

PRIOR ASSOCIATES

Consulting Engineers

1st Floor Offices

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Job No.

16698

Sheet

SURFACE / 01

Prepared

CC

Checked

Date

3/10/24

Project

Wind in the Willows, Hurst.

Section

Plan Areas

Amenity block / Detached day room (New)

$$= (3.8 \times 6.6) \times 5 = 125.40 \text{ m}^2$$

Mobile Home

$$= (12.2 \times 4) \times 6 = 292.80 \text{ m}^2$$

Existing day Room

$$= (5.36 \times 8.26) + (3.09 \times 1.28) = 48.23 \text{ m}^2$$

$$\text{Total} = 466.43 \text{ m}^2$$

M_{s-60} Rainfall

20 mm

r

0.4

Return period

100 years

Climate change

40 %

Area drained

467 m²

Duration (min)	z1 Rainfall (mm)	z2 Rainfall (mm)	Design Rainfall (mm)	Inflow Volume (m ³)
5	0.373	1.840	19.22	8.97
10	0.523	1.910	27.97	13.06
15	0.633	1.950	34.56	16.14
30	0.803	2.000	44.97	21.00
60	1.000	2.030	56.84	26.54
120	1.217	2.010	68.49	31.99
240	1.447	1.970	79.82	37.27
360	1.653	1.940	89.79	41.93
600	1.793	1.900	95.39	44.55
1440	2.240	1.810	113.52	53.02

Duration (min)	Inflow Volume (m ³)	Outflow Volume (m ³)									
		Discharge Rate (l/s)									
		0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
5	8.97	0.15	0.3	0.45	0.6	0.75	0.9	1.05	1.2	1.35	1.5
10	13.06	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3
15	16.14	0.45	0.9	1.35	1.8	2.25	2.7	3.15	3.6	4.05	4.5
30	21.00	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1	9
60	26.54	1.8	3.6	5.4	7.2	9	10.8	12.6	14.4	16.2	18
120	31.99	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36
240	37.27	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6	64.8	72
360	41.93	10.8	21.6	32.4	43.2	54	64.8	75.6	86.4	97.2	108
600	44.55	18	36	54	72	90	108	126	144	162	180
1440	53.02	43.2	86.4	129.6	172.8	216	259.2	302.4	345.6	388.8	432

Storage Volume Required (m ³)											
Discharge Rate (l/s)											
0.5	1	1.5	2	2.5	3	3.5	4	4.5	5		

8.8	8.7	8.5	8.4	8.2	8.1	7.9	7.8	7.6	7.5		
12.8	12.5	12.2	11.9	11.6	11.3	11.0	10.7	10.4	10.1		
15.7	15.2	14.8	14.3	13.9	13.4	13.0	12.5	12.1	11.6		
20.1	19.2	18.3	17.4	16.5	15.6	14.7	13.8	12.9	12.0		
24.7	22.9	21.1	19.3	17.5	15.7	13.9	12.1	10.3	8.5		
28.4	24.8	21.2	17.6	14.0	10.4	6.8	3.2	0.0	0.0		
30.1	22.9	15.7	8.5	1.3	0.0	0.0	0.0	0.0	0.0		
31.1	20.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Storage required	31.1	24.8	21.2	19.3	17.5	15.7	14.7	13.8	12.9	12.0	m ³
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SPILLAGE REQUIRED 24.8 m³
WITH 12/3 DISCHARGE.

0.8 m x 5.5 m x 6.0 m
ATTENUATION TANK REQUIRED.

ATTENUATION TANK → PUMP WITH
UNIT SET TO 12/3.

(TIME TO EMPTY JUST UNDER 7 HRS.).