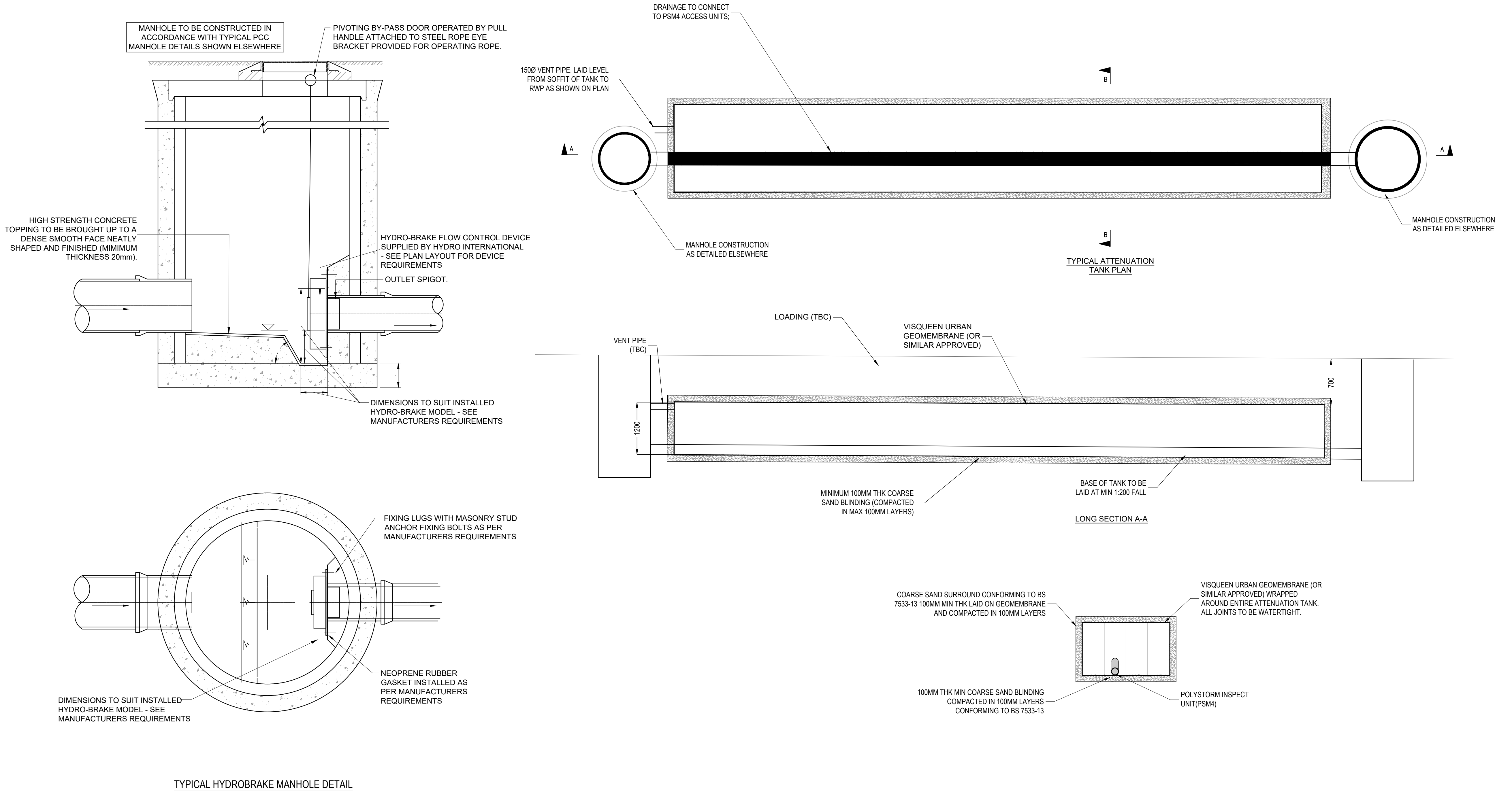




GENERAL NOTES:

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4. REFER TO DRAWING RODSTA-CUR-XX-XX-DR-C-92530_GENERAL DRAINAGE NOTES.

