathy Gao Date: 26-Sep-21
Checked by: Darren Sheather Date: 26-Sep-21
Plan No. 91-25368-1A

Location: Chelsea Gardens
Description: Moss Vale Stage 1A, 1B & 1C

Complied by: Kathy Gao
Checked by: Darren Sheather

Date: 26-Sep-21
Date: 26-Sep-21

Location: Chelsea Gardens
Description: Moss Vale Stage 1A, 1B & 1C

EQUIVALENT POPULATION CALCULATIONS (GRAVITY)

All areas are Gross Hectares

SECTION	CHAINAGE	RESIDENTIAL/OPEN SPACE												COMMERCIAL/INDUSTRIAL/SPECIAL USE																											
		HOUSES				RESIDENTIAL				OPEN SPACE				COMMERCIAL			INDUSTRIAL			SPECIAL USE (A1)			SPECIAL USE (A2)			SPECIAL USE (A3)			SECTION B-D			
		Lots	Ha	EP/Lot	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	EP/Ha	EP	Ha	Lots	EP/Lot	EP
A-B	50	209	19.8	3.5	731.5	0	#DIV/0!	0	2.71	0	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	13.51	134		469
(with B-D)		50	6.66	3.5	175	0	0	0	2.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.51	134	3.5	469
B-C	50	159	14.75	3.5	556.5	0	#DIV/0!	0	0.56	0	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	#DIV/0!	0	0	0		0
		159	14.75	3.5	556.5	0	0	0	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0

DESIGN FLOW CALCULATIONS

d = 1.73 x AREA$^{0.75}$ + 80(DESIGNED GRAV. EP)$^{0.75}$

Pericapita/day(L/EP/d) = 230

Pericapita/day(L/s/EP) = 0.002662

ADWF = 0.002662 X EP

PDWF = d x ADWF

Dilution Factor (F)
For EP/Ha < 100, F=3
For EP/Ha > 800, F=1.7
For 100 < EP/Ha < 800, Fnlinear

Dilution Factor (F) x PDWF

DESIGNED GRAV.EP	AREA Ha	ADWF L/S	PDWF L/S		
1200.5	36.02	3.20	9.38	3.00	28.13
644					
556.5	15.31	1.48	5.42	3.00	16.27
556.5					

DESIGN FLOW CALCULATIONS

PUMP FLOW (PF) For EP @ Max Rate: PUMP RATE (Max) L/s	EQUIV.EP EP	EQUIVALENT GRAVITY SEWER CONTRIBUTION FLOWS ADVISED SYDNEY WATER: EGS-DRY L/s	EQUIV.EP EP	DF= F*PDWF+PF+(EGS-DRY) PDWF=Peak Dry Weather Flow PF=PUMP RATE (Max) EGS=EXISTING (OLD) GRAVITY SEWER CONTRIBUTION: Design Flow (DF) L/s	TOTAL EP INCLUDES:- * DESIGNED GRAV CATCHMENT *PUMPED FLOW CONTRIBUTION *EXISTING GRAV CATCHMENT: EP
0.00	0	0.00	0	28.13	1200.5
0.00	0	0.00	0		
0.00	0	0.00	0	16.27	556.5
0.00	0	0.00	0		

PIPE DATA

$v = -2(2.g.d.S/100)^{1/2}.(Log(k / 3.7d + 2.51v / (d.(2.g.d.S/100)^{1/2}))$

$Qf = 1000.(\Pi/2)^2.d^2/4.v$

DN mm	PIPE TYPE	INT DIAM, (D) mm	Roughness (k) m	GRADE (S) %	Qf.VEL m/s	Qf (Capacity) L/s
225	P.V.C.	225	0.0015	0.5	0.81	32.20
						RETICULATION
						1600 EP MAX
225	P.V.C.	225	0.0015	0.6	0.89	35.29
						RETICULATION
						1600 EP MAX

PIPE TYPE: PE, PP, UPVC, GRP, Conc

SELF-CLEAN / SLIME CONTROL REQUIREMENTS

Self.Cl/Slime.Ctrl Flows(Calculated)=PDWF+0.5*PF(PDWF)+(EGS-DRY)

SELF CLEANSING / SLIME CONTROL FLOWS: ACTUAL PDWF L/s	REQUIRED PDWF for SELF CLEANSING L/s	REQUIRED PDWF for SLIME CONTROL L/s
9.38	3.83	NA - RETICULATION
	Self Cleansing OK	NA
5.42	2.50	NA - RETICULATION
	Self Cleansing OK	NA