

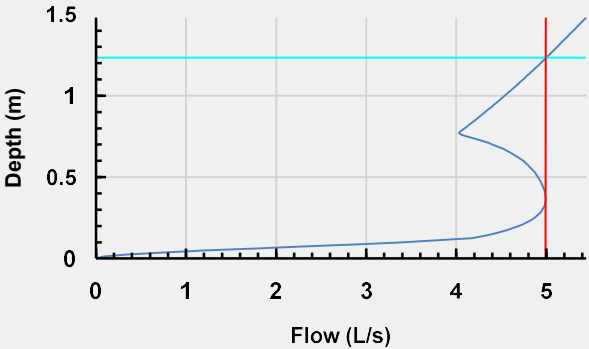
Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Junctions Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
7	Inlet	2.01	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
1	Inlet	Catchment Area (2)	(None)	No Restriction
2	Inlet	1.00	(None)	No Restriction
3A	Inlet	1.02	(None)	No Restriction
4	Inlet (2)	1.02A	(None)	No Restriction
		2.03		
		3.01		
		Catchment Area (3)		
8	Inlet	2.02	(None)	No Restriction
		Catchment Area (7)		
15	Inlet (3)	1.04	(None)	No Restriction
16	Inlet	1.05	(None)	No Restriction
EX MH	Inlet	1.07	(None)	No Restriction
17	Inlet	1.06	(None)	No Restriction
6	Inlet	Catchment Area (1)	(None)	No Restriction
		Catchment Area		
3	Inlet	1.01	(None)	No Restriction
10	Inlet	3.00	(None)	No Restriction
		4.01		
		Pipe (1)		
		6.00		
9	Inlet	Catchment Area (6)	(None)	No Restriction
	Inlet (1)	Pipe	(None)	No Restriction
11	Inlet	Catchment Area (5)	(None)	No Restriction
	Inlet (1)	Pipe (2)	(None)	No Restriction
12	Inlet	Pipe (3)	(None)	No Restriction
		4.00		
13	Inlet	5.00	(None)	No Restriction
		Catchment Area (9)		
14	Inlet	Pipe (5)	(None)	No Restriction
		Catchment Area (8)		
		Pipe (4)	(None)	No Restriction

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
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Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
7	Outlet	2.02	Free Discharge
1	Outlet	1.00	Free Discharge
2	Outlet	1.01	Free Discharge
3A	Outlet	1.02A	Free Discharge
4	Outlet	1.03	Free Discharge
8	Outlet	2.03	Free Discharge
15	Outlet	1.05	Hydro-Brake®
	Invert Level (m)	118.637	
	Design Depth (m)	1.233	
	Design Flow (L/s)	5.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0102-5000-1233-5000	
			
16	Outlet	1.06	Free Discharge
17	Outlet	1.07	Free Discharge
6	Outlet	2.01	Free Discharge
3	Outlet	1.02	Free Discharge
10	Outlet	3.01	Free Discharge
9	Outlet	3.00	Free Discharge
11	Outlet	4.00	Free Discharge
12	Outlet	4.01	Free Discharge
13	Outlet	5.00	Free Discharge
14	Outlet	6.00	Free Discharge

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: RB	Checked by:		Approved By:
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Porous Paving

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (10)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe
Outlet Type	Under Drain



Porous Paving (1)

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (11)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (1)
Outlet Type	Under Drain

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
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		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Porous Paving (2)

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (2)
Outlet Type	Under Drain



Porous Paving (3)

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (13)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (3)
Outlet Type	Under Drain

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
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Porous Paving (4)

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (14)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (5)
Outlet Type	Under Drain



Porous Paving (5)

Type : Porous Paving

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.300
Friction Scheme	Manning's n
n	0.015

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (15)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (4)
Outlet Type	Under Drain

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
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TANK

Type : Cellular Storage

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	1.03
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	1.04
Outlet Type	Free Discharge

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
Report Details: Type: Connections Storm Phase: Phase		Designed by: RB	Checked by:		Approved By:
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
1.00	31.124	Pipe	214.650		0.6	225	120.125	118.998
1.02A	1.985	Pipe	220.586		0.6	225	119.986	118.794
1.05	13.624	Pipe	223.341		0.6	225	120.900	118.637
2.02	10.575	Pipe	245.928		0.6	300	119.855	118.823
2.03	16.781	Pipe	239.734		0.6	300	120.030	118.780
1.04	8.980	Pipe	224.495		0.6	300	122.000	118.677
1.03	7.390	Pipe	223.938		0.6	300	119.980	118.710
1.06	34.443	Pipe	222.214		0.6	225	119.855	118.576
1.07	6.779	Pipe	218.685		0.6	225	120.250	118.421
2.01	40.885	Pipe	88.114		0.6	225	120.500	119.362
1.01	4.521	Pipe	215.305		0.6	225	119.980	118.853
1.02	8.351	Pipe	219.751		0.6	225	120.030	118.832
3.00	21.568	Pipe	40.390		0.6	225	121.700	119.496
3.01	10.394	Pipe	58.720		0.6	225	120.770	118.962
4.00	12.097	Pipe	40.056		0.6	150	122.255	120.900
4.01	22.311	Pipe	40.056		0.6	225	121.650	120.118
5.00	11.450	Pipe	40.034		0.6	150	121.530	120.479
6.00	12.638	Pipe	109.895		0.6	150	120.400	119.152
Pipe	6.971	Pipe	3.974		0.6	100	121.700	121.250
Pipe (1)	18.592	Pipe	8.126		0.6	100	121.712	121.250
Pipe (2)	7.679	Pipe	21.939		0.6	150	121.700	121.250
Pipe (3)	4.957	Pipe	5.477		0.6	100	121.650	121.805
Pipe (4)	8.853	Pipe	20.685		0.6	150	119.855	119.580
Pipe (5)	8.950	Pipe	14.891		0.6	150	120.770	121.080

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Culvert Type	Culvert Entrance
1.00	119.980	118.853		All		(None)	(None)
1.02A	119.980	118.785		All		(None)	(None)
1.05	119.855	118.576		All	5.000	(None)	(None)
2.02	120.030	118.780		All		(None)	(None)
2.03	119.980	118.710		All		(None)	(None)
1.04	120.900	118.637		All		(None)	(None)
1.03	121.500	118.677		All		(None)	(None)
1.06	120.250	118.421		All		(None)	(None)
1.07	120.070	118.390		All		(None)	(None)
2.01	119.855	118.898		All		(None)	(None)
1.01	120.030	118.832		All		(None)	(None)
1.02	119.986	118.794		All		(None)	(None)
3.00	120.770	118.962		All		(None)	(None)
3.01	119.980	118.785		All		(None)	(None)
4.00	121.650	120.598		All		(None)	(None)
4.01	120.770	119.561		All		(None)	(None)
5.00	121.650	120.193		All		(None)	(None)
6.00	120.770	119.037		All		(None)	(None)
Pipe	121.700	119.496		None	5.004	(None)	(None)
Pipe (1)	120.770	118.962		None	5.005	(None)	(None)
Pipe (2)	122.255	120.900		None	4.999	(None)	(None)
Pipe (3)	122.255	120.900		None	4.559	(None)	(None)
Pipe (4)	120.400	119.152		None	4.390	(None)	(None)
Pipe (5)	121.530	120.479		None	5.005	(None)	(None)

