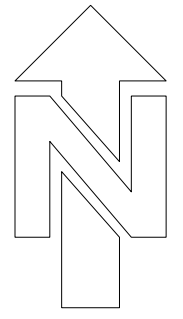


Appendix F

Drainage Strategy Layout & Finished Level Layout



F LEGEND

- Site Boundary
- Proposed Highway Side
- Proposed Attenuation Basin
- Proposed Highway rain garden
- Surface Water Sewer
- Foul Water Sewer
- Foul Water Manhole
- Thames Water Surface Water Sewer
- Thames Water Foul Water Sewer
- Existing stream/river
- Surface water mark
- Surface water flow control
- Foul water manhole
- Trapped road gully
- Surface water headwall
- Excavation lines
- Indicative Street Lighting
- Service trench

PL ISSUED FOR PLANNING	JPC	04/12/25
PL FIRST ISSUE	JPC	22/11/25
MR	REVISION	BY DATE

DRAWING STATUS
NOT FOR CONSTRUCTION

CLIENT
Bellway

DRAWING TITLE
DRAINAGE STRATEGY

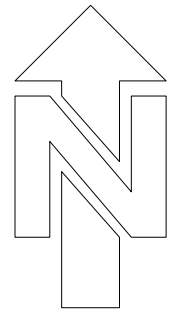
PROJECT
PARK LANE, CHARVIL, WOKINGHAM

simpson | tws
8 Friday Street
Henley-on-Thames
Oxfordshire, RG9 1AH
T: 01491 538 221
E: mail@simpsoning.com
W: www.simpsoning.com

Drawn	CHD	Scale	Date
JPC	JPC	1:500BA1	NOV2025

PLANNING

Drawing Number	Revision
P25-0896 SK100	P2



LEVELS LEGEND

Site Boundary	Proposed finished floor level
44.500	Order gradient
1:20	Order board
2.000	Retaining wall
45.00	Existing level
45.000	Proposed roof contours at 25mm increments
45.000	Proposed bank - max gradient 1/3
45.000	Roof Protection Area

P2 ISSUED FOR PLANNING	JPC 04.12.25
P2 FIRST ISSUE	JPC 22.11.25
REVISION	BY DATE

DRAWING STATUS
NOT FOR CONSTRUCTION

CLIENT

Bellway

DRAWING TITLE
PRELIMINARY LEVELS LAYOUT

PROJECT

PARK LANE, CHARVIL, WOKINGHAM

simpson | tws
8 Friday Street
Henley-on-Thames
Oxfordshire, RG9 1AH
T: 01491 518 211
E: mail@simpsoning.com
W: www.simpsoning.com

London, Henley-on-Thames and Gloucester

Drawn JPC	Checked JPH	Scales 1:500BA1	Date NOV 2025
Proposed of use: PLANNING			
Drawing Number: P25-0896 SK101	Revision: P2		

Appendix G

Thames Water Correspondence



Matthew Welsh

Simpson TWS
8 Friday Street
Henley On Thames
Oxfordshire
RG9 1AH



27 November 2025

Pre-planning enquiry: Capacity concerns

Site Address: Park Lane, Charvil, Wokingham, Berkshire, RG10 9TR

Dear Matthew

Thank you for providing information on your development.

Proposed site: The proposed construction of up to 75 residential units.

Proposed foul water: The foul water to be pumped at 3.8 l/s discharging to MH5355.

Proposed surface water: The surface water to be discharged to watercourse as does not form part of this application.

We have completed the assessment of the foul water flows and surface water run-off based on the information submitted in your application with the purpose of assessing sewerage capacity within the existing Thames Water sewer network.

Foul Water

We've assessed your foul water proposals and concluded that our sewerage and unfortunately, we're unable to meet the needs of your full development at this time.

In order to ensure we make the appropriate upgrades – or 'off-site reinforcement' – to serve the remainder of your development, we'll need to carry out modelling work, design a solution and build the necessary improvements. This work is done at our cost.

Once we've begun modelling, we may need to contact you to discuss changing the connection point for capacity reasons. Please note that we'll pay the cost of covering any extra distance if the connection needs to be made at a point further away than the nearest practicable point of at least the same diameter.

How long could modelling and reinforcement take?

Typical timescales for a development of your size are:

Modelling: 9-12 months

Design: 6 months

Construction: Up to 18 months*

Total: Up to 36 months

*(dependent on Traffic Management, Local Authority and Third-Party Landowners)

If the time you're likely to take from planning and construction through to first occupancy is longer than this, we'll be able to carry out the necessary upgrades in time for your development. If it's shorter, we may seek planning conditions, please contact me on the number below to discuss the timing of our activities.

What do you need to tell us before we start modelling?

We will only carry out modelling once we're confident that your development will proceed. In order to have this confidence, we'll need to know that you **own the land and have either outline or full planning permission**. Please email this information to us as soon as you have it.

If the modelling shows we need to carry out reinforcement work, then before we start construction, we'll need you to supply us with notification that you've confirmed your F10 – Notification of construction project - submission to the Health and Safety Executive.

Surface Water

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable. Before we can consider your surface water needs, you'll need written approval from the lead local flood authority that you have followed the sequential approach to the disposal of surface water and considered all practical means.

The disposal hierarchy being:

- 1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
- 2) rainwater infiltration to ground at or close to source
- 3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
- 4) rainwater discharge direct to a watercourse (unless not appropriate)
- 5) controlled rainwater discharge to a surface water sewer or drain
- 6) controlled rainwater discharge to a combined sewer.

Where connection to the public sewerage network is required to manage surface water flows, we will accept these flows at a discharge rate in line with CIRIA's best practice guide on SuDS or that stated within the sites planning approval.

Capacity at STW?

The receiving network is served by Wargrave STW and there isn't a known performance issue which may cause the EA to object to the development.

What do I need to do next?

If you've satisfied the points above, then you should compare your own timeline with the typical timescales we've suggested for our activities. If the time you're likely to take from planning and construction through to first occupancy is **more** than the total time we're likely to take, we'll be able to carry out the necessary upgrades in time for your development.

Yours sincerely

A handwritten signature in black ink that reads "Steve Knight". The script is cursive and fluid, with the first letters of "Steve" and "Knight" being capitalized and prominent.

Steve Knight

Adoption Engineer

Developer Services – Adoptions Engineer, Sewer Adoptions Team

Appendix H

Hydraulic Analysis Results

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S29	0.046	5.00	48.522	1350	477343.461	175263.627	1.302
S30	0.036	5.00	47.889	1350	477327.232	175245.560	1.379
S31	0.010	5.00	47.080	1350	477338.688	175210.097	1.490
S32	0.073	5.00	46.760	1350	477365.733	175204.433	1.203
S33	0.016	5.00	46.860	1350	477349.085	175194.889	1.623
S34	0.017	5.00	46.551	1350	477355.628	175176.706	1.651
S35	0.074	5.00	45.829	1350	477371.330	175140.930	1.529
S36			45.325	1350	477371.710	175133.174	1.135
S37	0.066	5.00	45.000	1350	477380.341	175111.849	1.350
S38			45.000	1350	477394.739	175101.339	1.500

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	S29	S30	24.286	0.600	47.220	46.510	0.710	34.2	225	5.18	49.7
1.001	S30	S31	37.267	0.600	46.510	45.665	0.845	44.1	225	5.49	48.4
1.002	S31	S33	18.422	0.600	45.590	45.237	0.353	52.2	300	5.64	47.9
2.000	S32	S33	19.190	0.600	45.557	45.237	0.320	60.0	300	5.16	49.8
1.003	S33	S34	19.324	0.600	45.237	44.975	0.262	73.8	300	5.81	47.2
1.004	S34	S35	39.070	0.600	44.900	44.300	0.600	65.1	375	6.10	46.1
1.005	S35	S36	7.765	0.600	44.300	44.190	0.110	70.6	375	6.16	45.9
1.006	S36	S37	23.006	0.600	44.190	43.650	0.540	42.6	375	6.30	45.4
1.007	S37	S38	17.825	0.600	43.650	43.500	0.150	118.8	375	6.48	44.8

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.244	89.2	8.3	1.077	1.154	0.046	0.0	46	1.417
1.001	1.975	78.5	14.4	1.154	1.190	0.082	0.0	65	1.508
1.002	2.181	154.2	15.9	1.190	1.323	0.092	0.0	65	1.424
2.000	2.034	143.7	13.1	0.903	1.323	0.073	0.0	61	1.279
1.003	1.832	129.5	30.9	1.323	1.276	0.181	0.0	99	1.512
1.004	2.248	248.3	33.0	1.276	1.154	0.198	0.0	92	1.582
1.005	2.159	238.4	45.1	1.154	0.760	0.272	0.0	109	1.670
1.006	2.782	307.3	44.6	0.760	0.975	0.272	0.0	96	2.001
1.007	1.661	183.4	54.7	0.975	1.125	0.338	0.0	140	1.458

