

Curtins Consulting Ltd		Page 1
.	Oldham Road	
.	Newton Heath	
.	Site 2 - East	
Date 10/02/2022 13:58	Designed by AH	
File Site 2 proposed drainag...	Checked by CD	
Innovyze	Network 2019.1	

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
1.000	6.743	0.200	33.7	0.002	5.00	0.0	0.600	o	150	Pipe/Conduit
1.001	25.047	0.313	80.0	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit
2.000	11.246	0.313	35.9	0.017	5.00	0.0	0.600	o	150	Pipe/Conduit
1.002	26.098	0.261	100.0	0.015	0.00	0.0	0.600	o	225	Pipe/Conduit
3.000	11.238	0.112	100.0	0.027	5.00	0.0	0.600	o	150	Pipe/Conduit
1.003	6.785	0.040	169.6	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit
4.000	9.619	0.096	100.0	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit
1.004	1.986	0.040	49.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
5.000	24.381	0.244	100.0	0.012	5.00	0.0	0.600	o	150	Pipe/Conduit
5.001	15.353	0.095	161.6	0.021	0.00	0.0	0.600	o	150	Pipe/Conduit
6.000	3.527	0.064	55.3	0.002	5.00	0.0	0.600	o	150	Pipe/Conduit
6.001	15.591	0.318	49.1	0.008	5.00	0.0	0.600	o	150	Pipe/Conduit
6.002	14.174	0.457	31.0	0.002	0.00	0.0	0.600	o	150	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
1.000	87.200	0.002	0.0	1.74	30.7
1.001	87.000	0.008	0.0	1.12	19.9
2.000	87.000	0.017	0.0	1.68	29.8
1.002	86.687	0.040	0.0	1.31	52.0
3.000	86.370	0.027	0.0	1.00	17.8
1.003	85.830	0.081	0.0	1.00	39.8
4.000	86.850	0.000	0.0	1.00	17.8
1.004	85.790	0.081	0.0	1.86	74.0
5.000	87.600	0.012	0.0	1.00	17.8
5.001	87.356	0.033	0.0	0.79	13.9
6.000	88.040	0.002	0.0	1.36	24.0
6.001	87.976	0.010	0.0	1.44	25.4
6.002	87.659	0.012	0.0	1.81	32.1

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Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
1.005	22.571	0.060	376.2	0.054	0.00	0.0	0.600	o	225	Pipe/Conduit
1.006	19.402	0.270	71.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit
1.007	9.573	1.530	6.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
1.005	85.750	0.306	0.0	0.67	26.6
1.006	85.690	0.306	0.0	1.19	21.0
1.007	85.420	0.306	0.0	6.32	447.0

Curtins Consulting Ltd		Page 4
.	Oldham Road	
.	Newton Heath	
.	Site 2 - East	
Date 10/02/2022 13:58	Designed by AH	
File Site 2 proposed drainag...	Checked by CD	
Innovyze	Network 2019.1	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	150	29	88.250	87.200	0.900	Open Manhole	600
1.001	o	150	30	88.250	87.000	1.100	Open Manhole	600
2.000	o	150	31	88.050	87.000	0.900	Open Manhole	600
1.002	o	225	32	88.050	86.687	1.138	Open Manhole	1500
3.000	o	150	33	87.420	86.370	0.900	Open Manhole	600
1.003	o	225	34	87.440	85.830	1.385	Open Manhole	1500
4.000	o	150	34A	87.900	86.850	0.900	Open Manhole	600
1.004	o	225	34B	87.420	85.790	1.405	Open Manhole	1500
5.000	o	150	45	88.950	87.600	1.200	Open Manhole	600
5.001	o	150	46	88.600	87.356	1.094	Open Manhole	600
6.000	o	150	47	89.090	88.040	0.900	Open Manhole	600
6.001	o	150	48	89.090	87.976	0.964	Open Manhole	600
6.002	o	150	49	88.790	87.659	0.981	Open Manhole	600

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	6.743	33.7	30	88.250	87.000	1.100	Open Manhole	600
1.001	25.047	80.0	32	88.050	86.687	1.213	Open Manhole	1500
2.000	11.246	35.9	32	88.050	86.687	1.213	Open Manhole	1500
1.002	26.098	100.0	34	87.440	86.426	0.789	Open Manhole	1500
3.000	11.238	100.0	34	87.440	86.258	1.032	Open Manhole	1500
1.003	6.785	169.6	34B	87.420	85.790	1.405	Open Manhole	1500
4.000	9.619	100.0	34B	87.420	86.754	0.516	Open Manhole	1500
1.004	1.986	49.6	TANK	88.000	85.750	2.025	Open Manhole	1500
5.000	24.381	100.0	46	88.600	87.356	1.094	Open Manhole	600
5.001	15.353	161.6	50	88.400	87.261	0.989	Open Manhole	600
6.000	3.527	55.3	48	89.090	87.976	0.964	Open Manhole	600
6.001	15.591	49.1	49	88.790	87.659	0.982	Open Manhole	600
6.002	14.174	31.0	50	88.400	87.202	1.048	Open Manhole	600