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: RB	Checked by:		Approved By:
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
7	119.855 118.823	Diameter / Length: 1.200	{1} 2.01	Pipe	118.898	Diam/Width:225	Manhole - Access Required
E:442894.021 N:293722.647	1.032						
			{a} 2.02	Pipe	118.823	Diam/Width:300	Not Applicable
1	120.125 118.998	Diameter / Length: 1.200					Manhole - Access Required
E:442932.167 N:293689.799	1.127						
			{a} 1.00	Pipe	118.998	Diam/Width:225	Not Applicable
2	119.980 118.853	Diameter / Length: 1.200	{1} 1.00	Pipe	118.853	Diam/Width:225	Manhole
E:442928.760 N:293720.736	1.127						
			{a} 1.01	Pipe	118.853	Diam/Width:225	Not Applicable
3A	119.986 118.794	Diameter / Length: 1.200	{1} 1.02	Pipe	118.794	Diam/Width:225	Manhole
E:442922.683 N:293728.525	1.192						
			{a} 1.02A	Pipe	118.794	Diam/Width:225	Not Applicable
4	119.980 118.710	Diameter / Length: 1.200	{1} 1.02A	Pipe	118.785	Diam/Width:225	Manhole - Access Required
E:442920.708 N:293728.326	1.270		{2} 2.03	Pipe	118.710	Diam/Width:300	
			{3} 3.01	Pipe	118.785	Diam/Width:225	
				{a} 1.03	Pipe	118.710	Diam/Width:300

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: RB	Checked by:	
		Approved By:		
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
8	120.030 118.780	Diameter / Length: 1.200	{1} 2.02	Pipe	118.780	Diam/Width:300	Manhole
E:442904.121 N:293725.781	1.250						
			{a} 2.03	Pipe	118.780	Diam/Width:300	Not Applicable
15	120.900 118.637	Diameter / Length: 1.200	{1} 1.04	Pipe	118.637	Diam/Width:300	Manhole
E:442902.935 N:293736.447	2.263						
			{a} 1.05	Pipe	118.637	Diam/Width:225	Not Applicable
16	119.855 118.576	Diameter / Length: 1.200	{1} 1.05	Pipe	118.576	Diam/Width:225	Manhole - Access Required
E:442891.943 N:293728.398	1.279						
			{a} 1.06	Pipe	118.576	Diam/Width:225	Not Applicable
EX MH	120.070 118.390	Diameter / Length: 1.200	{1} 1.07	Pipe	118.390	Diam/Width:225	Manhole - Access Required - Sealed
E:442892.264 N:293688.834	1.680						
							Not Applicable
17	120.250 118.421	Diameter / Length: 1.200	{1} 1.06	Pipe	118.421	Diam/Width:225	Manhole - Access Required
E:442896.356 N:293694.239	1.829						
			{a} 1.07	Pipe	118.421	Diam/Width:225	Not Applicable

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: RB	Checked by:	
		Approved By:		
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
6	120.500 119.362	Diameter / Length: 1.200					Manhole - Access Required
E:442898.782 N:293682.040	1.138						
			{a} 2.01	Pipe	119.362	Diam/Width:225	Not Applicable
3	120.030 118.832	Diameter / Length: 1.200	{1} 1.01	Pipe	118.832	Diam/Width:225	Manhole
E:442924.258 N:293720.324	1.198						
			{a} 1.02	Pipe	118.832	Diam/Width:225	Not Applicable
10	120.770 118.962	Diameter / Length: 1.200	{1} 3.00	Pipe	118.962	Diam/Width:225	Manhole
E:442911.435 N:293733.021	1.808		{2} 4.01	Pipe	119.561	Diam/Width:225	
			{3} Pipe (1)	Pipe	118.962	Diam/Width:100	
			{4} 6.00	Pipe	119.037	Diam/Width:150	
			{a} 3.01	Pipe	118.962	Diam/Width:225	Not Applicable
9	121.700 119.496	Diameter / Length: 1.200	{1} Pipe	Pipe	119.496	Diam/Width:100	Manhole
E:442908.246 N:293754.352	2.204						
			{a} 3.00	Pipe	119.496	Diam/Width:225	Not Applicable

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Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: RB	Checked by:		Approved By:
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
11	122.255 120.900	Diameter / Length: 1.200	{1} Pipe (2)	Pipe	120.900	Diam/Width:150	Manhole
E:442931.590 N:293749.039	1.355		{2} Pipe (3)	Pipe	120.900	Diam/Width:100	
			{a} 4.00	Pipe	120.900	Diam/Width:150	Not Applicable
12	121.650 120.118	Diameter / Length: 1.200	{1} 4.00	Pipe	120.598	Diam/Width:150	Manhole
E:442933.375 N:293737.075	1.532		{2} 5.00	Pipe	120.193	Diam/Width:150	
			{a} 4.01	Pipe	120.118	Diam/Width:225	Not Applicable
13	121.530 120.479	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	120.479	Diam/Width:150	Manhole
E:442935.404 N:293725.806	1.051						
			{a} 5.00	Pipe	120.479	Diam/Width:150	Not Applicable
14	120.400 119.152	Diameter / Length: 1.200	{1} Pipe (4)	Pipe	119.152	Diam/Width:150	Manhole
E:442899.113 N:293730.214	1.248						
			{a} 6.00	Pipe	119.152	Diam/Width:150	Not Applicable

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	6		Time of Concentration	0.022	95	0	95	0.021
Catchment Area (1)	6		Time of Concentration	0.045	95	0	95	0.043
Catchment Area (2)	1		Time of Concentration	0.082	95	0	95	0.078
Catchment Area (3)	4		Time of Concentration	0.021	95	0	95	0.019
Catchment Area (4)	7		Time of Concentration	0.017	95	0	95	0.017
Catchment Area (5)	11		Time of Concentration	0.042	95	0	95	0.040
Catchment Area (6)	9		Time of Concentration	0.038	95	0	95	0.036
Catchment Area (7)	8		Time of Concentration	0.011	95	0	95	0.010
Catchment Area (8)	14		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (9)	13		Time of Concentration	0.026	100	0	100	0.026
Catchment Area (10)	Porous Paving		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (11)	Porous Paving (1)		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (12)	Porous Paving (2)		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (13)	Porous Paving (3)		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (14)	Porous Paving (4)		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (15)	Porous Paving (5)		Time of Concentration	0.009	100	0	100	0.009
TOTAL		0.0		0.346				0.332

