

## Appendix I







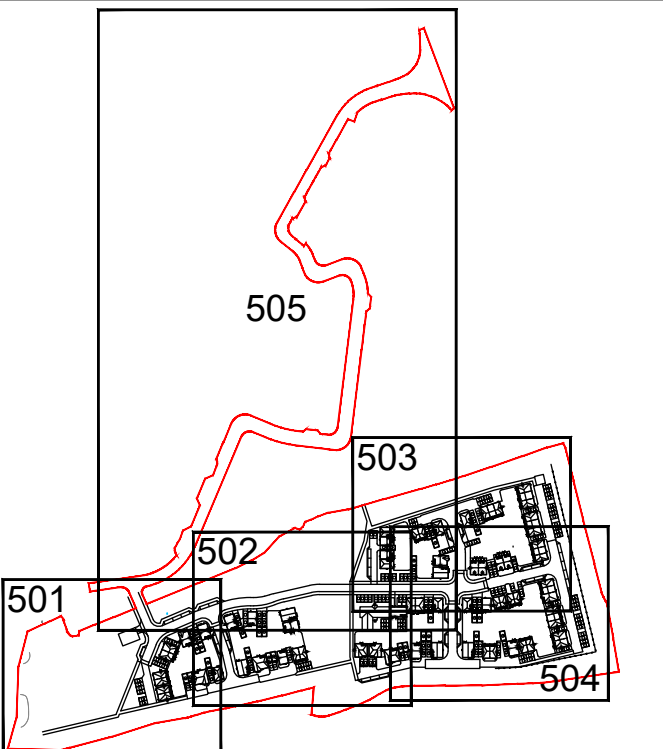
FOR CONTINUATION SEE DRAWING 091.5018.0505

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  - 4.3. LANDSCAPE LAYOUT: D3270\_FAB-00-XX-RP-L-0002\_P04 - Received 25.11.2024
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- EXISTING LOW RISK PLUVIAL FLOODING
- EXISTING LOW RISK PLUVIAL FLOODING DISPLACED BY PROPOSED ROAD
- TYPE C PERMEABLE PAVING
- HYDROBRAKE
- HEADWALL



KEY PLAN 1:500

1:200 0m 10m

**PRELIMINARY**

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Rev	Description	Date	By	App'd
P01	FIRST ISSUE	19.12.2024	LEC	NOH



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Project Name  
**CAMPFIELD, SOUTHWATER**

Title  
**PROPOSED DRAINAGE STRATEGY  
SHEET 1**

Project Phase  
**PRELIMINARY**

Date Created	Drawn By	Approved By	Suitability Code
10.12.2024	OT	NOH	-

PBA Project Number	Scale	(AT A1)
091.5018	1:200	

PBA Drawing No:	Revision
091.5018.0501	P01

QMS2010/V8/010723JM





ATTENUATION SWALES TO TEMPORARILY  
HOLD SURFACE WATER FLOOD RISK  
ESTIMATED SURFACE WATER FLOOD  
VOLUME: 408m<sup>3</sup>  
TOTAL ATTENUATED VOLUME: 526.3m<sup>3</sup>

PROPOSED ATTENUATION CRATES  
MANHOLE REF: 'ATTENUATION CRATES'  
AREA: 230m<sup>2</sup>  
HEIGHT: 0.8m  
BASE LEVEL: 43.38m<sup>3</sup>  
VOLUME: 175m<sup>3</sup> (95% VOID RATIO)

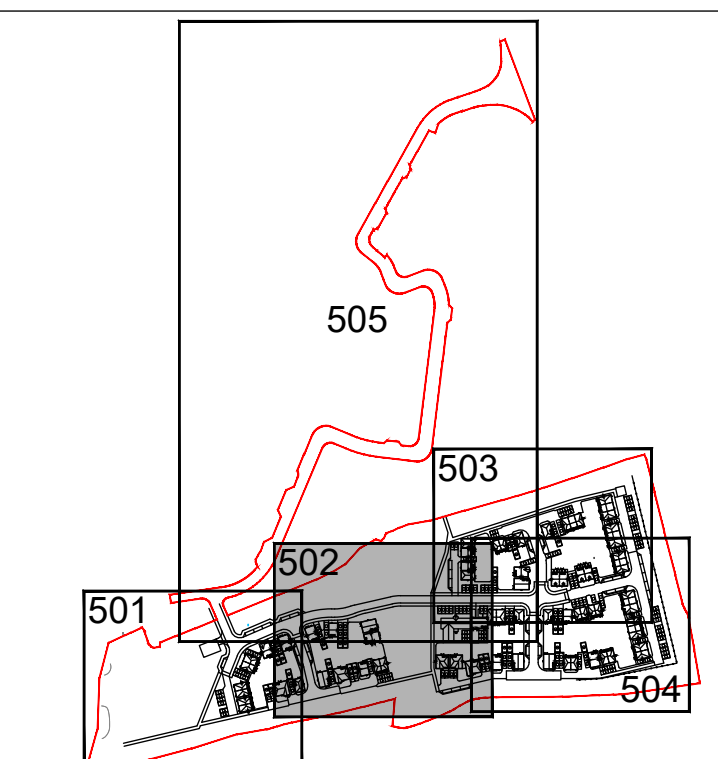
ATTENUATION  
CRATES  
CL: 45.981  
IL: 43.377

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KEY PLAN 1:500  
0m 10m  
1:200

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Client  
**miller**  
homes

Project Name  
**CAMPFIELD, SOUTHWATER**

Title  
**PROPOSED DRAINAGE STRATEGY  
SHEET 2**

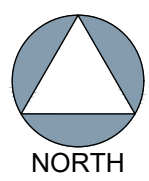
Project Phase  
**PRELIMINARY**

Date Created	Drawn By	Approved By	Suitability Code
10.12.2024	OT	NOH	-

PBA Project Number	Scale	(AT A1)
091.5018	1:200	

PBA Drawing No:	Revision
091.5018.0502	P01





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- HYDROBRAKE
- HEADWALL



KEY PLAN 1:500

1:200 0m 10m

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Project Name  
**CAMPFIELD, SOUTHWATER**

Title  
**PROPOSED DRAINAGE STRATEGY  
SHEET 3**

Project Phase  
**PRELIMINARY**

Date Created	Drawn By	Approved By	Suitability Code
10.12.2024	OT	NOH	-

PBA Project Number	Scale	(AT A1)
091.5018	1:200	

PBA Drawing No	Revision
091.5018.0503	P01



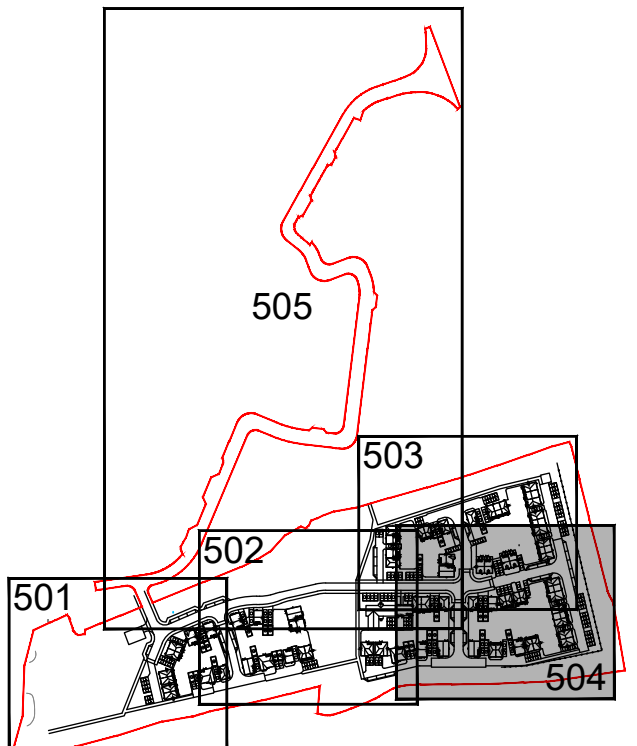


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- |  |                                       |
|--|---------------------------------------|
|  | SURFACE WATER NETWORK                 |
|  | FOUL WATER NETWORK                    |
|  | FOUL ROISING MAIN                     |
|  | TREE ROOT PROTECTION AREA             |
|  | ANCIENT WOODLAND OFFSET               |
|  | ATTENUATION CRATES                    |
|  | RAIN GARDEN                           |
|  | ATTENUATION SWALE                     |
|  | PROPOSED BASIN                        |
|  | EXISTING MEDIUM RISK PLUVIAL FLOODING |
|  | EXISTING LOW RISK PLUVIAL FLOODING    |
|  | EXISTING LOW RISK PLUVIAL FLOODING    |
|  | DISPLACED BY PROPOSED ROAD            |
|  | TYPE C PERMEABLE PAVING               |
|  | HYDROBRAKE                            |
|  | HEADWALL                              |



