



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
7006	130.51	FO	128.85	225			VC	30.52888	1 in 71
7004	129.93	SW	128.17	300			CO	3.605551	1 in 60
7004	129.93	SW	128.17	300			CO	3.605551	1 in 60
7003	129.86	SW	127.99	300			CO	25.07987	
7003	129.86	SW	127.99	300			CO	25.07987	
7010	129.86	CO	0	225			VC	2.664354	
7010		CO	0	225			VC	2.664354	
7007	130.48	SW	129.05	225			VC	40.49691	1 in 47
7005	130.04	CO	128.21	225			VC	21.93171	
7005	130.04	CO	128.21	225			VC	21.93171	

Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
------	-------	------	--------	--------	--------	-------	------	--------	------

LEGEND

Abandoned

Foul

Surface Water

Combined

Public Sewer

Private Sewer

Section 104

Rising Main

Sludge Main

Overflow

Water Course

Highway Drain

All point assets follow the standard colour convention:
red - combined
blue - surface water
brown - foul
purple - overflow

Manhole

Head of System

Extent of Survey

Rodding Eye

Inlet

Discharge Point

Vortex

Penstock

Washout Chamber

Valve

Air Valve

Non Return Valve

Soakaway

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Orifice Plate

Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

Lamp Hole

T Junction / Saddle

Catchpit

Valve Chamber

Vent Column

Vortex Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

Ww Treatment Works

Ww Pumping Station

Septic Tank

Control Kiosk

Change of Characteristic

MANHOLE FUNCTION

FO Foul

SW Surface Water

CO Combined

OV Overflow

SEWER SHAPE

CI Circular

EG Egg

OV Oval

FT Flat Top

RE Rectangular

SQ Square

TR Trapezoidal

AR Arch

BA Barrel

HO HorseShoe

UN Unspecified

SEWER MATERIAL

AC Asbestos Cement

BR Brick

PE Polyethylene

RP Reinforced Plastic Matrix

CO Concrete

CSB Concrete Segment Bolted

CSU Concrete Segment Unbolted

CC Concrete Box Culvert

PSC Plastic / Steel Composite

GRC Glass Reinforced Plastic

DI Ductile Iron

PVC Polyvinyl Chloride

CI Cast Iron

SI Spun Iron

ST Steel

VC Vitrified Clay

PP Polypropylene

PF Pitch Fibre

MAC Masonry, Coursed

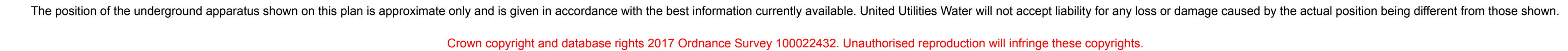
MAR Masonry, Random

U Unspecified

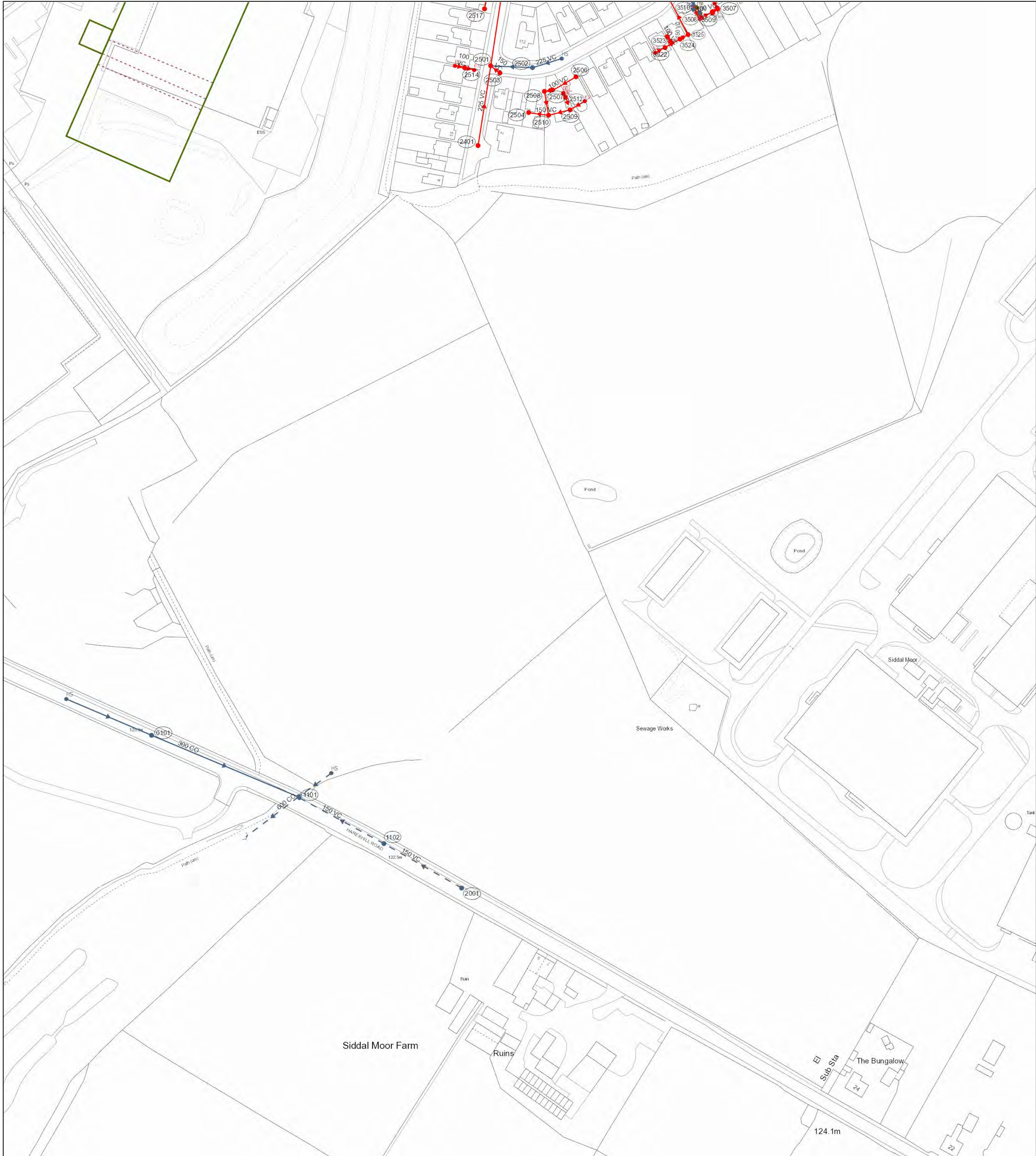
Address or Site Reference:
Site off Manchester Road Heywood OL10 2QR,

