

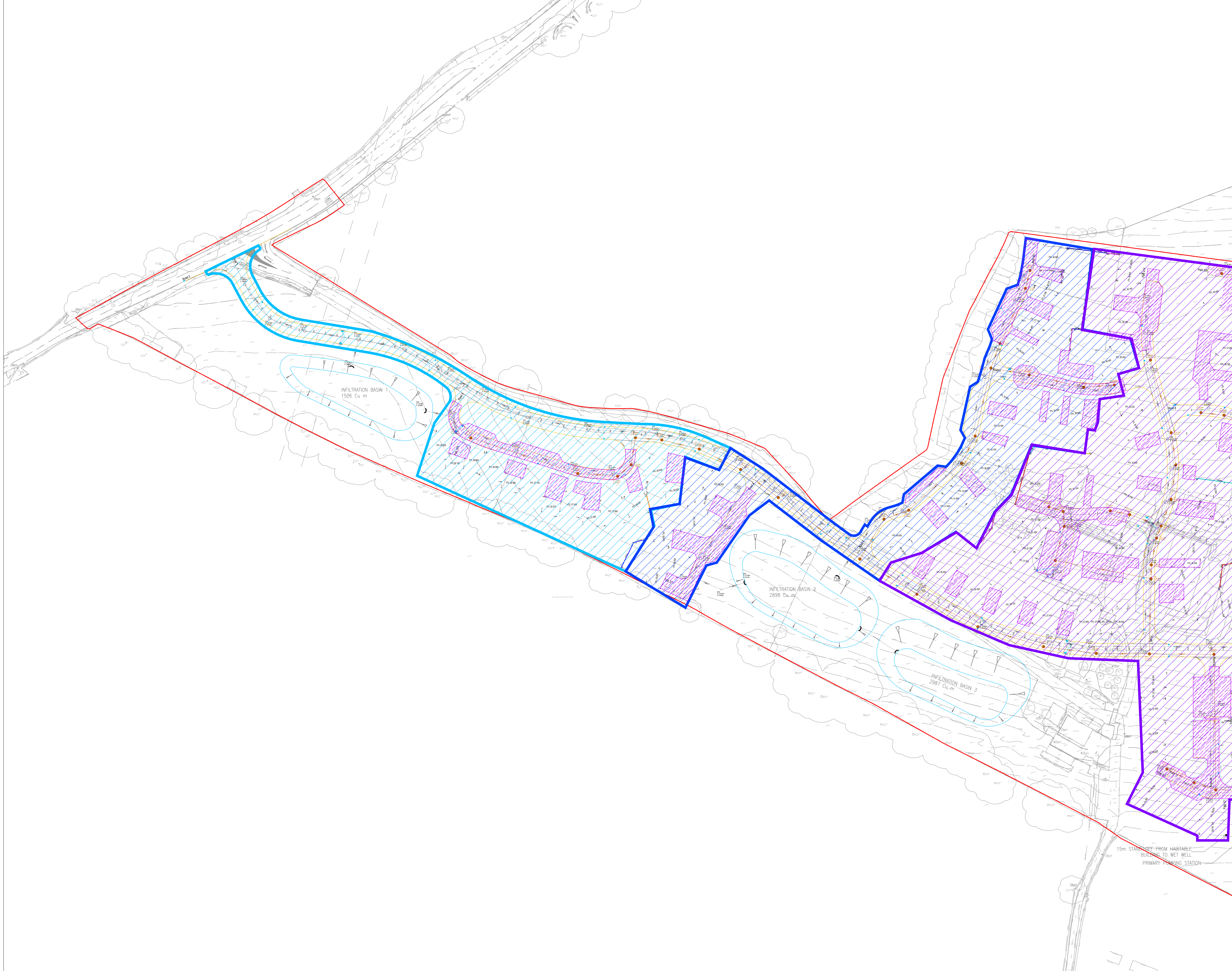
Appendix A

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LEGEND

- ROAD KERBS
 - DRAINAGE RUN FOUL
 - ROAD GULLY & CONNECTION
 - DRAINAGE RUN SURFACE
 - FOUL WATER MANHOLE
 - SURFACE WATER MANHOLE
- Catchment Area:
- Basin 1 0.308 Ha
 - Basin 2/3 0.387 Ha
 - Basin 4/5 3.356 Ha
 - Basin 6/7 1.003 Ha



PRELIMINARY
DRAWING/DESIGN IS STILL IN DEVELOPMENT
YOU ARE ADVISED TO MAKE THE ALLOWANCE

Rev	Description	Date	By	CSRD
C	BASIN VOLUMES UPDATED	19.05.2021	CLP	RW
B	BASIN VOLUMES ADDED	12.04.2021	OT	RW
A	PERMEABLE PAVEMENT ADDED	09.04.2021	OT	RW



Client: **millerhomes**

Project Name:
DOWNEND ROAD
FAREHAM

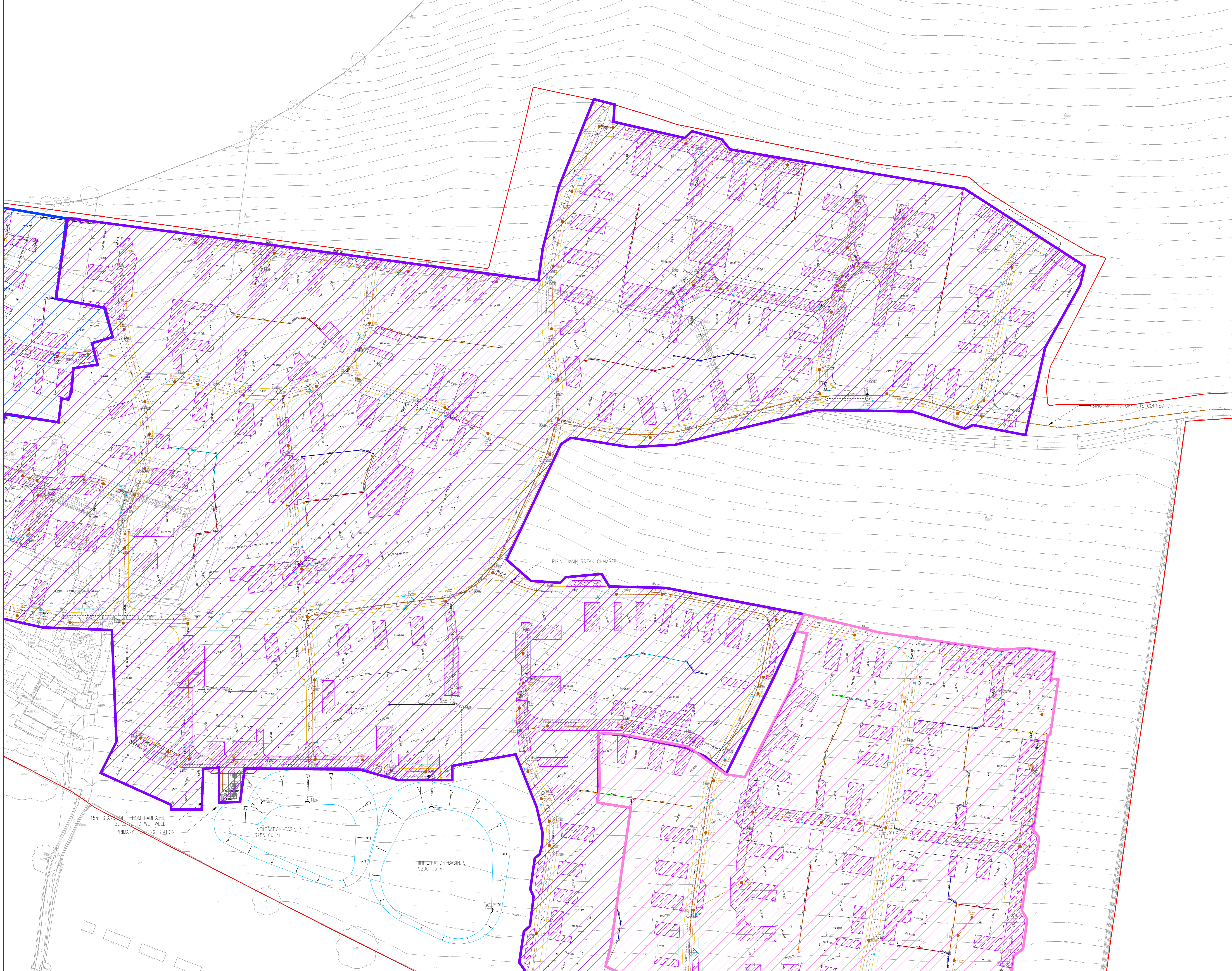
Title:
DRAINAGE OVERVIEW
SHEET (1 OF 3)

Project Phase: **PRELIMINARY**

Checked By	Checked Date	Drawn By	Drawn Date
RW	09.04.2021	OT	09.04.2021

Client Drawing No. - Scale: 1:500 (AT A0 SIZE)

Plot Drawing No. **091.5013.515** - Revision: **C**



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- LEGEND**
- ROAD KERBS
 - DRAINAGE RUN FOLLS
 - ROAD GULLY & CONNECTION
 - DRAINAGE RUN SURFACE
 - FOUL WATER MANHOLE
 - SURFACE WATER MANHOLE
- Catchment Key:**
- Basin 1 0.008 Ha
 - Basin 2/3 0.367 Ha
 - Basin 4/5 3.356 Ha
 - Basin 6/7 1.003 Ha

PRELIMINARY
DRAWING/DESIGN IS STILL "IN DEVELOPMENT"
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A	BASIN VOLUMES UPDATED	19.05.2021	CLP	RW
B	BASIN VOLUMES ADDED	12.04.2021	OT	RW
C	PERMEABLE PAVEMENT ADDED	09.04.2021	OT	RW
Rev	Description	Date	By	CSJ

