

Vale Consultancy					Page 1																																																																																																																																																																																																																			
29 Bocam Park Old Field Road, Pencoed Bridgend, Glamorgan, CF35 5LJ			TREDERWEN, BRONDEG, MERTHYR TYDFIL																																																																																																																																																																																																																					
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Summary of Results for 100 year Return Period (+30%) Half Drain Time : 18 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>47.896</td><td>0.046</td><td>2.8</td><td>2.6</td><td>0 K</td></tr><tr><td>30 min Summer</td><td>47.914</td><td>0.064</td><td>3.0</td><td>3.6</td><td>0 K</td></tr><tr><td>60 min Summer</td><td>47.929</td><td>0.079</td><td>3.0</td><td>4.4</td><td>0 K</td></tr><tr><td>120 min Summer</td><td>47.924</td><td>0.074</td><td>3.0</td><td>4.2</td><td>0 K</td></tr><tr><td>180 min Summer</td><td>47.915</td><td>0.065</td><td>3.0</td><td>3.6</td><td>0 K</td></tr><tr><td>240 min Summer</td><td>47.906</td><td>0.056</td><td>3.0</td><td>3.2</td><td>0 K</td></tr><tr><td>360 min Summer</td><td>47.896</td><td>0.046</td><td>2.8</td><td>2.6</td><td>0 K</td></tr><tr><td>480 min 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Summer	47.914	0.064	3.0	3.6	0 K	60 min Summer	47.929	0.079	3.0	4.4	0 K	120 min Summer	47.924	0.074	3.0	4.2	0 K	180 min Summer	47.915	0.065	3.0	3.6	0 K	240 min Summer	47.906	0.056	3.0	3.2	0 K	360 min Summer	47.896	0.046	2.8	2.6	0 K	480 min Summer	47.891	0.041	2.5	2.3	0 K	600 min Summer	47.886	0.036	2.2	2.0	0 K	720 min Summer	47.883	0.033	2.0	1.8	0 K	960 min Summer	47.878	0.028	1.7	1.5	0 K	1440 min Summer	47.871	0.021	1.3	1.2	0 K	2160 min Summer	47.866	0.016	1.0	0.9	0 K	2880 min Summer	47.864	0.014	0.8	0.7	0 K	4320 min Summer	47.861	0.011	0.7	0.6	0 K	5760 min Summer	47.859	0.009	0.5	0.5	0 K	7200 min Summer	47.858	0.008	0.5	0.4	0 K	8640 min Summer	47.857	0.007	0.4	0.4	0 K	10080 min Summer	47.857	0.007	0.4	0.3	0 K	15 min Winter	47.895	0.045	2.8	2.5	0 K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	103.740	0.0	20	30 min Summer	76.034	0.0	29	60 min Summer	53.146	0.0	46	120 min Summer	33.827	0.0	78	180 min Summer	26.096	0.0	108	240 min Summer	21.723	0.0	138	360 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Innovyze		Source Control 2020.1			
<u>Summary of Results for 100 year Return Period (+30%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	47.913	0.063	3.0	3.5	0 K
60 min Winter	47.923	0.073	3.0	4.1	0 K
120 min Winter	47.910	0.060	3.0	3.3	0 K
180 min Winter	47.899	0.049	3.0	2.7	0 K
240 min Winter	47.893	0.043	2.6	2.4	0 K
360 min Winter	47.884	0.034	2.1	1.9	0 K
480 min Winter	47.879	0.029	1.8	1.6	0 K
600 min Winter	47.875	0.025	1.5	1.4	0 K
720 min Winter	47.873	0.023	1.4	1.2	0 K
960 min Winter	47.869	0.019	1.1	1.0	0 K
1440 min Winter	47.864	0.014	0.9	0.8	0 K
2160 min Winter	47.861	0.011	0.7	0.6	0 K
2880 min Winter	47.859	0.009	0.5	0.5	0 K
4320 min Winter	47.857	0.007	0.4	0.3	0 K
5760 min Winter	47.856	0.006	0.4	0.3	0 K
7200 min Winter	47.855	0.005	0.3	0.3	0 K
8640 min Winter	47.855	0.005	0.3	0.2	0 K
10080 min Winter	47.854	0.004	0.3	0.2	0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	76.034	0.0	30		
60 min Winter	53.146	0.0	48		
120 min Winter	33.827	0.0	80		
180 min Winter	26.096	0.0	108		
240 min Winter	21.723	0.0	138		
360 min Winter	16.736	0.0	200		
480 min Winter	13.856	0.0	258		
600 min Winter	11.939	0.0	320		
720 min Winter	10.555	0.0	376		
960 min Winter	8.661	0.0	496		
1440 min Winter	6.527	0.0	724		
2160 min Winter	4.920	0.0	1104		
2880 min Winter	4.045	0.0	1468		
4320 min Winter	3.108	0.0	2176		
5760 min Winter	2.610	0.0	2856		
7200 min Winter	2.307	0.0	3544		
8640 min Winter	2.101	0.0	4168		
10080 min Winter	1.953	0.0	5088		
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Model Details Storage is Online Cover Level (m) 48.000 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.11664</td><td>Width (m)</td><td>18.8</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>52.2</td><td>Slope (1:X)</td><td>10000.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>47.850</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.11664	Width (m)	18.8	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	52.2	Slope (1:X)	10000.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	47.850	Membrane Depth (m)	0
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