OS sheet SD8508NE
Number:
Scale: 1:1250
Nodes: 10
Sheet: 1 of 4
Date: 11/08/2021

Printed by: Property Searches



SEWER RECORDS United Utilities



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Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
2506	CO	CO	100	150		VC	14.92737		
2501	SW	SW	150			VC	49.24792		
2507	CO	CO	100			VC	4.39773		
2502	SW	SW	129.09	225		VC	23.92173	1 in 27	
2503	CO	CO	128.62	150		VC	6.403124	1 in 17	
2509	CO	CO	150			VC	12.33625		
2510	CO	CO	150			VC	10.97458		
2501	CO	CO	128.22	225		VC	79.9502	1 in 113	
1102	SW	SW	150			VC	53.00475		
2514	CO	CO	150			VC	8.419589		
2507	CO	CO	150			VC	3.515177		
2508	CO	CO	100			VC	13.36781		
0101	SW	SW	124.24	300		CO	87.84646	1 in 35	
3509	CO	CO	100			VC	1.034902		
2517	CO	CO	100			VC	16.41844		
3522	CO	CO	150			VC	9.532157	1 in 135	
1101	SW	SW	600			CO	36.40205		
3525	CO	CO	150			VC	22.36304		
3508	CO	CO	100			VC	6.817094		
3523	CO	CO	100			VC	1.536818		
2401	CO	CO	128.77	225		VC	44.55334	1 in 84	
3524	CO	CO	150			VC	5.112437		

Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
------	-------	------	--------	--------	--------	-------	------	--------	------

LEGEND

Abandoned

Foul

Surface Water

Combined

Public Sewer

Private Sewer

Section 104

Rising Main

Sludge Main

Overflow

Water Course

Highway Drain

All point assets follow the standard colour convention:
red - combined
blue - surface water
brown - foul
purple - overflow

Manhole

Head of System

Extent of Survey

Rodding Eye

Inlet

Discharge Point

Vortex

Penstock

Washout Chamber

Valve

Air Valve

Non Return Valve

Soakaway

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Orifice Plate

Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

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Valve Chamber

Vent Column

Vortex Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

Ww Treatment Works

Ww Pumping Station

Septic Tank

Control Kiosk

Change of Characteristic

MANHOLE FUNCTION

FO Foul

SW Surface Water

CO Combined

OV Overflow

SEWER SHAPE

CI Circular

EG Egg

OV Oval

FT Flat Top

RE Rectangular

SQ Square

TR Trapezoidal

AR Arch

BA Barrel

HO HorseShoe

UN Unspecified

SEWER MATERIAL

AC Asbestos Cement

BR Brick

PE Polyethylene

RP Reinforced Plastic Matrix

CO Concrete

CSB Concrete Segment Bolted

CSU Concrete Segment Unbolted

CC Concrete Box Culvert

PSC Plastic / Steel Composite

GRC Glass Reinforced Plastic

DI Ductile Iron

PVC Polyvinyl Chloride

CI Cast Iron

SI Spun Iron

ST Steel

VC Vitrified Clay

PP Polypropylene

PF Pitch Fibre

MAC Masonry, Coursed

MAR Masonry, Random

U Unspecified

Address or Site Reference:
Site off Manchester Road Heywood OL10 2QR,

OS sheet SD8509SW
Number:
Scale: 1:1250 Date: 11/08/2021
Nodes: 22
Sheet: 3 of 4

Printed by: Property Searches

SEWER RECORDS

Water for the North West

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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LEGEND

	Air Valve
	AC Valve, open
	AC Valve, closed
	CC Valve, open
	CC Valve, closed
	Non Return Valve
	Pressure Management Valve
	OMS Valve
	Stop Tap
	Flow Meter
	Domestic Meter
	Commercial Meter
	Pump
	Hydrant
	Fire Hydrant
	Anode
	Chlorination Point
	De-chlorination Point
	Strainer Point
	Access Point
	Hatch Box
	IP Point
	Sampling Station
	Logger Box
	Bore Hole
	Inlet Point
	Bulk Supply Point
	End Cap
	Site Termination
	Change of Characteristic
	Condition Report

Property Types

	Water Tower
	Valve House
	Booster Pumping Station
	Intake Pumping Station
	Water Treatment Works
	Supply Reservoir
	Service Reservoir
	Impounding Reservoir
	Pipe Bridge

Symbology for abandoned assets is the same as above, but shown in black.

Address or Site Reference:

Site off Manchester Road Heywood OL10 2QR,

OS sheet number: SD8508NE
Scale: 1:1250
Date: 11/08/2021

Printed by: Property Searches

WATER MAIN RECORDS

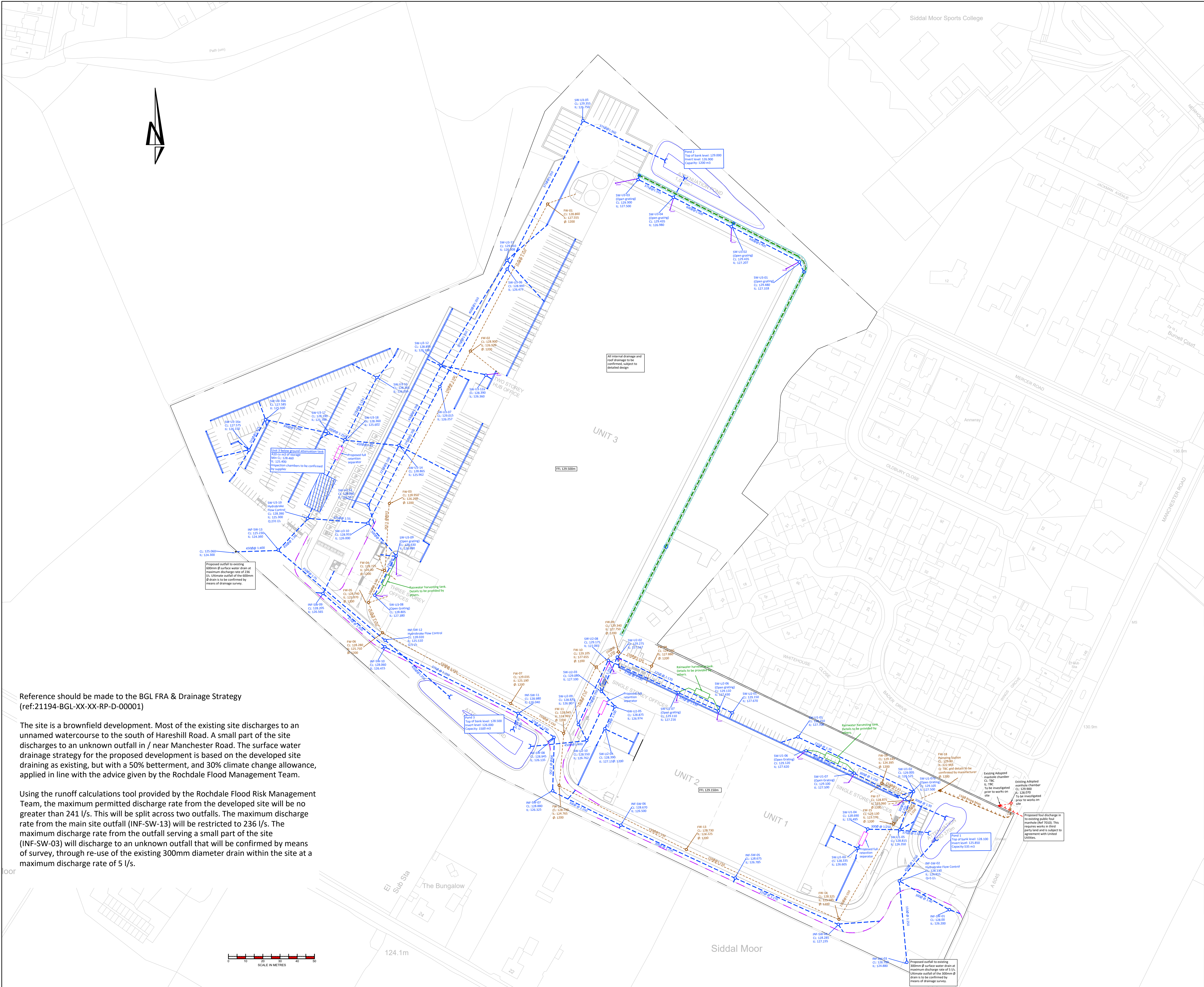




LEGEND

Proposed	Abandoned	Live

APPENDIX E – DRAINAGE STRATEGY



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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE

DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

GENERAL NOTES:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL THE RELEVANT ARCHITECTS, ENGINEERS' AND SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.