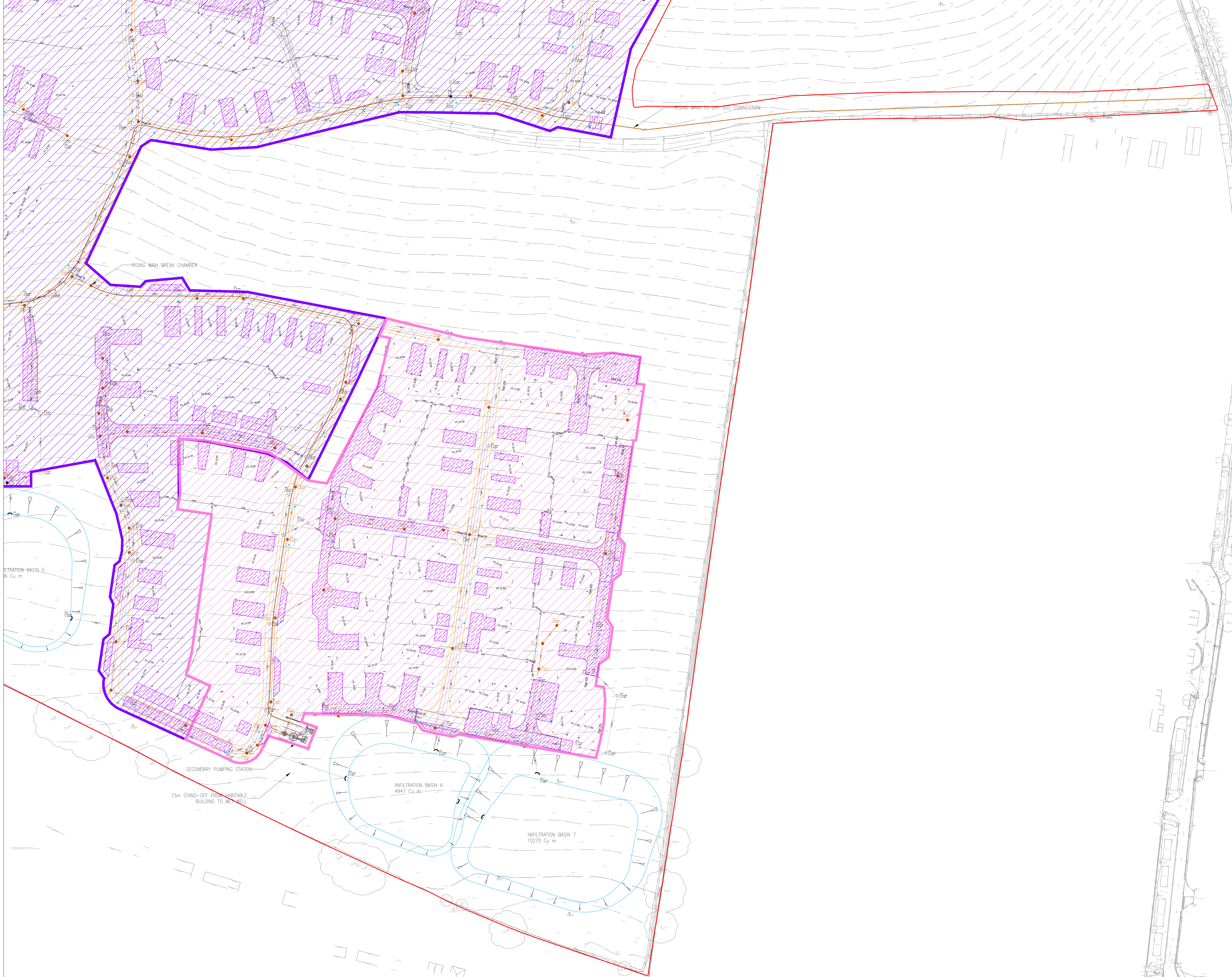
Paul Basham Associates Ltd
 Laneside Court, 5 Barrow Road, Fareham, PO15 8TU
 01488 664141, paul@paulbashamassociates.com, www.paulbashamassociates.com

Client:

Project Name: DOWNDEND ROAD, FAREHAM
 Title: DRAINAGE OVERVIEW SHEET (2 OF 3)
 Project Phase: PRELIMINARY

Checked By:	Checked Date:	Drawn By:	Drawn Date:
RW	09.04.2021	OT	09.04.2021
Client Drawing No:	Scale:		Revision:
	1:500		(AT A0 SIZE) C

PBA Drawing No: 091.5013.516



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LEGEND

- ROAD KERBS
- DRAINAGE RUN FOUL
- ROAD GULLY & CONNECTION
- DRAINAGE RUN SURFACE
- FOUL WATER MANHOLE
- SURFACE WATER MANHOLE

Catchment Key:

[Blue Hatched]	Basin 1 0.308 Ha
[Green Hatched]	Basin 2/3 0.387 Ha
[Purple Hatched]	Basin 4/5 3.356 Ha
[Pink Hatched]	Basin 6/7 1.003 Ha

PRELIMINARY
DRAWING/DESIGN IS STILL "IN DEVELOPMENT"
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

C	BASIN VOLUMES UPDATED	19.05.2021	CLP	RW
B	BASIN VOLUMES ADDED	12.04.2021	OT	RW
A	PERMEABLE PAVEMENT ADDED	09.04.2021	OT	RW
Rev	Description	Date	By	CSRD

p paulbusham associates
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Lansdown Court, 8 Broomfield Road, Farnham, TQ15 9TU
01483 626124 - paul@paulbushamassociates.com www.paulbushamassociates.com



Client: **Miller Homes**

Project Name: **DOWNEND ROAD FAREHAM**

Title: **DRAINAGE OVERVIEW (SHEET 3 OF 3)**

Project Phase: **PRELIMINARY**

Checked By:	Checked Date:	Drawn By:	Drawn Date:
RW	09.04.2021	OT	09.04.2021

Client Drawing No: - Scale: 1:500 (AT A0 SIZE)

PKA Drawing No: 091.5013.517 Revision: **C**

Appendix B



18th May 2021

Our ref: GE18989/GR05/210518



Rob Wilson
The Bothy
Cams Hall Estate
Fareham
PO16 8UT

Dear Rob,

RE: Land off Downend Road, Portchester

Further to your request, we write to present a summary of trial pit soakage testing undertaken on this site over a series of phases of intrusive investigation from late 2016 through to late summer 2020.

This letter summarises results from specific phases of investigation. For more details regarding those and any other phases of investigation, reference should be made to the reports prepared.

Trial pit soakage testing in December 2016 was undertaken in several pits. Results are presented for positions TP1 and TP3 to TP6 inclusive. Testing followed the general methodology as set out in BRE Digest 365 and whilst three test cycles were not completed, the objective of the testing was to inform the emerging drainage strategy and determine a principle of feasibility.

Further trial pit soakage testing to target potential basin locations was undertaken as part of investigation works undertaken in July 2020. Results from soakage testing undertaken in TP01 and TP02 are summarised herein.

Infiltration rates derived from soakage testing undertaken in the pits referenced above are summarised in Table 1 below and a plan showing the test locations is enclosed. For further information reference should be made to the individual reports.

Location	Main stratum tested	Infiltration rate (m/s)		
		Test cycle 1	Test cycle 2	Test cycle 3
GE15996 TP1	Weathered Chalk	3.0 x 10 ⁻⁵	-	-
GE15996 TP3	Weathered Chalk	2.0 x 10 ⁻⁵	1.4 x 10 ⁻⁵	-
GE15996 TP4	Gravelly Head Deposits	*	-	-
GE15996 TP5	Head Deposits	1.9 x 10 ⁻⁶	-	-
GE15996 TP6	Weathered Chalk	1.5 x 10 ⁻⁶	-	-
GE18989 TP01	Weathered Chalk	6.9 x 10 ⁻⁴	3.2 x 10 ⁻⁴	3.0 x 10 ⁻⁴
GE18989 TP02	Head Deposits	4.4 x 10 ⁻⁶	2.3 x 10 ⁻⁶	2.3 x 10 ⁻⁶

NOTE: * 1,800litres of water pumped into pit and drained too fast to record a fall in water level

Table 1 Summary of infiltration rates derived from trial pit soakage testing

We trust we have interpreted your request correctly and provided sufficient information for your current requirements.

Geo-Environmental Services Ltd
Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
+44(0)1273 832972 www.gesl.net

Environmental Consultants | Geotechnical Engineers | Site Investigations

Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479



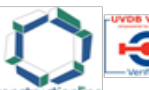
Should you have any queries please do not hesitate to contact us.

Yours sincerely
For and on Behalf of Geo-Environmental




GAVIN ROBERTS CGeol, BEng (Hons), MSc, FGS
Technical Director
gavin.roberts@gesl.net

Enc Soakage test location plan (GE15996 TP1, TP2-TP6; GE18989 TP01 and TP02)





Project: Land off Downend Road, Portchester PO16 8PX		Title: Exploratory Hole Location Plan	
Client: Miller Homes		Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	
Ref No: GE18989/GR05/210518	Version: 1.0		
Drawn: GR	Date: 18/05/2021		
Figure: 1	Scale: Not To Scale		
		 Geo-Environmental	