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Network Design Report Storm Phase: Phase Flow Path: Flow Path		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Name	Time Of Travel (mins)	Rainfall Intensity (mm/hr)	Total Area (ha)	Total Impermeable Area (ha)	Proportional Depth (mm)	Proportional Velocity (m/s)	Full Bore Velocity (m/s)	Capacity (L/s)
1.00	5.58	155.573	0.082	0.078	173	1.006	0.888	35.327
1.01	5.67	154.677	0.082	0.078	173	1.004	0.887	35.272
1.02	5.83	153.039	0.082	0.078	175	0.995	0.878	34.909
1.02A	5.87	152.656	0.082	0.078	175	0.993	0.876	34.842
Branch: 2.01								
2.01	5.49	156.589	0.066	0.063	110	1.382	1.394	55.413
2.02	5.67	154.711	0.084	0.080	145	0.985	0.998	70.551
2.03	5.94	151.880	0.095	0.090	153	1.019	1.011	71.467
Branch: Pipe								
Pipe	5.03	161.758	0.006	0.006	20	2.387	3.907	30.688
3.00	5.20	159.747	0.044	0.042	71	1.663	2.065	82.086
Branch: Pipe (2)								
Pipe (2)	5.06	161.412	0.006	0.006	27	1.240	2.160	38.163
Branch: Pipe (3)								
Pipe (3)	5.02	161.815	0.007	0.007	24	2.267	3.326	26.126
4.00	5.19	159.954	0.056	0.054	104	1.777	1.595	28.184
Branch: Pipe (5)								
Pipe (5)	5.06	161.440	0.006	0.006	24	1.423	2.624	46.370
5.00	5.18	160.060	0.032	0.032	74	1.585	1.595	28.192
4.01	5.37	157.942	0.087	0.085	105	2.012	2.073	82.430
Branch: Pipe (4)								
Pipe (4)	5.07	161.330	0.009	0.009	33	1.445	2.224	39.309
6.00	5.29	158.819	0.011	0.011	55	0.827	0.958	16.928
Branch: Pipe (1)								
Pipe (1)	5.11	160.782	0.006	0.006	24	1.849	2.729	21.431
3.01	5.47	156.834	0.148	0.144	168	1.927	1.710	67.992
1.03	6.06	150.715	0.346	0.332	300	1.047	1.047	73.975
1.04	6.20	149.328	0.346	0.332	300	1.045	1.045	73.882
1.05	6.46	146.883	0.346	0.332	225	0.871	0.871	34.623
1.06	7.12	141.144	0.346	0.332	225	0.873	0.873	34.712
1.07	7.25	140.089	0.346	0.332	225	0.880	0.880	34.995

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Network Design Report Storm Phase: Phase Flow Path: Flow Path		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Name	Flow (L/s)
1.00	32.959
1.01	32.959
1.02	32.959
1.02A	32.959
Branch: 2.01	
2.01	26.747
2.02	33.360
2.03	36.981
Branch: Pipe	
Pipe	2.627
3.00	18.027
Branch: Pipe (2)	
Pipe (2)	2.630
Branch: Pipe (3)	
Pipe (3)	3.248
4.00	23.253
Branch: Pipe (5)	
Pipe (5)	2.623
5.00	13.736
4.01	36.515
Branch: Pipe (4)	
Pipe (4)	4.090
6.00	4.833
Branch: Pipe (1)	
Pipe (1)	2.613
3.01	61.279
1.03	135.474
1.04	135.474
1.05	135.474
1.06	135.474
1.07	135.474

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Rain 1

Type: FSR

Return Period (years)	100.0
Region	England And Wales
M5-60 (mm)	19.8
Ratio R	0.400

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Inverts
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Manhole Options

Apply Offset	☐
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Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design	Date: 01/06/2023		
	Designed by: RB	Checked by:	Approved By:
	Report Details: Type: Outfall Details Storm Phase: Phase		
Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
EX MH	Free Discharge			

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
Report Title: Rainfall Analysis Criteria		Designed by: RB	Checked by:		Approved By:
Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX					

Runoff Type	Dynamic
Output Interval (mins)	1
Time Step	Shortest
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	150
Perform No Discharge Analysis	☐

Rainfall	
Rain 1	Type: FSR
Region	England And Wales
M5-60 (mm)	19.8
Ratio R	0.400
Summer	☒
Winter	☒

Return Period	
Return Period (years)	Increase Rainfall (%)
2.0	0.000
5.0	0.000
10.0	0.000
30.0	0.000
100.0	40.000