Key:

Proposed Surface Water Drainage

Proposed Surface Water Drainage Manhole

Siphonic Roof Downpipe (by others)

Proposed Foul Water Drainage

Proposed Foul rising main

Proposed Foul Water Drainage Manhole

Proposed Filter Drain & catchpit

Kerb Drainage

Proposed Channel Drains

Proposed Petrol Interceptor / Separator

Existing pumping chamber

Existing rising main

P4	20/10/22	ALA	Updated to suit latest architects layout	SEB
P3	13/10/22	ALA	Updated to suit latest architects layout	JW
P2	19/08/22	ALA	Updated to suit latest architects layout	SEB
P1	08/08/22	ALA	PRELIMINARY	JW
REV	DATE	BY	REVISION	CHK'D

Burrows Graham

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CLIENT
TRAMMELL CROW COMPANY

PROJECT
TRAMMELL HEYWOOD

DRAWING TITLE
DRAINAGE STRATEGY

OUR PROJECT NUMBER 21194	DRAWING STATUS PRELIMINARY	OFFICE NORTH
SCALE @ A1 1:1000	DATE 08/08/2022	DRAWN BY ALA
DRAWING No 21194-BGL-XX-XX-DR-C-00250	CHECKED BY JW	REV P4

APPENDIX F – HYDRAULIC CALCULATIONS

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.300	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.179	5.00	129.510	1350	2.887	228.265	1.650
SW-U3-01	0.649	5.00	129.480	1500	47.431	318.999	2.162
SW-U3-02	1.129	5.00	129.435	1500	5.738	340.097	2.228
SW-U3-03	0.643	5.00	129.300	1350	-49.796	368.517	1.800
SW-U3-04	1.131	5.00	129.435	1800	-29.494	357.600	2.454
pond 2			129.000	1800	-24.898	373.497	2.100
SW-U3-05			129.355	1350	-82.503	402.851	2.604
SW-U3-06			128.930	1350	-125.706	311.486	2.450
SW-U3-07			129.015	1350	-162.706	247.344	2.755
SW-U3-10			128.955	1350	-209.772	162.923	2.955
11	0.312	6.00	128.250	1350	-103.868	298.841	1.750
SW-U3-11	0.320	6.00	129.010	1350	-124.412	319.199	2.702
SW-U3-12	0.164	6.00	128.895	1350	-166.222	255.868	2.787
14	0.303	5.00	128.250	1350	-157.750	192.480	2.150
SW-U3-14			128.865	1350	-191.604	209.212	3.200
SW-U3-13	0.075	5.00	128.875	1200	-213.075	167.763	2.318
SW-U3-15	0.130	5.00	128.365	1200	-205.192	250.909	2.309
SW-U3-16	0.231	5.00	127.585	1200	-276.071	215.796	1.655
SW-U3-19			128.390	1350	-247.365	167.513	3.090
SW-U1-01	0.050	5.00	129.210	1200	38.948	40.406	1.510
SW-U1-02	0.050	5.00	129.005	1200	115.291	4.637	2.483
24	0.099	5.00	127.900	1200	65.169	-19.484	1.125
SW-U1-03	0.103	5.00	128.335	1200	82.940	-28.194	1.730
SW-U1-04			128.690	1200	85.859	-21.250	2.195
SW-U1-05	0.029	5.00	128.810	1350	103.737	-16.584	2.460
SW-U1-06	0.213	5.00	129.120	1200	48.033	28.133	1.500
SW-U1-07	0.258	5.00	129.100	1200	75.562	15.021	1.600
Pond 1			128.100		132.622	-15.352	2.250
INF-SW-01	0.036	5.00	128.000	1200	136.316	-65.299	1.800
INF-SW-03			126.790	1200	113.270	-89.805	1.910
tank u3			128.460		-241.567	178.641	3.060
SW-U3-18			128.360	1350	-223.937	212.975	2.758
INF-SW-02	0.095	5.00	128.100	2100	107.993	-50.574	3.060
INF-SW-04	0.068	5.00	128.285	1200	75.774	-75.841	1.050
INF-SW-05	0.052	5.00	128.675	1200	8.645	-46.954	1.890
INF-SW-06	0.055	5.00	128.670	1200	-61.308	-13.922	2.170
INF-SW-09	0.065	5.00	128.025	1350	-238.918	117.147	1.460
INF-SW-10	0.062	5.00	128.010	1350	-195.658	78.856	1.594
INF-SW-11			128.980	1350	-111.150	51.326	2.940

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SW-U2-01	0.050	5.00	129.150	1200	8.300	49.833	1.725
SW-U2-02	0.050	5.00	129.275	1200	-63.271	81.772	2.345
SW-U2-03	0.024	5.00	129.080	1200	-71.037	63.948	2.235
45	0.031	5.00	127.900	1200	-52.951	32.146	0.750
SW-U2-04	0.000	5.00	128.390	1200	-70.164	40.479	1.540
SW-U2-05	0.191	5.00	128.875	1200	-63.352	54.768	2.225
SW-U2-06	0.195	5.00	129.110	1500	-2.475	51.605	1.575
SW-U2-07	0.279	5.00	129.110	1350	-31.727	64.741	1.645
SW-U2-08	0.041	5.00	129.175	1350	-66.306	79.572	1.835
SW-U2-09			128.870	1350	-81.500	43.106	2.195
SW-U2-10			128.550	1500	-78.694	33.385	2.200
Pond 3	0.120	5.00	128.500		-130.330	40.183	2.500
INF-SW-12			128.125	1350	-199.820	87.665	2.615
INF-SW-13			125.230	1350	-272.699	153.204	0.870
Outfall_1			125.060	1350	-293.513	144.630	0.760
SW-U3-17	0.300	5.00	128.190	1200	-233.520	215.589	2.402
SW-U3-16a	0.099	5.00	127.575	1200	-282.277	205.804	1.425
INF-SW-08	0.048	5.00	128.945	1350	-97.614	40.800	2.810
INF-SW-07	0.067	5.00	128.880	1200	-104.971	15.152	2.555
SW-U3-08	0.010	5.00	128.805	1200	-206.829	120.293	1.425
SW-U3-09	0.014	5.00	128.630	1200	-195.890	141.422	1.940
SW-U1-07a	0.042	5.00	129.105	1200	107.219	-0.146	1.815
SW-U3-12a	0.040	5.00	128.390	1200	-138.052	253.052	2.030