P02	DRAFT STAGE 4 ISSUE	05/08/22	LK	CG
P01	STAGE 3 ISSUE	31/05/22	LK	CG
Rev:	Description:	Date:	By:	Chkd:



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Status:	SUITABLE FOR INFORMATION	S2
Project:	RODNEY STREET	
Orig Title:	TYPICAL DRAINAGE DETAILS SHEET 3	
Size:	A1	27/05/22
Scale:	1:20	LK
Project No:	Originator:	Volume:
Level:	Type:	Role:
Category / Number:	Rev:	
RODSTA - CUR - XX - XX - DR - C - 92522	- P02	



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KEY

- INDICATES THE FLOW ROUTE BASED ON FULL INLET CAPACITY OF COMPONENTS . i.e FALLS AT SURFACE
- INDICATES THE GENERAL GROUND LEVEL FALLS TO THE DRAINAGE SYSTEM

GROUND LEVELS TO FALL AWAY FROM THE PROPOSED BUILDING

DRAWING IS BASED ON:

- ARCHITECT - BUTTRESS DRAWING
RODSTA-BUT-ZZ-00-DP-A-01001 - Proposed Site Plan - REV P02
- LANDSCAPE ARCHITECT - LAYER STUDIO DRAWING
253-LYR-XX-ZZ-DWG-L-1001-Landscape Masterplan (RECEIVED 04/05/2022)
- TOPOGRAPHICAL & GRP UTILITY SURVEY - SURVEY OPERATION
REF: 21G134/001 AUG 2021.
- "ESP" SITE INVESTIGATION: UK21.5551 PHASE I & II
GEO-ENVIRONMENTAL ASSESSMENT - LAND OF RODNEY STREET, MANCHESTER (ISSUE 1)

P01	ISSUED FOR PLANNING	08/08/22	CG	CG
Rev:	Description:	Date:	By:	Chkd:

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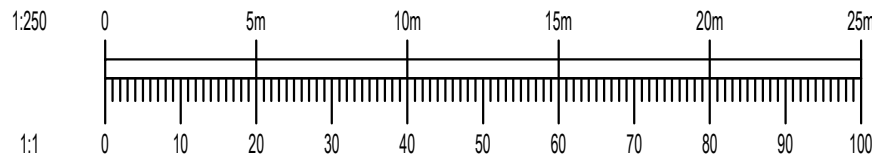
Status:	ISSUED FOR PLANNING	S2
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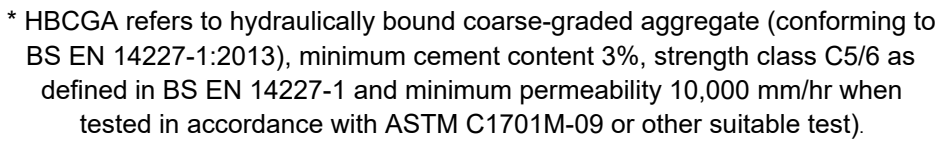
Project:	RODNEY STREET
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Orig Title:	OVERLAND FLOW ROUTES
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Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	20/10/21	CG	CG	CG
Scale: 1:250				

Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
RODSTA- CUR - XX - XX - DR - C -						92500 - P01	





- | | | | | | | |
|--|-------------|-----------|--------------|-------------|-------|--------------------|
| <h1 style="text-align: center;">EXTERNAL WORKS</h1> <h2 style="text-align: center;">GENERAL ARRANGEMENT</h2> | | | | | | |
| Size: | Date: | Drawn By: | Designed By: | Checked By: | | |
| A1 | 20/10/21 | CG | CG | CG | | |
| Scale: 1:250 | | | | | | |
| Project No: | Originator: | Volume: | Level: | Type: | Role: | Category / Number: |
| RODSTA - CUR - XX - XX - DR - C - 94700 - P03 | | | | | | |