Storm Durations	
Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
7	Rain 1: 2 years: +0 %: 15 mins: Winter	119.85 5	118.82 3	118.926	0.103	13.9	0.116	0.000	13.8	6.625	OK
1	Rain 1: 2 years: +0 %: 15 mins: Winter	120.12 5	118.99 8	119.099	0.101	14.1	0.114	0.000	13.9	6.520	OK
2	Rain 1: 2 years: +0 %: 15 mins: Winter	119.98 0	118.85 3	118.968	0.115	13.9	0.130	0.000	13.7	6.503	OK
3A	Rain 1: 2 years: +0 %: 15 mins: Winter	119.98 6	118.79 4	118.908	0.114	13.7	0.129	0.000	13.6	6.460	OK
4	Rain 1: 2 years: +0 %: 15 mins: Winter	119.98 0	118.71 0	118.888	0.178	50.0	0.201	0.000	49.8	23.423	OK
8	Rain 1: 2 years: +0 %: 15 mins: Winter	120.03 0	118.78 0	118.904	0.124	15.6	0.141	0.000	15.4	7.384	OK
15	Rain 1: 2 years: +0 %: 120 mins: Winter	120.90 0	118.63 7	118.885	0.248	4.7	0.281	0.000	4.6	41.364	Surcharged
16	Rain 1: 2 years: +0 %: 120 mins: Winter	119.85 5	118.57 6	118.632	0.056	4.6	0.063	0.000	4.6	41.222	OK
EX MH	Rain 1: 2 years: +0 %: 120 mins: Winter	120.07 0	118.39 0	118.445	0.055	4.6	0.000	0.000	4.6	41.116	OK
17	Rain 1: 2 years: +0 %: 120 mins: Winter	120.25 0	118.42 1	118.480	0.059	4.6	0.066	0.000	4.6	41.116	OK
6	Rain 1: 2 years: +0 %: 15 mins: Winter	120.50 0	119.36 2	119.431	0.069	11.4	0.078	0.000	11.0	5.249	OK
3	Rain 1: 2 years: +0 %: 15 mins: Winter	120.03 0	118.83 2	118.943	0.111	13.7	0.126	0.000	13.7	6.499	OK
10	Rain 1: 2 years: +0 %: 15 mins: Winter	120.77 0	118.96 2	119.046	0.084	17.6	0.095	0.000	17.7	8.299	OK
9	Rain 1: 2 years: +0 %: 15 mins: Winter	121.70 0	119.49 6	119.538	0.042	6.4	0.048	0.000	6.4	2.974	OK
11	Rain 1: 2 years: +0 %: 15 mins: Winter	122.25 5	120.90 0	120.954	0.054	7.3	0.061	0.000	7.1	3.348	OK
12	Rain 1: 2 years: +0 %: 15 mins: Winter	121.65 0	120.11 8	120.175	0.057	11.2	0.065	0.000	11.1	5.254	OK
13	Rain 1: 2 years: +0 %: 15 mins: Summer	121.53 0	120.47 9	120.520	0.041	4.4	0.047	0.000	4.4	1.907	OK
14	Rain 1: 2 years: +0 %: 15 mins: Summer	120.40 0	119.15 2	119.166	0.014	0.3	0.016	0.000	0.3	0.137	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 5 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
7	Rain 1: 5 years: +0 %: 15 mins: Winter	119.85 5	118.82 3	118.948	0.125	18.0	0.142	0.000	17.8	8.476	OK
1	Rain 1: 5 years: +0 %: 15 mins: Winter	120.12 5	118.99 8	119.115	0.117	18.2	0.132	0.000	17.9	8.397	OK
2	Rain 1: 5 years: +0 %: 15 mins: Winter	119.98 0	118.85 3	118.991	0.138	17.9	0.156	0.000	17.6	8.376	OK
3A	Rain 1: 5 years: +0 %: 120 mins: Winter	119.98 6	118.79 4	118.945	0.151	5.6	0.170	0.000	5.5	16.117	OK
4	Rain 1: 5 years: +0 %: 120 mins: Winter	119.98 0	118.71 0	118.945	0.235	20.3	0.265	0.000	19.8	59.332	OK
8	Rain 1: 5 years: +0 %: 120 mins: Winter	120.03 0	118.78 0	118.945	0.165	6.4	0.186	0.000	6.1	18.552	OK
15	Rain 1: 5 years: +0 %: 120 mins: Winter	120.90 0	118.63 7	118.944	0.307	4.9	0.347	0.000	4.9	49.771	Surcharged
16	Rain 1: 5 years: +0 %: 120 mins: Winter	119.85 5	118.57 6	118.633	0.057	4.9	0.065	0.000	4.9	49.578	OK
EX MH	Rain 1: 5 years: +0 %: 120 mins: Winter	120.07 0	118.39 0	118.447	0.056	4.9	0.000	0.000	4.9	49.434	OK
17	Rain 1: 5 years: +0 %: 120 mins: Winter	120.25 0	118.42 1	118.481	0.060	4.9	0.068	0.000	4.9	49.434	OK
6	Rain 1: 5 years: +0 %: 15 mins: Winter	120.50 0	119.36 2	119.442	0.080	14.6	0.090	0.000	14.2	6.758	OK
3	Rain 1: 5 years: +0 %: 15 mins: Winter	120.03 0	118.83 2	118.966	0.134	17.6	0.152	0.000	17.6	8.336	OK
10	Rain 1: 5 years: +0 %: 15 mins: Winter	120.77 0	118.96 2	119.062	0.100	22.8	0.113	0.000	22.7	10.711	OK
9	Rain 1: 5 years: +0 %: 15 mins: Winter	121.70 0	119.49 6	119.544	0.048	8.3	0.054	0.000	8.2	3.827	OK
11	Rain 1: 5 years: +0 %: 15 mins: Winter	122.25 5	120.90 0	120.962	0.062	9.3	0.070	0.000	9.2	4.315	OK
12	Rain 1: 5 years: +0 %: 15 mins: Winter	121.65 0	120.11 8	120.183	0.065	14.5	0.074	0.000	14.2	6.770	OK
13	Rain 1: 5 years: +0 %: 15 mins: Summer	121.53 0	120.47 9	120.526	0.047	5.7	0.053	0.000	5.6	2.460	OK
14	Rain 1: 5 years: +0 %: 15 mins: Summer	120.40 0	119.15 2	119.168	0.016	0.4	0.018	0.000	0.4	0.178	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: RB	Checked by:	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 10 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
7	Rain 1: 10 years: +0 %: 120 mins: Winter	119.85 5	118.82 3	118.996	0.173	6.7	0.195	0.000	6.5	19.230	OK
1	Rain 1: 10 years: +0 %: 15 mins: Winter	120.12 5	118.99 8	119.127	0.129	21.1	0.146	0.000	20.8	9.759	OK
2	Rain 1: 10 years: +0 %: 15 mins: Winter	119.98 0	118.85 3	119.008	0.155	20.8	0.175	0.000	20.4	9.641	OK
3A	Rain 1: 10 years: +0 %: 120 mins: Winter	119.98 6	118.79 4	118.996	0.202	6.5	0.228	0.000	6.3	18.866	OK
4	Rain 1: 10 years: +0 %: 120 mins: Winter	119.98 0	118.71 0	118.996	0.286	23.3	0.323	0.000	22.6	69.312	OK
8	Rain 1: 10 years: +0 %: 120 mins: Winter	120.03 0	118.78 0	118.996	0.216	7.4	0.244	0.000	7.0	21.703	OK
15	Rain 1: 10 years: +0 %: 120 mins: Winter	120.90 0	118.63 7	118.995	0.358	5.0	0.405	0.000	5.0	55.007	Surcharged
16	Rain 1: 10 years: +0 %: 120 mins: Winter	119.85 5	118.57 6	118.634	0.058	5.0	0.066	0.000	5.0	54.755	OK
EX MH	Rain 1: 10 years: +0 %: 120 mins: Winter	120.07 0	118.39 0	118.447	0.057	5.0	0.000	0.000	5.0	54.565	OK
17	Rain 1: 10 years: +0 %: 120 mins: Winter	120.25 0	118.42 1	118.482	0.061	5.0	0.069	0.000	5.0	54.565	OK
6	Rain 1: 10 years: +0 %: 15 mins: Winter	120.50 0	119.36 2	119.448	0.086	17.0	0.098	0.000	16.5	7.851	OK
3	Rain 1: 10 years: +0 %: 120 mins: Winter	120.03 0	118.83 2	118.996	0.164	6.5	0.185	0.000	6.5	18.883	OK
10	Rain 1: 10 years: +0 %: 15 mins: Winter	120.77 0	118.96 2	119.073	0.111	26.5	0.125	0.000	26.4	12.459	OK
9	Rain 1: 10 years: +0 %: 15 mins: Winter	121.70 0	119.49 6	119.548	0.052	9.6	0.059	0.000	9.5	4.448	OK
11	Rain 1: 10 years: +0 %: 15 mins: Winter	122.25 5	120.90 0	120.968	0.068	10.9	0.077	0.000	10.7	5.013	OK
12	Rain 1: 10 years: +0 %: 15 mins: Winter	121.65 0	120.11 8	120.189	0.071	16.8	0.080	0.000	16.6	7.868	OK
13	Rain 1: 10 years: +0 %: 15 mins: Summer	121.53 0	120.47 9	120.530	0.051	6.6	0.058	0.000	6.5	2.856	OK
14	Rain 1: 10 years: +0 %: 15 mins: Summer	120.40 0	119.15 2	119.169	0.017	0.5	0.019	0.000	0.5	0.207	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: RB	Checked by:	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
7	Rain 1: 30 years: +0 %: 120 mins: Winter	119.85 5	118.82 3	119.102	0.279	8.6	0.316	0.000	8.2	24.560	OK
1	Rain 1: 30 years: +0 %: 15 mins: Winter	120.12 5	118.99 8	119.150	0.152	26.8	0.172	0.000	26.3	12.379	OK
2	Rain 1: 30 years: +0 %: 120 mins: Winter	119.98 0	118.85 3	119.102	0.249	8.4	0.282	0.000	8.1	24.139	Surcharged
3A	Rain 1: 30 years: +0 %: 120 mins: Winter	119.98 6	118.79 4	119.102	0.308	7.8	0.349	0.000	7.5	23.847	Surcharged
4	Rain 1: 30 years: +0 %: 120 mins: Winter	119.98 0	118.71 0	119.102	0.392	28.7	0.444	0.000	27.7	87.559	Surcharged
8	Rain 1: 30 years: +0 %: 120 mins: Winter	120.03 0	118.78 0	119.102	0.322	9.3	0.364	0.000	8.5	27.323	Surcharged
15	Rain 1: 30 years: +0 %: 120 mins: Winter	120.90 0	118.63 7	119.102	0.465	5.1	0.525	0.000	5.0	59.470	Surcharged
16	Rain 1: 30 years: +0 %: 60 mins: Winter	119.85 5	118.57 6	118.634	0.058	5.0	0.066	0.000	5.0	28.759	OK
EX MH	Rain 1: 30 years: +0 %: 60 mins: Winter	120.07 0	118.39 0	118.447	0.057	5.0	0.000	0.000	5.0	28.510	OK
17	Rain 1: 30 years: +0 %: 60 mins: Winter	120.25 0	118.42 1	118.482	0.061	5.0	0.069	0.000	5.0	28.510	OK
6	Rain 1: 30 years: +0 %: 15 mins: Winter	120.50 0	119.36 2	119.461	0.099	21.6	0.112	0.000	20.9	9.637	OK
3	Rain 1: 30 years: +0 %: 120 mins: Winter	120.03 0	118.83 2	119.102	0.270	8.1	0.306	0.000	7.8	24.036	Surcharged
10	Rain 1: 30 years: +0 %: 120 mins: Winter	120.77 0	118.96 2	119.102	0.140	10.8	0.159	0.000	10.8	31.091	OK
9	Rain 1: 30 years: +0 %: 15 mins: Winter	121.70 0	119.49 6	119.554	0.058	12.2	0.066	0.000	12.1	5.640	OK
11	Rain 1: 30 years: +0 %: 15 mins: Winter	122.25 5	120.90 0	120.979	0.079	13.8	0.089	0.000	13.6	6.358	OK
12	Rain 1: 30 years: +0 %: 15 mins: Winter	121.65 0	120.11 8	120.199	0.081	21.3	0.091	0.000	21.1	9.977	OK
13	Rain 1: 30 years: +0 %: 15 mins: Summer	121.53 0	120.47 9	120.538	0.059	8.4	0.066	0.000	8.3	3.623	OK
14	Rain 1: 30 years: +0 %: 15 mins: Summer	120.40 0	119.15 2	119.171	0.019	0.6	0.021	0.000	0.6	0.264	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: RB	Checked by:	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
7	Rain 1: 100 years: +40 %: 180 mins: Winter	119.85 5	118.82 3	119.618	0.795	11.7	0.899	0.000	10.8	47.883	Surcharged
1	Rain 1: 100 years: +40 %: 15 mins: Winter	120.12 5	118.99 8	119.691	0.693	48.6	0.784	0.000	45.2	21.696	Surcharged
2	Rain 1: 100 years: +40 %: 180 mins: Winter	119.98 0	118.85 3	119.618	0.765	11.0	0.865	0.000	10.7	46.852	Surcharged
3A	Rain 1: 100 years: +40 %: 180 mins: Winter	119.98 6	118.79 4	119.618	0.824	10.4	0.932	0.000	10.1	45.222	Surcharged
4	Rain 1: 100 years: +40 %: 180 mins: Winter	119.98 0	118.71 0	119.618	0.908	38.2	1.027	0.000	37.9	169.669	Surcharged
8	Rain 1: 100 years: +40 %: 180 mins: Winter	120.03 0	118.78 0	119.618	0.838	12.3	0.947	0.000	12.0	52.730	Surcharged
15	Rain 1: 100 years: +40 %: 180 mins: Winter	120.90 0	118.63 7	119.617	0.980	5.3	1.109	0.000	5.0	84.838	Surcharged
16	Rain 1: 100 years: +40 %: 15 mins: Winter	119.85 5	118.57 6	118.634	0.058	5.0	0.066	0.000	5.0	6.263	OK
EX MH	Rain 1: 100 years: +40 %: 180 mins: Summer	120.07 0	118.39 0	118.447	0.057	5.0	0.000	0.000	5.0	84.818	OK
17	Rain 1: 100 years: +40 %: 180 mins: Summer	120.25 0	118.42 1	118.482	0.061	5.0	0.069	0.000	5.0	84.818	OK
6	Rain 1: 100 years: +40 %: 180 mins: Winter	120.50 0	119.36 2	119.618	0.256	9.3	0.289	0.000	9.2	39.394	Surcharged
3	Rain 1: 100 years: +40 %: 180 mins: Winter	120.03 0	118.83 2	119.618	0.786	10.7	0.889	0.000	10.4	46.042	Surcharged
10	Rain 1: 100 years: +40 %: 180 mins: Winter	120.77 0	118.96 2	119.618	0.656	14.6	0.742	0.000	13.5	61.614	Surcharged
9	Rain 1: 100 years: +40 %: 180 mins: Winter	121.70 0	119.49 6	119.618	0.122	5.2	0.138	0.000	5.2	22.382	OK
11	Rain 1: 100 years: +40 %: 15 mins: Winter	122.25 5	120.90 0	121.022	0.122	25.0	0.138	0.000	24.6	11.550	OK
12	Rain 1: 100 years: +40 %: 15 mins: Winter	121.65 0	120.11 8	120.233	0.115	38.7	0.130	0.000	38.2	18.128	OK
13	Rain 1: 100 years: +40 %: 15 mins: Summer	121.53 0	120.47 9	120.563	0.084	15.2	0.095	0.000	15.0	6.578	OK
14	Rain 1: 100 years: +40 %: 180 mins: Winter	120.40 0	119.15 2	119.618	0.466	0.8	0.527	0.000	0.2	1.000	Surcharged