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	SW-U3-01	98.000	0.600	127.860	127.468	0.392	250.0	450	6.28	50.0
1.001	SW-U3-01	SW-U3-02	45.000	0.600	127.318	127.207	0.111	405.4	600	6.90	50.0
1.002	SW-U3-02	SW-U3-04	38.000	0.600	127.207	127.131	0.076	500.0	600	7.48	50.0
2.000	SW-U3-03	SW-U3-04	23.051	0.600	127.500	127.431	0.069	334.1	375	5.39	50.0
1.003	SW-U3-04	pond 2	13.000	0.600	126.981	126.955	0.026	500.0	750	7.66	50.0
1.004	pond 2	SW-U3-05	52.000	0.600	126.900	126.751	0.149	350.0	375	8.56	50.0
1.005	SW-U3-05	SW-U3-06	95.000	0.600	126.751	126.480	0.271	350.0	375	10.20	50.0
1.006	SW-U3-06	SW-U3-07	77.000	0.600	126.480	126.260	0.220	350.0	375	11.54	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.281	203.7	24.3	1.200	1.562	0.179	0.0	104	0.873
1.001	1.203	340.1	112.2	1.562	1.628	0.828	0.0	236	1.084
1.002	1.082	305.9	265.2	1.628	1.704	1.957	0.0	434	1.211
2.000	0.985	108.8	87.1	1.425	1.629	0.643	0.0	255	1.090
1.003	1.244	549.7	505.6	1.704	1.295	3.731	0.0	571	1.401
1.004	0.963	106.3	505.6	1.725	2.229	3.731	0.0	375	0.975
1.005	0.963	106.3	505.6	2.229	2.075	3.731	0.0	375	0.975
1.006	0.963	106.3	505.6	2.075	2.380	3.731	0.0	375	0.975

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.007	SW-U3-07	SW-U3-10	90.000	0.600	126.260	126.003	0.257	350.0	375	13.10	50.0
1.008	SW-U3-10	SW-U3-19	34.000	0.600	126.000	125.375	0.625	54.4	375	13.33	50.0
4.000	11	SW-U3-11	31.500	0.600	126.500	126.383	0.117	270.0	375	6.48	50.0
4.001	SW-U3-11	SW-U3-12	70.000	0.600	126.308	126.108	0.200	350.0	450	7.56	50.0
4.002	SW-U3-12	SW-U3-14	51.000	0.600	126.108	125.962	0.146	350.0	450	8.34	50.0
6.000	14	SW-U3-14	37.763	0.600	126.100	125.665	0.435	86.8	375	5.32	50.0
7.000	SW-U3-13	SW-U3-14	37.000	0.600	126.557	126.187	0.370	100.0	225	5.47	50.0
4.005	tank u3	SW-U3-19	3.500	0.600	125.400	125.300	0.100	35.0	450	8.61	50.0
9.000_1	SW-U3-15	SW-U3-18	39.000	0.600	126.056	125.827	0.229	170.3	225	5.65	50.0
8.001	SW-U3-16	SW-U3-17	35.600	0.600	125.930	125.788	0.142	250.7	300	5.86	50.0
1.009	SW-U3-19	INF-SW-13	20.500	0.600	125.300	124.360	0.940	21.8	450	13.40	50.0
15.000	SW-U1-01	SW-U1-02	75.000	0.600	127.700	126.600	1.100	68.2	225	5.79	50.0
15.001	SW-U1-02	SW-U1-05	23.000	0.600	126.522	126.430	0.092	250.0	300	6.18	50.0
16.000	24	SW-U1-03	16.700	0.600	126.775	126.680	0.095	175.8	225	5.28	50.0
16.001	SW-U1-03	SW-U1-04	3.000	0.600	126.605	126.495	0.110	27.3	300	5.30	50.0
16.002	SW-U1-04	SW-U1-05	17.000	0.600	126.495	126.427	0.068	250.0	300	5.59	50.0
15.002	SW-U1-05	Pond 1	16.000	0.600	126.350	126.300	0.050	320.0	375	6.44	50.0
17.000	SW-U1-06	SW-U1-07	30.000	0.600	127.620	127.500	0.120	250.0	300	5.51	50.0
17.001	SW-U1-07	SW-U1-07a	31.500	0.600	127.500	127.290	0.210	150.0	300	5.92	50.0
15.003	Pond 1	INF-SW-02	31.000	0.600	125.850	125.040	0.810	38.3	450	6.60	50.0
18.000	INF-SW-01	INF-SW-02	41.000	0.600	126.200	125.190	1.010	40.6	300	5.28	50.0
12.004	INF-SW-02	INF-SW-03	46.000	0.600	125.340	124.880	0.460	100.0	150	7.71	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.007	0.963	106.3	505.6	2.380	2.577	3.731	0.0	375	0.975
1.008	2.461	271.8	508.9	2.580	2.640	3.755	0.0	375	2.492
4.000	1.098	121.2	42.3	1.375	2.252	0.312	0.0	153	1.003
4.001	1.081	171.9	85.7	2.252	2.337	0.632	0.0	225	1.080
4.002	1.081	171.9	113.3	2.337	2.453	0.836	0.0	268	1.152
6.000	1.945	214.8	41.1	1.775	2.825	0.303	0.0	110	1.510
7.000	1.307	52.0	10.2	2.093	2.453	0.075	0.0	67	1.019
4.005	3.445	547.9	267.5	2.610	2.640	1.974	0.0	222	3.426
9.000_1	0.999	39.7	17.6	2.084	2.308	0.130	0.0	105	0.970
8.001	0.988	69.9	44.7	1.355	2.102	0.330	0.0	175	1.047
1.009	4.368	694.6	776.4	2.640	0.420	5.729	0.0	450	4.423
15.000	1.586	63.0	6.8	1.285	2.180	0.050	0.0	50	1.044
15.001	0.990	70.0	13.6	2.183	2.080	0.100	0.0	89	0.771
16.000	0.983	39.1	13.4	0.900	1.430	0.099	0.0	91	0.894
16.001	3.022	213.6	27.4	1.430	1.895	0.202	0.0	72	2.094
16.002	0.990	70.0	27.4	1.895	2.083	0.202	0.0	130	0.931
15.002	1.007	111.2	44.9	2.085	1.425	0.331	0.0	165	0.954
17.000	0.990	70.0	28.9	1.200	1.300	0.213	0.0	134	0.943
17.001	1.281	90.6	63.8	1.300	1.515	0.471	0.0	186	1.384
15.003	3.294	523.9	114.3	1.800	2.610	0.844	0.0	142	2.659
18.000	2.475	174.9	4.9	1.500	2.610	0.036	0.0	34	1.102
12.004	1.005	17.8	132.1	2.610	1.760	0.975	0.0	150	1.023