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Appendix B

- Surface Water Calcs – 1, 30, 100 year +45%

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	11.061	40.0	150	Circular	51.700	50.723	0.827	51.700	50.446	1.104
1.001	8.214	50.0	150	Circular	51.700	50.446	1.104	51.710	50.282	1.278
1.002	9.415	60.0	150	Circular	51.710	50.282	1.278	51.790	50.125	1.515
1.003	14.234	80.0	150	Circular	51.790	50.125	1.515	51.900	49.947	1.803
2.000	5.607	40.0	150	Circular	51.885	50.354	1.381	51.885	50.214	1.521
2.001	2.066	40.0	150	Circular	51.885	50.214	1.521	51.900	50.162	1.588
2.002	8.616	40.0	150	Circular	51.900	50.162	1.588	51.900	49.947	1.803
1.004	2.744	100.0	225	Circular	51.900	49.872	1.803	51.885	49.845	1.815
1.005	19.109	100.0	225	Circular	51.885	49.845	1.815	51.774	49.654	1.895
1.006	7.691	100.0	225	Circular	51.774	49.654	1.895	51.600	49.577	1.798
1.007	5.722	100.0	225	Circular	51.600	49.577	1.798	51.514	49.520	1.769
3.000	7.982	40.0	150	Circular	51.550	50.500	0.900	51.570	50.300	1.120
3.001	15.890	40.0	150	Circular	51.570	50.300	1.120	51.514	49.903	1.461
4.000	13.430	40.0	150	Circular	51.560	50.510	0.900	51.510	50.174	1.186
4.001	3.403	40.0	150	Circular	51.510	50.174	1.186	51.514	50.089	1.275
1.008	22.662	125.0	300	Circular	51.514	49.445	1.769	51.408	49.264	1.844
5.000	20.397	40.0	150	Circular	51.500	50.450	0.900	51.408	49.940	1.318
1.009	10.805	150.0	300	Circular	51.408	49.264	1.844	51.291	49.192	1.799
6.000	12.875	50.0	100	Circular	51.040	49.990	0.950	51.080	49.732	1.248

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S01A	450	Manhole	Adoptable	S01	450	Manhole	Adoptable
1.001	S01	450	Manhole	Adoptable	S02	450	Manhole	Adoptable
1.002	S02	450	Manhole	Adoptable	S03	450	Manhole	Adoptable
1.003	S03	450	Manhole	Adoptable	TANK A	1200	Manhole	Adoptable
2.000	S04B	450	Manhole	Adoptable	S04A	450	Manhole	Adoptable
2.001	S04A	450	Manhole	Adoptable	S04	450	Manhole	Adoptable
2.002	S04	450	Manhole	Adoptable	TANK A	1200	Manhole	Adoptable
1.004	TANK A	1200	Manhole	Adoptable	S05	1200	Manhole	Adoptable
1.005	S05	1200	Manhole	Adoptable	S06	600	Manhole	Adoptable
1.006	S06	600	Manhole	Adoptable	S07	600	Manhole	Adoptable
1.007	S07	600	Manhole	Adoptable	S12	1200	Manhole	Adoptable
3.000	S08	450	Manhole	Adoptable	S09	450	Manhole	Adoptable
3.001	S09	450	Manhole	Adoptable	S12	1200	Manhole	Adoptable
4.000	S10	450	Manhole	Adoptable	S11	450	Manhole	Adoptable
4.001	S11	450	Manhole	Adoptable	S12	1200	Manhole	Adoptable
1.008	S12	1200	Manhole	Adoptable	S14	1200	Manhole	Adoptable
5.000	S13	450	Manhole	Adoptable	S14	1200	Manhole	Adoptable
1.009	S14	1200	Manhole	Adoptable	S26	1200	Manhole	Adoptable
6.000	S15	450	Manhole	Adoptable	S16	450	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
6.001	9.942	50.0	100	Circular	51.080	49.732	1.248	51.070	49.533	1.437
7.000	10.318	40.0	100	Circular	51.070	49.986	0.984	51.140	49.728	1.312
7.001	12.193	62.5	100	Circular	51.140	49.728	1.312	51.070	49.533	1.437
6.002	12.021	50.0	150	Circular	51.070	49.533	1.387	51.130	49.293	1.687
8.000	12.845	40.0	100	Circular	51.100	49.871	1.129	51.220	49.550	1.570
8.001	12.392	48.2	100	Circular	51.220	49.550	1.570	51.130	49.293	1.737
6.003	9.295	80.0	150	Circular	51.130	49.243	1.737	51.197	49.127	1.920
9.000	15.291	23.7	100	Circular	51.120	49.821	1.199	51.197	49.177	1.920
6.004	7.212	100.0	225	Circular	51.197	49.052	1.920	51.291	48.980	2.086
10.000	9.132	200.0	225	Circular	51.370	49.067	2.078	51.370	49.021	2.124
10.001	8.276	200.0	225	Circular	51.370	49.021	2.124	51.291	48.980	2.086
1.010	33.020	153.6	300	Circular	51.291	48.905	2.086	51.230	48.690	2.240
1.011	1.889	100.0	150	Circular	51.230	48.690	2.390	51.134	48.671	2.313
1.012	3.138	100.0	150	Circular	51.134	48.671	2.313	51.066	48.640	2.276
1.013	4.185	100.0	150	Circular	51.066	48.655	2.261	50.994	48.613	2.231