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Resident Volume (m³)	Max. Inflow (L/s)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK	Rain 1: 2 years: +0 %: 120 mins: Winter	118.886	118.886	0.209	0.209	27.754	16.2	0.000	0.000	4.7	41.523	79.296	OK
Porous Paving	Rain 1: 2 years: +0 %: 2160 mins: Summer	121.370	121.368	0.108	0.118	2.022	0.1	0.000	0.000	0.0	0.000	68.249	OK
Porous Paving (1)	Rain 1: 2 years: +0 %: 2160 mins: Summer	121.370	121.368	0.108	0.118	2.022	0.1	0.000	0.000	0.0	0.000	68.237	OK
Porous Paving (2)	Rain 1: 2 years: +0 %: 2160 mins: Summer	121.370	121.369	0.108	0.119	2.023	0.1	0.000	0.000	0.0	0.000	68.121	OK
Porous Paving (3)	Rain 1: 2 years: +0 %: 2160 mins: Summer	121.924	121.922	0.105	0.117	2.444	0.1	0.000	0.000	0.0	0.000	68.895	OK
Porous Paving (4)	Rain 1: 2 years: +0 %: 2160 mins: Summer	121.200	121.198	0.108	0.118	2.022	0.1	0.000	0.000	0.0	0.000	68.239	OK
Porous Paving (5)	Rain 1: 2 years: +0 %: 2160 mins: Summer	119.695	119.693	0.099	0.113	2.956	0.1	0.000	0.000	0.0	0.000	70.167	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 5 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Resident Volume (m³)	Max. Inflow (L/s)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK	Rain 1: 5 years: +0 %: 120 mins: Winter	118.944	118.944	0.267	0.267	35.552	19.8	0.000	0.000	4.9	49.993	73.479	OK
Porous Paving	Rain 1: 5 years: +0 %: 2160 mins: Summer	121.393	121.391	0.131	0.141	2.435	0.1	0.000	0.000	0.0	0.000	61.767	OK
Porous Paving (1)	Rain 1: 5 years: +0 %: 2160 mins: Summer	121.393	121.391	0.131	0.141	2.435	0.1	0.000	0.000	0.0	0.000	61.753	OK
Porous Paving (2)	Rain 1: 5 years: +0 %: 2160 mins: Summer	121.393	121.392	0.131	0.142	2.436	0.1	0.000	0.000	0.0	0.000	61.617	OK
Porous Paving (3)	Rain 1: 5 years: +0 %: 2160 mins: Summer	121.941	121.939	0.122	0.134	2.827	0.1	0.000	0.000	0.0	0.000	64.024	OK
Porous Paving (4)	Rain 1: 5 years: +0 %: 2160 mins: Summer	121.223	121.221	0.131	0.141	2.435	0.1	0.000	0.000	0.0	0.000	61.754	OK
Porous Paving (5)	Rain 1: 5 years: +0 %: 2160 mins: Summer	119.714	119.713	0.118	0.133	3.496	0.1	0.000	0.000	0.0	0.000	64.717	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
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Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 10 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Resident Volume (m³)	Max. Inflow (L/s)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK	Rain 1: 10 years: +0 %: 120 mins: Winter	118.995	118.995	0.318	0.318	42.334	22.6	0.000	0.000	5.0	55.315	68.420	OK
Porous Paving	Rain 1: 10 years: +0 %: 2160 mins: Summer	121.407	121.405	0.145	0.155	2.692	0.1	0.000	0.000	0.0	0.000	57.735	OK
Porous Paving (1)	Rain 1: 10 years: +0 %: 2160 mins: Summer	121.407	121.406	0.145	0.156	2.692	0.1	0.000	0.000	0.0	0.000	57.719	OK
Porous Paving (2)	Rain 1: 10 years: +0 %: 2160 mins: Summer	121.407	121.406	0.145	0.156	2.693	0.1	0.000	0.000	0.0	0.000	57.570	OK
Porous Paving (3)	Rain 1: 10 years: +0 %: 2160 mins: Summer	121.957	121.955	0.138	0.150	3.187	0.1	0.000	0.000	0.0	0.000	59.443	OK
Porous Paving (4)	Rain 1: 10 years: +0 %: 2160 mins: Summer	121.237	121.236	0.145	0.156	2.692	0.1	0.000	0.000	0.0	0.000	57.721	OK
Porous Paving (5)	Rain 1: 10 years: +0 %: 2160 mins: Winter	119.730	119.728	0.134	0.148	3.934	0.1	0.000	0.000	0.0	0.000	60.296	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: RB	Checked by: Approved By: 	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Resident Volume (m³)	Max. Inflow (L/s)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK	Rain 1: 30 years: +0 %: 120 mins: Winter	119.102	119.102	0.425	0.425	56.516	27.7	0.000	0.000	5.1	60.025	57.841	OK
Porous Paving	Rain 1: 30 years: +0 %: 2160 mins: Summer	121.434	121.433	0.172	0.183	3.187	0.1	0.000	0.000	0.0	0.000	49.953	OK
Porous Paving (1)	Rain 1: 30 years: +0 %: 2160 mins: Summer	121.434	121.433	0.172	0.183	3.187	0.1	0.000	0.000	0.0	0.000	49.934	OK
Porous Paving (2)	Rain 1: 30 years: +0 %: 2160 mins: Summer	121.435	121.434	0.173	0.184	3.187	0.1	0.000	0.000	0.0	0.000	49.780	OK
Porous Paving (3)	Rain 1: 30 years: +0 %: 2160 mins: Summer	121.989	121.987	0.169	0.182	3.886	0.1	0.000	0.000	0.0	0.000	50.555	OK
Porous Paving (4)	Rain 1: 30 years: +0 %: 2160 mins: Summer	121.264	121.263	0.172	0.183	3.187	0.1	0.000	0.000	0.0	0.000	49.936	OK
Porous Paving (5)	Rain 1: 30 years: +0 %: 2160 mins: Winter	119.770	119.768	0.174	0.188	5.051	0.1	0.000	0.000	0.0	0.000	49.019	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023			
		Designed by: RB	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX			