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
4.004	SW-U3-18	tank u3	6.000	0.600	125.602	125.400	0.202	29.7	450	8.60	50.0
8.002	SW-U3-17	SW-U3-18	9.000	0.600	125.788	125.752	0.036	250.0	300	6.01	50.0
10.000	INF-SW-04	INF-SW-05	64.000	0.600	127.235	126.860	0.375	170.7	225	6.07	50.0
4.003	SW-U3-14	SW-U3-18	30.000	0.600	125.962	125.602	0.360	83.3	450	8.57	50.0
10.001	INF-SW-05	INF-SW-06	71.000	0.600	126.785	126.500	0.285	249.1	300	7.26	50.0
10.002	INF-SW-06	INF-SW-07	43.000	0.600	126.500	126.325	0.175	245.7	300	7.98	50.0
11.000	INF-SW-09	INF-SW-10	52.000	0.600	126.565	126.416	0.149	350.0	375	5.90	50.0
11.001	INF-SW-10	INF-SW-11	93.000	0.600	126.416	126.040	0.376	247.3	375	7.25	50.0
10.005	INF-SW-11	Pond 3	10.000	0.600	126.040	126.000	0.040	250.0	375	8.98	50.0
9.000	SW-U2-01	SW-U2-02	72.800	0.600	127.425	127.000	0.425	171.3	225	6.25	50.0
12.001	SW-U2-02	SW-U2-03	20.500	0.600	126.930	126.845	0.085	241.2	300	6.59	50.0
9.002	SW-U2-03	SW-U2-05	11.000	0.600	126.845	126.800	0.045	244.4	300	6.57	50.0
13.000	45	SW-U2-04	18.000	0.600	127.150	127.000	0.150	120.0	150	5.33	50.0
13.001	SW-U2-04	SW-U2-05	13.500	0.600	126.850	126.800	0.050	270.0	300	5.56	50.0
9.003	SW-U2-05	SW-U2-10	21.000	0.600	126.650	126.500	0.150	140.0	450	6.82	50.0
14.000	SW-U2-06	SW-U2-07	24.000	0.600	127.535	127.465	0.070	342.9	375	5.41	50.0
14.001	SW-U2-07	SW-U2-08	43.000	0.600	127.465	127.340	0.125	344.0	375	6.15	50.0
14.002	SW-U2-08	SW-U2-09	39.505	0.600	127.340	126.675	0.665	59.4	375	6.43	50.0
14.003	SW-U2-09	SW-U2-10	9.000	0.600	126.675	126.650	0.025	360.0	375	6.59	50.0
12.004_1	SW-U2-10	Pond 3	10.000	0.600	126.350	126.270	0.080	125.0	600	6.90	50.0
10.006	Pond 3	INF-SW-12	49.000	0.600	126.000	125.510	0.490	100.0	450	9.38	50.0
10.007	INF-SW-12	INF-SW-13	80.000	0.600	125.510	124.360	1.150	69.6	450	9.93	50.0
1.010	INF-SW-13	Outfall_1	24.000	0.600	124.360	124.300	0.060	400.0	450	13.80	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
4.004	3.741	594.9	267.5	2.308	2.610	1.974	0.0	211	3.646
8.002	0.990	70.0	85.4	2.102	2.308	0.630	0.0	300	1.002
10.000	0.998	39.7	9.2	0.825	1.590	0.068	0.0	73	0.814
4.003	2.228	354.3	164.5	2.453	2.308	1.214	0.0	216	2.190
10.001	0.991	70.1	16.3	1.590	1.870	0.120	0.0	98	0.812
10.002	0.998	70.6	23.7	1.870	2.255	0.175	0.0	120	0.903
11.000	0.963	106.3	8.8	1.085	1.219	0.065	0.0	72	0.588
11.001	1.147	126.7	17.2	1.219	2.565	0.127	0.0	93	0.809
10.005	1.141	126.0	56.5	2.565	2.125	0.417	0.0	176	1.112
9.000	0.996	39.6	6.8	1.500	2.050	0.050	0.0	63	0.748
12.001	1.008	71.2	13.6	2.045	1.935	0.100	0.0	88	0.780
9.002	1.001	70.8	16.8	1.935	1.775	0.124	0.0	99	0.825
13.000	0.916	16.2	4.2	0.600	1.240	0.031	0.0	52	0.769
13.001	0.952	67.3	4.2	1.240	1.775	0.031	0.0	51	0.536
9.003	1.716	272.9	46.9	1.775	1.600	0.346	0.0	125	1.296
14.000	0.973	107.4	26.4	1.200	1.270	0.195	0.0	126	0.810
14.001	0.971	107.2	64.2	1.270	1.460	0.474	0.0	209	1.012
14.002	2.354	260.0	69.8	1.460	1.820	0.515	0.0	132	2.008
14.003	0.949	104.8	69.8	1.820	1.525	0.515	0.0	224	1.014
12.004_1	2.176	615.4	116.7	1.600	1.630	0.861	0.0	175	1.691
10.006	2.033	323.3	189.5	2.050	2.165	1.398	0.0	248	2.111
10.007	2.440	388.0	189.5	2.165	0.420	1.398	0.0	222	2.426
1.010	1.010	160.7	965.9	0.420	0.310	7.127	0.0	450	1.023

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
8.000	SW-U3-16a	SW-U3-16	18.000	0.600	126.150	126.005	0.145	124.1	225	5.26	50.0
10.004	INF-SW-08	INF-SW-11	24.000	0.600	126.135	126.040	0.095	252.6	375	8.84	50.0
10.003	INF-SW-07	INF-SW-08	29.500	0.600	126.325	126.210	0.115	256.5	300	8.48	50.0
3.000	SW-U3-08	SW-U3-09	24.500	0.600	127.380	126.765	0.615	39.8	225	5.20	50.0
3.001	SW-U3-09	SW-U3-10	23.700	0.600	126.690	126.075	0.615	38.5	300	5.35	50.0
17.002	SW-U1-07a	Pond 1	25.000	0.600	127.290	126.400	0.890	28.1	300	6.05	50.0
5.000	SW-U3-12a	SW-U3-12	28.310	0.600	126.360	126.260	0.100	283.1	300	5.51	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
8.000	1.172	46.6	13.4	1.200	1.355	0.099	0.0	82	1.014
10.004	1.135	125.4	39.3	2.435	2.565	0.290	0.0	144	1.008
10.003	0.977	69.0	32.8	2.255	2.435	0.242	0.0	146	0.965
3.000	2.078	82.6	1.4	1.200	1.640	0.010	0.0	20	0.774
3.001	2.540	179.5	3.3	1.640	2.580	0.024	0.0	28	0.991
17.002	2.977	210.5	69.5	1.515	1.400	0.513	0.0	118	2.678
5.000	0.929	65.7	5.4	1.730	2.335	0.040	0.0	58	0.565

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	98.000	250.0	450	Circular	129.510	127.860	1.200	129.480	127.468	1.562
1.001	45.000	405.4	600	Circular	129.480	127.318	1.562	129.435	127.207	1.628
1.002	38.000	500.0	600	Circular	129.435	127.207	1.628	129.435	127.131	1.704
2.000	23.051	334.1	375	Circular	129.300	127.500	1.425	129.435	127.431	1.629
1.003	13.000	500.0	750	Circular	129.435	126.981	1.704	129.000	126.955	1.295
1.004	52.000	350.0	375	Circular	129.000	126.900	1.725	129.355	126.751	2.229
1.005	95.000	350.0	375	Circular	129.355	126.751	2.229	128.930	126.480	2.075
1.006	77.000	350.0	375	Circular	128.930	126.480	2.075	129.015	126.260	2.380
1.007	90.000	350.0	375	Circular	129.015	126.260	2.380	128.955	126.003	2.577
1.008	34.000	54.4	375	Circular	128.955	126.000	2.580	128.390	125.375	2.640