Appendix C

Lancaster Court
 8 Barnes Wallis Road
 Fareham PO15 5TU



Date 19/05/2021 09:40
 File basin1.SRCX

Designed by r.wilson
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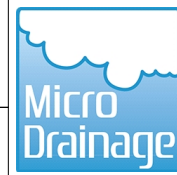
Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 5 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	22.355	0.055	65.7	22.8	O K
30 min Summer	22.359	0.059	66.0	24.4	O K
60 min Summer	22.350	0.050	65.3	20.9	O K
120 min Summer	22.339	0.039	50.9	16.1	O K
180 min Summer	22.332	0.032	41.0	13.2	O K
240 min Summer	22.327	0.027	35.1	11.1	O K
360 min Summer	22.321	0.021	27.2	8.6	O K
480 min Summer	22.317	0.017	22.1	7.1	O K
600 min Summer	22.315	0.015	18.8	6.1	O K
720 min Summer	22.313	0.013	16.9	5.3	O K
960 min Summer	22.311	0.011	13.7	4.3	O K
1440 min Summer	22.308	0.008	10.5	3.3	O K
2160 min Summer	22.306	0.006	7.9	2.5	O K
2880 min Summer	22.305	0.005	6.0	1.9	O K
4320 min Summer	22.304	0.004	4.8	1.5	O K
5760 min Summer	22.303	0.003	4.1	1.3	O K
7200 min Summer	22.303	0.003	3.5	1.1	O K
8640 min Summer	22.302	0.002	2.8	0.9	O K
10080 min Summer	22.302	0.002	2.8	0.9	O K
15 min Winter	22.363	0.063	66.4	26.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	96.371	0.0	13
30 min Summer	64.160	0.0	21
60 min Summer	40.933	0.0	36
120 min Summer	25.357	0.0	66
180 min Summer	18.948	0.0	96
240 min Summer	15.333	0.0	126
360 min Summer	11.348	0.0	186
480 min Summer	9.161	0.0	248
600 min Summer	7.755	0.0	308
720 min Summer	6.765	0.0	368
960 min Summer	5.449	0.0	488
1440 min Summer	4.013	0.0	732
2160 min Summer	2.951	0.0	1080
2880 min Summer	2.370	0.0	1436
4320 min Summer	1.739	0.0	2208
5760 min Summer	1.394	0.0	2888
7200 min Summer	1.175	0.0	3576
8640 min Summer	1.021	0.0	4336
10080 min Summer	0.908	0.0	5128
15 min Winter	96.371	0.0	14

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8 Barnes Wallis Road
Fareham PO15 5TU



Date 19/05/2021 09:40

Designed by r.wilson

File basin1.SRCX

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Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	22.363	0.063	66.4	26.1	O K
60 min Winter	22.347	0.047	61.6	19.5	O K
120 min Winter	22.333	0.033	43.0	13.7	O K
180 min Winter	22.326	0.026	33.1	10.6	O K
240 min Winter	22.321	0.021	27.2	8.7	O K
360 min Winter	22.316	0.016	20.8	6.6	O K
480 min Winter	22.313	0.013	16.9	5.3	O K
600 min Winter	22.311	0.011	14.3	4.5	O K
720 min Winter	22.310	0.010	12.4	3.9	O K
960 min Winter	22.308	0.008	9.8	3.1	O K
1440 min Winter	22.306	0.006	7.3	2.3	O K
2160 min Winter	22.304	0.004	5.4	1.7	O K
2880 min Winter	22.304	0.004	4.8	1.5	O K
4320 min Winter	22.303	0.003	3.5	1.1	O K
5760 min Winter	22.302	0.002	2.8	0.9	O K
7200 min Winter	22.302	0.002	2.2	0.8	O K
8640 min Winter	22.302	0.002	2.2	0.7	O K
10080 min Winter	22.302	0.002	2.2	0.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	64.160	0.0	22
60 min Winter	40.933	0.0	36
120 min Winter	25.357	0.0	68
180 min Winter	18.948	0.0	98
240 min Winter	15.333	0.0	128
360 min Winter	11.348	0.0	190
480 min Winter	9.161	0.0	246
600 min Winter	7.755	0.0	304
720 min Winter	6.765	0.0	368
960 min Winter	5.449	0.0	492
1440 min Winter	4.013	0.0	708
2160 min Winter	2.951	0.0	1100
2880 min Winter	2.370	0.0	1448
4320 min Winter	1.739	0.0	2280
5760 min Winter	1.394	0.0	2688
7200 min Winter	1.175	0.0	3712
8640 min Winter	1.021	0.0	4480
10080 min Winter	0.908	0.0	4968

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.308

Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:
0	4 0.233	4	8 0.075

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Model Details

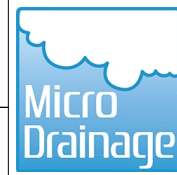
Storage is Online Cover Level (m) 23.500

Infiltration Basin Structure

Invert Level (m) 22.300 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 1.08000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 1.08000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	407.4	0.201	463.8	0.401	522.6	0.601	583.6
0.101	435.3	0.301	492.9	0.501	552.8	0.684	609.7

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 4 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	22.332	0.032	90.5	29.4	O K
30 min Summer	22.334	0.034	96.2	31.0	O K
60 min Summer	22.331	0.031	86.2	27.8	O K
120 min Summer	22.324	0.024	66.4	21.5	O K
180 min Summer	22.319	0.019	53.7	17.3	O K
240 min Summer	22.316	0.016	45.3	14.7	O K
360 min Summer	22.313	0.013	35.5	11.4	O K
480 min Summer	22.310	0.010	28.5	9.4	O K
600 min Summer	22.309	0.009	24.3	8.0	O K
720 min Summer	22.308	0.008	21.5	6.9	O K
960 min Summer	22.306	0.006	17.3	5.5	O K
1440 min Summer	22.305	0.005	13.2	4.1	O K
2160 min Summer	22.304	0.004	10.4	3.2	O K
2880 min Summer	22.303	0.003	7.6	2.4	O K
4320 min Summer	22.302	0.002	6.2	1.9	O K
5760 min Summer	22.302	0.002	4.8	1.6	O K
7200 min Summer	22.302	0.002	4.8	1.5	O K
8640 min Summer	22.301	0.001	3.5	1.2	O K
10080 min Summer	22.301	0.001	3.5	1.1	O K
15 min Winter	22.336	0.036	100.5	32.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	13
30 min Summer	83.789	0.0	21
60 min Summer	53.779	0.0	36
120 min Summer	33.337	0.0	66
180 min Summer	24.832	0.0	96
240 min Summer	20.006	0.0	126
360 min Summer	14.706	0.0	186
480 min Summer	11.818	0.0	248
600 min Summer	9.966	0.0	308
720 min Summer	8.665	0.0	368
960 min Summer	6.943	0.0	490
1440 min Summer	5.071	0.0	718
2160 min Summer	3.696	0.0	1092
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2172
5760 min Summer	1.705	0.0	2840
7200 min Summer	1.427	0.0	3664
8640 min Summer	1.235	0.0	4248
10080 min Summer	1.093	0.0	5064
15 min Winter	124.633	0.0	13

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File basin1-100.SRCX

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Checked by



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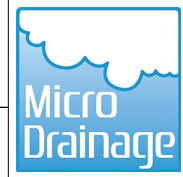
Source Control 2014.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	22.335	0.035	99.1	32.2	O K
60 min Winter	22.329	0.029	80.6	26.1	O K
120 min Winter	22.320	0.020	56.5	18.2	O K
180 min Winter	22.316	0.016	43.9	14.1	O K
240 min Winter	22.313	0.013	35.5	11.4	O K
360 min Winter	22.310	0.010	27.1	8.6	O K
480 min Winter	22.308	0.008	21.5	6.9	O K
600 min Winter	22.307	0.007	18.7	5.9	O K
720 min Winter	22.306	0.006	15.9	5.0	O K
960 min Winter	22.305	0.005	13.2	4.1	O K
1440 min Winter	22.304	0.004	10.4	3.2	O K
2160 min Winter	22.303	0.003	7.6	2.3	O K
2880 min Winter	22.302	0.002	6.2	1.9	O K
4320 min Winter	22.302	0.002	4.8	1.4	O K
5760 min Winter	22.301	0.001	3.5	1.2	O K
7200 min Winter	22.301	0.001	3.5	1.1	O K
8640 min Winter	22.301	0.001	3.5	1.1	O K
10080 min Winter	22.301	0.001	2.1	0.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	83.789	0.0	21
60 min Winter	53.779	0.0	38
120 min Winter	33.337	0.0	68
180 min Winter	24.832	0.0	100
240 min Winter	20.006	0.0	128
360 min Winter	14.706	0.0	192
480 min Winter	11.818	0.0	238
600 min Winter	9.966	0.0	320
720 min Winter	8.665	0.0	366
960 min Winter	6.943	0.0	484
1440 min Winter	5.071	0.0	740
2160 min Winter	3.696	0.0	1100
2880 min Winter	2.949	0.0	1460
4320 min Winter	2.142	0.0	2212
5760 min Winter	1.705	0.0	2888
7200 min Winter	1.427	0.0	3408
8640 min Winter	1.235	0.0	4200
10080 min Winter	1.093	0.0	4960

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8 Barnes Wallis Road
Fareham PO15 5TU



Date 19/05/2021 09:41
File basin1-100.SRCX

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.308

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0	4 0.233	4	8 0.075

Lancaster Court
8 Barnes Wallis Road
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Model Details

Storage is Online Cover Level (m) 23.500

Infiltration Basin Structure

Invert Level (m) 22.300 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 1.08000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 1.08000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	901.0	0.200	984.0	0.700	1202.0	1.200	1420.0

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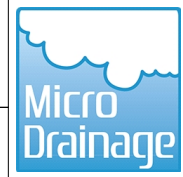
Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 1433 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	24.767	0.067	1.2	69.1	O K
30 min Summer	24.788	0.088	1.3	91.6	O K
60 min Summer	24.811	0.111	1.3	115.7	O K
120 min Summer	24.834	0.134	1.3	140.8	O K
180 min Summer	24.847	0.147	1.3	155.2	O K
240 min Summer	24.856	0.156	1.3	164.8	O K
360 min Summer	24.868	0.168	1.3	177.4	O K
480 min Summer	24.875	0.175	1.3	185.4	O K
600 min Summer	24.880	0.180	1.4	190.6	O K
720 min Summer	24.883	0.183	1.4	194.0	O K
960 min Summer	24.886	0.186	1.4	197.1	O K
1440 min Summer	24.886	0.186	1.4	197.6	O K
2160 min Summer	24.884	0.184	1.4	194.8	O K
2880 min Summer	24.879	0.179	1.4	190.0	O K
4320 min Summer	24.868	0.168	1.3	177.4	O K
5760 min Summer	24.855	0.155	1.3	163.8	O K
7200 min Summer	24.843	0.143	1.3	150.5	O K
8640 min Summer	24.832	0.132	1.3	138.1	O K
10080 min Summer	24.821	0.121	1.3	126.5	O K
15 min Winter	24.775	0.075	1.2	77.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	96.371	0.0	19
30 min Summer	64.160	0.0	34
60 min Summer	40.933	0.0	64
120 min Summer	25.357	0.0	124
180 min Summer	18.948	0.0	182
240 min Summer	15.333	0.0	242
360 min Summer	11.348	0.0	362
480 min Summer	9.161	0.0	482
600 min Summer	7.755	0.0	602
720 min Summer	6.765	0.0	720
960 min Summer	5.449	0.0	960
1440 min Summer	4.013	0.0	1210
2160 min Summer	2.951	0.0	1580
2880 min Summer	2.370	0.0	1988
4320 min Summer	1.739	0.0	2808
5760 min Summer	1.394	0.0	3632
7200 min Summer	1.175	0.0	4400
8640 min Summer	1.021	0.0	5192
10080 min Summer	0.908	0.0	5952
15 min Winter	96.371	0.0	19