Rain 1: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max.
 Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Resident Volume (m³)	Max. Inflow (L/s)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
TANK	Rain 1: 100 years: +40 %: 180 mins: Winter	119.618	119.618	0.941	0.941	125.094	37.9	0.000	0.000	5.3	85.949	6.683	OK
Porous Paving	Rain 1: 100 years: +40 %: 2160 mins: Winter	121.564	121.556	0.302	0.306	5.478	0.1	0.000	0.000	0.0	0.349	13.985	OK
Porous Paving (1)	Rain 1: 100 years: +40 %: 2160 mins: Winter	121.565	121.556	0.303	0.306	5.476	0.1	0.000	0.000	0.0	0.353	13.979	OK
Porous Paving (2)	Rain 1: 100 years: +40 %: 2160 mins: Summer	121.565	121.556	0.303	0.306	5.465	0.2	0.000	0.000	0.0	0.397	13.887	OK
Porous Paving (3)	Rain 1: 100 years: +40 %: 2160 mins: Summer	122.122	122.111	0.302	0.306	6.761	0.2	0.000	0.000	0.0	0.411	13.971	OK
Porous Paving (4)	Rain 1: 100 years: +40 %: 2160 mins: Winter	121.395	121.386	0.303	0.306	5.476	0.1	0.000	0.000	0.0	0.353	13.982	OK
Porous Paving (5)	Rain 1: 100 years: +40 %: 2160 mins: Winter	119.899	119.887	0.304	0.307	8.557	0.2	0.000	0.000	0.0	0.540	13.630	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: RB	Checked by:	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.00	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	1	2	120.125	119.099	0.107	6.520	0.8	0.39	13.9	OK
1.02A	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	3A	4	119.986	118.908	0.108	6.460	0.7	0.39	13.6	OK
1.05	Rain 1: 2 years: +0 %: 120 mins: Winter	Pipe	15	16	120.900	118.885	0.057	41.328	0.6	0.13	4.6	Surcharged
2.02	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	7	8	119.855	118.926	0.114	6.625	0.6	0.2	13.8	OK
2.03	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	8	4	120.030	118.904	0.151	7.384	0.4	0.22	15.4	OK
1.04	Rain 1: 2 years: +0 %: 30 mins: Winter	Pipe	TANK	15	122.000	118.861	0.204	11.846	0.3	0.06	4.7	OK
1.03	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	4	TANK	119.980	118.888	0.136	23.423	2.0	0.67	49.8	OK
1.06	Rain 1: 2 years: +0 %: 120 mins: Winter	Pipe	16	17	119.855	118.632	0.057	41.222	0.6	0.13	4.6	OK
1.07	Rain 1: 2 years: +0 %: 120 mins: Winter	Pipe	17	EX MH	120.250	118.480	0.057	41.116	0.6	0.13	4.6	OK
2.01	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	6	7	120.500	119.431	0.068	5.249	1.1	0.2	11.0	OK
1.01	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	2	3	119.980	118.968	0.113	6.503	0.7	0.39	13.7	OK
1.02	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	3	3A	120.030	118.943	0.113	6.499	0.7	0.39	13.7	OK
3.00	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	9	10	121.700	119.538	0.063	2.974	0.7	0.08	6.4	OK
3.01	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	10	4	120.770	119.046	0.093	8.299	1.2	0.26	17.7	OK
4.00	Rain 1: 2 years: +0 %: 15 mins: Winter	Pipe	11	12	122.255	120.954	0.053	3.348	1.3	0.25	7.1	OK
4.01	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	12	10	121.650	120.175	0.056	4.895	1.4	0.13	11.1	OK
5.00	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	13	12	121.530	120.520	0.040	1.907	1.1	0.15	4.4	OK
6.00	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	14	10	120.400	119.166	0.014	0.137	0.4	0.02	0.3	OK
Pipe	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving	9	121.700	121.275	0.021	0.000	0.0	0	0.0	OK
Pipe (1)	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (1)	10	121.712	121.275	0.042	0.000	0.0	0	0.0	OK
Pipe (2)	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (2)	11	121.700	121.275	0.026	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023					
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: RB	Checked by:	Approved By:			
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX					