Curtins Consulting Ltd		Page 6
.	Oldham Road	
.	Newton Heath	
.	Site 2 - East	
Date 10/02/2022 13:58	Designed by AH	
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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.003	o	150	43	87.700	86.111	1.439	Open Manhole	600
9.004	o	150	44	87.700	85.850	1.700	Open Manhole	1200
1.005	o	225	TANK	88.000	85.750	2.025	Open Manhole	1500
1.006	o	150	FCC2	88.200	85.690	2.360	Open Manhole	1500
1.007	o	300	C2	88.400	85.420	2.680	Open Manhole	1500

Downstream Manhole

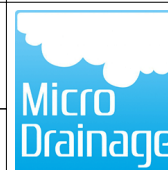
PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.003	3.496	94.3	44	87.700	86.074	1.476	Open Manhole	1200
9.004	10.182	101.8	TANK	88.000	85.750	2.100	Open Manhole	1500
1.005	22.571	376.2	FCC2	88.200	85.690	2.285	Open Manhole	1500
1.006	19.402	71.9	C2	88.400	85.420	2.830	Open Manhole	1500
1.007	9.573	6.3		88.300	83.890	4.110	Open Manhole	0

Curtins Consulting Ltd		Page 7
.	Oldham Road	
.	Newton Heath	
.	Site 2 - East	
Date 10/02/2022 13:58	Designed by AH	
File Site 2 proposed drainag...	Checked by CD	
Innovyze	Network 2019.1	
<u>Online Controls for Storm</u> <u>Orifice Manhole: FCC2, DS/PN: 1.006, Volume (m³): 5.3</u> Diameter (m) 0.081 Discharge Coefficient 0.600 Invert Level (m) 85.690		
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Curtins Consulting Ltd		Page 8																		
.	Oldham Road																			
.	Newton Heath																			
.	Site 2 - East																			
Date 10/02/2022 13:58	Designed by AH																			
File Site 2 proposed drainag...	Checked by CD																			
Innovyze	Network 2019.1																			
Storage Structures for Storm Cellular Storage Manhole: TANK, DS/PN: 1.005 Invert Level (m) 85.750 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00000 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>100.0</td><td>0.0</td><td>0.801</td><td>0.0</td><td>0.0</td></tr><tr><td>0.800</td><td>100.0</td><td>0.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	100.0	0.0	0.801	0.0	0.0	0.800	100.0	0.0			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	100.0	0.0	0.801	0.0	0.0															
0.800	100.0	0.0																		
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Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.334
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.300	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	OFF
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1
Climate Change (%)	0

								Water	
US/MH		Return Climate	First (X)	First (Y)	First (Z)	Overflow	Level		
PN	Name	Storm	Period	Change	Surcharge	Flood	Overflow	Act.	(m)
1.000	29	15 Winter	1	+0%					87.207
1.001	30	15 Winter	1	+0%					87.021
2.000	31	15 Winter	1	+0%					87.027
1.002	32	15 Winter	1	+0%					86.733
3.000	33	15 Winter	1	+0%					86.416
1.003	34	60 Winter	1	+0%					85.923
4.000	34A	60 Winter	1	+0%					86.850
1.004	34B	60 Winter	1	+0%					85.921
5.000	45	15 Winter	1	+0%					87.629
5.001	46	15 Winter	1	+0%					87.409
6.000	47	15 Winter	1	+0%					88.053
6.001	48	15 Winter	1	+0%					87.998
6.002	49	15 Winter	1	+0%					87.680
5.002	50	15 Winter	1	+0%					87.231
5.003	51	15 Winter	1	+0%					86.907
5.004	52	60 Winter	1	+0%					85.923
7.000	35	15 Winter	1	+0%					86.480
8.000	36	15 Winter	1	+0%					86.311
7.001	37	15 Winter	1	+0%					85.985
7.002	37A	60 Winter	1	+0%					85.921
9.000	38	15 Winter	1	+0%					86.880
9.001	39	15 Winter	1	+0%					86.789

