

Drainage Design Report

Flow

V2.0

Copyright © 1988-2016 Causeway Software Solutions Limited

Network

Storm Network 1

Filename

J:\PROJECTS\1086 - PERSIMMON HOMES\003 - PURBROOK PARK SCHOOL\PDS\FLOW\PURBROOK NETWORK 1.PFD

Username

ENZYGO\mark.jarvis

Last analysed

21/03/2016 13:20:49

Report produced on

21/03/2016 13:43:50

Causeway Sales

Tel:

+44(0) 1628 552000

Fax:

+44(0) 1628 552001

Email:

marketing@causeway.com

Web:

www.causeway.com

Technical support web portal:

<http://support.causeway.com>

Rainfall Methodology	FSR
Return Period (years)	1
Additional Flow (%)	0
FSR Region	England and Wales
M5-60 (mm)	19.600
Ratio-R	0.325
CV	0.750
Time of Entry (mins)	5.00
Maximum Time of Concentration (mins)	30.00
Maximum Rainfall (mm/hr)	50.0
Minimum Velocity (m/s)	1.00
Connection Type	Level Soffits
Minimum Backdrop Type (m)	1.000
Preferred Cover Depth (m)	1.200

	Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)	Notes
✓	1	0.038	5.00		52.741	Manhole	Adoptable	2400		468281.746	107763.509	3.286	
✓	2	0.151	5.00		52.670	Manhole	Adoptable	2400		468287.303	107798.621	3.286	
✓	3	0.075	5.00		52.704	Manhole	Adoptable	2400		468274.769	107809.412	3.319	
✓	4	0.098	5.00		52.451	Manhole	Adoptable	3000		468290.497	107814.103	3.099	
✓	5				51.931	Manhole	Adoptable	2400		468314.101	107809.107	2.627	
✓	6				51.794	Manhole	Adoptable	1500		468319.887	107807.444	2.550	

	Name	US Node	DS Node	Length (m)	k (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)	Min DS IL (m)	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (ha)	Pro Depth (mm)	Pro Velocity (m/s)
✓	1.000	1	2	35.549	0.600	49.455	49.384	0.071	500.0	1350	5.33	47.1		1.791	2564.0	4.8	1.936	1.936	0.038	0.0	43	0.364
✓	1.001	2	4	15.808	0.600	49.384	49.352	0.032	500.0	1350	5.48	46.5		1.791	2564.0	23.8	1.936	1.749	0.189	0.0	89	0.588
✓	2.000	3	4	16.413	0.600	49.385	49.352	0.033	500.0	1350	5.15	47.7		1.791	2564.0	9.7	1.969	1.749	0.075	0.0	58	0.447
✓	1.002	4	5	24.127	0.600	49.352	49.304	0.048	500.0	1350	5.70	45.7		1.791	2564.0	44.9	1.749	1.277	0.362	0.0	121	0.710
?	1.003	5	6	6.020	0.600	49.304	49.244	0.060	100.3	150	5.80	0.0	49.594	1.003	17.7	0.0	2.477	2.400	0.362	0.0	0	0.000

Results for 1 year Critical Storm Duration. Largest routing error: 0.48%														
Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link Name	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
180 minute winter	1	136	49.698	0.243	2.5	1.1012	0.0000	OK	1.000	2	1.2	0.075	0.000	7.6134
180 minute winter	2	140	49.698	0.314	5.9	1.4205	0.0000	OK	1.001	4	3.5	0.176	0.001	4.2882
180 minute winter	3	140	49.698	0.313	2.7	1.4153	0.0000	OK	2.000	4	1.8	0.095	0.001	4.4417
180 minute winter	4	140	49.698	0.346	8.5	2.4448	0.0000	OK	1.002	5	5.0	0.198	0.002	7.6879
180 minute winter	5	140	49.698	0.394	5.0	1.7815	0.0000	SURCHARGED	1.003	6	3.3	0.759	0.185	0.0260
180 minute winter	6	140	49.286	0.042	3.3	0.0000	0.0000	OK						

Results for 30 year Critical Storm Duration. Largest routing error: 0.48%														
Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link Name	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
240 minute winter	1	232	50.184	0.729	4.2	3.2977	0.0000	OK	1.000	2	1.3	0.083	0.001	29.7217
240 minute winter	2	236	50.184	0.800	10.2	3.6200	0.0000	OK	1.001	4	3.9	0.195	0.002	14.3046
240 minute winter	3	236	50.184	0.799	5.0	3.6162	0.0000	OK	2.000	4	2.9	0.108	0.001	14.8431
240 minute winter	4	236	50.184	0.832	13.2	5.8836	0.0000	OK	1.002	5	6.5	0.238	0.003	23.0985
240 minute winter	5	236	50.184	0.880	6.5	3.9829	0.0000	SURCHARGED	1.003	6	3.3	0.759	0.185	0.0260
30 minute winter	6	191	49.286	0.042	3.3	0.0000	0.0000	OK						

Results for 100 year +40% Critical Storm Duration. Largest routing error: 0.48%														
Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	Link Name	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
360 minute winter	1	344	51.365	1.910	6.5	8.6407	0.0000	SURCHARGED	1.000	2	1.5	0.090	0.001	50.8901
360 minute winter	2	344	51.365	1.981	13.8	8.9623	0.0000	SURCHARGED	1.001	4	4.8	0.191	0.002	22.6299
360 minute winter	3	344	51.365	1.980	6.8	8.9580	0.0000	SURCHARGED	2.000	4	3.8	0.109	0.001	23.4960
360 minute winter	4	344	51.365	2.013	16.7	14.2306	0.0000	SURCHARGED	1.002	5	7.4	0.251	0.003	34.5390
360 minute winter	5	344	51.365	2.061	7.4	9.3245	0.0000	SURCHARGED	1.003	6	4.2	0.809	0.234	0.0309
360 minute winter	6	344	49.291	0.047	4.2	0.0000	0.0000	OK						