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Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	24.799	0.099	1.3	102.7	O K
60 min Winter	24.824	0.124	1.3	129.8	O K
120 min Winter	24.850	0.150	1.3	158.2	O K
180 min Winter	24.865	0.165	1.3	174.7	O K
240 min Winter	24.876	0.176	1.3	185.7	O K
360 min Winter	24.889	0.189	1.4	200.5	O K
480 min Winter	24.898	0.198	1.4	210.2	O K
600 min Winter	24.904	0.204	1.4	216.7	O K
720 min Winter	24.908	0.208	1.4	221.2	O K
960 min Winter	24.912	0.212	1.4	226.3	O K
1440 min Winter	24.914	0.214	1.4	227.6	O K
2160 min Winter	24.909	0.209	1.4	222.5	O K
2880 min Winter	24.902	0.202	1.4	215.2	O K
4320 min Winter	24.885	0.185	1.4	196.0	O K
5760 min Winter	24.866	0.166	1.3	175.1	O K
7200 min Winter	24.847	0.147	1.3	154.7	O K
8640 min Winter	24.829	0.129	1.3	135.8	O K
10080 min Winter	24.813	0.113	1.3	118.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	64.160	0.0	33
60 min Winter	40.933	0.0	62
120 min Winter	25.357	0.0	122
180 min Winter	18.948	0.0	180
240 min Winter	15.333	0.0	240
360 min Winter	11.348	0.0	356
480 min Winter	9.161	0.0	472
600 min Winter	7.755	0.0	588
720 min Winter	6.765	0.0	702
960 min Winter	5.449	0.0	926
1440 min Winter	4.013	0.0	1356
2160 min Winter	2.951	0.0	1688
2880 min Winter	2.370	0.0	2160
4320 min Winter	1.739	0.0	3068
5760 min Winter	1.394	0.0	3920
7200 min Winter	1.175	0.0	4760
8640 min Winter	1.021	0.0	5536
10080 min Winter	0.908	0.0	6352

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.387

Time (mins)	Area
From: To: (ha)	
0	4 0.387

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Model Details

Storage is Online Cover Level (m) 25.439

Infiltration Basin Structure

Invert Level (m) 24.700 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00830 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.00830

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1022.5	0.301	1146.4	0.601	1275.4
0.101	1063.2	0.401	1188.8	0.701	1319.6
0.201	1104.5	0.501	1231.8	0.739	1336.4

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 1835 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	24.786	0.086	1.3	89.6	O K
30 min Summer	24.815	0.115	1.3	119.9	O K
60 min Summer	24.845	0.145	1.3	152.7	O K
120 min Summer	24.876	0.176	1.3	186.6	O K
180 min Summer	24.894	0.194	1.4	205.6	O K
240 min Summer	24.905	0.205	1.4	218.0	O K
360 min Summer	24.920	0.220	1.4	234.3	O K
480 min Summer	24.929	0.229	1.4	245.0	O K
600 min Summer	24.936	0.236	1.4	252.2	O K
720 min Summer	24.940	0.240	1.4	257.0	O K
960 min Summer	24.945	0.245	1.4	262.2	O K
1440 min Summer	24.945	0.245	1.4	262.6	O K
2160 min Summer	24.941	0.241	1.4	257.8	O K
2880 min Summer	24.935	0.235	1.4	251.1	O K
4320 min Summer	24.921	0.221	1.4	235.4	O K
5760 min Summer	24.906	0.206	1.4	218.8	O K
7200 min Summer	24.891	0.191	1.4	202.7	O K
8640 min Summer	24.877	0.177	1.3	187.6	O K
10080 min Summer	24.864	0.164	1.3	173.5	O K
15 min Winter	24.796	0.096	1.3	100.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	34
60 min Summer	53.779	0.0	64
120 min Summer	33.337	0.0	124
180 min Summer	24.832	0.0	184
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	362
480 min Summer	11.818	0.0	482
600 min Summer	9.966	0.0	602
720 min Summer	8.665	0.0	722
960 min Summer	6.943	0.0	960
1440 min Summer	5.071	0.0	1370
2160 min Summer	3.696	0.0	1708
2880 min Summer	2.949	0.0	2076
4320 min Summer	2.142	0.0	2896
5760 min Summer	1.705	0.0	3696
7200 min Summer	1.427	0.0	4536
8640 min Summer	1.235	0.0	5352
10080 min Summer	1.093	0.0	6144
15 min Winter	124.633	0.0	19

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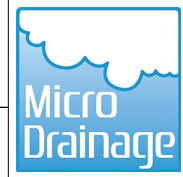
Source Control 2014.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	24.828	0.128	1.3	134.5	O K
60 min Winter	24.862	0.162	1.3	171.3	O K
120 min Winter	24.897	0.197	1.4	209.6	O K
180 min Winter	24.917	0.217	1.4	231.3	O K
240 min Winter	24.930	0.230	1.4	245.5	O K
360 min Winter	24.947	0.247	1.4	264.5	O K
480 min Winter	24.958	0.258	1.4	277.2	O K
600 min Winter	24.966	0.266	1.4	286.0	O K
720 min Winter	24.971	0.271	1.4	292.3	O K
960 min Winter	24.978	0.278	1.4	299.8	O K
1440 min Winter	24.981	0.281	1.5	303.6	O K
2160 min Winter	24.975	0.275	1.4	296.4	O K
2880 min Winter	24.967	0.267	1.4	287.5	O K
4320 min Winter	24.948	0.248	1.4	265.5	O K
5760 min Winter	24.926	0.226	1.4	241.2	O K
7200 min Winter	24.904	0.204	1.4	217.0	O K
8640 min Winter	24.883	0.183	1.4	194.4	O K
10080 min Winter	24.864	0.164	1.3	173.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	83.789	0.0	34
60 min Winter	53.779	0.0	64
120 min Winter	33.337	0.0	122
180 min Winter	24.832	0.0	180
240 min Winter	20.006	0.0	240
360 min Winter	14.706	0.0	358
480 min Winter	11.818	0.0	474
600 min Winter	9.966	0.0	590
720 min Winter	8.665	0.0	706
960 min Winter	6.943	0.0	934
1440 min Winter	5.071	0.0	1382
2160 min Winter	3.696	0.0	1968
2880 min Winter	2.949	0.0	2224
4320 min Winter	2.142	0.0	3156
5760 min Winter	1.705	0.0	4040
7200 min Winter	1.427	0.0	4904
8640 min Winter	1.235	0.0	5712
10080 min Winter	1.093	0.0	6552

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.387

Time (mins)	Area
From: To: (ha)	
0	4 0.387

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Model Details

Storage is Online Cover Level (m) 25.439

Infiltration Basin Structure

Invert Level (m) 24.700 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00830 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.00830

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1022.5	0.301	1146.4	0.601	1275.4
0.101	1063.2	0.401	1188.8	0.701	1319.6
0.201	1104.5	0.501	1231.8	0.739	1336.4

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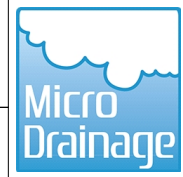
Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 43 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	19.177	0.177	62.0	200.6	O K
30 min Summer	19.216	0.216	63.6	246.4	O K
60 min Summer	19.233	0.233	64.2	266.9	O K
120 min Summer	19.228	0.228	64.0	260.4	O K
180 min Summer	19.211	0.211	63.3	240.2	O K
240 min Summer	19.191	0.191	62.5	217.0	O K
360 min Summer	19.154	0.154	61.0	173.6	O K
480 min Summer	19.122	0.122	59.8	137.0	O K
600 min Summer	19.096	0.096	58.7	107.2	O K
720 min Summer	19.076	0.076	57.9	84.3	O K
960 min Summer	19.051	0.051	56.9	57.0	O K
1440 min Summer	19.039	0.039	43.9	43.1	O K
2160 min Summer	19.029	0.029	33.0	32.2	O K
2880 min Summer	19.024	0.024	26.8	26.0	O K
4320 min Summer	19.018	0.018	20.0	19.3	O K
5760 min Summer	19.014	0.014	16.0	15.5	O K
7200 min Summer	19.012	0.012	13.8	13.3	O K
8640 min Summer	19.011	0.011	12.1	11.6	O K
10080 min Summer	19.009	0.009	10.4	10.0	O K
15 min Winter	19.201	0.201	63.0	228.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	96.371	0.0	19
30 min Summer	64.160	0.0	31
60 min Summer	40.933	0.0	50
120 min Summer	25.357	0.0	84
180 min Summer	18.948	0.0	118
240 min Summer	15.333	0.0	150
360 min Summer	11.348	0.0	216
480 min Summer	9.161	0.0	276
600 min Summer	7.755	0.0	334
720 min Summer	6.765	0.0	390
960 min Summer	5.449	0.0	496
1440 min Summer	4.013	0.0	738
2160 min Summer	2.951	0.0	1100
2880 min Summer	2.370	0.0	1468
4320 min Summer	1.739	0.0	2172
5760 min Summer	1.394	0.0	2896
7200 min Summer	1.175	0.0	3656
8640 min Summer	1.021	0.0	4368
10080 min Summer	0.908	0.0	5112
15 min Winter	96.371	0.0	19