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1350	Manhole	Adoptable	SW-U3-01	1500	Manhole	Adoptable
1.001	SW-U3-01	1500	Manhole	Adoptable	SW-U3-02	1500	Manhole	Adoptable
1.002	SW-U3-02	1500	Manhole	Adoptable	SW-U3-04	1800	Manhole	Adoptable
2.000	SW-U3-03	1350	Manhole	Adoptable	SW-U3-04	1800	Manhole	Adoptable
1.003	SW-U3-04	1800	Manhole	Adoptable	pond 2	1800	Manhole	Adoptable
1.004	pond 2	1800	Manhole	Adoptable	SW-U3-05	1350	Manhole	Adoptable
1.005	SW-U3-05	1350	Manhole	Adoptable	SW-U3-06	1350	Manhole	Adoptable
1.006	SW-U3-06	1350	Manhole	Adoptable	SW-U3-07	1350	Manhole	Adoptable
1.007	SW-U3-07	1350	Manhole	Adoptable	SW-U3-10	1350	Manhole	Adoptable
1.008	SW-U3-10	1350	Manhole	Adoptable	SW-U3-19	1350	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
4.000	31.500	270.0	375	Circular	128.250	126.500	1.375	129.010	126.383	2.252
4.001	70.000	350.0	450	Circular	129.010	126.308	2.252	128.895	126.108	2.337
4.002	51.000	350.0	450	Circular	128.895	126.108	2.337	128.865	125.962	2.453
6.000	37.763	86.8	375	Circular	128.250	126.100	1.775	128.865	125.665	2.825
7.000	37.000	100.0	225	Circular	128.875	126.557	2.093	128.865	126.187	2.453
4.005	3.500	35.0	450	Circular	128.460	125.400	2.610	128.390	125.300	2.640
9.000_1	39.000	170.3	225	Circular	128.365	126.056	2.084	128.360	125.827	2.308
8.001	35.600	250.7	300	Circular	127.585	125.930	1.355	128.190	125.788	2.102
1.009	20.500	21.8	450	Circular	128.390	125.300	2.640	125.230	124.360	0.420
15.000	75.000	68.2	225	Circular	129.210	127.700	1.285	129.005	126.600	2.180
15.001	23.000	250.0	300	Circular	129.005	126.522	2.183	128.810	126.430	2.080
16.000	16.700	175.8	225	Circular	127.900	126.775	0.900	128.335	126.680	1.430
16.001	3.000	27.3	300	Circular	128.335	126.605	1.430	128.690	126.495	1.895
16.002	17.000	250.0	300	Circular	128.690	126.495	1.895	128.810	126.427	2.083
15.002	16.000	320.0	375	Circular	128.810	126.350	2.085	128.100	126.300	1.425
17.000	30.000	250.0	300	Circular	129.120	127.620	1.200	129.100	127.500	1.300
17.001	31.500	150.0	300	Circular	129.100	127.500	1.300	129.105	127.290	1.515
15.003	31.000	38.3	450	Circular	128.100	125.850	1.800	128.100	125.040	2.610
18.000	41.000	40.6	300	Circular	128.000	126.200	1.500	128.100	125.190	2.610
12.004	46.000	100.0	150	Circular	128.100	125.340	2.610	126.790	124.880	1.760
4.004	6.000	29.7	450	Circular	128.360	125.602	2.308	128.460	125.400	2.610
8.002	9.000	250.0	300	Circular	128.190	125.788	2.102	128.360	125.752	2.308
10.000	64.000	170.7	225	Circular	128.285	127.235	0.825	128.675	126.860	1.590

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.000	11	1350	Manhole	Adoptable	SW-U3-11	1350	Manhole	Adoptable
4.001	SW-U3-11	1350	Manhole	Adoptable	SW-U3-12	1350	Manhole	Adoptable
4.002	SW-U3-12	1350	Manhole	Adoptable	SW-U3-14	1350	Manhole	Adoptable
6.000	14	1350	Manhole	Adoptable	SW-U3-14	1350	Manhole	Adoptable
7.000	SW-U3-13	1200	Manhole	Adoptable	SW-U3-14	1350	Manhole	Adoptable
4.005	tank u3		Junction		SW-U3-19	1350	Manhole	Adoptable
9.000_1	SW-U3-15	1200	Manhole	Adoptable	SW-U3-18	1350	Manhole	Adoptable
8.001	SW-U3-16	1200	Manhole	Adoptable	SW-U3-17	1200	Manhole	Adoptable
1.009	SW-U3-19	1350	Manhole	Adoptable	INF-SW-13	1350	Manhole	Adoptable
15.000	SW-U1-01	1200	Manhole	Adoptable	SW-U1-02	1200	Manhole	Adoptable
15.001	SW-U1-02	1200	Manhole	Adoptable	SW-U1-05	1350	Manhole	Adoptable
16.000	24	1200	Manhole	Adoptable	SW-U1-03	1200	Manhole	Adoptable
16.001	SW-U1-03	1200	Manhole	Adoptable	SW-U1-04	1200	Manhole	Adoptable
16.002	SW-U1-04	1200	Manhole	Adoptable	SW-U1-05	1350	Manhole	Adoptable
15.002	SW-U1-05	1350	Manhole	Adoptable	Pond 1		Junction	
17.000	SW-U1-06	1200	Manhole	Adoptable	SW-U1-07	1200	Manhole	Adoptable
17.001	SW-U1-07	1200	Manhole	Adoptable	SW-U1-07a	1200	Manhole	Adoptable
15.003	Pond 1		Junction		INF-SW-02	2100	Manhole	Adoptable
18.000	INF-SW-01	1200	Manhole	Adoptable	INF-SW-02	2100	Manhole	Adoptable
12.004	INF-SW-02	2100	Manhole	Adoptable	INF-SW-03	1200	Manhole	Adoptable
4.004	SW-U3-18	1350	Manhole	Adoptable	tank u3		Junction	
8.002	SW-U3-17	1200	Manhole	Adoptable	SW-U3-18	1350	Manhole	Adoptable
10.000	INF-SW-04	1200	Manhole	Adoptable	INF-SW-05	1200	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
4.003	30.000	83.3	450	Circular	128.865	125.962	2.453	128.360	125.602	2.308
10.001	71.000	249.1	300	Circular	128.675	126.785	1.590	128.670	126.500	1.870
10.002	43.000	245.7	300	Circular	128.670	126.500	1.870	128.880	126.325	2.255
11.000	52.000	350.0	375	Circular	128.025	126.565	1.085	128.010	126.416	1.219
11.001	93.000	247.3	375	Circular	128.010	126.416	1.219	128.980	126.040	2.565
10.005	10.000	250.0	375	Circular	128.980	126.040	2.565	128.500	126.000	2.125
9.000	72.800	171.3	225	Circular	129.150	127.425	1.500	129.275	127.000	2.050
12.001	20.500	241.2	300	Circular	129.275	126.930	2.045	129.080	126.845	1.935
9.002	11.000	244.4	300	Circular	129.080	126.845	1.935	128.875	126.800	1.775
13.000	18.000	120.0	150	Circular	127.900	127.150	0.600	128.390	127.000	1.240
13.001	13.500	270.0	300	Circular	128.390	126.850	1.240	128.875	126.800	1.775
9.003	21.000	140.0	450	Circular	128.875	126.650	1.775	128.550	126.500	1.600
14.000	24.000	342.9	375	Circular	129.110	127.535	1.200	129.110	127.465	1.270
14.001	43.000	344.0	375	Circular	129.110	127.465	1.270	129.175	127.340	1.460
14.002	39.505	59.4	375	Circular	129.175	127.340	1.460	128.870	126.675	1.820
14.003	9.000	360.0	375	Circular	128.870	126.675	1.820	128.550	126.650	1.525
12.004_1	10.000	125.0	600	Circular	128.550	126.350	1.600	128.500	126.270	1.630
10.006	49.000	100.0	450	Circular	128.500	126.000	2.050	128.125	125.510	2.165
10.007	80.000	69.6	450	Circular	128.125	125.510	2.165	125.230	124.360	0.420
1.010	24.000	400.0	450	Circular	125.230	124.360	0.420	125.060	124.300	0.310
8.000	18.000	124.1	225	Circular	127.575	126.150	1.200	127.585	126.005	1.355
10.004	24.000	252.6	375	Circular	128.945	126.135	2.435	128.980	126.040	2.565