KEY PLAN 1:500

1:200



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ent



Project Name  
CAMPFIELD, SOUTHWATER

## PROPOSED DRAINAGE STRATEGY

### HEET 4

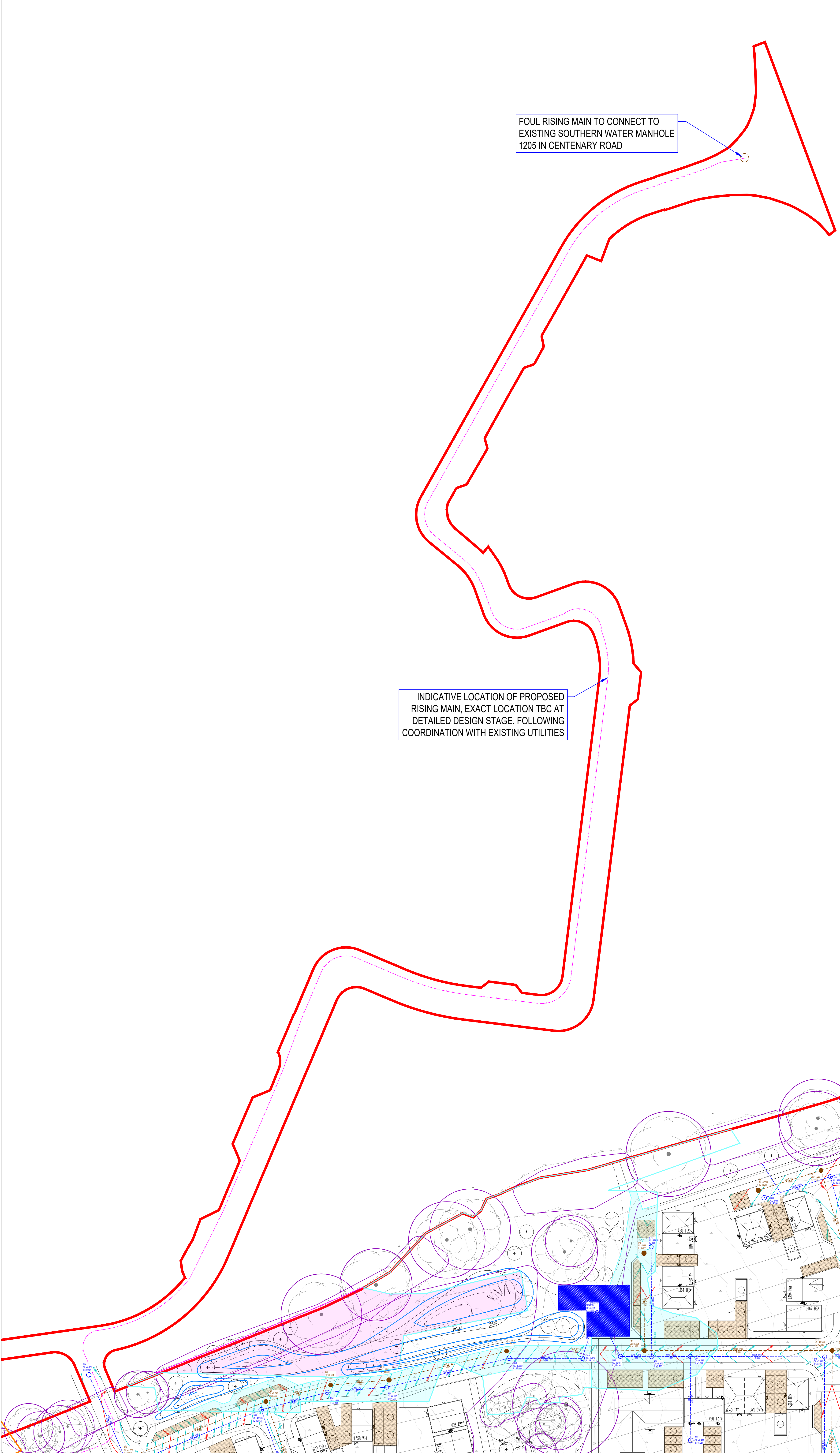
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Issue Created	Drawn By	Approved By	Suitability Code
0.12.2024	OT	NOH	-

Project Number	Scale
01.5018	1:200 (AT A1)

A Drawing No:	091.5018.0504	Revision	P01
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**LEGEND**

- --- SURFACE WATER NETWORK
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**KEY PLAN 1:500**

1: 500 0m 25m

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P01	FIRST ISSUE	19.12.2024	LEC	NOH
Rev	Description	Date	By	App'd

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**Client**  
**miller homes**

**Project Name**  
**CAMPFIELD, SOUTHWATER**

**Title**  
**PROPOSED DRAINAGE STRATEGY SHEET 5**

**Project Phase**  
**PRELIMINARY**

Date Completed	Drawn By	Approved By	Suitability Code
17.12.2024	LC	NOH	-

PBA Project Number	Scale	(AT A1)
091.5018	1:500	

PBA Drawing No.	Revision
091.5018.0505	P01

QMS2023/V8/010723.UM



## Appendix J





# Surface Water Drainage Proforma

West Sussex County Council (WSCC) as Lead Local Flood Authority recommends this proforma is completed and submitted to support any planning application for a major development. The information contained in this form will be used by WSCC officers in their role as 'statutory consultee' on surface water drainage. The proforma should accompany the site-specific Flood Risk Assessment and Drainage Strategy submitted as part of the planning application.

## 1. Site Details

No.	Requirement	Answer	Application Type
1.1	Address including postcode		Outline & Full
1.2	OS grid reference (easting and northing)		Outline & Full
1.3	Planning application reference		Outline & Full
1.4	Total site area (hectares)		Outline & Full
1.5	Pre-development use		Outline & Full
1.6	Proposed design life		Outline & Full
1.7	Have agreements in principle for discharge been provided (where applicable)? (YES/NO)		Outline & Full
1.8	Topographic Survey Plan showing existing site layout, site levels and drainage system		Outline & Full

## 2. Discharge Hierarchy/Methods of Discharge<sup>1</sup>

No.	Requirement	Answer	Application Type
2.1	Store rainwater for later use (reuse) (YES/NO)		Full
2.2	Infiltration techniques such as soakaways, permeable paving, etc (YES/NO)		Outline & Full
2.3	Hybrid (YES/NO)		Outline & Full

<sup>1</sup> Runoff may be discharged via one or multiple methods.



No.	Requirement	Answer	Application Type
2.4	Attenuation with restricted discharge to watercourse (YES/NO)		Outline & Full
2.5	Attenuation with restricted discharge to surface water sewer (YES/NO)		Outline & Full
2.6	Attenuation with restricted discharge to combined sewer (YES/NO)		Outline & Full

### 3. Calculation Inputs

No.	Requirement	Answer	Application Type
3.1	Area within site which is drained by SuDS <sup>2</sup> (hectares)		Outline & Full
3.2	Impermeable area drained pre-development <sup>3</sup> (hectares)		Outline & Full
3.3	Impermeable area drained post-development <sup>3</sup> (hectares)		Outline & Full
3.4	Urban Creep (hectares)		Outline & Full
3.5	Climate change factor applied (1 in 30 and 1 in 100) (percentage)		Outline & Full

### 4. Infiltration Feasibility/Ground Investigations

No.	Requirement	Answer	Application Type
4.1	Has winter groundwater monitoring and infiltration been undertaken? (YES/NO)		Outline & Full
4.2	Period of winter groundwater monitoring (from/to)		Outline & Full
4.3	Depth to highest recorded groundwater level (mAOD)		Full
4.4	Infiltration rate		Outline & Full

<sup>2</sup> Impermeable area should be measured pre and post development. Impermeable surfaces include roofs, pavements, driveways and paths, where runoff is conveyed to the drainage system.

<sup>3</sup> 10% Urban Creep should be added to the volumes required for storage and not increase discharge rates.