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Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	19.247	0.247	64.8	282.7	O K
60 min Winter	19.267	0.267	65.6	306.5	O K
120 min Winter	19.255	0.255	65.1	292.2	O K
180 min Winter	19.227	0.227	64.0	258.7	O K
240 min Winter	19.196	0.196	62.7	222.2	O K
360 min Winter	19.139	0.139	60.4	155.9	O K
480 min Winter	19.092	0.092	58.6	103.2	O K
600 min Winter	19.060	0.060	57.3	66.9	O K
720 min Winter	19.048	0.048	54.3	52.7	O K
960 min Winter	19.039	0.039	43.9	42.9	O K
1440 min Winter	19.029	0.029	32.5	31.9	O K
2160 min Winter	19.021	0.021	23.9	23.7	O K
2880 min Winter	19.017	0.017	19.4	18.8	O K
4320 min Winter	19.013	0.013	14.3	13.8	O K
5760 min Winter	19.010	0.010	11.5	11.1	O K
7200 min Winter	19.009	0.009	9.8	9.4	O K
8640 min Winter	19.008	0.008	8.7	8.3	O K
10080 min Winter	19.007	0.007	7.6	7.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	64.160	0.0	31
60 min Winter	40.933	0.0	52
120 min Winter	25.357	0.0	90
180 min Winter	18.948	0.0	128
240 min Winter	15.333	0.0	162
360 min Winter	11.348	0.0	226
480 min Winter	9.161	0.0	284
600 min Winter	7.755	0.0	334
720 min Winter	6.765	0.0	376
960 min Winter	5.449	0.0	500
1440 min Winter	4.013	0.0	740
2160 min Winter	2.951	0.0	1108
2880 min Winter	2.370	0.0	1420
4320 min Winter	1.739	0.0	2168
5760 min Winter	1.394	0.0	2856
7200 min Winter	1.175	0.0	3624
8640 min Winter	1.021	0.0	4352
10080 min Winter	0.908	0.0	5120

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 1.386

Time (mins)	Area	Time (mins)	Area
From:	To: (ha)	From:	To: (ha)
0	4 0.705	4	8 0.681

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8 Barnes Wallis Road
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Model Details

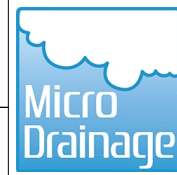
Storage is Online Cover Level (m) 20.000

Infiltration Basin Structure

Invert Level (m) 19.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.36000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.36000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1098.0	0.500	1296.0	1.000	1506.0

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 60 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	19.236	0.236	64.3	269.5	O K
30 min Summer	19.294	0.294	66.7	339.1	O K
60 min Summer	19.324	0.324	67.9	376.6	O K
120 min Summer	19.325	0.325	68.0	377.8	O K
180 min Summer	19.309	0.309	67.3	357.2	O K
240 min Summer	19.287	0.287	66.4	330.9	O K
360 min Summer	19.244	0.244	64.7	279.2	O K
480 min Summer	19.205	0.205	63.1	232.7	O K
600 min Summer	19.170	0.170	61.7	191.9	O K
720 min Summer	19.139	0.139	60.5	156.8	O K
960 min Summer	19.093	0.093	58.6	103.3	O K
1440 min Summer	19.049	0.049	56.0	54.3	O K
2160 min Summer	19.037	0.037	41.6	40.3	O K
2880 min Summer	19.029	0.029	33.0	32.6	O K
4320 min Summer	19.022	0.022	24.5	23.7	O K
5760 min Summer	19.017	0.017	19.4	18.9	O K
7200 min Summer	19.015	0.015	16.6	16.0	O K
8640 min Summer	19.013	0.013	14.3	13.8	O K
10080 min Summer	19.011	0.011	12.6	12.2	O K
15 min Winter	19.266	0.266	65.6	306.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	32
60 min Summer	53.779	0.0	54
120 min Summer	33.337	0.0	88
180 min Summer	24.832	0.0	122
240 min Summer	20.006	0.0	156
360 min Summer	14.706	0.0	222
480 min Summer	11.818	0.0	286
600 min Summer	9.966	0.0	348
720 min Summer	8.665	0.0	406
960 min Summer	6.943	0.0	520
1440 min Summer	5.071	0.0	736
2160 min Summer	3.696	0.0	1100
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2188
5760 min Summer	1.705	0.0	2880
7200 min Summer	1.427	0.0	3616
8640 min Summer	1.235	0.0	4368
10080 min Summer	1.093	0.0	5000
15 min Winter	124.633	0.0	20

Lancaster Court
8 Barnes Wallis Road
Fareham PO15 5TU



Date 19/05/2021 09:38
File basin 4-100.SRCX

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	19.334	0.334	68.3	388.0	O K
60 min Winter	19.373	0.373	69.9	436.0	O K
120 min Winter	19.370	0.370	69.8	432.5	O K
180 min Winter	19.343	0.343	68.7	399.6	O K
240 min Winter	19.309	0.309	67.3	358.3	O K
360 min Winter	19.244	0.244	64.7	278.8	O K
480 min Winter	19.185	0.185	62.3	209.6	O K
600 min Winter	19.135	0.135	60.3	151.4	O K
720 min Winter	19.094	0.094	58.6	104.7	O K
960 min Winter	19.049	0.049	56.0	54.5	O K
1440 min Winter	19.036	0.036	41.0	40.3	O K
2160 min Winter	19.027	0.027	30.2	29.4	O K
2880 min Winter	19.022	0.022	24.5	23.7	O K
4320 min Winter	19.016	0.016	17.7	17.1	O K
5760 min Winter	19.013	0.013	14.3	13.7	O K
7200 min Winter	19.011	0.011	12.1	11.6	O K
8640 min Winter	19.009	0.009	10.4	10.0	O K
10080 min Winter	19.008	0.008	9.2	8.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	83.789	0.0	32
60 min Winter	53.779	0.0	58
120 min Winter	33.337	0.0	94
180 min Winter	24.832	0.0	132
240 min Winter	20.006	0.0	168
360 min Winter	14.706	0.0	238
480 min Winter	11.818	0.0	302
600 min Winter	9.966	0.0	362
720 min Winter	8.665	0.0	416
960 min Winter	6.943	0.0	498
1440 min Winter	5.071	0.0	740
2160 min Winter	3.696	0.0	1100
2880 min Winter	2.949	0.0	1460
4320 min Winter	2.142	0.0	2196
5760 min Winter	1.705	0.0	2928
7200 min Winter	1.427	0.0	3584
8640 min Winter	1.235	0.0	4224
10080 min Winter	1.093	0.0	5184

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 1.386

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0 4	0.705	4 8	0.681

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8 Barnes Wallis Road
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File basin 4-100.SRCX

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Model Details

Storage is Online Cover Level (m) 20.000

Infiltration Basin Structure

Invert Level (m) 19.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.36000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.36000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1098.0	0.500	1296.0	1.000	1506.0

Lancaster Court
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 File basin 5.SRCX

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 52 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	19.181	0.181	113.1	384.7	O K
30 min Summer	19.224	0.224	115.4	477.7	O K
60 min Summer	19.244	0.244	116.4	522.2	O K
120 min Summer	19.240	0.240	116.2	513.0	O K
180 min Summer	19.222	0.222	115.3	473.3	O K
240 min Summer	19.201	0.201	114.2	426.9	O K
360 min Summer	19.160	0.160	112.0	339.5	O K
480 min Summer	19.126	0.126	110.3	266.0	O K
600 min Summer	19.098	0.098	108.8	206.6	O K
720 min Summer	19.077	0.077	107.7	160.7	O K
960 min Summer	19.051	0.051	106.4	107.0	O K
1440 min Summer	19.039	0.039	82.2	80.4	O K
2160 min Summer	19.029	0.029	60.8	59.5	O K
2880 min Summer	19.023	0.023	49.1	48.0	O K
4320 min Summer	19.017	0.017	35.3	34.8	O K
5760 min Summer	19.014	0.014	29.0	28.1	O K
7200 min Summer	19.011	0.011	23.7	23.1	O K
8640 min Summer	19.010	0.010	20.5	20.1	O K
10080 min Summer	19.009	0.009	18.4	17.9	O K
15 min Winter	19.206	0.206	114.4	437.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	18
30 min Summer	83.789	0.0	31
60 min Summer	53.779	0.0	50
120 min Summer	33.337	0.0	84
180 min Summer	24.832	0.0	118
240 min Summer	20.006	0.0	152
360 min Summer	14.706	0.0	216
480 min Summer	11.818	0.0	276
600 min Summer	9.966	0.0	334
720 min Summer	8.665	0.0	390
960 min Summer	6.943	0.0	496
1440 min Summer	5.071	0.0	736
2160 min Summer	3.696	0.0	1100
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2200
5760 min Summer	1.705	0.0	2888
7200 min Summer	1.427	0.0	3568
8640 min Summer	1.235	0.0	4344
10080 min Summer	1.093	0.0	5096
15 min Winter	124.633	0.0	18

Lancaster Court
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 File basin 5.SRCX

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	19.257	0.257	117.1	548.8	O K
60 min Winter	19.280	0.280	118.3	601.4	O K
120 min Winter	19.270	0.270	117.8	579.3	O K
180 min Winter	19.241	0.241	116.3	515.0	O K
240 min Winter	19.208	0.208	114.5	442.0	O K
360 min Winter	19.146	0.146	111.3	308.6	O K
480 min Winter	19.097	0.097	108.8	202.8	O K
600 min Winter	19.062	0.062	106.9	128.9	O K
720 min Winter	19.048	0.048	101.5	99.6	O K
960 min Winter	19.039	0.039	82.2	80.5	O K
1440 min Winter	19.029	0.029	60.8	59.4	O K
2160 min Winter	19.021	0.021	44.9	43.7	O K
2880 min Winter	19.017	0.017	35.3	34.4	O K
4320 min Winter	19.012	0.012	25.8	25.1	O K
5760 min Winter	19.010	0.010	20.5	20.0	O K
7200 min Winter	19.008	0.008	17.4	16.8	O K
8640 min Winter	19.007	0.007	15.3	14.7	O K
10080 min Winter	19.006	0.006	13.2	12.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	83.789	0.0	31
60 min Winter	53.779	0.0	54
120 min Winter	33.337	0.0	90
180 min Winter	24.832	0.0	128
240 min Winter	20.006	0.0	162
360 min Winter	14.706	0.0	228
480 min Winter	11.818	0.0	286
600 min Winter	9.966	0.0	334
720 min Winter	8.665	0.0	376
960 min Winter	6.943	0.0	496
1440 min Winter	5.071	0.0	736
2160 min Winter	3.696	0.0	1096
2880 min Winter	2.949	0.0	1476
4320 min Winter	2.142	0.0	2160
5760 min Winter	1.705	0.0	2880
7200 min Winter	1.427	0.0	3632
8640 min Winter	1.235	0.0	4328
10080 min Winter	1.093	0.0	4992