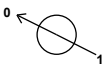
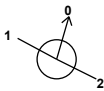
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.003	SW-U3-14	1350	Manhole	Adoptable	SW-U3-18	1350	Manhole	Adoptable
10.001	INF-SW-05	1200	Manhole	Adoptable	INF-SW-06	1200	Manhole	Adoptable
10.002	INF-SW-06	1200	Manhole	Adoptable	INF-SW-07	1200	Manhole	Adoptable
11.000	INF-SW-09	1350	Manhole	Adoptable	INF-SW-10	1350	Manhole	Adoptable
11.001	INF-SW-10	1350	Manhole	Adoptable	INF-SW-11	1350	Manhole	Adoptable
10.005	INF-SW-11	1350	Manhole	Adoptable	Pond 3		Junction	
9.000	SW-U2-01	1200	Manhole	Adoptable	SW-U2-02	1200	Manhole	Adoptable
12.001	SW-U2-02	1200	Manhole	Adoptable	SW-U2-03	1200	Manhole	Adoptable
9.002	SW-U2-03	1200	Manhole	Adoptable	SW-U2-05	1200	Manhole	Adoptable
13.000	45	1200	Manhole	Adoptable	SW-U2-04	1200	Manhole	Adoptable
13.001	SW-U2-04	1200	Manhole	Adoptable	SW-U2-05	1200	Manhole	Adoptable
9.003	SW-U2-05	1200	Manhole	Adoptable	SW-U2-10	1500	Manhole	Adoptable
14.000	SW-U2-06	1500	Manhole	Adoptable	SW-U2-07	1350	Manhole	Adoptable
14.001	SW-U2-07	1350	Manhole	Adoptable	SW-U2-08	1350	Manhole	Adoptable
14.002	SW-U2-08	1350	Manhole	Adoptable	SW-U2-09	1350	Manhole	Adoptable
14.003	SW-U2-09	1350	Manhole	Adoptable	SW-U2-10	1500	Manhole	Adoptable
12.004_1	SW-U2-10	1500	Manhole	Adoptable	Pond 3		Junction	
10.006	Pond 3		Junction		INF-SW-12	1350	Manhole	Adoptable
10.007	INF-SW-12	1350	Manhole	Adoptable	INF-SW-13	1350	Manhole	Adoptable
1.010	INF-SW-13	1350	Manhole	Adoptable	Outfall_1	1350	Manhole	Adoptable
8.000	SW-U3-16a	1200	Manhole	Adoptable	SW-U3-16	1200	Manhole	Adoptable
10.004	INF-SW-08	1350	Manhole	Adoptable	INF-SW-11	1350	Manhole	Adoptable

Pipeline Schedule

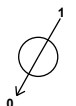
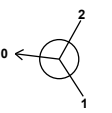
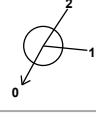
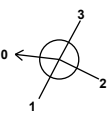
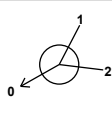
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
10.003	29.500	256.5	300	Circular	128.880	126.325	2.255	128.945	126.210	2.435
3.000	24.500	39.8	225	Circular	128.805	127.380	1.200	128.630	126.765	1.640
3.001	23.700	38.5	300	Circular	128.630	126.690	1.640	128.955	126.075	2.580
17.002	25.000	28.1	300	Circular	129.105	127.290	1.515	128.100	126.400	1.400
5.000	28.310	283.1	300	Circular	128.390	126.360	1.730	128.895	126.260	2.335

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
10.003	INF-SW-07	1200	Manhole	Adoptable	INF-SW-08	1350	Manhole	Adoptable
3.000	SW-U3-08	1200	Manhole	Adoptable	SW-U3-09	1200	Manhole	Adoptable
3.001	SW-U3-09	1200	Manhole	Adoptable	SW-U3-10	1350	Manhole	Adoptable
17.002	SW-U1-07a	1200	Manhole	Adoptable	Pond 1		Junction	
5.000	SW-U3-12a	1200	Manhole	Adoptable	SW-U3-12	1350	Manhole	Adoptable

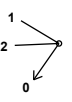
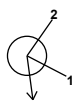
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	2.887	228.265	129.510	1.650	1350				
						0	1.000	127.860	450
SW-U3-01	47.431	318.999	129.480	2.162	1500		1	1.000	127.468
						0	1.001	127.318	600
SW-U3-02	5.738	340.097	129.435	2.228	1500		1	1.001	127.207
						0	1.002	127.207	600
SW-U3-03	-49.796	368.517	129.300	1.800	1350		0	2.000	127.500
						0	2.000	127.431	375
SW-U3-04	-29.494	357.600	129.435	2.454	1800		1	1.002	127.131
						0	1.003	126.981	750
pond 2	-24.898	373.497	129.000	2.100	1800		1	1.003	126.955
						0	1.004	126.900	375
SW-U3-05	-82.503	402.851	129.355	2.604	1350		1	1.004	126.751
						0	1.005	126.751	375
SW-U3-06	-125.706	311.486	128.930	2.450	1350		1	1.005	126.480
						0	1.006	126.480	375