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
6.001	S16	450	Manhole	Adoptable	S19	450	Manhole	Adoptable
7.000	S17	450	Manhole	Adoptable	S18	450	Manhole	Adoptable
7.001	S18	450	Manhole	Adoptable	S19	450	Manhole	Adoptable
6.002	S19	450	Manhole	Adoptable	S22	450	Manhole	Adoptable
8.000	S20	450	Manhole	Adoptable	S21	450	Manhole	Adoptable
8.001	S21	450	Manhole	Adoptable	S22	450	Manhole	Adoptable
6.003	S22	450	Manhole	Adoptable	S24	600	Manhole	Adoptable
9.000	S23	450	Manhole	Adoptable	S24	600	Manhole	Adoptable
6.004	S24	600	Manhole	Adoptable	S26	1200	Manhole	Adoptable
10.000	S25	450	Manhole	Adoptable	TANK B		Junction	
10.001	TANK B		Junction		S26	1200	Manhole	Adoptable
1.010	S26	1200	Manhole	Adoptable	S27	1200	Manhole	Adoptable
1.011	S27	1200	Manhole	Adoptable	S28	450	Manhole	Adoptable
1.012	S28	450	Manhole	Adoptable	C01	1200	Manhole	Adoptable
1.013	C01	1200	Manhole	Adoptable	C02	1200	Manhole	Adoptable

Node S27 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	48.690	Product Number	CTL-SHE-0106-5000-1000-5000
Design Depth (m)	1.000	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node S05 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	49.845	Product Number	CTL-SHE-0106-5000-1000-5000
Design Depth (m)	1.000	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node TANK A Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.872
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	168

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	70.0	0.0	0.800	70.0	0.0	0.801	0.0	0.0

Node TANK B Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.021
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	140.0	0.0	1.200	140.0	0.0	1.201	0.0	0.0