Pipe (3)	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (3)	11	121.650	121.830	0.026	0.000	0.0	0	0.0	OK
Pipe (4)	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (5)	14	119.855	119.605	0.007	0.000	0.0	0	0.0	OK
Pipe (5)	Rain 1: 2 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (4)	13	120.770	121.105	0.021	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
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Rain 1: 5 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.00	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	1	2	120.125	119.115	0.126	8.397	0.8	0.51	17.9	OK
1.02A	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	3A	4	119.986	118.935	0.136	8.201	0.7	0.5	17.4	OK
1.05	Rain 1: 5 years: +0 %: 120 mins: Winter	Pipe	15	16	120.900	118.944	0.058	49.725	0.6	0.14	4.9	Surcharged
2.02	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	7	8	119.855	118.948	0.139	8.476	0.6	0.25	17.8	OK
2.03	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	8	4	120.030	118.932	0.179	9.292	0.5	0.28	19.8	OK
1.04	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	TANK	15	122.000	118.873	0.216	5.890	0.4	0.07	5.1	OK
1.03	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	4	TANK	119.980	118.911	0.160	27.021	2.0	0.89	65.5	OK
1.06	Rain 1: 5 years: +0 %: 120 mins: Winter	Pipe	16	17	119.855	118.633	0.059	49.578	0.6	0.14	4.9	OK
1.07	Rain 1: 5 years: +0 %: 120 mins: Winter	Pipe	17	EX MH	120.250	118.481	0.058	49.434	0.6	0.14	4.9	OK
2.01	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	6	7	120.500	119.442	0.078	6.758	1.2	0.26	14.2	OK
1.01	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	2	3	119.980	118.991	0.136	8.376	0.7	0.5	17.6	OK
1.02	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	3	3A	120.030	118.966	0.138	8.336	0.7	0.5	17.6	OK
3.00	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	9	10	121.700	119.544	0.073	3.827	0.7	0.1	8.2	OK
3.01	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	10	4	120.770	119.062	0.115	10.711	1.3	0.33	22.7	OK
4.00	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	11	12	122.255	120.962	0.060	4.315	1.4	0.33	9.2	OK
4.01	Rain 1: 5 years: +0 %: 15 mins: Winter	Pipe	12	10	121.650	120.183	0.064	6.770	1.5	0.17	14.2	OK
5.00	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	13	12	121.530	120.526	0.046	2.460	1.2	0.2	5.6	OK
6.00	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	14	10	120.400	119.168	0.020	0.178	0.4	0.02	0.4	OK
Pipe	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving	9	121.700	121.282	0.023	0.000	0.0	0	0.0	OK
Pipe (1)	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (1)	10	121.712	121.282	0.049	0.000	0.0	0	0.0	OK
Pipe (2)	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (2)	11	121.700	121.282	0.030	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023					
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		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX					

Pipe (3)	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (3)	11	121.650	121.837	0.030	0.000	0.0	0	0.0	OK
Pipe (4)	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (5)	14	119.855	119.612	0.008	0.000	0.0	0	0.0	OK
Pipe (5)	Rain 1: 5 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (4)	13	120.770	121.112	0.024	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: RB	Checked by:	
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX		



Rain 1: 10 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.00	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	1	2	120.125	119.127	0.140	9.759	0.8	0.59	20.8	OK
1.02A	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	3A	4	119.986	118.953	0.153	9.331	0.7	0.58	20.3	OK
1.05	Rain 1: 10 years: +0 %: 120 mins: Winter	Pipe	15	16	120.900	118.995	0.059	54.950	0.6	0.14	5.0	Surcharged
2.02	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	7	8	119.855	118.965	0.156	9.788	0.7	0.29	20.8	OK
2.03	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	8	4	120.030	118.950	0.196	10.632	0.5	0.33	23.4	OK
1.04	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	TANK	15	122.000	118.903	0.246	6.247	0.4	0.07	5.5	OK
1.03	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	4	TANK	119.980	118.932	0.210	34.132	2.1	0.99	73.2	OK
1.06	Rain 1: 10 years: +0 %: 120 mins: Winter	Pipe	16	17	119.855	118.634	0.059	54.755	0.6	0.14	5.0	OK
1.07	Rain 1: 10 years: +0 %: 120 mins: Winter	Pipe	17	EX MH	120.250	118.482	0.059	54.565	0.6	0.14	5.0	OK
2.01	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	6	7	120.500	119.448	0.085	7.851	1.2	0.3	16.5	OK
1.01	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	2	3	119.980	119.008	0.153	9.641	0.7	0.58	20.4	OK
1.02	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	3	3A	120.030	118.983	0.155	9.533	0.7	0.58	20.4	OK
3.00	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	9	10	121.700	119.548	0.081	4.448	0.8	0.12	9.5	OK
3.01	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	10	4	120.770	119.073	0.129	12.459	1.2	0.39	26.4	OK
4.00	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	11	12	122.255	120.968	0.066	5.013	1.4	0.38	10.7	OK
4.01	Rain 1: 10 years: +0 %: 15 mins: Winter	Pipe	12	10	121.650	120.189	0.070	7.868	1.6	0.2	16.6	OK
5.00	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	13	12	121.530	120.530	0.050	2.856	1.3	0.23	6.5	OK
6.00	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	14	10	120.400	119.169	0.026	0.207	0.4	0.03	0.5	OK
Pipe	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving	9	121.700	121.287	0.025	0.000	0.0	0	0.0	OK
Pipe (1)	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (1)	10	121.712	121.287	0.055	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023					
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: RB	Checked by:	Approved By:			
		Company Address: Waterman Infrastructure & Environment Ltd 5th Floor One Cornwall Street Birmingham, B3 2DX					