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 2.030

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0 4	1.453	4 8	0.577

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File basin 5.SRCX

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Model Details

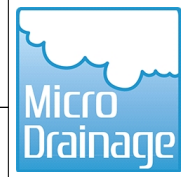
Storage is Online Cover Level (m) 20.000

Infiltration Basin Structure

Invert Level (m) 19.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.36000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.36000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	2075.0	0.500	2330.0	1.000	2572.0

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 File basin 5-100.SRCX

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 52 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	19.181	0.181	113.1	384.7	O K
30 min Summer	19.224	0.224	115.4	477.7	O K
60 min Summer	19.244	0.244	116.4	522.2	O K
120 min Summer	19.240	0.240	116.2	513.0	O K
180 min Summer	19.222	0.222	115.3	473.3	O K
240 min Summer	19.201	0.201	114.2	426.9	O K
360 min Summer	19.160	0.160	112.0	339.5	O K
480 min Summer	19.126	0.126	110.3	266.0	O K
600 min Summer	19.098	0.098	108.8	206.6	O K
720 min Summer	19.077	0.077	107.7	160.7	O K
960 min Summer	19.051	0.051	106.4	107.0	O K
1440 min Summer	19.039	0.039	82.2	80.4	O K
2160 min Summer	19.029	0.029	60.8	59.5	O K
2880 min Summer	19.023	0.023	49.1	48.0	O K
4320 min Summer	19.017	0.017	35.3	34.8	O K
5760 min Summer	19.014	0.014	29.0	28.1	O K
7200 min Summer	19.011	0.011	23.7	23.1	O K
8640 min Summer	19.010	0.010	20.5	20.1	O K
10080 min Summer	19.009	0.009	18.4	17.9	O K
15 min Winter	19.206	0.206	114.4	437.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	18
30 min Summer	83.789	0.0	31
60 min Summer	53.779	0.0	50
120 min Summer	33.337	0.0	84
180 min Summer	24.832	0.0	118
240 min Summer	20.006	0.0	152
360 min Summer	14.706	0.0	216
480 min Summer	11.818	0.0	276
600 min Summer	9.966	0.0	334
720 min Summer	8.665	0.0	390
960 min Summer	6.943	0.0	496
1440 min Summer	5.071	0.0	736
2160 min Summer	3.696	0.0	1100
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2200
5760 min Summer	1.705	0.0	2888
7200 min Summer	1.427	0.0	3568
8640 min Summer	1.235	0.0	4344
10080 min Summer	1.093	0.0	5096
15 min Winter	124.633	0.0	18

Lancaster Court
8 Barnes Wallis Road
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Date 19/05/2021 09:39
File basin 5-100.SRCX

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Source Control 2014.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	19.257	0.257	117.1	548.8	O K
60 min Winter	19.280	0.280	118.3	601.4	O K
120 min Winter	19.270	0.270	117.8	579.3	O K
180 min Winter	19.241	0.241	116.3	515.0	O K
240 min Winter	19.208	0.208	114.5	442.0	O K
360 min Winter	19.146	0.146	111.3	308.6	O K
480 min Winter	19.097	0.097	108.8	202.8	O K
600 min Winter	19.062	0.062	106.9	128.9	O K
720 min Winter	19.048	0.048	101.5	99.6	O K
960 min Winter	19.039	0.039	82.2	80.5	O K
1440 min Winter	19.029	0.029	60.8	59.4	O K
2160 min Winter	19.021	0.021	44.9	43.7	O K
2880 min Winter	19.017	0.017	35.3	34.4	O K
4320 min Winter	19.012	0.012	25.8	25.1	O K
5760 min Winter	19.010	0.010	20.5	20.0	O K
7200 min Winter	19.008	0.008	17.4	16.8	O K
8640 min Winter	19.007	0.007	15.3	14.7	O K
10080 min Winter	19.006	0.006	13.2	12.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	83.789	0.0	31
60 min Winter	53.779	0.0	54
120 min Winter	33.337	0.0	90
180 min Winter	24.832	0.0	128
240 min Winter	20.006	0.0	162
360 min Winter	14.706	0.0	228
480 min Winter	11.818	0.0	286
600 min Winter	9.966	0.0	334
720 min Winter	8.665	0.0	376
960 min Winter	6.943	0.0	496
1440 min Winter	5.071	0.0	736
2160 min Winter	3.696	0.0	1096
2880 min Winter	2.949	0.0	1476
4320 min Winter	2.142	0.0	2160
5760 min Winter	1.705	0.0	2880
7200 min Winter	1.427	0.0	3632
8640 min Winter	1.235	0.0	4328
10080 min Winter	1.093	0.0	4992

Lancaster Court
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 File basin 5-100.SRCX

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 2.030

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0 4	1.453	4 8	0.577

Lancaster Court
8 Barnes Wallis Road
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File basin 5-100.SRCX

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Model Details

Storage is Online Cover Level (m) 20.000

Infiltration Basin Structure

Invert Level (m) 19.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.36000 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.36000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	2075.0	0.500	2330.0	1.000	2572.0

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 File Basin 6-7-100.CASX

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Cascade Summary of Results for basin 6.SRCX

Upstream Outflow To Overflow To
Structures

(None) basin 7.SRCX (None)

Half Drain Time : 1423 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	14.540	0.040	1.0	66.3	O K
30 min Summer	14.553	0.053	1.3	87.7	O K
60 min Summer	14.567	0.067	1.3	110.8	O K
120 min Summer	14.581	0.081	1.3	134.9	O K
180 min Summer	14.589	0.089	1.3	148.9	O K
240 min Summer	14.595	0.095	1.3	158.3	O K
360 min Summer	14.602	0.102	1.3	170.7	O K
480 min Summer	14.607	0.107	1.3	178.8	O K
600 min Summer	14.610	0.110	1.3	184.1	O K
720 min Summer	14.612	0.112	1.3	187.7	O K
960 min Summer	14.615	0.115	1.3	191.4	O K
1440 min Summer	14.616	0.116	1.3	193.4	O K
2160 min Summer	14.615	0.115	1.3	192.6	O K
2880 min Summer	14.613	0.113	1.3	189.3	O K
4320 min Summer	14.607	0.107	1.3	178.9	O K
5760 min Summer	14.600	0.100	1.3	166.8	O K
7200 min Summer	14.593	0.093	1.3	154.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	96.371	0.0	19
30 min Summer	64.160	0.0	34
60 min Summer	40.933	0.0	64
120 min Summer	25.357	0.0	124
180 min Summer	18.948	0.0	182
240 min Summer	15.333	0.0	242
360 min Summer	11.348	0.0	362
480 min Summer	9.161	0.0	482
600 min Summer	7.755	0.0	602
720 min Summer	6.765	0.0	720
960 min Summer	5.449	0.0	960
1440 min Summer	4.013	0.0	1196
2160 min Summer	2.951	0.0	1576
2880 min Summer	2.370	0.0	1984
4320 min Summer	1.739	0.0	2808
5760 min Summer	1.394	0.0	3624
7200 min Summer	1.175	0.0	4400

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 File Basin 6-7-100.CASX

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Cascade Summary of Results for basin 6.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
8640 min Summer	14.586	0.086	1.3	143.2	O K
10080 min Summer	14.580	0.080	1.3	132.4	O K
15 min Winter	14.545	0.045	1.1	74.2	O K
30 min Winter	14.559	0.059	1.3	98.3	O K
60 min Winter	14.575	0.075	1.3	124.3	O K
120 min Winter	14.591	0.091	1.3	151.6	O K
180 min Winter	14.600	0.100	1.3	167.6	O K
240 min Winter	14.607	0.107	1.3	178.3	O K
360 min Winter	14.615	0.115	1.3	192.8	O K
480 min Winter	14.621	0.121	1.3	202.4	O K
600 min Winter	14.625	0.125	1.3	209.0	O K
720 min Winter	14.628	0.128	1.3	213.7	O K
960 min Winter	14.631	0.131	1.3	219.3	O K
1440 min Winter	14.632	0.132	1.3	221.7	O K
2160 min Winter	14.630	0.130	1.3	218.4	O K
2880 min Winter	14.627	0.127	1.3	212.8	O K
4320 min Winter	14.617	0.117	1.3	196.0	O K
5760 min Winter	14.606	0.106	1.3	177.0	O K
7200 min Winter	14.595	0.095	1.3	158.0	O K
8640 min Winter	14.584	0.084	1.3	140.3	O K
10080 min Winter	14.575	0.075	1.3	124.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
8640 min Summer	1.021	0.0	5184
10080 min Summer	0.908	0.0	5944
15 min Winter	96.371	0.0	19
30 min Winter	64.160	0.0	33
60 min Winter	40.933	0.0	62
120 min Winter	25.357	0.0	122
180 min Winter	18.948	0.0	180
240 min Winter	15.333	0.0	240
360 min Winter	11.348	0.0	356
480 min Winter	9.161	0.0	472
600 min Winter	7.755	0.0	588
720 min Winter	6.765	0.0	702
960 min Winter	5.449	0.0	924
1440 min Winter	4.013	0.0	1354
2160 min Winter	2.951	0.0	1688
2880 min Winter	2.370	0.0	2160
4320 min Winter	1.739	0.0	3064
5760 min Winter	1.394	0.0	3920
7200 min Winter	1.175	0.0	4752
8640 min Winter	1.021	0.0	5528
10080 min Winter	0.908	0.0	6248