No.	Requirement	Answer	Application Type
4.5	Depth of infiltration structure (mAOD)		Full
4.6	Safety factor used for sizing infiltration storage		Outline & Full

## 5. Calculation Outputs: Greenfield Runoff Rates<sup>4</sup>

No.	Requirement	Answer	Application Type
5.1	Qbar (l/s)		Outline & Full
5.2	1 in 1 year rainfall (l/s)		Outline & Full
5.3	1 in 30 year rainfall (l/s)		Outline & Full
5.4	1 in 100 year rainfall (l/s)		Outline & Full

## 6. Calculation Outputs: Brownfield Runoff Rates (including Urban Creep) (if applicable)

No.	Requirement	Answer	Application Type
6.1	1 in 1 year rainfall (l/s)		Outline & Full
6.2	1 in 30 year rainfall (l/s)		Outline & Full
6.3	1 in 100 year rainfall (l/s)		Outline & Full

## 7. Calculation Outputs: Volume Control/Infiltration Provision

No.	Requirement	Answer	Application Type
7.1	Infiltration (m <sup>3</sup> )		Outline & Full
7.2	Attenuation (m <sup>3</sup> )		Outline & Full
7.3	Separate volume designated as long-term storage <sup>5</sup> (m <sup>3</sup> )		Full
7.4	Total volume control (sum of inputs for 7.1 to 7.3) (m <sup>3</sup> )		Full

<sup>4</sup> Flows within long term storage areas should be infiltrated to the ground or discharged at low flow rate of maximum 2 litres per second per hectare (l/s/ha).

<sup>5</sup> In calculations and for the avoidance of doubt FEH shall be used FSR is not acceptable, and CV values must equal 1.



## 8. Calculation Outputs: Attenuation/Restricted Discharge

No.	Requirement	Answer	Application Type
8.1	Proposed discharge rate (critical storm)	1 in 1 (100%) AEP (m/s)	Outline & Full
		1 in 30 (3.33%) AEP (m/s)	Outline & Full
		1 in 30 (3.33%) AEP plus climate change (m/s)	Outline & Full
		1 in 100 (1%) AEP (m/s)	Outline & Full
		1 in 100 (1%) AEP plus climate change (m/s)	Outline & Full
8.2	Calculations show critical storm durations (both by max height and max discharge) for 1 in 1, 1 in 30, 1 in 30 plus climate change, 1 in 100 and 1 in 100 year plus climate change allowance can be accommodated on site (YES/NO)		Outline & Full
8.3	Has treatment of potential contaminants been considered? (YES/NO)		Outline & Full
8.4	Demonstration of source control features with substantive evidence why these cannot be used if not (YES/NO)		Full
8.5	If discharging into a watercourse, piped system or the sea, has the proposed drainage network been modelled against predicted top water levels for the 1 in 100 year storm event plus climate change allowance, within the existing system? (YES/NO)		Full

## 9. Other Supporting Details

No.	Requirement	Answer	Application Type
9.1	Plan detailing location of groundwater monitoring and infiltration testing		Outline & Full
9.2	Detailed drainage design layout		Full
9.3	Maintenance strategy		Full



No.	Requirement	Answer	Application Type
9.4	Detailed development layout		Full
9.5	Impermeable area plan		Full
9.6	Phasing plan?		Full
9.7	If ground levels are being raised over 300mm above existing levels and is unavoidable, have detailed plans been provided, together with drainage proposals, to address any potential drainage related issues?		Full

The above form should be completed using evidence from information which should be appended to this form. The information being submitted should be proportionate to the site conditions, flood risks and magnitude of development. It should serve as a summary of the drainage proposals and should clearly show that the proposed discharge rate and volume as a result of development will not be increasing. Where there is an increase in discharge rate or volume, then the relevant section of this form must be completed with clear evidence demonstrating how the requirements will be met.

This form is completed using factual information and can be used as a summary of the surface water drainage strategy on this site.

<b>Form completed by</b>	
<b>Qualification of person responsible for signing off this proforma</b>	
<b>Company</b>	
<b>On behalf of (client's details)</b>	
<b>Date</b>	



## Appendix K





## Network Details

### Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
S15	0.097	1.200	Type B	48.528	45.618	2.610	516199.149	124941.442
S35	0.105	1.200	Type A	50.110	45.777	4.108	516224.155	124836.909
S36	0.000	1.200	Type A	48.760	45.380	3.080	516211.918	124887.880
S71	0.127	1.200	Type A	47.643	43.935	3.409	516158.383	124875.357
S38	0.027	1.350	Type C	47.657	45.860	1.497	516124.689	124919.948
S39	0.038	1.200	Type B	48.340	45.920	2.270	516158.246	124930.566
S40	0.039	1.200	Type B	48.037	45.737	2.132	516143.363	124925.874
S41	0.026	1.200	Type B	47.676	45.350	2.026	516150.667	124900.240
S42	0.004	1.200	Type A	47.500	43.716	3.484	516150.524	124875.144
S43	0.068	1.200	Type B	49.169	46.670	2.274	516177.176	124824.950
S44	0.063	1.200	Type B	47.807	45.400	2.182	516141.659	124825.233
S45	0.000	1.200	Type A	47.325	43.679	3.346	516141.769	124875.019
S72	0.000	1.350	Type C	46.411	45.061	1.200	516103.991	124851.459
S73	0.170	1.200	Type B	46.586	43.519	2.767	516103.846	124875.184
S46	0.049	1.200	Type B	46.690	43.941	2.599	516092.800	124906.108
S47	0.023	1.200	Type B	46.370	43.473	2.597	516092.973	124875.080
S48	0.022	1.200	Type B	46.161	43.436	2.425	516084.111	124875.180
ATTENUATION	0.000	1.200	Type B	45.991	43.377	2.314	516077.549	124887.516
S49	0.015	1.350	Type B	45.813	43.135	2.378	516073.323	124874.642
S50	0.041	1.350	Type B	45.222	42.506	2.416	516052.692	124874.642
S51	0.011	1.200	Type B	44.112	41.503	2.309	516018.120	124866.496
S52	0.048	1.200	Type B	43.555	41.078	2.177	516001.322	124865.038
S53	0.009	1.350	Type C	42.426	41.112	1.163	515995.548	124819.978
S54	0.019	1.200	Type B	42.736	40.975	1.611	515992.259	124833.916
S55	0.049	1.350	Type B	42.703	40.552	1.851	515982.716	124860.110
S56	0.022	1.350	Type C	40.951	39.454	1.347	515934.077	124869.949
S57	0.071	1.350	Type B	40.980	38.865	1.665	515945.170	124844.499
S58	0.042	1.350	Type C	40.394	38.700	1.244	515939.290	124826.866
S59	0.004	1.200	Type B	47.348	45.663	1.535	516129.295	124824.636
S60	0.048	1.200	Unknown	46.874	45.538	1.186	516116.891	124824.394
S61	0.028	1.350	Type C	45.457	44.106	1.200	516080.361	124815.500
S62	0.014	1.350	Type C	45.143	43.587	1.331	516077.147	124829.285
S63	0.065	1.200	Type B	43.708	41.598	1.885	516038.724	124820.374
S64	0.055	1.200	Type B	42.059	39.327	2.432	515997.611	124810.880
S65	0.000	1.350	Type B	39.629	36.499	2.680	515945.153	124798.377
S70	0.022	1.350	Type A	39.990	36.350	3.190	515941.775	124814.305
B_IN	0.000	0.000	Type C	37.800	35.850	1.500	515908.101	124810.892
BASIN	0.000	0.000	Unknown	37.800	35.800	1.550	515881.287	124800.398
S68	0.000	1.350	Type B	37.800	35.733	1.767	515873.933	124797.965
S69	0.000	0.000	Type C	37.800	35.570	1.930	515870.538	124796.835

### Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)
1.000	S15	45.618	S36	45.380	Circ	0.3mØ	55.063	231.5	0.600	2.610
2.000	S35	45.777	S36	45.455	Circ	0.225mØ	52.419	162.6	0.600	4.108
1.001	S36	45.380	S71	43.935	Circ	0.3mØ	54.980	38.0	0.600	3.080
1.002	S71	43.935	S42	43.716	Circ	0.3mØ	7.863	36.0	0.600	3.409
3.000	S38	45.860	S40	45.737	Circ	0.3mØ	19.591	159.9	0.600	1.497
4.000	S39	45.920	S40	45.755	Circ	0.15mØ	15.605	94.5	0.600	2.270
3.001	S40	45.737	S41	45.425	Circ	0.3mØ	26.654	85.3	0.600	1.999
3.002	S41	45.350	S42	43.716	Circ	0.3mØ	25.096	15.4	0.600	2.026
1.003	S42	43.716	S45	43.679	Circ	0.3mØ	8.755	237.0	0.600	3.484
5.000	S43	46.670	S44	45.400	Circ	0.225mØ	35.518	28.0	0.600	2.274
5.001	S44	45.400	S45	44.155	Circ	0.3mØ	49.786	40.0	0.600	2.107
1.004	S45	43.679	S73	43.519	Circ	0.3mØ	37.923	237.0	0.600	3.346
6.000	S72	45.061	S73	43.673	Circ	0.15mØ	23.726	17.1	0.600	1.200
1.005	S73	43.519	S47	43.473	Circ	0.3mØ	10.874	237.0	0.600	2.767
7.000	S46	43.941	S47	43.627	Circ	0.15mØ	31.029	98.8	0.600	2.599
1.006	S47	43.473	S48	43.436	Circ	0.3mØ	8.862	237.0	0.600	2.597
1.007	S48	43.436		43.377	Circ	0.3mØ	13.973	235.7	0.600	2.425



## Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)
1.008		43.377	S49	43.135	Circ	0.3mØ	13.550	56.0	0.600	2.314
1.009	S49	43.135	S50	42.506	Circ	0.3mØ	20.631	32.8	0.600	2.378
1.010	S50	42.506	S51	41.503	Circ	0.3mØ	35.519	35.4	0.600	2.416
1.011	S51	41.503	S52	41.078	Circ	0.3mØ	16.861	39.7	0.600	2.309
1.012	S52	41.078	S55	40.552	Circ	0.3mØ	19.248	36.5	0.600	2.177
8.000	S53	41.112	S54	40.975	Circ	0.15mØ	14.321	104.6	0.600	1.163
8.001	S54	40.975	S55	40.702	Circ	0.15mØ	27.878	101.8	0.600	1.611
1.013	S55	40.552	S57	39.015	Circ	0.3mØ	40.662	26.5	0.600	1.851
9.000	S56	39.454	S57	39.165	Circ	0.15mØ	27.763	96.1	0.600	1.347
1.014	S57	38.865	S58	38.700	Circ	0.45mØ	18.587	112.4	0.600	1.665
1.015	S58	38.700	S70	36.350	Circ	0.45mØ	12.805	5.4	0.600	1.244
10.000	S59	45.663	S60	45.538	Circ	0.15mØ	12.406	99.5	0.600	1.535
10.001	S60	45.538	S61	44.106	Circ	0.15mØ	37.597	26.3	0.600	1.186
10.002	S61	44.106	S62	43.587	Circ	0.225mØ	14.155	27.3	0.600	1.125
10.003	S62	43.587	S63	41.598	Circ	0.225mØ	39.443	19.8	0.600	1.331
10.004	S63	41.598	S64	39.477	Circ	0.225mØ	42.195	19.9	0.600	1.885
10.005	S64	39.327	S65	36.649	Circ	0.3mØ	53.927	20.1	0.600	2.432
10.006	S65	36.499	S70	36.350	Circ	0.45mØ	16.282	109.1	0.600	2.680
1.016	S70	36.350	B_IN	35.850	Circ	0.45mØ	33.846	67.7	0.600	3.190
1.017	B_IN	35.850	BASIN	35.800	Circ	0.45mØ	28.795	575.9	0.600	1.500
1.018	BASIN	35.800	S68	35.733	Circ	0.45mØ	7.746	115.4	0.600	1.550
1.019	S68	35.733	S69	35.570	Circ	0.3mØ	3.578	22.0	0.600	1.767

## Outfall Details

Outfall Manhole S69 : Surcharged (Constant Level)

Surcharged Constant

Water Elevation (m)	Water Depth (m)
35.889	0.319

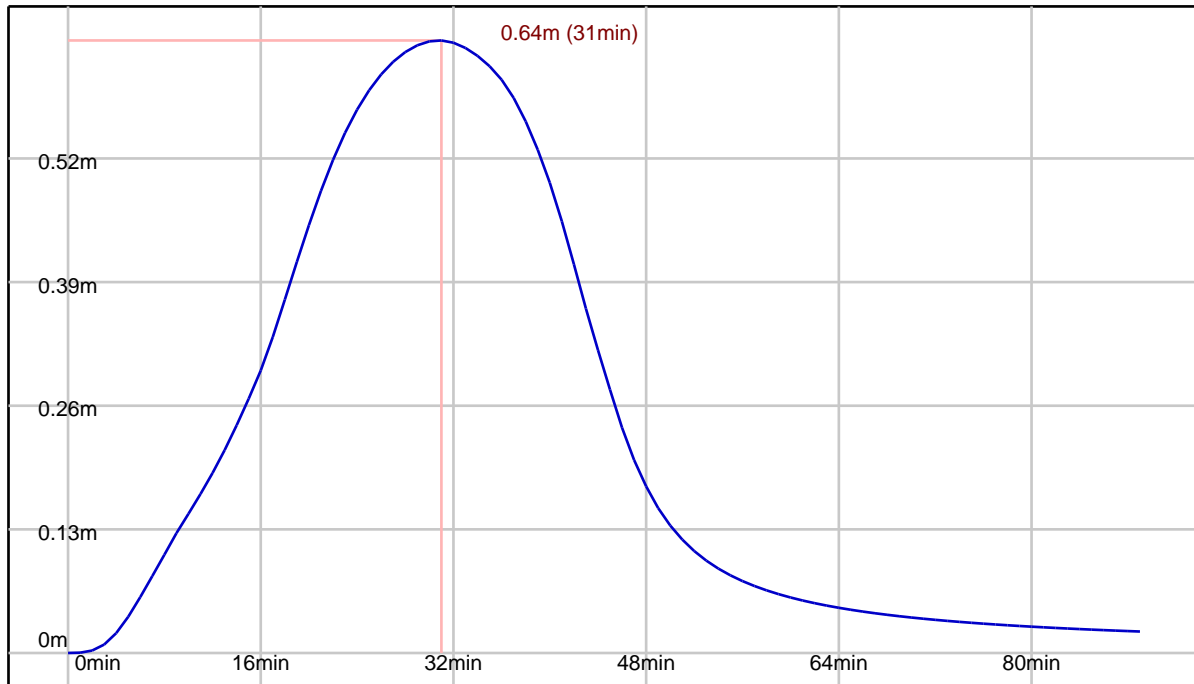
## Flow Control Details

Tank Structure at Manhole ATTENUATION CRATES

Tank Invert (m)	Tank Height (m)	Void Ratio (%)	Area (m2)	Effective Area (m2) Area x Void Ratio	Max Storage (m3) Effective Area x Height	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
43.377	0.800	95.00	229.661	218.178	174.542	0.00000000	0.00000000	2.00



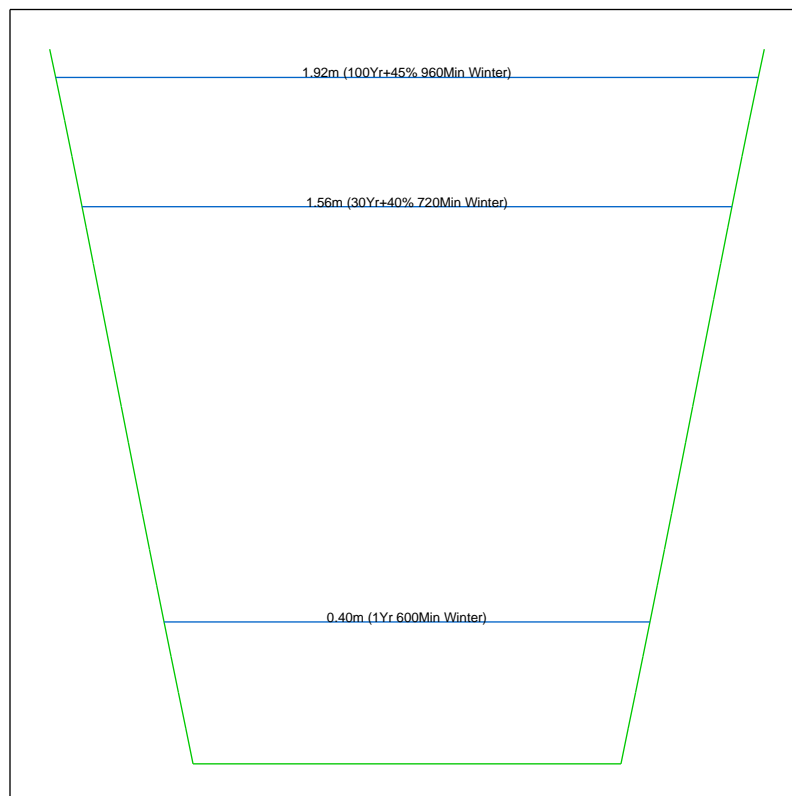
## Tank at ATTENUATION CRATES (100Yr+45% 30Min Winter)