Pipe (2)	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (2)	11	121.700	121.287	0.033	0.000	0.0	0	0.0	OK
Pipe (3)	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (3)	11	121.650	121.842	0.033	0.000	0.0	0	0.0	OK
Pipe (4)	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (5)	14	119.855	119.617	0.008	0.000	0.0	0	0.0	OK
Pipe (5)	Rain 1: 10 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (4)	13	120.770	121.117	0.026	0.000	0.0	0	0.0	OK

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Rain 1: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.00	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	1	2	120.125	119.150	0.169	12.379	0.8	0.74	26.3	OK
1.02A	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	3A	4	119.986	118.980	0.181	11.415	0.8	0.74	25.9	OK
1.05	Rain 1: 30 years: +0 %: 60 mins: Winter	Pipe	15	16	120.900	119.081	0.059	29.015	0.6	0.14	5.0	Surcharged
2.02	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	7	8	119.855	118.996	0.185	12.126	0.6	0.38	26.8	OK
2.03	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	8	4	120.030	118.977	0.224	13.014	0.6	0.44	31.4	OK
1.04	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	TANK	15	122.000	118.961	0.300	6.754	0.4	0.08	6.1	OK
1.03	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	4	TANK	119.980	118.954	0.241	38.548	2.3	1.33	98.1	OK
1.06	Rain 1: 30 years: +0 %: 60 mins: Winter	Pipe	16	17	119.855	118.634	0.060	28.759	0.6	0.14	5.0	OK
1.07	Rain 1: 30 years: +0 %: 60 mins: Winter	Pipe	17	EX MH	120.250	118.482	0.059	28.510	0.6	0.14	5.0	OK
2.01	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	6	7	120.500	119.461	0.098	9.637	1.3	0.38	20.9	OK
1.01	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	2	3	119.980	119.043	0.187	12.000	0.7	0.73	25.9	OK
1.02	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	3	3A	120.030	119.017	0.185	11.748	0.7	0.75	26.3	OK
3.00	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	9	10	121.700	119.554	0.095	5.640	0.8	0.15	12.1	OK
3.01	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	10	4	120.770	119.094	0.152	15.814	1.3	0.49	33.6	OK
4.00	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	11	12	122.255	120.979	0.076	6.358	1.5	0.48	13.6	OK
4.01	Rain 1: 30 years: +0 %: 15 mins: Winter	Pipe	12	10	121.650	120.199	0.079	9.977	1.7	0.26	21.1	OK
5.00	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	13	12	121.530	120.538	0.057	3.623	1.3	0.29	8.3	OK
6.00	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	14	10	120.400	119.171	0.037	0.264	0.4	0.03	0.6	OK
Pipe	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving	9	121.700	121.297	0.028	0.000	0.0	0	0.0	OK
Pipe (1)	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (1)	10	121.712	121.297	0.065	0.000	0.0	0	0.0	OK
Pipe (2)	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (2)	11	121.700	121.297	0.038	0.000	0.0	0	0.0	OK

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Pipe (3)	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (3)	11	121.650	121.852	0.038	0.000	0.0	0	0.0	OK
Pipe (4)	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (5)	14	119.855	119.627	0.009	0.000	0.0	0	0.0	OK
Pipe (5)	Rain 1: 30 years: +0 %: 15 mins: Summer	Pipe	Porous Paving (4)	13	120.770	121.127	0.029	0.000	0.0	0	0.0	OK

Project: WIE19849 Hinckley CDC Phase 1 Proposed Surface Water Drainage Design		Date: 01/06/2023		
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Rain 1: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.00	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	1	2	120.125	119.691	0.225	21.695	1.1	1.28	45.2	Surcharged
1.02A	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	3A	4	119.986	119.301	0.225	19.254	1.1	1.21	42.1	Surcharged
1.05	Rain 1: 100 years: +40 %: 30 mins: Winter	Pipe	15	16	120.900	119.345	0.059	13.808	0.6	0.14	5.0	Surcharged
2.02	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	7	8	119.855	119.325	0.300	21.188	0.7	0.63	44.7	Surcharged
2.03	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	8	4	120.030	119.302	0.300	22.684	0.7	0.7	50.1	Surcharged
1.04	Rain 1: 100 years: +40 %: 15 mins: Summer	Pipe	TANK	15	122.000	119.139	0.300	7.417	0.4	0.09	6.9	Surcharged
1.03	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	4	TANK	119.980	119.261	0.300	73.545	2.5	2.17	160.7	Surcharged
1.06	Rain 1: 100 years: +40 %: 15 mins: Summer	Pipe	16	17	119.855	118.634	0.060	6.193	0.6	0.14	5.0	OK
1.07	Rain 1: 100 years: +40 %: 180 mins: Summer	Pipe	17	EX MH	120.250	118.482	0.059	84.818	0.6	0.14	5.0	OK
2.01	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	6	7	120.500	119.512	0.225	17.612	1.3	0.69	38.1	OK
1.01	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	2	3	119.980	119.438	0.225	20.577	1.1	1.24	43.6	Surcharged
1.02	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	3	3A	120.030	119.379	0.225	19.921	1.1	1.22	42.6	Surcharged
3.00	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	9	10	121.700	119.573	0.225	10.230	0.9	0.27	22.0	OK
3.01	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	10	4	120.770	119.434	0.225	27.682	1.5	0.85	58.0	Surcharged
4.00	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	11	12	122.255	121.022	0.115	11.550	1.7	0.87	24.6	OK
4.01	Rain 1: 100 years: +40 %: 15 mins: Winter	Pipe	12	10	121.650	120.233	0.111	18.128	2.0	0.46	38.2	OK
5.00	Rain 1: 100 years: +40 %: 15 mins: Summer	Pipe	13	12	121.530	120.563	0.081	6.578	1.5	0.53	15.0	OK
6.00	Rain 1: 100 years: +40 %: 15 mins: Summer	Pipe	14	10	120.400	119.386	0.150	0.483	0.3	0.24	4.0	Surcharged
Pipe	Rain 1: 100 years: +40 %: 2160 mins: Winter	Pipe	Porous Paving	9	121.700	121.554	0.008	0.344	0.2	0	0.0	Surcharged

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Pipe (1)	Rain 1: 100 years: +40 %: 2160 mins: Winter	Pipe	Porous Paving (1)	10	121.712	121.554	0.013	0.352	0.1	0	0.0	Surcharged
Pipe (2)	Rain 1: 100 years: +40 %: 2160 mins: Summer	Pipe	Porous Paving (2)	11	121.700	121.555	0.011	0.397	0.2	0	0.0	Surcharged
Pipe (3)	Rain 1: 100 years: +40 %: 2160 mins: Summer	Pipe	Porous Paving (3)	11	121.650	122.109	0.011	0.411	0.2	0	0.0	Surcharged
Pipe (4)	Rain 1: 100 years: +40 %: 180 mins: Winter	Pipe	Porous Paving (5)	14	119.855	119.767	0.150	0.000	0.0	0	0.0	Surcharged
Pipe (5)	Rain 1: 100 years: +40 %: 2160 mins: Winter	Pipe	Porous Paving (4)	13	120.770	121.384	0.007	0.353	0.2	0	0.0	Surcharged