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	1440	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m ³ /ha)	0.0		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
30	35	0	0
100	0	0	0
100	40	0	0

Node S38 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.53280	Safety Factor	2.0	Invert Level (m)	43.500
Side Inf Coefficient (m/hr)	0.53280	Porosity	1.00	Time to half empty (mins)	136

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	60.0	60.0	1.500	275.0	284.5

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 15 minute summer	99.734	28.221
2 year 15 minute winter	69.989	28.221
2 year 30 minute summer	64.003	18.111
2 year 30 minute winter	44.914	18.111
2 year 60 minute summer	42.590	11.255
2 year 60 minute winter	28.296	11.255
2 year 120 minute summer	30.944	8.178
2 year 120 minute winter	20.559	8.178
2 year 180 minute summer	25.344	6.522
2 year 180 minute winter	16.474	6.522
2 year 240 minute summer	20.659	5.460
2 year 240 minute winter	13.726	5.460
2 year 360 minute summer	16.098	4.143
2 year 360 minute winter	10.464	4.143
2 year 480 minute summer	12.734	3.365
2 year 480 minute winter	8.460	3.365
2 year 600 minute summer	10.419	2.850
2 year 600 minute winter	7.119	2.850
2 year 720 minute summer	9.258	2.481
2 year 720 minute winter	6.222	2.481
2 year 960 minute summer	7.540	1.986
2 year 960 minute winter	4.995	1.986
2 year 1440 minute summer	5.387	1.444
2 year 1440 minute winter	3.621	1.444

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 2160 minute summer	3.821	1.056
2 year 2160 minute winter	2.633	1.056
2 year 2880 minute summer	3.179	0.852
2 year 2880 minute winter	2.137	0.852
2 year 4320 minute summer	2.448	0.640
2 year 4320 minute winter	1.612	0.640
2 year 5760 minute summer	2.068	0.529
2 year 5760 minute winter	1.339	0.529
2 year 7200 minute summer	1.810	0.462
2 year 7200 minute winter	1.168	0.462
2 year 8640 minute summer	1.630	0.416
2 year 8640 minute winter	1.052	0.416
2 year 10080 minute summer	1.500	0.383
2 year 10080 minute winter	0.968	0.383
30 year 15 minute summer	300.733	85.097
30 year 15 minute winter	211.041	85.097
30 year 30 minute summer	196.561	55.620
30 year 30 minute winter	137.938	55.620
30 year 60 minute summer	130.743	34.552
30 year 60 minute winter	86.863	34.552
30 year 120 minute summer	80.187	21.191
30 year 120 minute winter	53.274	21.191
30 year 180 minute summer	61.048	15.710
30 year 180 minute winter	39.683	15.710
30 year 240 minute summer	47.744	12.617
30 year 240 minute winter	31.720	12.617
30 year 360 minute summer	35.601	9.161
30 year 360 minute winter	23.141	9.161
30 year 480 minute summer	27.426	7.248
30 year 480 minute winter	18.221	7.248
30 year 600 minute summer	22.029	6.025
30 year 600 minute winter	15.051	6.025
30 year 720 minute summer	19.301	5.173
30 year 720 minute winter	12.971	5.173
30 year 960 minute summer	15.406	4.057
30 year 960 minute winter	10.205	4.057
30 year 1440 minute summer	10.706	2.869
30 year 1440 minute winter	7.195	2.869
30 year 2160 minute summer	7.358	2.034
30 year 2160 minute winter	5.070	2.034
30 year 2880 minute summer	5.971	1.600
30 year 2880 minute winter	4.013	1.600
30 year 4320 minute summer	4.417	1.155
30 year 4320 minute winter	2.909	1.155
30 year 5760 minute summer	3.615	0.925
30 year 5760 minute winter	2.340	0.925
30 year 7200 minute summer	3.082	0.786
30 year 7200 minute winter	1.989	0.786
30 year 8640 minute summer	2.713	0.692
30 year 8640 minute winter	1.751	0.692
30 year 10080 minute summer	2.447	0.624
30 year 10080 minute winter	1.580	0.624

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year +35% CC 15 minute summer	405.990	114.881
30 year +35% CC 15 minute winter	284.905	114.881
30 year +35% CC 30 minute summer	265.358	75.087
30 year +35% CC 30 minute winter	186.216	75.087
30 year +35% CC 60 minute summer	176.503	46.645
30 year +35% CC 60 minute winter	117.264	46.645
30 year +35% CC 120 minute summer	108.252	28.608
30 year +35% CC 120 minute winter	71.920	28.608
30 year +35% CC 180 minute summer	82.415	21.208
30 year +35% CC 180 minute winter	53.572	21.208
30 year +35% CC 240 minute summer	64.454	17.033
30 year +35% CC 240 minute winter	42.822	17.033
30 year +35% CC 360 minute summer	48.061	12.368
30 year +35% CC 360 minute winter	31.241	12.368
30 year +35% CC 480 minute summer	37.025	9.785
30 year +35% CC 480 minute winter	24.599	9.785
30 year +35% CC 600 minute summer	29.739	8.134
30 year +35% CC 600 minute winter	20.319	8.134
30 year +35% CC 720 minute summer	26.056	6.983
30 year +35% CC 720 minute winter	17.511	6.983
30 year +35% CC 960 minute summer	20.798	5.477
30 year +35% CC 960 minute winter	13.777	5.477
30 year +35% CC 1440 minute summer	14.452	3.873
30 year +35% CC 1440 minute winter	9.713	3.873
30 year +35% CC 2160 minute summer	9.934	2.745
30 year +35% CC 2160 minute winter	6.845	2.745
30 year +35% CC 2880 minute summer	8.061	2.160
30 year +35% CC 2880 minute winter	5.417	2.160
30 year +35% CC 4320 minute summer	5.963	1.559
30 year +35% CC 4320 minute winter	3.927	1.559
30 year +35% CC 5760 minute summer	4.881	1.249
30 year +35% CC 5760 minute winter	3.159	1.249
30 year +35% CC 7200 minute summer	4.160	1.061
30 year +35% CC 7200 minute winter	2.685	1.061
30 year +35% CC 8640 minute summer	3.662	0.934
30 year +35% CC 8640 minute winter	2.364	0.934
30 year +35% CC 10080 minute summer	3.304	0.843
30 year +35% CC 10080 minute winter	2.132	0.843
100 year 15 minute summer	388.343	109.888
100 year 15 minute winter	272.521	109.888
100 year 30 minute summer	254.956	72.144
100 year 30 minute winter	178.917	72.144
100 year 60 minute summer	171.309	45.272
100 year 60 minute winter	113.814	45.272
100 year 120 minute summer	102.598	27.114
100 year 120 minute winter	68.164	27.114
100 year 180 minute summer	77.327	19.899
100 year 180 minute winter	50.264	19.899
100 year 240 minute summer	60.149	15.896
100 year 240 minute winter	39.962	15.896
100 year 360 minute summer	44.625	11.483
100 year 360 minute winter	29.007	11.483

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year 480 minute summer	34.310	9.067
100 year 480 minute winter	22.795	9.067
100 year 600 minute summer	27.517	7.527
100 year 600 minute winter	18.801	7.527
100 year 720 minute summer	24.077	6.453
100 year 720 minute winter	16.181	6.453
100 year 960 minute summer	19.162	5.046
100 year 960 minute winter	12.693	5.046
100 year 1440 minute summer	13.240	3.548
100 year 1440 minute winter	8.898	3.548
100 year 2160 minute summer	9.023	2.494
100 year 2160 minute winter	6.217	2.494
100 year 2880 minute summer	7.265	1.947
100 year 2880 minute winter	4.883	1.947
100 year 4320 minute summer	5.298	1.385
100 year 4320 minute winter	3.489	1.385
100 year 5760 minute summer	4.284	1.097
100 year 5760 minute winter	2.773	1.097
100 year 7200 minute summer	3.616	0.922
100 year 7200 minute winter	2.334	0.922
100 year 8640 minute summer	3.157	0.805
100 year 8640 minute winter	2.038	0.805
100 year 10080 minute summer	2.828	0.722
100 year 10080 minute winter	1.825	0.722
100 year +40% CC 15 minute summer	543.680	153.843
100 year +40% CC 15 minute winter	381.530	153.843
100 year +40% CC 30 minute summer	356.939	101.001
100 year +40% CC 30 minute winter	250.483	101.001
100 year +40% CC 60 minute summer	239.833	63.381
100 year +40% CC 60 minute winter	159.339	63.381
100 year +40% CC 120 minute summer	143.637	37.959
100 year +40% CC 120 minute winter	95.429	37.959
100 year +40% CC 180 minute summer	108.257	27.858
100 year +40% CC 180 minute winter	70.370	27.858
100 year +40% CC 240 minute summer	84.209	22.254
100 year +40% CC 240 minute winter	55.946	22.254
100 year +40% CC 360 minute summer	62.474	16.077
100 year +40% CC 360 minute winter	40.610	16.077
100 year +40% CC 480 minute summer	48.034	12.694
100 year +40% CC 480 minute winter	31.912	12.694
100 year +40% CC 600 minute summer	38.524	10.537
100 year +40% CC 600 minute winter	26.322	10.537
100 year +40% CC 720 minute summer	33.708	9.034
100 year +40% CC 720 minute winter	22.654	9.034
100 year +40% CC 960 minute summer	26.827	7.064
100 year +40% CC 960 minute winter	17.770	7.064
100 year +40% CC 1440 minute summer	18.536	4.968
100 year +40% CC 1440 minute winter	12.457	4.968
100 year +40% CC 2160 minute summer	12.633	3.491
100 year +40% CC 2160 minute winter	8.704	3.491
100 year +40% CC 2880 minute summer	10.172	2.726
100 year +40% CC 2880 minute winter	6.836	2.726