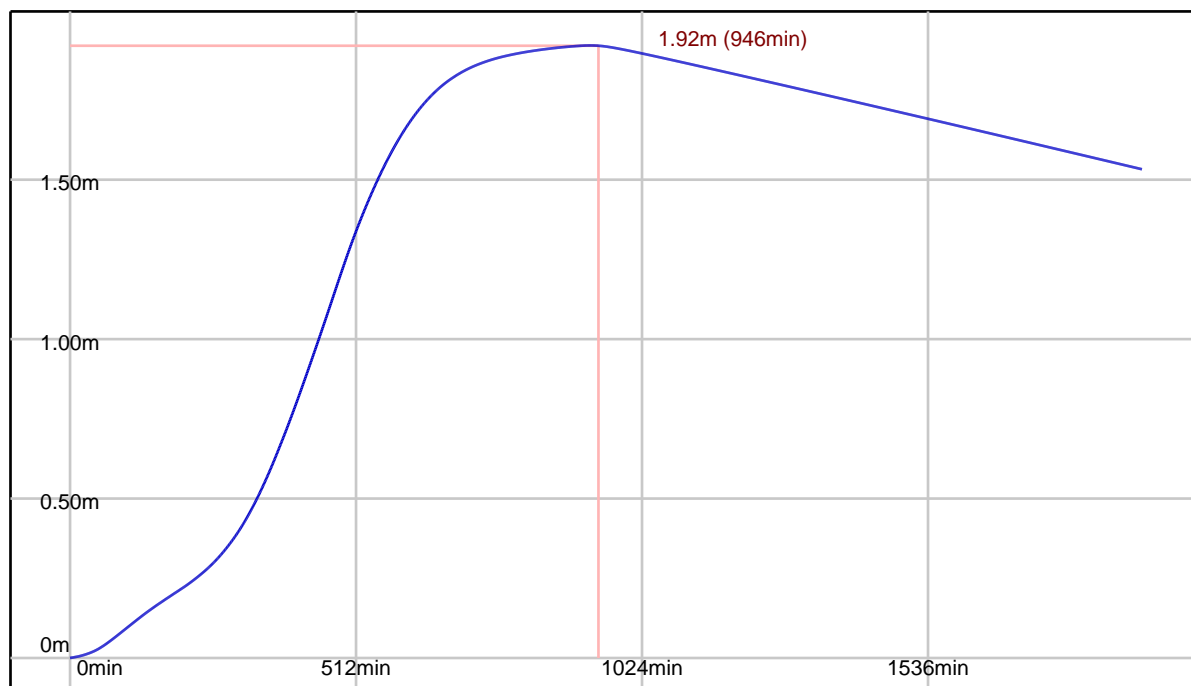
## Pond Structure at Manhole BASIN

Pond Invert (m)	Max Depth (m)	Volume To Water Level (m3)	Water Level (m)	Freeboard (m)	Infil Base (m/hr)	Infil Side (m/hr)	Safety Factor
35.800	2.000	1140.006	37.500	0.300	0.00000000	0.00000000	2.00

## Pond Depth/Area Diagram at BASIN



## Pond at BASIN (100Yr+45% 960Min Winter)

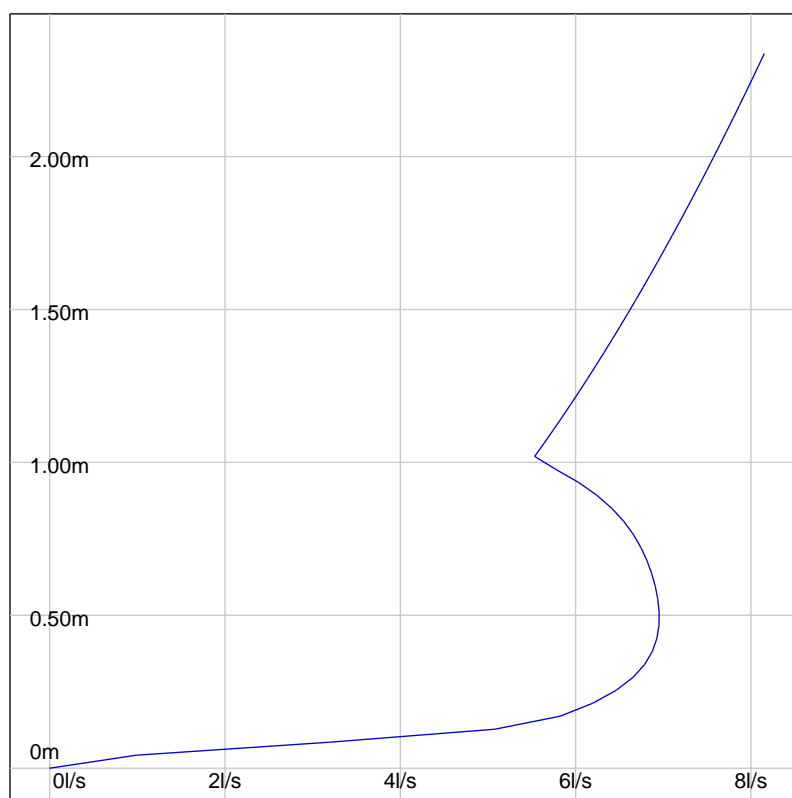


## Controls within Manhole S68

### Hydro-Brake® Optimum Control at Manhole S68

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0114-7510-1967-7510	1.967	7.510	0.000	0.492	6.954	1.012	5.512

### Hydro-Brake® Optimum Control at S68





## Simulation Settings

FEH2022 (point): Filename=FEH\_Point\_Descriptors\_516055\_124881\_v5\_0\_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760

Return Periods (yrs) + Climate Change: (1, +0%), (30, +40%), (100, +45%)

## Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
1Yr 15Min Winter	15.200	0.00	0.11	30Yr+40% 600Min Summer	8.643	0.00	1.27
1Yr 15Min Summer	15.200	0.00	0.12	30Yr+40% 600Min Winter	8.643	0.00	1.32
1Yr 30Min Winter	9.573	0.00	0.07	30Yr+40% 720Min Summer	7.442	0.00	1.19
1Yr 30Min Summer	9.573	0.00	0.07	30Yr+40% 720Min Winter	7.442	0.00	1.53
1Yr 60Min Winter	6.158	0.00	0.04	30Yr+40% 960Min Summer	5.885	0.00	0.81
1Yr 60Min Summer	6.158	0.00	0.04	30Yr+40% 960Min Winter	5.885	0.00	1.22
1Yr 120Min Summer	5.113	0.00	0.00	30Yr+40% 1440Min Summer	4.232	0.00	1.10
1Yr 120Min Winter	5.113	0.00	0.02	30Yr+40% 1440Min Winter	4.232	0.00	1.11
1Yr 180Min Summer	4.357	0.00	0.00	30Yr+40% 2160Min Summer	3.061	0.00	1.06
1Yr 180Min Winter	4.357	0.00	-0.04	30Yr+40% 2160Min Winter	3.061	0.00	0.82
1Yr 240Min Summer	3.634	0.00	0.00	30Yr+40% 2880Min Summer	2.447	0.00	0.92
1Yr 240Min Winter	3.634	0.00	-0.09	30Yr+40% 2880Min Winter	2.447	0.00	1.01
1Yr 360Min Summer	2.894	0.00	-0.15	30Yr+40% 4320Min Summer	1.813	0.00	0.90
1Yr 360Min Winter	2.894	0.00	-0.14	30Yr+40% 4320Min Winter	1.813	0.00	0.96
1Yr 480Min Summer	2.432	0.00	-0.22	30Yr+40% 5760Min Summer	1.484	0.00	0.93
1Yr 480Min Winter	2.432	0.00	-0.25	30Yr+40% 5760Min Winter	1.484	0.00	1.17
1Yr 600Min Summer	2.077	0.00	-0.23	100Yr+45% 15Min Summer	153.029	0.00	0.66
1Yr 600Min Winter	2.077	0.00	-0.26	100Yr+45% 15Min Winter	153.029	0.00	0.79
1Yr 720Min Winter	1.810	0.00	-0.24	100Yr+45% 30Min Summer	102.275	0.00	0.84
1Yr 720Min Summer	1.810	0.00	-0.21	100Yr+45% 30Min Winter	102.275	0.00	0.93
1Yr 960Min Summer	1.471	0.00	-0.18	100Yr+45% 60Min Summer	65.177	0.00	1.28
1Yr 960Min Winter	1.471	0.00	-0.11	100Yr+45% 60Min Winter	65.177	0.00	1.35
1Yr 1440Min Summer	1.112	0.00	-0.10	100Yr+45% 120Min Summer	39.042	0.00	1.54
1Yr 1440Min Winter	1.112	0.00	-0.03	100Yr+45% 120Min Winter	39.042	0.00	1.63
1Yr 2160Min Summer	0.847	0.00	0.00	100Yr+45% 180Min Summer	28.665	0.00	1.65
1Yr 2160Min Winter	0.847	0.00	-0.07	100Yr+45% 180Min Winter	28.665	0.00	1.68
1Yr 2880Min Summer	0.705	0.00	-0.02	100Yr+45% 240Min Summer	23.017	0.00	1.73
1Yr 2880Min Winter	0.705	0.00	0.01	100Yr+45% 240Min Winter	23.017	0.00	1.66
1Yr 4320Min Summer	0.559	0.00	0.02	100Yr+45% 360Min Summer	16.777	0.00	1.77
1Yr 4320Min Winter	0.559	0.00	0.01	100Yr+45% 360Min Winter	16.777	0.00	1.81
1Yr 5760Min Winter	0.484	0.00	0.01	100Yr+45% 480Min Summer	13.370	0.00	1.76
1Yr 5760Min Summer	0.484	0.00	0.01	100Yr+45% 480Min Winter	13.370	0.00	1.82
30Yr+40% 15Min Summer	117.210	0.00	0.54	100Yr+45% 600Min Summer	11.191	0.00	1.70
30Yr+40% 15Min Winter	117.210	0.00	0.61	100Yr+45% 600Min Winter	11.191	0.00	1.75
30Yr+40% 30Min Summer	77.706	0.00	0.89	100Yr+45% 720Min Summer	9.665	0.00	1.75
30Yr+40% 30Min Winter	77.706	0.00	0.83	100Yr+45% 720Min Winter	9.665	0.00	1.82
30Yr+40% 60Min Summer	49.124	0.00	0.94	100Yr+45% 960Min Summer	7.670	0.00	1.60
30Yr+40% 60Min Winter	49.124	0.00	1.00	100Yr+45% 960Min Winter	7.670	0.00	1.77
30Yr+40% 120Min Summer	30.017	0.00	1.22	100Yr+45% 1440Min Summer	5.535	0.00	1.46
30Yr+40% 120Min Winter	30.017	0.00	1.35	100Yr+45% 1440Min Winter	5.535	0.00	1.68
30Yr+40% 180Min Winter	22.217	0.00	1.44	100Yr+45% 2160Min Summer	3.998	0.00	1.37
30Yr+40% 180Min Summer	22.217	0.00	1.30	100Yr+45% 2160Min Winter	3.998	0.00	1.44
30Yr+40% 240Min Summer	17.847	0.00	1.43	100Yr+45% 2880Min Summer	3.176	0.00	1.22
30Yr+40% 240Min Winter	17.847	0.00	1.35	100Yr+45% 2880Min Winter	3.176	0.00	1.37
30Yr+40% 360Min Summer	13.013	0.00	1.48	100Yr+45% 4320Min Summer	2.321	0.00	1.23
30Yr+40% 360Min Winter	13.013	0.00	1.58	100Yr+45% 4320Min Winter	2.321	0.00	0.85
30Yr+40% 480Min Summer	10.356	0.00	1.51	100Yr+45% 5760Min Winter	1.877	0.00	0.86
30Yr+40% 480Min Winter	10.356	0.00	1.45	100Yr+45% 5760Min Summer	1.877	0.00	0.78

## Simulation Results

Return Period Yrs: 1.0

Climate Change %: 0

### Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S15	15 min Winter	8	45.683	0.066	7.791		OK
S35	15 min Winter	9	45.845	0.067	7.954		OK
S36	15 min Winter	9	45.439	0.059	15.708		OK
S71	15 min Winter	9	44.009	0.074	25.164		OK
S38	15 min Winter	8	45.892	0.032	2.214		OK
S39	15 min Winter	8	45.961	0.041	3.070		OK
S40	15 min Winter	9	45.790	0.052	8.069		OK
S41	15 min Winter	9	45.388	0.038	10.165		OK
S42	15 min Winter	9	43.872	0.156	35.665		OK
S43	15 min Winter	8	46.705	0.035	5.451		OK
S44	15 min Winter	9	45.448	0.048	9.949		OK
S45	15 min Winter	9	43.848	0.169	45.521		OK
S72	-	0	45.061	0.000	0.000		OK
S73	15 min Winter	9	43.722	0.203	57.814		OK
S46	15 min Winter	8	43.988	0.047	3.982		OK
S47	15 min Winter	9	43.681	0.207	62.197		OK
S48	15 min Winter	10	43.641	0.205	63.422		OK
ATTENUATION	120 min Summer	66	43.479	0.099	36.586		OK
S49	120 min Summer	67	43.221	0.086	35.882		OK
S50	120 min Summer	67	42.596	0.090	37.324		OK
S51	120 min Summer	67	41.596	0.093	37.738		OK
S52	120 min Summer	67	41.172	0.094	39.424		OK
S53	15 min Winter	9	41.133	0.020	0.679		OK
S54	15 min Winter	9	41.011	0.035	2.129		OK
S55	120 min Summer	66	40.640	0.089	42.382		OK
S56	15 min Winter	9	39.485	0.031	1.641		OK
S57	120 min Summer	66	38.984	0.119	45.840		OK
S58	120 min Summer	66	38.756	0.056	47.393		OK
S59	15 min Winter	9	45.677	0.014	0.313		OK
S60	15 min Winter	8	45.573	0.035	4.192		OK
S61	15 min Winter	8	44.144	0.038	6.325		OK
S62	15 min Winter	9	43.625	0.038	7.236		OK
S63	15 min Winter	9	41.647	0.049	12.220		OK
S64	15 min Winter	9	39.379	0.052	16.483		OK
S65	15 min Winter	9	36.568	0.069	16.510		OK
S70	120 min Summer	65	36.464	0.114	57.461		OK
B_IN	600 min Winter	447	36.197	0.347	6.710		OK
BASIN	600 min Winter	447	36.197	0.397	6.709		OK
S68	600 min Winter	448	36.197	0.465	6.652		Surcharged
S69	15 min Winter	0	35.889	0.319	0.050		Outfall

### Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	9	S15	S36	0.062	0.729	7.595	0.105	OK
2.000	15 min Winter	9	S35	S36	0.067	0.810	8.113	0.200	OK
1.001	15 min Winter	9	S36	S71	0.066	1.343	15.569	0.086	OK
1.002	15 min Winter	9	S71	S42	0.115	1.014	25.138	0.135	OK
3.000	15 min Winter	9	S38	S40	0.042	0.360	2.151	0.025	OK
4.000	15 min Winter	8	S39	S40	0.041	0.767	2.992	0.164	OK
3.001	15 min Winter	9	S40	S41	0.052	0.992	8.214	0.068	OK
3.002	15 min Winter	9	S41	S42	0.097	0.533	10.200	0.036	OK
1.003	15 min Winter	9	S42	S45	0.162	0.906	35.369	0.493	OK
5.000	15 min Winter	8	S43	S44	0.042	1.063	5.374	0.054	OK
5.001	15 min Winter	9	S44	S45	0.048	1.379	10.153	0.058	OK
1.004	15 min Winter	9	S45	S73	0.186	0.978	44.917	0.626	OK



## Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
6.000	15 min Winter	9	S72	S73	0.025	0.000	0.000	0.000	OK
1.005	15 min Winter	9	S73	S47	0.205	1.108	56.672	0.790	OK
7.000	15 min Winter	9	S46	S47	0.050	0.807	3.815	0.214	OK
1.006	15 min Winter	10	S47	S48	0.206	1.206	62.228	0.867	OK
1.007	30 min Summer	18	S48		0.135	2.001	57.250	0.795	OK
1.008	120 min Summer	67		S49	0.093	1.905	35.359	0.238	OK
1.009	120 min Summer	67	S49	S50	0.088	2.076	35.906	0.185	OK
1.010	120 min Summer	67	S50	S51	0.091	2.050	37.365	0.200	OK
1.011	120 min Summer	67	S51	S52	0.093	2.011	37.768	0.214	OK
1.012	120 min Summer	67	S52	S55	0.091	2.169	39.456	0.214	OK
8.000	15 min Winter	9	S53	S54	0.028	0.314	0.696	0.040	OK
8.001	15 min Winter	9	S54	S55	0.035	0.680	2.144	0.122	OK
1.013	120 min Summer	66	S55	S57	0.089	2.416	42.329	0.195	OK
9.000	15 min Winter	9	S56	S57	0.031	0.647	1.676	0.093	OK
1.014	120 min Summer	66	S57	S58	0.087	2.113	45.843	0.150	OK
1.015	120 min Summer	66	S58	S70	0.085	2.290	47.397	0.034	OK
10.000	15 min Winter	9	S59	S60	0.024	0.174	0.319	0.018	OK
10.001	15 min Winter	8	S60	S61	0.036	1.245	4.103	0.118	OK
10.002	15 min Winter	9	S61	S62	0.038	1.416	6.211	0.062	OK
10.003	15 min Winter	9	S62	S63	0.043	1.361	7.310	0.062	OK
10.004	15 min Winter	9	S63	S64	0.049	1.931	12.328	0.105	OK
10.005	15 min Winter	9	S64	S65	0.052	2.026	16.510	0.066	OK
10.006	15 min Winter	9	S65	S70	0.085	0.790	16.482	0.053	OK
1.016	480 min Winter	346	S70	B_IN	0.195	0.747	23.661	0.060	OK
1.017	600 min Winter	447	B_IN	BASIN	0.372	0.364	19.902	0.149	OK
1.018	600 min Winter	739	BASIN	S68	0.424	0.074	7.391	0.025	OK
1.019	600 min Winter	450	S68	S69	0.242	0.315	18.099	0.076	OK