Node S07 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.375	Slope (1:X)	400.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.225
Safety Factor	2.0	Width (m)	2.000	Inf Depth (m)	
Porosity	0.33	Length (m)	115.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01A	10	50.755	0.032	2.9	0.0178	0.0000	OK
15 minute winter	S01	10	50.497	0.051	5.7	0.0227	0.0000	OK
15 minute winter	S02	10	50.333	0.051	5.6	0.0081	0.0000	OK
15 minute winter	S03	10	50.208	0.083	11.0	0.0483	0.0000	OK
15 minute winter	S04B	10	50.395	0.041	4.3	0.0213	0.0000	OK
15 minute winter	S04A	10	50.271	0.057	6.0	0.0167	0.0000	OK
15 minute winter	S04	10	50.229	0.067	10.1	0.0314	0.0000	OK
30 minute winter	TANK A	26	49.986	0.114	16.2	8.1344	0.0000	OK
30 minute winter	S05	26	49.986	0.141	4.6	0.1593	0.0000	OK
30 minute winter	S06	20	49.706	0.052	5.4	0.0206	0.0000	OK
15 minute winter	S07	11	49.648	0.071	9.5	0.0418	0.0000	OK
15 minute winter	S08	10	50.544	0.044	5.4	0.0366	0.0000	OK
15 minute winter	S09	10	50.371	0.071	11.9	0.0580	0.0000	OK
15 minute winter	S10	11	50.521	0.011	0.3	0.0022	0.0000	OK
15 minute winter	S11	10	50.231	0.057	6.9	0.0458	0.0000	OK
15 minute winter	S12	11	49.558	0.113	27.5	0.1275	0.0000	OK
15 minute winter	S13	10	50.463	0.013	0.5	0.0029	0.0000	OK
15 minute winter	S14	11	49.396	0.132	30.9	0.1723	0.0000	OK
15 minute winter	S15	10	50.010	0.020	0.8	0.0051	0.0000	OK
15 minute winter	S16	11	49.759	0.027	1.4	0.0059	0.0000	OK
15 minute winter	S17	11	50.003	0.017	0.6	0.0040	0.0000	OK
15 minute winter	S18	10	49.753	0.025	1.1	0.0051	0.0000	OK
15 minute winter	S19	10	49.592	0.059	7.6	0.0353	0.0000	OK
15 minute winter	S20	10	49.890	0.019	0.8	0.0046	0.0000	OK
15 minute winter	S21	11	49.577	0.027	1.4	0.0055	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01A	1.000	S01	2.9	0.725	0.102	0.0445	
15 minute winter	S01	1.001	S02	5.6	1.069	0.223	0.0432	
15 minute winter	S02	1.002	S03	5.6	0.729	0.242	0.0722	
15 minute winter	S03	1.003	TANK A	10.8	1.115	0.543	0.1378	
15 minute winter	S04B	2.000	S04A	4.3	0.857	0.152	0.0281	
15 minute winter	S04A	2.001	S04	5.9	0.862	0.210	0.0142	
15 minute winter	S04	2.002	TANK A	10.0	1.392	0.356	0.0621	
30 minute winter	TANK A	1.004	S05	4.6	0.354	0.088	0.0637	
30 minute winter	S05	Hydro-Brake®	S06	4.5				
30 minute winter	S06	1.006	S07	5.4	0.741	0.104	0.0646	
15 minute winter	S07	1.007	S12	9.4	0.939	0.182	0.0576	
15 minute winter	S08	3.000	S09	5.4	0.863	0.190	0.0500	
15 minute winter	S09	3.001	S12	11.7	1.478	0.415	0.1258	
15 minute winter	S10	4.000	S11	0.3	0.106	0.011	0.0451	
15 minute winter	S11	4.001	S12	6.8	1.205	0.242	0.0192	
15 minute winter	S12	1.008	S14	27.6	1.025	0.278	0.6113	
15 minute winter	S13	5.000	S14	0.4	0.588	0.016	0.0154	
15 minute winter	S14	1.009	S26	31.1	1.111	0.344	0.3027	
15 minute winter	S15	6.000	S16	0.8	0.550	0.089	0.0180	
15 minute winter	S16	6.001	S19	1.4	0.425	0.157	0.0320	
15 minute winter	S17	7.000	S18	0.6	0.511	0.062	0.0124	
15 minute winter	S18	7.001	S19	1.1	0.339	0.137	0.0385	
15 minute winter	S19	6.002	S22	7.4	1.205	0.294	0.0741	
15 minute winter	S20	8.000	S21	0.8	0.573	0.080	0.0173	
15 minute winter	S21	8.001	S22	1.4	0.728	0.155	0.0279	

Results for 2 year Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S22	11	49.332	0.089	11.3	0.0302	0.0000	OK
15 minute winter	S23	10	49.847	0.026	1.9	0.0090	0.0000	OK
15 minute winter	S24	10	49.227	0.175	13.9	0.0576	0.0000	OK
120 minute winter	S25	114	49.224	0.157	0.2	0.0250	0.0000	OK
120 minute winter	TANK B	114	49.224	0.203	13.7	27.0324	0.0000	OK
120 minute winter	S26	116	49.224	0.319	17.4	0.3958	0.0000	SURCHARGED
15 minute summer	S27	10	49.234	0.544	17.7	0.7442	0.0000	SURCHARGED
720 minute winter	S28	360	48.736	0.065	5.0	0.0104	0.0000	OK
720 minute winter	C01	360	48.714	0.074	5.0	0.0842	0.0000	OK
720 minute winter	C02	360	48.667	0.054	5.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S22	6.003	S24	11.4	1.057	0.575	0.1085	
15 minute winter	S23	9.000	S24	1.9	1.018	0.149	0.0425	
15 minute winter	S24	6.004	S26	15.8	0.832	0.304	0.2630	
120 minute winter	S25	10.000	TANK B	-0.2	-0.056	-0.005	0.3078	
120 minute winter	TANK B	10.001	S26	-13.7	-0.863	-0.374	0.3209	
120 minute winter	S26	1.010	S27	7.3	0.335	0.082	2.3252	
15 minute summer	S27	Hydro-Brake®	S28	5.0				
720 minute winter	S28	1.012	C01	5.0	0.618	0.280	0.0253	
720 minute winter	C01	1.013	C02	5.0	0.814	0.280	0.0256	95.6