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +40% CC 4320 minute summer	7.417	1.939
100 year +40% CC 4320 minute winter	4.884	1.939
100 year +40% CC 5760 minute summer	5.997	1.535
100 year +40% CC 5760 minute winter	3.882	1.535
100 year +40% CC 7200 minute summer	5.063	1.291
100 year +40% CC 7200 minute winter	3.267	1.291
100 year +40% CC 8640 minute summer	4.420	1.128
100 year +40% CC 8640 minute winter	2.853	1.128
100 year +40% CC 10080 minute summer	3.960	1.010
100 year +40% CC 10080 minute winter	2.556	1.010

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S29	10	47.264	0.044	7.5	0.0626	0.0000	OK
15 minute summer	S30	11	46.573	0.063	13.3	0.0899	0.0000	OK
15 minute summer	S31	11	45.652	0.062	14.6	0.0888	0.0000	OK
15 minute summer	S32	10	45.615	0.058	11.9	0.0826	0.0000	OK
15 minute summer	S33	11	45.338	0.101	28.8	0.1446	0.0000	OK
15 minute summer	S34	11	44.989	0.089	31.4	0.1275	0.0000	OK
15 minute summer	S35	11	44.422	0.122	42.9	0.1741	0.0000	OK
15 minute summer	S36	11	44.284	0.094	43.0	0.1340	0.0000	OK
180 minute summer	S37	116	43.805	0.155	22.2	0.2219	0.0000	OK
180 minute summer	S38	120	43.805	0.305	22.2	25.4212	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	S29	1.000	S30	7.4	1.039	0.083	0.1754
15 minute summer	S30	1.001	S31	13.0	1.458	0.166	0.3328
15 minute summer	S31	1.002	S33	14.7	0.948	0.095	0.2886
15 minute summer	S32	2.000	S33	11.8	0.831	0.082	0.2884
15 minute summer	S33	1.003	S34	28.8	1.439	0.222	0.3870
15 minute summer	S34	1.004	S35	31.4	1.242	0.127	0.9948
15 minute summer	S35	1.005	S36	43.0	1.648	0.180	0.2034
15 minute summer	S36	1.006	S37	43.0	1.402	0.140	0.7118
180 minute summer	S37	1.007	S38	22.2	0.895	0.121	1.2373
180 minute summer	S38	Infiltration		7.4			

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S29	10	47.297	0.077	22.6	0.1097	0.0000	OK
15 minute summer	S30	10	46.627	0.117	40.2	0.1674	0.0000	OK
15 minute summer	S31	10	45.703	0.113	44.3	0.1616	0.0000	OK
15 minute summer	S32	10	45.658	0.101	35.9	0.1446	0.0000	OK
15 minute summer	S33	11	45.436	0.199	87.7	0.2846	0.0000	OK
15 minute summer	S34	11	45.061	0.161	95.1	0.2308	0.0000	OK
15 minute summer	S35	11	44.537	0.237	130.3	0.3393	0.0000	OK
15 minute summer	S36	11	44.372	0.182	130.9	0.2610	0.0000	OK
120 minute summer	S37	90	44.239	0.589	71.9	0.8435	0.0000	SURCHARGED
120 minute summer	S38	90	44.239	0.739	70.5	84.4643	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	S29	1.000	S30	22.5	1.381	0.252	0.3979
15 minute summer	S30	1.001	S31	39.4	1.947	0.502	0.7561
15 minute summer	S31	1.002	S33	44.2	1.197	0.287	0.6786
15 minute summer	S32	2.000	S33	35.7	1.045	0.249	0.6742
15 minute summer	S33	1.003	S34	87.1	1.871	0.673	0.8996
15 minute summer	S34	1.004	S35	95.6	1.609	0.385	2.3193
15 minute summer	S35	1.005	S36	130.9	2.124	0.549	0.4915
15 minute summer	S36	1.006	S37	130.9	1.688	0.426	1.8326
120 minute summer	S37	1.007	S38	70.5	1.222	0.384	1.9660
120 minute summer	S38	Infiltration		12.3			

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S29	10	47.310	0.090	30.5	0.1288	0.0000	OK
15 minute summer	S30	10	46.652	0.142	54.2	0.2037	0.0000	OK
15 minute summer	S31	10	45.725	0.135	59.8	0.1929	0.0000	OK
15 minute summer	S32	10	45.676	0.119	48.4	0.1696	0.0000	OK
15 minute summer	S33	11	45.493	0.256	118.5	0.3670	0.0000	OK
15 minute summer	S34	11	45.096	0.196	128.4	0.2806	0.0000	OK
15 minute summer	S35	11	44.604	0.304	175.8	0.4354	0.0000	OK
120 minute summer	S36	88	44.475	0.285	78.2	0.4077	0.0000	OK
120 minute summer	S37	88	44.465	0.815	97.2	1.1667	0.0000	SURCHARGED
120 minute summer	S38	94	44.436	0.936	95.3	120.2616	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	S29	1.000	S30	30.3	1.477	0.340	0.5013
15 minute summer	S30	1.001	S31	53.2	2.081	0.678	0.9554
15 minute summer	S31	1.002	S33	59.7	1.236	0.388	0.8690
15 minute summer	S32	2.000	S33	48.2	1.099	0.335	0.8590
15 minute summer	S33	1.003	S34	117.6	1.958	0.908	1.1561
15 minute summer	S34	1.004	S35	129.0	1.672	0.520	3.0096
15 minute summer	S35	1.005	S36	174.4	2.125	0.732	0.6926
120 minute summer	S36	1.006	S37	78.2	1.216	0.254	2.3024
120 minute summer	S37	1.007	S38	95.3	1.341	0.520	1.9660
120 minute summer	S38	Infiltration		14.6			

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S29	10	47.308	0.088	29.2	0.1257	0.0000	OK
15 minute summer	S30	10	46.648	0.138	51.8	0.1975	0.0000	OK
15 minute summer	S31	10	45.723	0.133	57.2	0.1897	0.0000	OK
15 minute summer	S32	10	45.673	0.116	46.3	0.1656	0.0000	OK
15 minute summer	S33	11	45.482	0.245	113.3	0.3503	0.0000	OK
15 minute summer	S34	11	45.090	0.190	122.7	0.2719	0.0000	OK
15 minute summer	S35	11	44.589	0.289	168.1	0.4132	0.0000	OK
15 minute summer	S36	12	44.433	0.243	167.5	0.3474	0.0000	OK
120 minute summer	S37	90	44.421	0.771	92.1	1.1028	0.0000	SURCHARGED
120 minute summer	S38	94	44.399	0.899	90.3	113.1605	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	S29	1.000	S30	29.0	1.462	0.326	0.4840
15 minute summer	S30	1.001	S31	50.9	2.062	0.648	0.9216
15 minute summer	S31	1.002	S33	57.0	1.229	0.370	0.8402
15 minute summer	S32	2.000	S33	46.1	1.090	0.321	0.8276
15 minute summer	S33	1.003	S34	112.4	1.950	0.868	1.1110
15 minute summer	S34	1.004	S35	123.4	1.663	0.497	2.8734
15 minute summer	S35	1.005	S36	167.5	2.163	0.702	0.6420
15 minute summer	S36	1.006	S37	164.8	1.720	0.536	2.1369
120 minute summer	S37	1.007	S38	90.3	1.329	0.492	1.9660
120 minute summer	S38	Infiltration		14.2			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S29	10	47.326	0.106	40.8	0.1515	0.0000	OK
15 minute summer	S30	10	46.690	0.180	72.6	0.2570	0.0000	OK
15 minute summer	S31	12	45.852	0.262	79.9	0.3744	0.0000	OK
15 minute summer	S32	11	45.805	0.248	64.8	0.3548	0.0000	OK
15 minute summer	S33	12	45.760	0.523	152.5	0.7485	0.0000	SURCHARGED
15 minute summer	S34	12	45.345	0.445	166.6	0.6372	0.0000	SURCHARGED
15 minute summer	S35	12	45.065	0.765	218.7	1.0950	0.0000	SURCHARGED
30 minute summer	S36	20	44.900	0.710	193.1	1.0166	0.0000	SURCHARGED
120 minute winter	S37	100	44.660	1.010	85.7	1.4449	0.0000	SURCHARGED
120 minute winter	S38	100	44.658	1.158	84.1	167.2202	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	S29	1.000	S30	40.6	1.559	0.455	0.6355
15 minute summer	S30	1.001	S31	71.0	2.171	0.905	1.2326
15 minute summer	S31	1.002	S33	77.8	1.205	0.505	1.2490
15 minute summer	S32	2.000	S33	61.1	1.152	0.425	1.2731
15 minute summer	S33	1.003	S34	152.2	2.161	1.175	1.3608
15 minute summer	S34	1.004	S35	154.6	1.663	0.623	4.3093
15 minute summer	S35	1.005	S36	209.0	2.082	0.877	0.8565
30 minute summer	S36	1.006	S37	192.9	1.749	0.628	2.5375
120 minute winter	S37	1.007	S38	84.1	1.383	0.459	1.9660
120 minute winter	S38	Infiltration		17.1			