Return Period Yrs: 30.0

Climate Change %: 40

## Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S15	15 min Winter	12	46.461	0.843	24.692		Surcharged
S35	15 min Winter	11	46.675	0.898	39.121		Surcharged
S36	15 min Winter	12	46.440	1.060	57.604		Surcharged
S71	15 min Winter	12	46.291	2.356	90.901		Surcharged
S38	15 min Winter	12	46.287	0.427	7.017		Surcharged
S39	15 min Winter	12	46.334	0.414	9.727		Surcharged
S40	15 min Winter	12	46.285	0.547	30.158		Surcharged
S41	15 min Winter	12	46.264	0.914	35.354		Surcharged
S42	15 min Winter	12	46.239	2.523	129.432		Surcharged
S43	15 min Winter	8	46.771	0.101	42.040		OK
S44	15 min Winter	12	46.174	0.774	34.411		Surcharged
S45	15 min Winter	12	46.125	2.445	168.502		Surcharged
S72	30 min Summer	18	45.340	0.280	0.000		Surcharged
S73	15 min Winter	11	45.332	1.813	225.911		Surcharged
S46	15 min Winter	10	45.390	1.448	23.931		Surcharged
S47	15 min Winter	11	44.898	1.424	258.358		Surcharged
S48	30 min Summer	18	44.442	1.006	267.739		Surcharged
ATTENUATION	30 min Winter	28	43.818	0.438	187.776		Surcharged
S49	30 min Winter	27	43.451	0.316	188.441		Surcharged
S50	30 min Winter	21	42.986	0.480	186.580		Surcharged
S51	30 min Summer	19	42.034	0.531	186.776		Surcharged
S52	30 min Summer	19	41.583	0.505	201.085		Surcharged
S53	15 min Winter	8	41.170	0.058	5.577		OK
S54	15 min Winter	9	41.091	0.116	16.380		OK
S55	30 min Summer	18	40.983	0.432	235.036		Surcharged
S56	15 min Winter	8	39.548	0.094	13.461		OK
S57	30 min Summer	16	39.207	0.341	293.019		OK
S58	30 min Summer	16	38.843	0.143	317.485		OK
S59	15 min Winter	8	45.701	0.038	2.567		OK
S60	15 min Winter	8	45.652	0.113	32.421		OK
S61	15 min Winter	8	44.216	0.110	49.065		OK
S62	15 min Winter	8	43.696	0.109	57.161		OK
S63	15 min Winter	8	41.751	0.153	96.935		OK
S64	15 min Winter	8	39.478	0.151	129.180		OK
S65	720 min Winter	702	37.359	0.860	0.769		Surcharged
S70	720 min Winter	701	37.359	1.009	6.952		Surcharged
B_IN	720 min Winter	703	37.359	1.509	6.589		Surcharged
BASIN	720 min Winter	703	37.359	1.559	6.590		Surcharged
S68	720 min Winter	704	37.365	1.632	5.900		Surcharged
S69	15 min Summer	0	35.889	0.319	2.412		Outfall

## Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	9	S15	S36	0.300	1.186	56.645	0.780	Surcharged
2.000	15 min Winter	8	S35	S36	0.225	1.274	50.640	1.247	OK
1.001	15 min Winter	8	S36	S71	0.300	1.555	79.907	0.442	Surcharged
1.002	15 min Winter	8	S71	S42	0.300	1.426	100.800	0.542	Surcharged
3.000	30 min Summer	18	S38	S40	0.300	0.631	16.103	0.184	Surcharged
4.000	30 min Summer	17	S39	S40	0.150	1.262	21.877	1.199	Surcharged
3.001	30 min Summer	18	S40	S41	0.300	1.713	58.023	0.482	Surcharged
3.002	15 min Winter	9	S41	S42	0.300	1.255	65.898	0.231	Surcharged
1.003	15 min Winter	16	S42	S45	0.300	1.921	135.805	1.892	Surcharged
5.000	15 min Winter	9	S43	S44	0.162	1.880	41.738	0.423	OK
5.001	15 min Winter	9	S44	S45	0.300	1.999	69.356	0.394	Surcharged
1.004	15 min Winter	15	S45	S73	0.300	2.520	178.161	2.482	Surcharged
6.000	30 min Winter	23	S72	S73	0.150	0.329	3.737	0.086	Surcharged
1.005	15 min Winter	11	S73	S47	0.300	3.227	228.115	3.178	Surcharged
7.000	15 min Winter	10	S46	S47	0.150	1.296	22.911	1.284	Surcharged
1.006	15 min Winter	11	S47	S48	0.300	3.671	259.482	3.615	Surcharged



## Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.007	15 min Winter	12	S48		0.300	4.017	268.277	3.727	Surcharged
1.008	30 min Winter	32		S49	0.300	2.805	192.269	1.293	Surcharged
1.009	30 min Winter	31	S49	S50	0.300	3.122	193.723	0.995	Surcharged
1.010	60 min Summer	49	S50	S51	0.300	2.980	195.441	1.044	Surcharged
1.011	60 min Winter	50	S51	S52	0.300	2.948	195.863	1.108	Surcharged
1.012	30 min Winter	19	S52	S55	0.300	3.250	209.191	1.135	Surcharged
8.000	15 min Winter	8	S53	S54	0.086	0.524	5.492	0.317	OK
8.001	30 min Summer	18	S54	S55	0.132	1.126	16.299	0.928	OK
1.013	30 min Winter	19	S55	S57	0.300	3.601	238.476	1.100	Surcharged
9.000	15 min Winter	8	S56	S57	0.094	1.127	13.056	0.722	OK
1.014	30 min Summer	16	S57	S58	0.242	3.359	293.048	0.962	OK
1.015	30 min Summer	16	S58	S70	0.296	3.007	317.418	0.228	OK
10.000	15 min Winter	8	S59	S60	0.076	0.285	2.525	0.142	OK
10.001	15 min Winter	8	S60	S61	0.112	2.261	31.929	0.916	OK
10.002	15 min Winter	8	S61	S62	0.110	2.525	48.682	0.487	OK
10.003	15 min Winter	8	S62	S63	0.131	2.354	56.644	0.483	OK
10.004	15 min Winter	9	S63	S64	0.153	3.326	95.363	0.814	OK
10.005	15 min Winter	9	S64	S65	0.225	3.587	128.085	0.515	OK
10.006	30 min Summer	17	S65	S70	0.450	1.012	112.166	0.363	OK
1.016	30 min Summer	17	S70	B_IN	0.450	2.659	422.866	1.075	OK
1.017	30 min Summer	21	B_IN	BASIN	0.450	2.930	418.826	3.141	OK
1.018	5760 min Winter	3464	BASIN	S68	0.450	0.163	25.858	0.086	OK
1.019	5760 min Winter	2715	S68	S69	0.270	0.831	43.780	0.184	OK