Results for 30 year Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01A	10	50.768	0.045	5.5	0.0245	0.0000	OK
15 minute winter	S01	10	50.519	0.073	10.7	0.0328	0.0000	OK
15 minute winter	S02	10	50.353	0.071	10.6	0.0113	0.0000	OK
15 minute winter	S03	11	50.285	0.160	20.7	0.0928	0.0000	SURCHARGED
15 minute winter	S04B	10	50.414	0.060	8.2	0.0314	0.0000	OK
15 minute winter	S04A	10	50.304	0.090	11.3	0.0263	0.0000	OK
15 minute winter	S04	10	50.263	0.101	19.1	0.0475	0.0000	OK
60 minute winter	TANK A	49	50.129	0.257	20.5	18.2469	0.0000	SURCHARGED
60 minute winter	S05	49	50.128	0.283	5.1	0.3199	0.0000	SURCHARGED
600 minute winter	S06	435	49.837	0.183	3.9	0.0726	0.0000	OK
600 minute winter	S07	435	49.837	0.260	4.7	0.1534	0.0000	SURCHARGED
15 minute winter	S08	10	50.565	0.065	10.2	0.0537	0.0000	OK
15 minute winter	S09	10	50.408	0.108	22.3	0.0888	0.0000	OK
15 minute winter	S10	10	50.525	0.015	0.6	0.0029	0.0000	OK
15 minute winter	S11	10	50.259	0.085	13.1	0.0681	0.0000	OK
600 minute winter	S12	435	49.837	0.392	8.0	0.4435	0.0000	SURCHARGED
15 minute winter	S13	10	50.468	0.018	0.9	0.0039	0.0000	OK
600 minute winter	S14	435	49.837	0.573	8.2	0.7492	0.0000	SURCHARGED
15 minute winter	S15	10	50.018	0.028	1.5	0.0071	0.0000	OK
600 minute winter	S16	435	49.837	0.105	0.2	0.0228	0.0000	SURCHARGED
15 minute winter	S17	10	50.010	0.024	1.2	0.0055	0.0000	OK
600 minute winter	S18	435	49.836	0.108	0.2	0.0219	0.0000	SURCHARGED
600 minute winter	S19	435	49.836	0.303	1.3	0.1824	0.0000	SURCHARGED
15 minute winter	S20	10	49.898	0.027	1.5	0.0064	0.0000	OK
600 minute winter	S21	435	49.836	0.286	0.2	0.0593	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01A	1.000	S01	5.5	0.848	0.194	0.0718	
15 minute winter	S01	1.001	S02	10.6	1.259	0.419	0.0689	
15 minute winter	S02	1.002	S03	10.5	0.804	0.455	0.1210	
15 minute winter	S03	1.003	TANK A	20.0	1.213	1.009	0.2402	
15 minute winter	S04B	2.000	S04A	8.1	0.924	0.289	0.0495	
15 minute winter	S04A	2.001	S04	11.2	0.946	0.398	0.0245	
15 minute winter	S04	2.002	TANK A	18.9	1.600	0.672	0.1019	
60 minute winter	TANK A	1.004	S05	5.1	0.354	0.099	0.1091	
60 minute winter	S05	Hydro-Brake®	S06	5.0				
600 minute winter	S06	1.006	S07	3.9	0.696	0.074	0.2864	
600 minute winter	S07	1.007	S12	4.6	0.765	0.088	0.2276	
15 minute winter	S08	3.000	S09	10.1	0.962	0.359	0.0835	
15 minute winter	S09	3.001	S12	22.0	1.691	0.781	0.2068	
15 minute winter	S10	4.000	S11	0.6	0.116	0.020	0.0749	
15 minute winter	S11	4.001	S12	12.9	1.396	0.458	0.0315	
600 minute winter	S12	1.008	S14	7.6	0.695	0.076	1.5958	
15 minute winter	S13	5.000	S14	0.8	0.711	0.030	0.0243	
600 minute winter	S14	1.009	S26	8.0	0.668	0.088	0.7609	
15 minute winter	S15	6.000	S16	1.5	0.655	0.172	0.0291	
600 minute winter	S16	6.001	S19	0.2	0.283	0.023	0.0778	
15 minute winter	S17	7.000	S18	1.2	0.615	0.122	0.0199	
600 minute winter	S18	7.001	S19	0.2	0.245	0.026	0.0954	
600 minute winter	S19	6.002	S22	1.3	0.687	0.052	0.2116	
15 minute winter	S20	8.000	S21	1.5	0.673	0.154	0.0556	
600 minute winter	S21	8.001	S22	0.2	0.457	0.023	0.0970	