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.085	5.00	48.761	1350	477378.521	175278.434	1.511
S2	0.051	5.00	48.070	1200	477411.014	175280.131	1.760
S3	0.088	5.00	47.087	1350	477450.514	175289.523	1.513
S4	0.021	5.00	47.546	1350	477432.496	175284.191	2.296
S5	0.104	5.00	46.420	1350	477419.521	175215.136	1.347
S6	0.049	5.00	46.027	1350	477447.955	175222.288	1.747
S7	0.049	5.00	46.333	1350	477398.377	175189.663	1.773
S8	0.044	5.00	46.168	1350	477416.548	175194.149	1.736
S9	0.044	5.00	46.048	1350	477430.922	175195.818	1.686
S10	0.090	5.00	45.848	1350	477453.171	175201.401	1.698
S11	0.063	5.00	45.572	1350	477470.104	175206.071	1.632
S12	0.090	5.00	45.281	1350	477480.765	175232.830	1.350
S13	0.064	5.00	44.854	1500	477489.471	175216.664	1.834
S14	0.066	5.00	44.122	1500	477506.759	175192.303	1.792
S15	0.146	5.00	44.930	1350	477430.457	175125.922	1.445
S16	0.041	5.00	43.888	1350	477496.944	175142.946	1.295
S17	0.046	5.00	43.638	1350	477510.511	175152.950	1.433
S18	0.035	5.00	43.355	1500	477527.760	175168.784	1.895
S19	0.023	5.00	43.157	1500	477532.753	175162.540	1.877
S20			42.629	1500	477553.894	175156.835	1.829
S21	0.147	5.00	41.145	1500	477613.726	175168.960	1.855
S22	0.074	5.00	40.604	1500	477649.252	175192.645	2.014
S23	0.037	5.00	39.500	1500	477670.097	175193.427	1.500
S24	0.141	5.00	39.934	1350	477683.921	175231.416	1.350
S25			39.500	1350	477694.826	175226.114	1.500
S26		5.00	39.500	1500	477715.773	175232.625	1.500
S27			39.500	1500	477720.647	175233.687	2.050

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	S1	S2	32.537	0.600	47.250	46.310	0.940	34.6	300	5.20	49.6
1.001	S2	S4	21.862	0.600	46.310	45.400	0.910	24.0	300	5.32	49.1
2.000	S3	S4	18.790	0.600	45.574	45.400	0.174	108.0	300	5.21	49.6
1.002	S4	S6	63.805	0.600	45.250	44.280	0.970	65.8	450	5.74	47.5
3.000	S5	S6	29.320	0.600	45.073	44.430	0.643	45.6	300	5.21	49.6
1.003	S6	S10	21.528	0.600	44.280	44.150	0.130	165.6	450	5.97	46.6
4.000	S7	S8	18.716	0.600	44.560	44.432	0.128	146.2	375	5.21	49.6
4.001	S8	S9	14.471	0.600	44.432	44.362	0.070	206.7	375	5.40	48.8
4.002	S9	S10	22.939	0.600	44.362	44.225	0.137	167.4	375	5.67	47.7
1.004	S10	S11	17.564	0.600	44.150	43.940	0.210	83.6	450	6.10	46.1
1.005	S11	S13	22.075	0.600	43.940	43.170	0.770	28.7	450	6.20	45.8
5.000	S12	S13	18.362	0.600	43.931	43.320	0.611	30.1	300	5.11	50.0
1.006	S13	S14	29.872	0.600	43.020	42.330	0.690	43.3	600	6.33	45.3
1.007	S14	S18	31.531	0.600	42.330	41.460	0.870	36.2	600	6.46	44.9
6.000	S15	S16	68.632	0.600	43.485	42.593	0.892	76.9	300	5.64	47.9
6.001	S16	S17	16.856	0.600	42.593	42.280	0.313	53.9	300	5.77	47.3
6.002	S17	S18	23.414	0.600	42.205	41.685	0.520	45.0	375	5.91	46.8
1.008	S18	S19	7.994	0.600	41.460	41.280	0.180	44.4	600	6.50	44.8
1.009	S19	S20	21.898	0.600	41.280	40.800	0.480	45.6	600	6.60	44.4
1.010	S20	S21	61.048	0.600	40.800	39.290	1.510	40.4	600	6.86	43.5
1.011	S21	S22	42.698	0.600	39.290	38.590	0.700	61.0	600	7.09	42.8
1.012	S22	S23	20.860	0.600	38.590	38.000	0.590	35.4	600	7.17	42.6
7.000	S24	S25	12.126	0.600	38.584	38.000	0.584	20.8	300	5.06	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.681	189.5	15.2	1.211	1.460	0.085	0.0	57	1.629
1.001	3.221	227.6	24.2	1.460	1.846	0.136	0.0	65	2.116
2.000	1.512	106.9	15.8	1.213	1.846	0.088	0.0	78	1.093
1.002	2.509	399.1	42.0	1.846	1.297	0.245	0.0	98	1.656
3.000	2.334	165.0	18.6	1.047	1.297	0.104	0.0	68	1.564
1.003	1.577	250.8	67.0	1.297	1.248	0.398	0.0	158	1.342
4.000	1.496	165.2	8.8	1.398	1.361	0.049	0.0	58	0.806
4.001	1.256	138.7	16.4	1.361	1.311	0.093	0.0	86	0.850
4.002	1.397	154.3	23.6	1.311	1.248	0.137	0.0	99	1.020
1.004	2.224	353.7	104.1	1.248	1.182	0.625	0.0	167	1.944
1.005	3.808	605.6	113.8	1.182	1.234	0.688	0.0	131	2.953
5.000	2.878	203.4	16.3	1.050	1.234	0.090	0.0	57	1.750
1.006	3.707	1048.2	137.9	1.234	1.192	0.842	0.0	146	2.608
1.007	4.053	1146.0	147.3	1.192	1.295	0.908	0.0	144	2.833
6.000	1.794	126.8	25.3	1.145	0.995	0.146	0.0	91	1.410
6.001	2.147	151.7	32.0	0.995	1.058	0.187	0.0	93	1.711
6.002	2.706	298.9	39.4	1.058	1.295	0.233	0.0	91	1.897
1.008	3.660	1034.9	190.2	1.295	1.277	1.176	0.0	173	2.821
1.009	3.611	1021.0	192.5	1.277	1.229	1.199	0.0	175	2.803
1.010	3.837	1084.9	188.6	1.229	1.255	1.199	0.0	168	2.915
1.011	3.121	882.5	208.3	1.255	1.414	1.346	0.0	197	2.576
1.012	4.104	1160.3	218.5	1.414	0.900	1.420	0.0	175	3.186
7.000	3.465	244.9	25.5	1.050	1.200	0.141	0.0	65	2.266

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.015	S26	S27	4.989	0.600	38.000	37.450	0.550	9.1	600	5.01	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.015	8.115	2294.5	0.0	0.900	1.450	0.000	0.0	0	0.000

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s) x
Summer CV	1.000	Drain Down Time (mins)	1440	Check Discharge Volume x
Winter CV	1.000	Additional Storage (m³/ha)	0.0	

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
30	35	0	0
100	0	0	0
100	40	0	0

Node S27 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	37.450	Product Number	CTL-SHE-0105-6100-1750-6100
Design Depth (m)	1.750	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	6.1	Min Node Diameter (mm)	1200