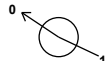
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW-U3-07	-162.706	247.344	129.015	2.755	1350	 1	1.006	126.260	375
SW-U3-10	-209.772	162.923	128.955	2.955	1350	0	1.007	126.260	375
						 1	3.001	126.075	300
						2	1.007	126.003	375
11	-103.868	298.841	128.250	1.750	1350	0	1.008	126.000	375
						 0	4.000	126.500	375
						0	4.000	126.383	375
SW-U3-11	-124.412	319.199	129.010	2.702	1350	 1	4.001	126.308	450
SW-U3-12	-166.222	255.868	128.895	2.787	1350	0	5.000	126.260	300
						 2	4.001	126.108	450
						0	4.002	126.108	450
14	-157.750	192.480	128.250	2.150	1350	 0	6.000	126.100	375
						0	7.000	126.187	225
						 2	6.000	125.665	375
SW-U3-14	-191.604	209.212	128.865	3.200	1350	3	4.002	125.962	450
SW-U3-13	-213.075	167.763	128.875	2.318	1200	0	4.003	125.962	450
						 0	7.000	126.557	225
						0	9.000_1	126.056	225
SW-U3-15	-205.192	250.909	128.365	2.309	1200	 0	8.000	126.005	225
SW-U3-16	-276.071	215.796	127.585	1.655	1200	 0	8.001	125.930	300
						1	4.005	125.300	450
						 2	1.008	125.375	375
SW-U3-19	-247.365	167.513	128.390	3.090	1350	0	1.009	125.300	450
SW-U1-01	38.948	40.406	129.210	1.510	1200	 0	15.000	127.700	225
						0	15.000	126.600	225
						 1	15.001	126.522	300

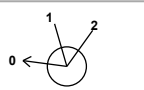
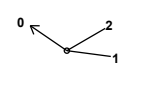
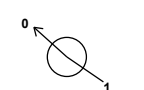
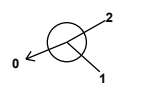
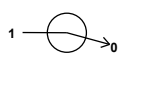
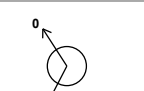
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
24	65.169	-19.484	127.900	1.125	1200		0	16.000	126.775	225
SW-U1-03	82.940	-28.194	128.335	1.730	1200		1	16.000	126.680	225
SW-U1-04	85.859	-21.250	128.690	2.195	1200		0	16.001	126.605	300
SW-U1-05	103.737	-16.584	128.810	2.460	1350		1	16.002	126.427	300
SW-U1-06	48.033	28.133	129.120	1.500	1200		2	15.001	126.430	300
SW-U1-07	75.562	15.021	129.100	1.600	1200		0	15.002	126.350	375
Pond 1	132.622	-15.352	128.100	2.250			0	17.000	127.620	300
INF-SW-01	136.316	-65.299	128.000	1.800	1200		1	17.000	127.500	300
INF-SW-03	113.270	-89.805	126.790	1.910	1200		2	17.001	127.500	300
tank u3	-241.567	178.641	128.460	3.060			0	17.002	126.400	300
SW-U3-18	-223.937	212.975	128.360	2.758	1350		0	15.002	126.300	375
INF-SW-02	107.993	-50.574	128.100	3.060	2100		1	15.003	125.850	450
INF-SW-04	75.774	-75.841	128.285	1.050	1200		0	18.000	126.200	300
							1	12.004	124.880	150
							1	4.004	125.400	450
							0	4.005	125.400	450
							1	9.000_1	125.827	225
							2	8.002	125.752	300
							3	4.003	125.602	450
							0	4.004	125.602	450
							1	18.000	125.190	300
							2	15.003	125.040	450
							0	12.004	125.340	150
							0	10.000	127.235	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
INF-SW-05	8.645	-46.954	128.675	1.890	1200		1 10.000	126.860	225
						0	10.001	126.785	300
INF-SW-06	-61.308	-13.922	128.670	2.170	1200		1 10.001	126.500	300
						0	10.002	126.500	300
INF-SW-09	-238.918	117.147	128.025	1.460	1350		0 11.000	126.565	375
INF-SW-10	-195.658	78.856	128.010	1.594	1350		1 11.000	126.416	375
						0	11.001	126.416	375
INF-SW-11	-111.150	51.326	128.980	2.940	1350		1 11.001	126.040	375
						2	10.004	126.040	375
						0	10.005	126.040	375
SW-U2-01	8.300	49.833	129.150	1.725	1200		0 9.000	127.425	225
SW-U2-02	-63.271	81.772	129.275	2.345	1200		1 9.000	127.000	225
						0	12.001	126.930	300
SW-U2-03	-71.037	63.948	129.080	2.235	1200		1 12.001	126.845	300
						0	9.002	126.845	300
45	-52.951	32.146	127.900	0.750	1200		0 13.000	127.150	150
SW-U2-04	-70.164	40.479	128.390	1.540	1200		1 13.000	127.000	150
						0	13.001	126.850	300
SW-U2-05	-63.352	54.768	128.875	2.225	1200		1 13.001	126.800	300
						2	9.002	126.800	300
						0	9.003	126.650	450
SW-U2-06	-2.475	51.605	129.110	1.575	1500		0 14.000	127.535	375
SW-U2-07	-31.727	64.741	129.110	1.645	1350		1 14.000	127.465	375
						0	14.001	127.465	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW-U2-08	-66.306	79.572	129.175	1.835	1350	 1 0	14.001	127.340	375
SW-U2-09	-81.500	43.106	128.870	2.195	1350	 1 0	14.002	126.675	375
SW-U2-10	-78.694	33.385	128.550	2.200	1500	 1 2 0	14.003	126.650	375
Pond 3	-130.330	40.183	128.500	2.500		 1 2 0	12.004_1	126.350	600
INF-SW-12	-199.820	87.665	128.125	2.615	1350	 1 0	10.006	126.270	600
INF-SW-13	-272.699	153.204	125.230	0.870	1350	 1 2 0	10.007	126.000	450
Outfall_1	-293.513	144.630	125.060	0.760	1350	 1	1.010	125.510	450
SW-U3-17	-233.520	215.589	128.190	2.402	1200	 1 0	8.001	124.360	450
SW-U3-16a	-282.277	205.804	127.575	1.425	1200	 0	8.000	124.300	450
INF-SW-08	-97.614	40.800	128.945	2.810	1350	 1 0	10.003	124.360	450
INF-SW-07	-104.971	15.152	128.880	2.555	1200	 1 0	10.002	124.360	450
SW-U3-08	-206.829	120.293	128.805	1.425	1200	 0	3.000	124.300	450
SW-U3-09	-195.890	141.422	128.630	1.940	1200	 1 0	3.000	126.350	600

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW-U1-07a	107.219	-0.146	129.105	1.815	1200	1 	17.001	127.290	300
						0	17.002	127.290	300
SW-U3-12a	-138.052	253.052	128.390	2.030	1200	0 			
						0	5.000	126.360	300

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	20.000	Drain Down Time (mins)	240
Ratio-R	0.300	Additional Storage (m³/ha)	20.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	30	0	0
100	30	0	0

Node INF-SW-02 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	12.004	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0086-5000-2635-5000
Invert Level (m)	125.340	Min Outlet Diameter (m)	0.100
Design Depth (m)	2.635	Min Node Diameter (mm)	1200
Design Flow (l/s)	5.0		

Node Pond 3 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	126.000	Product Number	CTL-SHE-0087-5000-2500-5000
Design Depth (m)	2.500	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node SW-U3-19 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	125.300	Product Number	CTL-SHE-0537-2310-2800-2310
Design Depth (m)	2.800	Min Outlet Diameter (m)	
Design Flow (l/s)	231.0	Min Node Diameter (mm)	