Results for 30 year Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S22	435	49.837	0.594	2.0	0.2013	0.0000	SURCHARGED
15 minute winter	S23	10	49.857	0.036	3.5	0.0124	0.0000	OK
600 minute winter	S24	435	49.837	0.785	2.3	0.2582	0.0000	SURCHARGED
600 minute winter	S25	435	49.837	0.770	0.1	0.1224	0.0000	SURCHARGED
600 minute winter	TANK B	435	49.837	0.816	10.6	108.5119	0.0000	SURCHARGED
600 minute winter	S26	435	49.838	0.933	10.7	1.1566	0.0000	SURCHARGED
600 minute winter	S27	435	49.836	1.146	5.0	1.5667	0.0000	SURCHARGED
600 minute winter	S28	435	49.623	0.952	4.9	0.1513	0.0000	SURCHARGED
600 minute winter	C01	435	49.618	0.978	4.9	1.1065	0.0000	SURCHARGED
15 minute summer	C02	1	49.613	1.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S22	6.003	S24	1.9	0.474	0.094	0.1636	
15 minute winter	S23	9.000	S24	3.5	1.119	0.278	0.0793	
600 minute winter	S24	6.004	S26	2.1	0.381	0.041	0.2868	
600 minute winter	S25	10.000	TANK B	-0.1	-0.006	-0.002	0.3632	
600 minute winter	TANK B	10.001	S26	-10.6	-0.322	-0.289	0.3291	
600 minute winter	S26	1.010	S27	4.7	0.229	0.053	2.3252	
600 minute winter	S27	Hydro-Brake®	S28	4.9				
600 minute winter	S28	1.012	C01	4.9	0.277	0.275	0.0552	
600 minute winter	C01	1.013	C02	4.9	0.277	0.275	0.0737	84.2