Node S26 Infiltration Basin Storage Structure

Base Inf Coefficient (m/hr)	0.03557	Invert Level (m)	38.000
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	1120
Safety Factor	2.0	Analyse flow through structure	x
Porosity	1.00		

Inlets

S23 | S25

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	934.0	934.0	0.750	1293.0	1303.7	0.751	1438.0	1448.7	1.500	2049.0	2069.6

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 15 minute summer	99.734	28.221
2 year 15 minute winter	69.989	28.221
2 year 30 minute summer	64.003	18.111
2 year 30 minute winter	44.914	18.111
2 year 60 minute summer	42.590	11.255
2 year 60 minute winter	28.296	11.255
2 year 120 minute summer	30.944	8.178
2 year 120 minute winter	20.559	8.178
2 year 180 minute summer	25.344	6.522
2 year 180 minute winter	16.474	6.522
2 year 240 minute summer	20.659	5.460
2 year 240 minute winter	13.726	5.460
2 year 360 minute summer	16.098	4.143
2 year 360 minute winter	10.464	4.143
2 year 480 minute summer	12.734	3.365
2 year 480 minute winter	8.460	3.365
2 year 600 minute summer	10.419	2.850
2 year 600 minute winter	7.119	2.850
2 year 720 minute summer	9.258	2.481
2 year 720 minute winter	6.222	2.481
2 year 960 minute summer	7.540	1.986
2 year 960 minute winter	4.995	1.986
2 year 1440 minute summer	5.387	1.444
2 year 1440 minute winter	3.621	1.444
2 year 2160 minute summer	3.821	1.056
2 year 2160 minute winter	2.633	1.056
2 year 2880 minute summer	3.179	0.852
2 year 2880 minute winter	2.137	0.852
2 year 4320 minute summer	2.448	0.640
2 year 4320 minute winter	1.612	0.640
2 year 5760 minute summer	2.068	0.529
2 year 5760 minute winter	1.339	0.529
2 year 7200 minute summer	1.810	0.462
2 year 7200 minute winter	1.168	0.462
2 year 8640 minute summer	1.630	0.416
2 year 8640 minute winter	1.052	0.416
2 year 10080 minute summer	1.500	0.383
2 year 10080 minute winter	0.968	0.383
30 year 15 minute summer	300.733	85.097
30 year 15 minute winter	211.041	85.097
30 year 30 minute summer	196.561	55.620
30 year 30 minute winter	137.938	55.620
30 year 60 minute summer	130.743	34.552
30 year 60 minute winter	86.863	34.552
30 year 120 minute summer	80.187	21.191
30 year 120 minute winter	53.274	21.191
30 year 180 minute summer	61.048	15.710
30 year 180 minute winter	39.683	15.710
30 year 240 minute summer	47.744	12.617
30 year 240 minute winter	31.720	12.617
30 year 360 minute summer	35.601	9.161
30 year 360 minute winter	23.141	9.161

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 480 minute summer	27.426	7.248
30 year 480 minute winter	18.221	7.248
30 year 600 minute summer	22.029	6.025
30 year 600 minute winter	15.051	6.025
30 year 720 minute summer	19.301	5.173
30 year 720 minute winter	12.971	5.173
30 year 960 minute summer	15.406	4.057
30 year 960 minute winter	10.205	4.057
30 year 1440 minute summer	10.706	2.869
30 year 1440 minute winter	7.195	2.869
30 year 2160 minute summer	7.358	2.034
30 year 2160 minute winter	5.070	2.034
30 year 2880 minute summer	5.971	1.600
30 year 2880 minute winter	4.013	1.600
30 year 4320 minute summer	4.417	1.155
30 year 4320 minute winter	2.909	1.155
30 year 5760 minute summer	3.615	0.925
30 year 5760 minute winter	2.340	0.925
30 year 7200 minute summer	3.082	0.786
30 year 7200 minute winter	1.989	0.786
30 year 8640 minute summer	2.713	0.692
30 year 8640 minute winter	1.751	0.692
30 year 10080 minute summer	2.447	0.624
30 year 10080 minute winter	1.580	0.624
30 year +35% CC 15 minute summer	405.990	114.881
30 year +35% CC 15 minute winter	284.905	114.881
30 year +35% CC 30 minute summer	265.358	75.087
30 year +35% CC 30 minute winter	186.216	75.087
30 year +35% CC 60 minute summer	176.503	46.645
30 year +35% CC 60 minute winter	117.264	46.645
30 year +35% CC 120 minute summer	108.252	28.608
30 year +35% CC 120 minute winter	71.920	28.608
30 year +35% CC 180 minute summer	82.415	21.208
30 year +35% CC 180 minute winter	53.572	21.208
30 year +35% CC 240 minute summer	64.454	17.033
30 year +35% CC 240 minute winter	42.822	17.033
30 year +35% CC 360 minute summer	48.061	12.368
30 year +35% CC 360 minute winter	31.241	12.368
30 year +35% CC 480 minute summer	37.025	9.785
30 year +35% CC 480 minute winter	24.599	9.785
30 year +35% CC 600 minute summer	29.739	8.134
30 year +35% CC 600 minute winter	20.319	8.134
30 year +35% CC 720 minute summer	26.056	6.983
30 year +35% CC 720 minute winter	17.511	6.983
30 year +35% CC 960 minute summer	20.798	5.477
30 year +35% CC 960 minute winter	13.777	5.477
30 year +35% CC 1440 minute summer	14.452	3.873
30 year +35% CC 1440 minute winter	9.713	3.873
30 year +35% CC 2160 minute summer	9.934	2.745
30 year +35% CC 2160 minute winter	6.845	2.745
30 year +35% CC 2880 minute summer	8.061	2.160
30 year +35% CC 2880 minute winter	5.417	2.160

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year +35% CC 4320 minute summer	5.963	1.559
30 year +35% CC 4320 minute winter	3.927	1.559
30 year +35% CC 5760 minute summer	4.881	1.249
30 year +35% CC 5760 minute winter	3.159	1.249
30 year +35% CC 7200 minute summer	4.160	1.061
30 year +35% CC 7200 minute winter	2.685	1.061
30 year +35% CC 8640 minute summer	3.662	0.934
30 year +35% CC 8640 minute winter	2.364	0.934
30 year +35% CC 10080 minute summer	3.304	0.843
30 year +35% CC 10080 minute winter	2.132	0.843
100 year 15 minute summer	388.343	109.888
100 year 15 minute winter	272.521	109.888
100 year 30 minute summer	254.956	72.144
100 year 30 minute winter	178.917	72.144
100 year 60 minute summer	171.309	45.272
100 year 60 minute winter	113.814	45.272
100 year 120 minute summer	102.598	27.114
100 year 120 minute winter	68.164	27.114
100 year 180 minute summer	77.327	19.899
100 year 180 minute winter	50.264	19.899
100 year 240 minute summer	60.149	15.896
100 year 240 minute winter	39.962	15.896
100 year 360 minute summer	44.625	11.483
100 year 360 minute winter	29.007	11.483
100 year 480 minute summer	34.310	9.067
100 year 480 minute winter	22.795	9.067
100 year 600 minute summer	27.517	7.527
100 year 600 minute winter	18.801	7.527
100 year 720 minute summer	24.077	6.453
100 year 720 minute winter	16.181	6.453
100 year 960 minute summer	19.162	5.046
100 year 960 minute winter	12.693	5.046
100 year 1440 minute summer	13.240	3.548
100 year 1440 minute winter	8.898	3.548
100 year 2160 minute summer	9.023	2.494
100 year 2160 minute winter	6.217	2.494
100 year 2880 minute summer	7.265	1.947
100 year 2880 minute winter	4.883	1.947
100 year 4320 minute summer	5.298	1.385
100 year 4320 minute winter	3.489	1.385
100 year 5760 minute summer	4.284	1.097
100 year 5760 minute winter	2.773	1.097
100 year 7200 minute summer	3.616	0.922
100 year 7200 minute winter	2.334	0.922
100 year 8640 minute summer	3.157	0.805
100 year 8640 minute winter	2.038	0.805
100 year 10080 minute summer	2.828	0.722
100 year 10080 minute winter	1.825	0.722
100 year +40% CC 15 minute summer	543.680	153.843
100 year +40% CC 15 minute winter	381.530	153.843
100 year +40% CC 30 minute summer	356.939	101.001
100 year +40% CC 30 minute winter	250.483	101.001