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 File Basin 6-7-100.CASX

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Cascade Rainfall Details for basin 6.SRCX

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.370

Time (mins)	Area
From:	To: (ha)
0	4 0.370

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Cascade Model Details for basin 6.SRCX

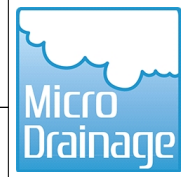
Storage is Online Cover Level (m) 15.500

Infiltration Basin Structure

Invert Level (m) 14.500 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.00540 Porosity 1.00
 Infiltration Coefficient Side (m/hr) 0.00540

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1645.0	0.500	1882.0	1.000	2125.0

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Cascade Summary of Results for basin 6-100.SRCX

Upstream Outflow To Overflow To
Structures

(None) basin 7-100.SRCX (None)

Half Drain Time : 4761 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	14.625	0.125	1.3	208.9	O K
30 min Summer	14.667	0.167	1.4	280.4	O K
60 min Summer	14.712	0.212	1.4	358.7	O K
120 min Summer	14.759	0.259	1.4	441.6	O K
180 min Summer	14.786	0.286	1.4	490.2	O K
240 min Summer	14.805	0.305	1.5	523.3	O K
360 min Summer	14.831	0.331	1.5	570.2	O K
480 min Summer	14.850	0.350	1.5	604.1	O K
600 min Summer	14.864	0.364	1.5	629.9	O K
720 min Summer	14.875	0.375	1.5	650.3	O K
960 min Summer	14.892	0.392	1.5	680.5	O K
1440 min Summer	14.912	0.412	1.5	716.6	O K
2160 min Summer	14.924	0.424	1.5	739.6	O K
2880 min Summer	14.926	0.426	1.5	743.8	O K
4320 min Summer	14.918	0.418	1.5	728.8	O K
5760 min Summer	14.908	0.408	1.5	709.9	O K
7200 min Summer	14.897	0.397	1.5	689.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	23
30 min Summer	83.789	0.0	38
60 min Summer	53.779	0.0	68
120 min Summer	33.337	0.0	128
180 min Summer	24.832	0.0	188
240 min Summer	20.006	0.0	248
360 min Summer	14.706	0.0	366
480 min Summer	11.818	0.0	486
600 min Summer	9.966	0.0	606
720 min Summer	8.665	0.0	726
960 min Summer	6.943	0.0	966
1440 min Summer	5.071	0.0	1444
2160 min Summer	3.696	0.0	2164
2880 min Summer	2.949	0.0	2880
4320 min Summer	2.142	0.0	3764
5760 min Summer	1.705	0.0	4544
7200 min Summer	1.427	0.0	5264

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Cascade Summary of Results for basin 6-100.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
8640 min Summer	14.887	0.387	1.5	671.0	O K
10080 min Summer	14.876	0.376	1.5	652.2	O K
15 min Winter	14.640	0.140	1.3	234.1	O K
30 min Winter	14.686	0.186	1.4	314.3	O K
60 min Winter	14.737	0.237	1.4	402.0	O K
120 min Winter	14.789	0.289	1.4	495.4	O K
180 min Winter	14.820	0.320	1.5	550.3	O K
240 min Winter	14.841	0.341	1.5	587.8	O K
360 min Winter	14.870	0.370	1.5	641.2	O K
480 min Winter	14.892	0.392	1.5	680.1	O K
600 min Winter	14.908	0.408	1.5	709.9	O K
720 min Winter	14.921	0.421	1.5	733.7	O K
960 min Winter	14.940	0.440	1.6	769.5	O K
1440 min Winter	14.964	0.464	1.6	813.8	O K
2160 min Winter	14.981	0.481	1.6	845.7	O K
2880 min Winter	14.987	0.487	1.6	856.7	O K
4320 min Winter	14.983	0.483	1.6	848.7	O K
5760 min Winter	14.968	0.468	1.6	821.9	O K
7200 min Winter	14.955	0.455	1.6	797.5	O K
8640 min Winter	14.942	0.442	1.6	772.6	O K
10080 min Winter	14.928	0.428	1.5	746.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
8640 min Summer	1.235	0.0	6056
10080 min Summer	1.093	0.0	6864
15 min Winter	124.633	0.0	23
30 min Winter	83.789	0.0	38
60 min Winter	53.779	0.0	68
120 min Winter	33.337	0.0	126
180 min Winter	24.832	0.0	186
240 min Winter	20.006	0.0	244
360 min Winter	14.706	0.0	362
480 min Winter	11.818	0.0	480
600 min Winter	9.966	0.0	598
720 min Winter	8.665	0.0	716
960 min Winter	6.943	0.0	952
1440 min Winter	5.071	0.0	1418
2160 min Winter	3.696	0.0	2116
2880 min Winter	2.949	0.0	2796
4320 min Winter	2.142	0.0	4108
5760 min Winter	1.705	0.0	5192
7200 min Winter	1.427	0.0	5616
8640 min Winter	1.235	0.0	6568
10080 min Winter	1.093	0.0	7464

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Cascade Rainfall Details for basin 6-100.SRCX

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.899

Time (mins)	Area	Time (mins)	Area
From:	To: (ha)	From:	To: (ha)
0	4 0.404	4	8 0.495

Paul Basham Associates		Page 1			
Lancaster Court 8 Barnes Wallis Road Fareham PO15 5TU					
Date 19/05/2021 09:33 File Basin 6-7-100.CASX	Designed by r.wilson Checked by				
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<u>Cascade Summary of Results for basin 7.SRCX</u>					
Upstream Structures	Outflow To	Overflow To			
basin 6.SRCX	(None)	(None)			
Half Drain Time : 740 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	13.007	0.007	0.3	18.6	O K
30 min Summer	13.009	0.009	0.4	24.6	O K
60 min Summer	13.011	0.011	0.5	31.0	O K
120 min Summer	13.014	0.014	0.6	37.4	O K
180 min Summer	13.015	0.015	0.6	40.8	O K
240 min Summer	13.016	0.016	0.6	42.9	O K
360 min Summer	13.017	0.017	0.7	45.2	O K
480 min Summer	13.017	0.017	0.7	46.2	O K
600 min Summer	13.017	0.017	0.7	46.9	O K
720 min Summer	13.017	0.017	0.7	47.4	O K
960 min Summer	13.018	0.018	0.7	48.0	O K
1440 min Summer	13.018	0.018	0.7	48.3	O K
2160 min Summer	13.017	0.017	0.7	47.4	O K
2880 min Summer	13.017	0.017	0.7	45.9	O K
4320 min Summer	13.016	0.016	0.6	42.6	O K
5760 min Summer	13.015	0.015	0.6	39.6	O K
7200 min Summer	13.014	0.014	0.6	36.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	96.371	0.0	19		
30 min Summer	64.160	0.0	34		
60 min Summer	40.933	0.0	64		
120 min Summer	25.357	0.0	122		
180 min Summer	18.948	0.0	182		
240 min Summer	15.333	0.0	242		
360 min Summer	11.348	0.0	360		
480 min Summer	9.161	0.0	456		
600 min Summer	7.755	0.0	500		
720 min Summer	6.765	0.0	564		
960 min Summer	5.449	0.0	684		
1440 min Summer	4.013	0.0	956		
2160 min Summer	2.951	0.0	1368		
2880 min Summer	2.370	0.0	1784		
4320 min Summer	1.739	0.0	2552		
5760 min Summer	1.394	0.0	3344		
7200 min Summer	1.175	0.0	4104		
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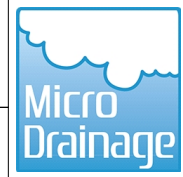
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Cascade Summary of Results for basin 7.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
8640 min Summer	13.013	0.013	0.5	34.5	O K
10080 min Summer	13.012	0.012	0.5	32.5	O K
15 min Winter	13.008	0.008	0.3	20.9	O K
30 min Winter	13.010	0.010	0.4	27.6	O K
60 min Winter	13.013	0.013	0.5	34.8	O K
120 min Winter	13.015	0.015	0.6	42.0	O K
180 min Winter	13.017	0.017	0.7	45.8	O K
240 min Winter	13.018	0.018	0.7	48.2	O K
360 min Winter	13.019	0.019	0.8	50.9	O K
480 min Winter	13.019	0.019	0.8	52.2	O K
600 min Winter	13.019	0.019	0.8	52.7	O K
720 min Winter	13.019	0.019	0.8	53.2	O K
960 min Winter	13.020	0.020	0.8	53.6	O K
1440 min Winter	13.019	0.019	0.8	53.1	O K
2160 min Winter	13.019	0.019	0.8	50.9	O K
2880 min Winter	13.018	0.018	0.7	48.3	O K
4320 min Winter	13.016	0.016	0.6	43.3	O K
5760 min Winter	13.014	0.014	0.6	39.0	O K
7200 min Winter	13.013	0.013	0.5	35.5	O K
8640 min Winter	13.012	0.012	0.5	32.6	O K
10080 min Winter	13.011	0.011	0.5	30.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
8640 min Summer	1.021	0.0	4840
10080 min Summer	0.908	0.0	5640
15 min Winter	96.371	0.0	19
30 min Winter	64.160	0.0	33
60 min Winter	40.933	0.0	62
120 min Winter	25.357	0.0	120
180 min Winter	18.948	0.0	178
240 min Winter	15.333	0.0	236
360 min Winter	11.348	0.0	348
480 min Winter	9.161	0.0	456
600 min Winter	7.755	0.0	554
720 min Winter	6.765	0.0	578
960 min Winter	5.449	0.0	722
1440 min Winter	4.013	0.0	1028
2160 min Winter	2.951	0.0	1472
2880 min Winter	2.370	0.0	1900
4320 min Winter	1.739	0.0	2724
5760 min Winter	1.394	0.0	3520
7200 min Winter	1.175	0.0	4256
8640 min Winter	1.021	0.0	5096
10080 min Winter	0.908	0.0	5752