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01A	12	50.935	0.212	10.3	0.1160	0.0000	SURCHARGED
15 minute winter	S01	12	50.904	0.458	18.7	0.2041	0.0000	SURCHARGED
15 minute winter	S02	12	50.810	0.528	16.3	0.0840	0.0000	SURCHARGED
15 minute winter	S03	12	50.705	0.580	33.1	0.3358	0.0000	SURCHARGED
360 minute winter	S04B	352	50.630	0.276	2.2	0.1449	0.0000	SURCHARGED
360 minute winter	S04A	344	50.631	0.417	4.0	0.1212	0.0000	SURCHARGED
360 minute winter	S04	344	50.629	0.467	5.2	0.2197	0.0000	SURCHARGED
360 minute winter	TANK A	344	50.629	0.757	10.8	53.8520	0.0000	SURCHARGED
360 minute winter	S05	344	50.629	0.784	5.0	0.8867	0.0000	SURCHARGED
480 minute winter	S06	360	50.599	0.945	5.5	0.3741	0.0000	SURCHARGED
480 minute winter	S07	360	50.600	1.023	7.2	0.6023	0.0000	SURCHARGED
15 minute winter	S08	11	51.051	0.551	19.1	0.4547	0.0000	SURCHARGED
15 minute winter	S09	11	50.952	0.652	39.0	0.5347	0.0000	SURCHARGED
480 minute winter	S10	360	50.599	0.089	0.1	0.0176	0.0000	OK
480 minute winter	S11	360	50.599	0.425	4.2	0.3415	0.0000	SURCHARGED
480 minute winter	S12	360	50.599	1.154	14.5	1.3050	0.0000	SURCHARGED
480 minute winter	S13	360	50.599	0.149	0.2	0.0321	0.0000	OK
480 minute winter	S14	360	50.599	1.335	15.8	1.7460	0.0000	SURCHARGED
480 minute winter	S15	360	50.600	0.610	0.3	0.1550	0.0000	SURCHARGED
480 minute winter	S16	360	50.600	0.868	0.7	0.1893	0.0000	SURCHARGED
480 minute winter	S17	360	50.600	0.614	0.2	0.1431	0.0000	SURCHARGED
480 minute winter	S18	360	50.600	0.872	0.6	0.1762	0.0000	SURCHARGED
480 minute winter	S19	360	50.600	1.067	2.7	0.6413	0.0000	SURCHARGED
480 minute winter	S20	360	50.600	0.729	0.5	0.1750	0.0000	SURCHARGED
480 minute winter	S21	360	50.600	1.050	1.0	0.2173	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01A	1.000	S01	9.5	0.919	0.338	0.1947	
15 minute winter	S01	1.001	S02	16.3	1.260	0.648	0.1446	
15 minute winter	S02	1.002	S03	16.3	0.928	0.711	0.1657	
15 minute winter	S03	1.003	TANK A	32.1	1.825	1.616	0.2506	
360 minute winter	S04B	2.000	S04A	2.2	0.759	0.078	0.0987	
360 minute winter	S04A	2.001	S04	3.1	0.798	0.110	0.0364	
360 minute winter	S04	2.002	TANK A	5.2	1.058	0.184	0.1517	
360 minute winter	TANK A	1.004	S05	5.0	0.302	0.097	0.1091	
360 minute winter	S05	Hydro-Brake®	S06	4.9				
480 minute winter	S06	1.006	S07	5.3	0.682	0.103	0.3059	
480 minute winter	S07	1.007	S12	7.1	0.830	0.136	0.2276	
15 minute winter	S08	3.000	S09	16.7	0.977	0.591	0.1405	
15 minute winter	S09	3.001	S12	36.9	2.096	1.309	0.2797	
480 minute winter	S10	4.000	S11	0.1	0.106	0.004	0.1915	
480 minute winter	S11	4.001	S12	2.7	0.956	0.096	0.0599	
480 minute winter	S12	1.008	S14	14.4	0.737	0.145	1.5958	
480 minute winter	S13	5.000	S14	0.2	0.459	0.007	0.3589	
480 minute winter	S14	1.009	S26	15.6	0.693	0.173	0.7609	
480 minute winter	S15	6.000	S16	0.3	0.424	0.035	0.1007	
480 minute winter	S16	6.001	S19	-0.5	0.319	-0.063	0.0778	
480 minute winter	S17	7.000	S18	0.2	0.398	0.021	0.0807	
480 minute winter	S18	7.001	S19	-0.5	0.245	-0.070	0.0954	
480 minute winter	S19	6.002	S22	2.6	0.726	0.101	0.2116	
480 minute winter	S20	8.000	S21	0.3	0.417	0.031	0.1005	
480 minute winter	S21	8.001	S22	-0.8	0.457	-0.092	0.0970	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 97.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S22	360	50.600	1.357	3.8	0.4600	0.0000	SURCHARGED
480 minute winter	S23	360	50.599	0.778	1.3	0.2677	0.0000	SURCHARGED
480 minute winter	S24	360	50.599	1.547	4.6	0.5090	0.0000	SURCHARGED
480 minute winter	S25	360	50.599	1.532	0.1	0.2436	0.0000	SURCHARGED
480 minute winter	TANK B	360	50.599	1.578	18.1	159.6665	0.0000	SURCHARGED
480 minute winter	S26	360	50.599	1.694	20.6	2.1002	0.0000	SURCHARGED
480 minute winter	S27	360	50.599	1.909	5.2	2.6090	0.0000	SURCHARGED
30 minute summer	S28	18	49.635	0.964	5.0	0.1533	0.0000	SURCHARGED
15 minute summer	C01	11	49.626	0.986	5.0	1.1154	0.0000	SURCHARGED
15 minute summer	C02	1	49.613	1.000	5.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S22	6.003	S24	3.7	0.545	0.185	0.1636	
480 minute winter	S23	9.000	S24	-0.8	0.587	-0.065	0.1196	
480 minute winter	S24	6.004	S26	4.5	0.427	0.086	0.2868	
480 minute winter	S25	10.000	TANK B	1.5	0.038	0.042	0.3632	
480 minute winter	TANK B	10.001	S26	-18.1	-0.454	-0.493	0.3291	
480 minute winter	S26	1.010	S27	4.8	0.293	0.053	2.3252	
480 minute winter	S27	Hydro-Brake®	S28	5.0				
30 minute summer	S28	1.012	C01	5.0	0.540	0.282	0.0552	
15 minute summer	C01	1.013	C02	5.0	0.286	0.283	0.0737	7.5