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +40% CC 60 minute summer	239.833	63.381
100 year +40% CC 60 minute winter	159.339	63.381
100 year +40% CC 120 minute summer	143.637	37.959
100 year +40% CC 120 minute winter	95.429	37.959
100 year +40% CC 180 minute summer	108.257	27.858
100 year +40% CC 180 minute winter	70.370	27.858
100 year +40% CC 240 minute summer	84.209	22.254
100 year +40% CC 240 minute winter	55.946	22.254
100 year +40% CC 360 minute summer	62.474	16.077
100 year +40% CC 360 minute winter	40.610	16.077
100 year +40% CC 480 minute summer	48.034	12.694
100 year +40% CC 480 minute winter	31.912	12.694
100 year +40% CC 600 minute summer	38.524	10.537
100 year +40% CC 600 minute winter	26.322	10.537
100 year +40% CC 720 minute summer	33.708	9.034
100 year +40% CC 720 minute winter	22.654	9.034
100 year +40% CC 960 minute summer	26.827	7.064
100 year +40% CC 960 minute winter	17.770	7.064
100 year +40% CC 1440 minute summer	18.536	4.968
100 year +40% CC 1440 minute winter	12.457	4.968
100 year +40% CC 2160 minute summer	12.633	3.491
100 year +40% CC 2160 minute winter	8.704	3.491
100 year +40% CC 2880 minute summer	10.172	2.726
100 year +40% CC 2880 minute winter	6.836	2.726
100 year +40% CC 4320 minute summer	7.417	1.939
100 year +40% CC 4320 minute winter	4.884	1.939
100 year +40% CC 5760 minute summer	5.997	1.535
100 year +40% CC 5760 minute winter	3.882	1.535
100 year +40% CC 7200 minute summer	5.063	1.291
100 year +40% CC 7200 minute winter	3.267	1.291
100 year +40% CC 8640 minute summer	4.420	1.128
100 year +40% CC 8640 minute winter	2.853	1.128
100 year +40% CC 10080 minute summer	3.960	1.010
100 year +40% CC 10080 minute winter	2.556	1.010

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	47.304	0.054	13.8	0.0777	0.0000	OK
15 minute summer	S2	10	46.374	0.064	22.0	0.0729	0.0000	OK
15 minute summer	S3	10	45.650	0.076	14.3	0.1094	0.0000	OK
15 minute summer	S4	11	45.344	0.094	39.2	0.1340	0.0000	OK
15 minute summer	S5	10	45.139	0.066	16.9	0.0942	0.0000	OK
15 minute summer	S6	11	44.448	0.168	63.3	0.2403	0.0000	OK
15 minute summer	S7	10	44.615	0.055	8.0	0.0790	0.0000	OK
15 minute summer	S8	10	44.519	0.087	15.1	0.1249	0.0000	OK
15 minute summer	S9	10	44.460	0.098	22.0	0.1409	0.0000	OK
15 minute summer	S10	11	44.330	0.180	99.4	0.2571	0.0000	OK
15 minute summer	S11	11	44.079	0.139	109.4	0.1983	0.0000	OK
15 minute summer	S12	10	43.987	0.056	14.7	0.0801	0.0000	OK
15 minute summer	S13	11	43.172	0.152	133.5	0.2690	0.0000	OK
15 minute summer	S14	11	42.471	0.141	143.8	0.2486	0.0000	OK
15 minute summer	S15	10	43.572	0.087	23.8	0.1245	0.0000	OK
15 minute summer	S16	11	42.688	0.095	30.2	0.1365	0.0000	OK
15 minute summer	S17	11	42.298	0.093	37.0	0.1326	0.0000	OK
15 minute summer	S18	11	41.672	0.212	186.4	0.3749	0.0000	OK
15 minute summer	S19	11	41.473	0.193	190.0	0.3407	0.0000	OK
15 minute summer	S20	11	40.967	0.167	189.9	0.2959	0.0000	OK
15 minute summer	S21	11	39.493	0.203	211.2	0.3587	0.0000	OK
15 minute summer	S22	11	38.838	0.248	218.4	0.4374	0.0000	OK
360 minute summer	S23	264	38.238	0.238	63.0	0.0000	0.0000	OK
15 minute summer	S24	8	38.687	0.103	23.0	0.1469	0.0000	OK
360 minute summer	S25	280	38.233	0.233	18.8	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 summer	S1	1.000	S2	13.7	1.391	0.072	0.3212	
15 minute summer	S2	1.001	S4	21.7	2.010	0.095	0.2362	
15 minute summer	S3	2.000	S4	14.1	1.033	0.132	0.2570	
15 minute summer	S4	1.002	S6	39.0	1.031	0.098	2.4787	
15 minute summer	S5	3.000	S6	16.7	1.492	0.101	0.3280	
15 minute summer	S6	1.003	S10	63.5	1.128	0.253	1.2152	
15 minute summer	S7	4.000	S8	7.9	0.544	0.048	0.2757	
15 minute summer	S8	4.001	S9	14.8	0.701	0.107	0.3072	
15 minute summer	S9	4.002	S10	21.9	0.923	0.142	0.5513	
15 minute summer	S10	1.004	S11	99.6	1.989	0.282	0.8819	
15 minute summer	S11	1.005	S13	109.4	2.795	0.181	0.8647	
15 minute summer	S12	5.000	S13	14.6	1.650	0.072	0.1621	
15 minute summer	S13	1.006	S14	133.5	2.513	0.127	1.5887	
15 minute summer	S14	1.007	S18	143.8	2.083	0.125	2.1958	
15 minute summer	S15	6.000	S16	23.5	1.309	0.185	1.2337	
15 minute summer	S16	6.001	S17	29.9	1.622	0.197	0.3105	
15 minute summer	S17	6.002	S18	37.2	1.820	0.124	0.4784	
15 minute summer	S18	1.008	S19	186.4	2.231	0.180	0.6682	
15 minute summer	S19	1.009	S20	189.9	2.672	0.186	1.5581	
15 minute summer	S20	1.010	S21	188.4	2.552	0.174	4.5183	
15 minute summer	S21	1.011	S22	208.4	2.290	0.236	4.1306	
15 minute summer	S22	1.012	S23	224.9	3.991	0.194	1.2848	
15 minute summer	S24	7.000	S25	23.4	2.971	0.095	0.1311	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S26	264	38.232	0.232	42.3	233.1248	0.0000	OK
360 minute summer	S27	256	38.248	0.798	25.1	1.4102	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)
360 minute summer	S26	1.015	S27	25.1	0.273	0.011	0.9534	
360 minute summer	S26	Infiltration		4.6				
360 minute summer	S27	Hydro-Brake®		5.7				222.5

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	47.345	0.095	41.7	0.1354	0.0000	OK
15 minute summer	S2	10	46.427	0.117	66.5	0.1329	0.0000	OK
15 minute summer	S3	10	45.716	0.142	43.2	0.2026	0.0000	OK
15 minute summer	S4	10	45.415	0.165	118.9	0.2358	0.0000	OK
15 minute summer	S5	10	45.186	0.113	51.1	0.1621	0.0000	OK
15 minute summer	S6	11	44.637	0.357	192.7	0.5108	0.0000	OK
15 minute summer	S7	10	44.655	0.095	24.1	0.1362	0.0000	OK
15 minute summer	S8	10	44.600	0.168	45.5	0.2398	0.0000	OK
15 minute summer	S9	11	44.553	0.191	66.4	0.2736	0.0000	OK
15 minute summer	S10	11	44.517	0.367	298.3	0.5248	0.0000	OK
15 minute summer	S11	11	44.212	0.272	328.5	0.3895	0.0000	OK
15 minute summer	S12	10	44.032	0.101	44.2	0.1438	0.0000	OK
15 minute summer	S13	11	43.305	0.285	401.2	0.5030	0.0000	OK
15 minute summer	S14	11	42.601	0.271	432.3	0.4796	0.0000	OK
15 minute summer	S15	10	43.646	0.161	71.7	0.2301	0.0000	OK
15 minute summer	S16	11	42.779	0.186	91.1	0.2658	0.0000	OK
15 minute summer	S17	10	42.373	0.168	111.8	0.2399	0.0000	OK
15 minute summer	S18	11	41.903	0.443	561.1	0.7835	0.0000	OK
15 minute summer	S19	11	41.663	0.383	572.2	0.6765	0.0000	OK
15 minute summer	S20	11	41.115	0.315	572.4	0.5564	0.0000	OK
15 minute summer	S21	11	39.716	0.426	641.3	0.7526	0.0000	OK
15 minute summer	S22	11	39.031	0.441	673.9	0.7798	0.0000	OK
360 minute winter	S23	352	38.631	0.631	93.0	0.0000	0.0000	OK
15 minute summer	S24	9	38.724	0.140	69.3	0.1997	0.0000	OK
360 minute winter	S25	360	38.622	0.622	30.0	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 summer	S1	1.000	S2	41.5	1.864	0.219	0.7254	
15 minute summer	S2	1.001	S4	65.9	2.698	0.289	0.5337	
15 minute summer	S3	2.000	S4	42.7	1.377	0.400	0.5833	
15 minute summer	S4	1.002	S6	117.8	1.281	0.295	5.9690	
15 minute summer	S5	3.000	S6	50.8	1.820	0.308	1.1069	
15 minute summer	S6	1.003	S10	190.8	1.398	0.761	2.9407	
15 minute summer	S7	4.000	S8	23.9	0.696	0.145	0.6512	
15 minute summer	S8	4.001	S9	44.8	0.870	0.323	0.7506	
15 minute summer	S9	4.002	S10	65.4	0.935	0.424	1.7030	
15 minute summer	S10	1.004	S11	299.0	2.485	0.845	2.0954	
15 minute summer	S11	1.005	S13	328.7	3.598	0.543	2.0157	
15 minute summer	S12	5.000	S13	43.9	2.223	0.216	0.3628	
15 minute summer	S13	1.006	S14	401.4	3.143	0.383	3.8156	
15 minute summer	S14	1.007	S18	432.5	2.475	0.377	5.4718	
15 minute summer	S15	6.000	S16	71.0	1.686	0.560	2.8894	
15 minute summer	S16	6.001	S17	90.1	2.110	0.594	0.7196	
15 minute summer	S17	6.002	S18	112.1	2.267	0.375	1.3324	
15 minute summer	S18	1.008	S19	561.4	2.713	0.542	1.6510	
15 minute summer	S19	1.009	S20	572.4	3.368	0.561	3.7177	
15 minute summer	S20	1.010	S21	572.5	3.155	0.528	11.1015	
15 minute summer	S21	1.011	S22	639.2	3.056	0.724	9.3107	
15 minute summer	S22	1.012	S23	679.4	4.622	0.586	3.1573	
15 minute summer	S24	7.000	S25	69.7	3.554	0.285	0.4454	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S26	352	38.623	0.623	61.6	680.2572	0.0000	SURCHARGED
360 minute winter	S27	352	38.628	1.178	25.7	2.0815	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)
360 minute winter	S26	1.015	S27	25.7	0.294	0.011	1.4053	
360 minute winter	S26	Infiltration		4.6				
360 minute winter	S27	Hydro-Brake®		5.7				465.7