Return Period Yrs: 100.0

Climate Change %: 45

## Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S15	30 min Winter	21	47.331	1.713	31.596		Surcharged
S35	30 min Summer	19	47.613	1.836	43.427		Surcharged
S36	30 min Winter	21	47.294	1.914	68.281		Surcharged
S71	30 min Winter	21	47.110	3.176	106.848		Surcharged
S38	30 min Winter	21	47.098	1.238	8.978		Surcharged
S39	30 min Winter	21	47.171	1.251	12.446		Surcharged
S40	30 min Winter	21	47.097	1.360	33.594		Surcharged
S41	30 min Winter	21	47.075	1.725	41.390		Surcharged
S42	30 min Winter	21	47.042	3.326	148.076		Surcharged
S43	30 min Winter	21	47.027	0.357	22.108		Surcharged
S44	30 min Winter	21	46.965	1.565	43.428		Surcharged
S45	30 min Winter	21	46.896	3.216	190.995		Surcharged
S72	30 min Summer	19	45.909	0.848	0.000		Surcharged
S73	30 min Summer	19	45.901	2.382	252.340		Surcharged
S46	30 min Summer	18	46.121	2.180	27.903		Surcharged
S47	30 min Summer	19	45.354	1.881	291.905		Surcharged
S48	30 min Summer	19	44.768	1.332	302.761		Surcharged
ATTENUATION	30 min Winter	31	44.024	0.644	193.438		Surcharged
S49	30 min Winter	29	43.626	0.491	195.003		Surcharged
S50	30 min Summer	18	43.145	0.640	176.109		Surcharged
S51	30 min Summer	18	42.307	0.804	181.315		Surcharged
S52	30 min Summer	18	41.884	0.805	207.681		Surcharged
S53	30 min Summer	18	41.427	0.314	5.069		Surcharged
S54	30 min Summer	18	41.417	0.441	15.010		Surcharged
S55	30 min Summer	18	41.246	0.694	249.380		Surcharged
S56	15 min Winter	8	39.569	0.115	17.576		OK
S57	15 min Winter	8	39.227	0.362	313.158		OK
S58	15 min Winter	8	38.849	0.149	345.110		OK
S59	15 min Winter	10	45.838	0.175	2.611		Surcharged
S60	15 min Winter	10	45.826	0.288	33.802		Surcharged
S61	15 min Winter	7	44.228	0.121	57.705		OK
S62	15 min Winter	8	43.709	0.122	68.487		OK
S63	15 min Winter	8	41.784	0.185	120.701		OK
S64	15 min Winter	8	39.502	0.175	164.088		OK
S65	960 min Winter	930	37.721	1.222	0.932		Surcharged
S70	960 min Winter	930	37.721	1.371	7.484		Surcharged
B_IN	960 min Winter	930	37.721	1.871	7.481		Flood Risk
BASIN	960 min Winter	932	37.721	1.921	7.192		Flood Risk
S68	960 min Winter	927	37.723	1.990	7.181		Flood Risk
S69	15 min Summer	0	35.889	0.319	3.216		Outfall

## Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	8	S15	S36	0.300	1.197	64.590	0.889	Surcharged
2.000	15 min Winter	9	S35	S36	0.225	1.468	58.359	1.438	OK
1.001	15 min Winter	7	S36	S71	0.300	1.426	83.102	0.460	Surcharged
1.002	30 min Summer	17	S71	S42	0.300	1.609	113.735	0.612	Surcharged
3.000	30 min Summer	16	S38	S40	0.300	0.665	20.779	0.237	Surcharged
4.000	30 min Summer	15	S39	S40	0.150	1.415	25.013	1.371	Surcharged
3.001	15 min Winter	8	S40	S41	0.300	1.699	71.876	0.598	Surcharged
3.002	15 min Winter	8	S41	S42	0.300	1.316	69.103	0.243	Surcharged
1.003	30 min Summer	22	S42	S45	0.300	2.115	149.484	2.083	Surcharged
5.000	30 min Summer	18	S43	S44	0.225	1.876	51.572	0.523	OK
5.001	15 min Winter	8	S44	S45	0.300	1.949	74.068	0.420	Surcharged
1.004	15 min Winter	15	S45	S73	0.300	2.844	201.066	2.801	Surcharged
6.000	15 min Winter	17	S72	S73	0.150	0.362	5.436	0.126	Surcharged
1.005	15 min Winter	11	S73	S47	0.300	3.648	257.849	3.593	Surcharged
7.000	15 min Winter	10	S46	S47	0.150	1.645	29.077	1.630	Surcharged
1.006	15 min Winter	11	S47	S48	0.300	4.198	296.754	4.135	Surcharged



## Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.007	15 min Winter	11	S48		0.300	4.376	307.059	4.266	Surcharged
1.008	30 min Winter	33		S49	0.300	2.791	197.277	1.326	Surcharged
1.009	30 min Winter	42	S49	S50	0.300	3.099	199.525	1.025	Surcharged
1.010	60 min Winter	63	S50	S51	0.300	2.955	199.633	1.066	Surcharged
1.011	30 min Winter	27	S51	S52	0.300	2.955	200.121	1.132	Surcharged
1.012	60 min Winter	31	S52	S55	0.300	3.248	208.688	1.132	Surcharged
8.000	30 min Summer	16	S53	S54	0.150	0.534	6.770	0.391	Surcharged
8.001	15 min Winter	9	S54	S55	0.150	1.148	19.552	1.113	Surcharged
1.013	30 min Summer	18	S55	S57	0.300	3.614	248.393	1.146	Surcharged
9.000	15 min Winter	8	S56	S57	0.115	1.180	16.997	0.940	OK
1.014	15 min Winter	8	S57	S58	0.256	3.364	311.282	1.022	OK
1.015	15 min Winter	8	S58	S70	0.300	3.143	344.386	0.247	OK
10.000	15 min Winter	11	S59	S60	0.150	0.352	5.466	0.307	Surcharged
10.001	15 min Winter	8	S60	S61	0.136	2.263	36.816	1.057	OK
10.002	15 min Winter	8	S61	S62	0.122	2.621	57.416	0.574	OK
10.003	15 min Winter	8	S62	S63	0.154	2.428	68.095	0.580	OK
10.004	15 min Winter	8	S63	S64	0.204	3.398	119.568	1.021	OK
10.005	15 min Winter	8	S64	S65	0.237	3.690	162.726	0.654	OK
10.006	15 min Winter	10	S65	S70	0.450	1.166	145.662	0.471	OK
1.016	30 min Summer	17	S70	B_IN	0.450	3.090	491.449	1.250	OK
1.017	30 min Summer	19	B_IN	BASIN	0.450	3.178	491.761	3.688	OK
1.018	4320 min Summer	2138	BASIN	S68	0.450	0.157	24.966	0.083	OK
1.019	5760 min Winter	2632	S68	S69	0.270	0.828	42.518	0.179	OK

## Appendix L





SUMMARY TABLE		DESIGN CONDITIONS			
		1	2	3	4
<b>Land Use Type</b> <b>Pollution Hazard Level</b> <b>Pollution Hazard Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	Residential roofing Very low 0.2 0.2 0.05				
<b>SuDS components proposed</b>		SuDS components can only be assumed to deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters of the SuDS Manual. See also checklists in Appendix B			
<b>Component 1</b>	Detention basin				
<b>Component 2</b>	None				
<b>Component 3</b>	None				
<b>SuDS Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	 0.5 0.5 0.6				
<b>Groundwater protection type</b>  <b>Groundwater protection Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	None  0 0 0				
<b>Combined Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>  <b>Acceptability of Pollution Mitigation</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	 0.5 0.5 0.6  Sufficient Sufficient Sufficient	Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			

SUMMARY TABLE		DESIGN CONDITIONS			
		1	2	3	4
Land Use Type	Residential parking				
Pollution Hazard Level	Low				
Pollution Hazard Indices					
TSS	0.5				
Metals	0.4				
Hydrocarbons	0.4				
SuDS components proposed		SuDS components can only be assumed to deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters of the SuDS Manual. See also checklists in Appendix B			
Component 1	Pervious pavement (where the pavement is not designed as an infiltration component)				
Component 2	None				
Component 3	None				
SuDS Pollution Mitigation Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
Groundwater protection type	None				
Groundwater protection					
Pollution Mitigation					
Indices					
TSS	0				
Metals	0				
Hydrocarbons	0				
Combined Pollution Mitigation		Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
Acceptability of Pollution					
Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				



SUMMARY TABLE		DESIGN CONDITIONS			
		1	2	3	4
<b>Land Use Type</b> <b>Pollution Hazard Level</b> <b>Pollution Hazard Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	Low traffic roads (e.g. residential roads and general access roads, < 300 traffic movements/day) Low 0.5 0.4 0.4				
<b>SuDS components proposed</b>		SuDS components can only be assumed to deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters of the SuDS Manual. See also checklists in Appendix B			
<b>Component 1</b>	Detention basin				
<b>Component 2</b>	None				
<b>Component 3</b>	None				
<b>SuDS Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	 0.5 0.5 0.6				
<b>Groundwater protection type</b>  <b>Groundwater protection Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	None  0 0 0				
<b>Combined Pollution Mitigation Indices</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>  <b>Acceptability of Pollution Mitigation</b> <b>TSS</b> <b>Metals</b> <b>Hydrocarbons</b>	 0.5 0.5 0.6  Sufficient Sufficient Sufficient	Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			