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Date 19/05/2021 09:33
File Basin 6-7-100.CASX

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Cascade Rainfall Details for basin 7.SRCX

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.104

Time (mins)	Area
From: To: (ha)	
0	4 0.104

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Cascade Model Details for basin 7.SRCX

Storage is Online Cover Level (m) 14.500

Infiltration Basin Structure

Invert Level (m) 13.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.00540 Porosity 1.00
 Infiltration Coefficient Side (m/hr) 0.00540

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	2727.0	1.000	3030.0	1.500	3347.0

Cascade Summary of Results for basin 7-100.SRCX

Upstream Structures Outflow To Overflow To

basin 6-100.SRCX (None) (None)

Half Drain Time : 742 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	13.009	0.009	0.4	24.1	O K
30 min Summer	13.012	0.012	0.5	32.2	O K
60 min Summer	13.015	0.015	0.6	40.8	O K
120 min Summer	13.018	0.018	0.8	49.2	O K
180 min Summer	13.020	0.020	0.8	53.5	O K
240 min Summer	13.021	0.021	0.9	56.0	O K
360 min Summer	13.021	0.021	0.9	58.6	O K
480 min Summer	13.022	0.022	0.9	59.6	O K
600 min Summer	13.022	0.022	0.9	60.3	O K
720 min Summer	13.022	0.022	0.9	60.7	O K
960 min Summer	13.022	0.022	0.9	61.3	O K
1440 min Summer	13.022	0.022	0.9	61.1	O K
2160 min Summer	13.022	0.022	0.9	59.4	O K
2880 min Summer	13.021	0.021	0.9	57.1	O K
4320 min Summer	13.019	0.019	0.8	52.5	O K
5760 min Summer	13.018	0.018	0.7	48.3	O K
7200 min Summer	13.016	0.016	0.7	44.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	34
60 min Summer	53.779	0.0	64
120 min Summer	33.337	0.0	122
180 min Summer	24.832	0.0	182
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	360
480 min Summer	11.818	0.0	450
600 min Summer	9.966	0.0	500
720 min Summer	8.665	0.0	562
960 min Summer	6.943	0.0	686
1440 min Summer	5.071	0.0	964
2160 min Summer	3.696	0.0	1364
2880 min Summer	2.949	0.0	1784
4320 min Summer	2.142	0.0	2556
5760 min Summer	1.705	0.0	3344
7200 min Summer	1.427	0.0	4112

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Cascade Summary of Results for basin 7-100.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
8640 min Summer	13.015	0.015	0.6	41.7	O K
10080 min Summer	13.014	0.014	0.6	39.2	O K
15 min Winter	13.010	0.010	0.4	27.0	O K
30 min Winter	13.013	0.013	0.5	36.0	O K
60 min Winter	13.017	0.017	0.7	45.7	O K
120 min Winter	13.020	0.020	0.8	55.2	O K
180 min Winter	13.022	0.022	0.9	60.1	O K
240 min Winter	13.023	0.023	1.0	62.9	O K
360 min Winter	13.024	0.024	1.0	66.0	O K
480 min Winter	13.025	0.025	1.0	67.3	O K
600 min Winter	13.025	0.025	1.0	67.8	O K
720 min Winter	13.025	0.025	1.0	68.1	O K
960 min Winter	13.025	0.025	1.0	68.3	O K
1440 min Winter	13.025	0.025	1.0	67.1	O K
2160 min Winter	13.023	0.023	1.0	63.8	O K
2880 min Winter	13.022	0.022	0.9	60.1	O K
4320 min Winter	13.020	0.020	0.8	53.3	O K
5760 min Winter	13.017	0.017	0.7	47.8	O K
7200 min Winter	13.016	0.016	0.6	43.1	O K
8640 min Winter	13.014	0.014	0.6	39.4	O K
10080 min Winter	13.013	0.013	0.5	36.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
8640 min Summer	1.235	0.0	4848
10080 min Summer	1.093	0.0	5640
15 min Winter	124.633	0.0	19
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	120
180 min Winter	24.832	0.0	178
240 min Winter	20.006	0.0	236
360 min Winter	14.706	0.0	348
480 min Winter	11.818	0.0	456
600 min Winter	9.966	0.0	554
720 min Winter	8.665	0.0	576
960 min Winter	6.943	0.0	722
1440 min Winter	5.071	0.0	1026
2160 min Winter	3.696	0.0	1472
2880 min Winter	2.949	0.0	1900
4320 min Winter	2.142	0.0	2720
5760 min Winter	1.705	0.0	3520
7200 min Winter	1.427	0.0	4320
8640 min Winter	1.235	0.0	5096
10080 min Winter	1.093	0.0	5848

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Date 19/05/2021 09:30
 File Basin 6-7-100.CASX

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Cascade Rainfall Details for basin 7-100.SRCX

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.104

Time (mins)	Area
From: To:	(ha)
0	4 0.104

Appendix D

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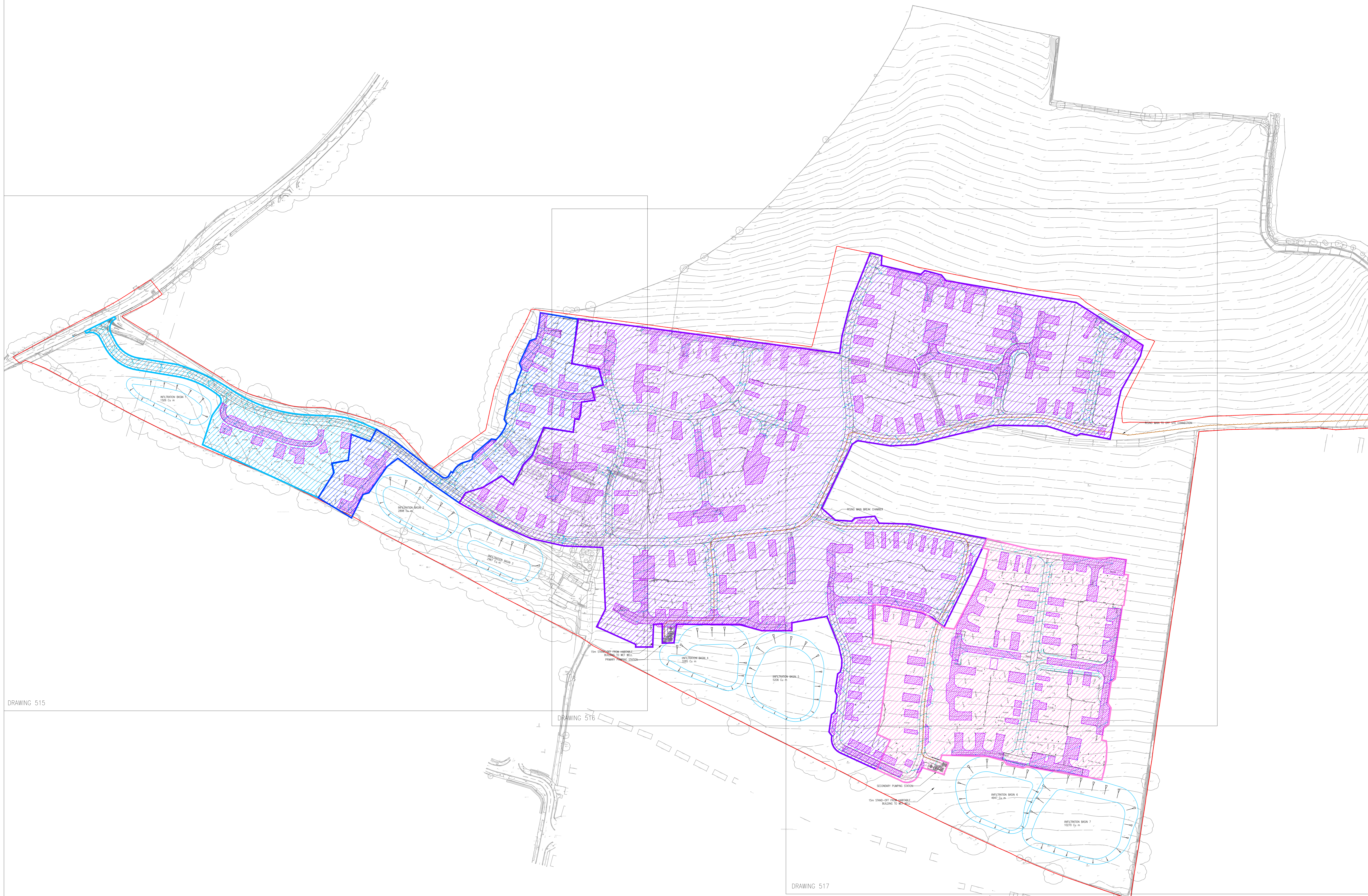
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LEGEND

ROAD KERBS
GRADUATE RAN FOLL
ROAD GULLY & CONNECTION
GRADUATE RAN SURFACE
FOLL WATER MANHOLE
SURFACE WATER MANHOLE

Colchamert - Key

Basin 1 0.308 Ha
Basin 2/3 0.367 Ha
Basin 4/5 3.356 Ha
Basin 6/7 1.033 Ha



DRAWING 515

DRAWING 516

DRAWING 517

PRELIMINARY
DRAWING/DESIGN IS STILL IN DEVELOPMENT
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

Rev	Description	Date	By	CRD
C	BASE VOLUMES UPDATED	19.05.2021	CLP	RW
B	BASE VOLUMES ADDED	12.04.2021	OT	RW
A	PERMEABLE PAVEMENT ADDED	09.04.2021	OT	RW

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Client:



Project Name:
DOWNEND ROAD
FAREHAM
Type:
KEY PLAN

Project Phase:
PRELIMINARY

Checked By	Checked Date	Drawn By	Drawn Date
RW	09.04.2021	OT	09.04.2021

Client Drawing No.: -
Scale: 1:1000
AT A0 SIZE

PLN Drawing No.: 091.5013.518
Revision: C