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	47.361	0.111	56.4	0.1595	0.0000	OK
15 minute summer	S2	10	46.451	0.141	89.9	0.1590	0.0000	OK
15 minute summer	S3	10	45.745	0.171	58.3	0.2443	0.0000	OK
15 minute summer	S4	10	45.444	0.194	160.7	0.2782	0.0000	OK
15 minute summer	S5	10	45.207	0.134	69.0	0.1913	0.0000	OK
15 minute summer	S6	11	44.894	0.614	260.7	0.8782	0.0000	SURCHARGED
15 minute summer	S7	11	44.765	0.205	32.5	0.2932	0.0000	OK
15 minute summer	S8	12	44.747	0.315	61.5	0.4512	0.0000	OK
15 minute summer	S9	12	44.727	0.365	83.4	0.5224	0.0000	OK
15 minute summer	S10	11	44.689	0.539	378.9	0.7716	0.0000	SURCHARGED
15 minute summer	S11	11	44.267	0.327	418.9	0.4686	0.0000	OK
15 minute summer	S12	10	44.050	0.119	59.7	0.1707	0.0000	OK
15 minute summer	S13	11	43.355	0.335	517.0	0.5925	0.0000	OK
15 minute summer	S14	11	42.660	0.330	558.3	0.5834	0.0000	OK
15 minute summer	S15	10	43.682	0.197	96.8	0.2815	0.0000	OK
15 minute summer	S16	11	42.827	0.234	123.0	0.3350	0.0000	OK
15 minute summer	S17	11	42.410	0.205	150.7	0.2938	0.0000	OK
15 minute summer	S18	11	42.020	0.560	730.7	0.9902	0.0000	OK
15 minute summer	S19	11	41.749	0.469	743.7	0.8293	0.0000	OK
15 minute summer	S20	11	41.177	0.377	742.9	0.6665	0.0000	OK
15 minute summer	S21	11	39.857	0.567	831.8	1.0026	0.0000	OK
15 minute summer	S22	10	39.127	0.537	872.8	0.9492	0.0000	OK
480 minute winter	S23	464	38.849	0.849	117.4	0.0000	0.0000	OK
480 minute winter	S24	480	38.839	0.255	9.6	0.3653	0.0000	OK
480 minute winter	S25	480	38.839	0.839	32.6	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 summer	S1	1.000	S2	56.1	1.998	0.296	0.9145	
15 minute summer	S2	1.001	S4	89.1	2.902	0.391	0.6712	
15 minute summer	S3	2.000	S4	57.7	1.478	0.540	0.7341	
15 minute summer	S4	1.002	S6	159.5	1.328	0.400	7.1458	
15 minute summer	S5	3.000	S6	68.7	1.757	0.416	1.4771	
15 minute summer	S6	1.003	S10	254.8	1.608	1.016	3.4110	
15 minute summer	S7	4.000	S8	34.4	0.733	0.208	1.4883	
15 minute summer	S8	4.001	S9	60.5	0.880	0.436	1.5078	
15 minute summer	S9	4.002	S10	87.1	0.951	0.565	2.5205	
15 minute summer	S10	1.004	S11	379.1	2.577	1.072	2.4767	
15 minute summer	S11	1.005	S13	419.2	3.758	0.692	2.4591	
15 minute summer	S12	5.000	S13	59.3	2.398	0.292	0.4544	
15 minute summer	S13	1.006	S14	516.6	3.242	0.493	4.7915	
15 minute summer	S14	1.007	S18	557.4	2.533	0.486	6.8218	
15 minute summer	S15	6.000	S16	95.8	1.773	0.756	3.6981	
15 minute summer	S16	6.001	S17	121.6	2.225	0.802	0.9191	
15 minute summer	S17	6.002	S18	151.2	2.246	0.506	1.9406	
15 minute summer	S18	1.008	S19	729.2	2.833	0.705	2.0398	
15 minute summer	S19	1.009	S20	742.9	3.501	0.728	4.6319	
15 minute summer	S20	1.010	S21	738.9	3.233	0.681	14.1149	
15 minute summer	S21	1.011	S22	830.1	3.213	0.941	11.5279	
15 minute summer	S22	1.012	S23	878.7	4.642	0.757	4.1008	
480 minute winter	S24	7.000	S25	9.6	1.440	0.039	0.8143	

Results for 30 year +35% CC Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S26	472	38.840	0.840	65.4	975.2770	0.0000	SURCHARGED
360 minute winter	S27	360	38.845	1.395	25.7	2.4657	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	S26	1.015	S27	25.8	0.302	0.011	1.4053	
480 minute winter	S26	Infiltration		4.6				
360 minute winter	S27	Hydro-Brake®		5.7				545.0

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	47.359	0.109	53.9	0.1556	0.0000	OK
15 minute summer	S2	10	46.447	0.137	85.9	0.1546	0.0000	OK
15 minute summer	S3	10	45.740	0.166	55.8	0.2374	0.0000	OK
15 minute summer	S4	10	45.440	0.190	153.6	0.2713	0.0000	OK
15 minute summer	S5	10	45.203	0.130	66.0	0.1866	0.0000	OK
15 minute summer	S6	11	44.839	0.559	249.2	0.7996	0.0000	SURCHARGED
15 minute summer	S7	12	44.699	0.139	31.1	0.1987	0.0000	OK
15 minute summer	S8	11	44.700	0.268	58.8	0.3833	0.0000	OK
15 minute summer	S9	11	44.693	0.331	83.2	0.4734	0.0000	OK
15 minute summer	S10	11	44.657	0.507	366.5	0.7248	0.0000	SURCHARGED
15 minute summer	S11	11	44.257	0.317	403.3	0.4533	0.0000	OK
15 minute summer	S12	10	44.047	0.116	57.1	0.1664	0.0000	OK
15 minute summer	S13	11	43.346	0.326	495.7	0.5760	0.0000	OK
15 minute summer	S14	11	42.649	0.319	535.7	0.5638	0.0000	OK
15 minute summer	S15	10	43.676	0.191	92.6	0.2726	0.0000	OK
15 minute summer	S16	11	42.818	0.225	117.7	0.3223	0.0000	OK
15 minute summer	S17	10	42.403	0.198	144.3	0.2829	0.0000	OK
15 minute summer	S18	11	41.995	0.535	700.3	0.9455	0.0000	OK
15 minute summer	S19	11	41.732	0.452	712.6	0.7986	0.0000	OK
15 minute summer	S20	11	41.165	0.365	711.8	0.6456	0.0000	OK
15 minute summer	S21	11	39.826	0.536	802.6	0.9466	0.0000	OK
15 minute summer	S22	10	39.110	0.520	847.3	0.9185	0.0000	OK
360 minute winter	S23	352	38.792	0.792	116.7	0.0000	0.0000	OK
360 minute winter	S24	368	38.783	0.199	11.4	0.2848	0.0000	OK
360 minute winter	S25	368	38.783	0.783	38.6	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 summer	S1	1.000	S2	53.6	1.978	0.283	0.8829	
15 minute summer	S2	1.001	S4	85.1	2.871	0.374	0.6483	
15 minute summer	S3	2.000	S4	55.2	1.463	0.517	0.7094	
15 minute summer	S4	1.002	S6	152.5	1.326	0.382	7.0773	
15 minute summer	S5	3.000	S6	65.7	1.789	0.398	1.4628	
15 minute summer	S6	1.003	S10	242.9	1.533	0.969	3.4110	
15 minute summer	S7	4.000	S8	30.9	0.728	0.187	1.1333	
15 minute summer	S8	4.001	S9	55.7	0.884	0.401	1.3545	
15 minute summer	S9	4.002	S10	83.2	0.944	0.539	2.4460	
15 minute summer	S10	1.004	S11	365.3	2.565	1.033	2.4389	
15 minute summer	S11	1.005	S13	402.3	3.729	0.664	2.3771	
15 minute summer	S12	5.000	S13	56.7	2.372	0.279	0.4394	
15 minute summer	S13	1.006	S14	495.9	3.229	0.473	4.6096	
15 minute summer	S14	1.007	S18	534.4	2.548	0.466	6.5834	
15 minute summer	S15	6.000	S16	91.7	1.762	0.723	3.5624	
15 minute summer	S16	6.001	S17	116.4	2.211	0.767	0.8854	
15 minute summer	S17	6.002	S18	144.7	2.221	0.484	1.8303	
15 minute summer	S18	1.008	S19	698.7	2.817	0.675	1.9708	
15 minute summer	S19	1.009	S20	711.8	3.482	0.697	4.4605	
15 minute summer	S20	1.010	S21	713.8	3.228	0.658	13.5894	
15 minute summer	S21	1.011	S22	802.5	3.191	0.909	11.1997	
15 minute summer	S22	1.012	S23	852.9	4.651	0.735	3.9281	
360 minute winter	S24	7.000	S25	11.4	1.522	0.047	0.7278	

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S26	360	38.784	0.784	78.3	891.3655	0.0000	SURCHARGED
360 minute winter	S27	352	38.787	1.337	26.0	2.3632	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)
360 minute winter	S26	1.015	S27	26.0	0.286	0.011	1.4053	
360 minute winter	S26	Infiltration		4.6				
360 minute winter	S27	Hydro-Brake®		5.7				544.8

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	47.382	0.132	75.5	0.1886	0.0000	OK
15 minute summer	S2	10	46.479	0.169	120.4	0.1916	0.0000	OK
15 minute summer	S3	10	45.783	0.209	78.1	0.2986	0.0000	OK
15 minute summer	S4	12	45.634	0.384	215.2	0.5493	0.0000	OK
15 minute summer	S5	11	45.648	0.575	92.3	0.8234	0.0000	SURCHARGED
15 minute summer	S6	11	45.427	1.147	316.3	1.6416	0.0000	SURCHARGED
15 minute summer	S7	11	45.273	0.713	43.5	1.0203	0.0000	SURCHARGED
15 minute summer	S8	11	45.265	0.833	89.0	1.1916	0.0000	SURCHARGED
15 minute summer	S9	11	45.233	0.871	123.4	1.2462	0.0000	SURCHARGED
15 minute summer	S10	11	45.134	0.984	489.7	1.4077	0.0000	SURCHARGED
15 minute summer	S11	12	44.512	0.572	540.4	0.8189	0.0000	SURCHARGED
15 minute summer	S12	10	44.073	0.142	79.9	0.2034	0.0000	OK
15 minute summer	S13	12	43.663	0.643	669.3	1.1369	0.0000	SURCHARGED
15 minute summer	S14	12	43.285	0.955	701.3	1.6877	0.0000	SURCHARGED
15 minute summer	S15	11	44.170	0.685	129.6	0.9795	0.0000	SURCHARGED
15 minute summer	S16	12	43.438	0.845	153.5	1.2098	0.0000	SURCHARGED
15 minute summer	S17	12	43.069	0.864	195.2	1.2360	0.0000	SURCHARGED
15 minute summer	S18	12	42.835	1.375	894.6	2.4296	0.0000	SURCHARGED
15 minute summer	S19	12	42.461	1.181	892.1	2.0861	0.0000	SURCHARGED
15 minute summer	S20	12	41.838	1.038	892.7	1.8343	0.0000	SURCHARGED
15 minute summer	S21	12	40.553	1.263	994.2	2.2321	0.0000	SURCHARGED
15 minute summer	S22	11	39.374	0.784	1047.3	1.3861	0.0000	SURCHARGED
480 minute winter	S23	472	39.071	1.071	215.4	0.0000	0.0000	OK
480 minute winter	S24	488	39.061	0.477	12.5	0.6822	0.0000	SURCHARGED
480 minute winter	S25	488	39.061	1.061	43.2	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 summer	S1	1.000	S2	75.1	2.146	0.396	1.1513	
15 minute summer	S2	1.001	S4	119.3	3.098	0.524	0.9850	
15 minute summer	S3	2.000	S4	77.3	1.571	0.723	0.9782	
15 minute summer	S4	1.002	S6	198.8	1.438	0.498	9.6496	
15 minute summer	S5	3.000	S6	85.5	1.819	0.518	2.0647	
15 minute summer	S6	1.003	S10	315.6	1.992	1.258	3.4110	
15 minute summer	S7	4.000	S8	49.9	0.751	0.302	2.0643	
15 minute summer	S8	4.001	S9	84.3	0.899	0.608	1.5961	
15 minute summer	S9	4.002	S10	112.1	1.018	0.726	2.5301	
15 minute summer	S10	1.004	S11	487.0	3.074	1.377	2.7829	
15 minute summer	S11	1.005	S13	537.6	3.865	0.888	3.4976	
15 minute summer	S12	5.000	S13	79.4	2.571	0.390	0.8717	
15 minute summer	S13	1.006	S14	642.7	3.173	0.613	8.4143	
15 minute summer	S14	1.007	S18	694.9	2.517	0.606	8.8816	
15 minute summer	S15	6.000	S16	117.3	1.823	0.925	4.8330	
15 minute summer	S16	6.001	S17	154.4	2.263	1.017	1.1870	
15 minute summer	S17	6.002	S18	188.2	2.147	0.630	2.5825	
15 minute summer	S18	1.008	S19	876.1	3.111	0.847	2.2517	
15 minute summer	S19	1.009	S20	892.7	3.461	0.874	6.1682	
15 minute summer	S20	1.010	S21	899.6	3.200	0.829	17.1958	
15 minute summer	S21	1.011	S22	995.8	3.536	1.128	12.0271	
15 minute summer	S22	1.012	S23	1052.0	4.509	0.907	5.3728	
480 minute winter	S24	7.000	S25	12.5	1.515	0.051	0.8539	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S26	480	39.062	1.062	87.3	1332.3150	0.0000	SURCHARGED
480 minute winter	S27	464	39.067	1.617	25.3	2.8574	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	S26	1.015	S27	25.3	0.292	0.011	1.4053	
480 minute winter	S26	Infiltration		4.6				
480 minute winter	S27	Hydro-Brake®		5.9				611.2

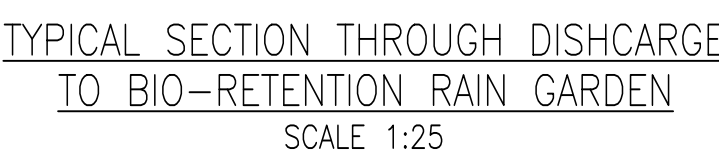
Appendix I

SuDS Construction Details



- Flowtex Protection Fleece by
Stormwater Management LTD
- LLDPE Impermeable Membrane
by Stormwater Management LTD

TYPICAL SECTION THROUGH INLET TO BASIN VIA PRECAST CONCRETE HEADWALL
SCALE 1:25

DRAWING STATUS

DRAWING STATUS

NOT FOR CONSTRUCTION

CLIENT

Bellway

DRAWING TITLE

SUDS CONSTRUCTION DETAILS

PROJECT

PARK LANE,
CHARVIL,
WOKINGHAM

 **simpson | tws**
8 Friday Street
Henley-On-Thames
Oxfordshire, RG9 1AH
T: 01491 576 221
E: mail@simpsoneng.com
W: www.simpsoneng.com

London, Henley-on-Thames and Gloucester

Drawn GI	Ch'ed IRH	Scales AS SHOWN	Date NOV 6 2025
-------------	--------------	--------------------	--------------------

SE	FIN	AS CHOWN	NOV 2023
Purpose of Issue			
PLANNING			

Drawing Number	Revision
P25-0896 SK105	P2