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Boundary Way 3 Grovelands Business Center Hemel Hempstead HP2 7TE		
Date 29/01/2018 16:30 File WINDES.MDX	Designed by JLawie Checked by	
XP Solutions	Network 2017.1.2	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	30
FEH Rainfall Version	2013
Site Location	GB 469450 174000 SU 69450 74000
Data Type	Catchment
Maximum Rainfall (mm/hr)	50
Maximum Time of Concentration (mins)	30
Foul Sewage (l/s/ha)	0.000
Volumetric Runoff Coeff.	0.750
PIMP (%)	100
Add Flow / Climate Change (%)	0
Minimum Backdrop Height (m)	0.200
Maximum Backdrop Height (m)	1.500
Min Design Depth for Optimisation (m)	1.200
Min Vel for Auto Design only (m/s)	1.00
Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	7.752	0.150	51.7	0.004	5.00	0.0	0.600		o	150	Pipe/Conduit	
1.001	19.358	1.650	11.7	0.003	0.00	0.0	0.600		o	150	Pipe/Conduit	
1.002	11.844	0.120	98.7	0.007	0.00	0.0	0.600		o	150	Pipe/Conduit	
1.003	39.650	0.655	60.5	0.067	0.00	0.0	0.600		o	225	Pipe/Conduit	
2.000	10.566	0.025	422.6	0.018	5.00	0.0		0.001 →[1]			Cellular Storage	
1.004	15.515	0.090	172.4	0.034	0.00	0.0		0.001	o	225	Pipe/Conduit	
1.005	1.881	0.019	99.0	0.000	0.00	0.0	0.600		o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	5.09	50.600	0.004	0.0	0.0	0.0	1.40	24.8	0.5
1.001	50.00	5.20	50.450	0.007	0.0	0.0	0.0	2.96	52.3	1.0
1.002	50.00	5.40	48.800	0.014	0.0	0.0	0.0	1.01	17.9	1.9
1.003	50.00	5.79	48.605	0.081	0.0	0.0	0.0	1.68	67.0	11.0
2.000	50.00	5.01	48.050	0.018	0.0	0.0	0.0	15.51	41893.6	2.5
1.004	50.00	5.81	47.950	0.134	0.0	0.0	0.0	11.18	444.6	18.1
1.005	50.00	5.84	47.860	0.134	0.0	0.0	0.0	1.31	52.2	18.1

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	User	-	100	0.004	0.004	0.004
1.001	User	-	100	0.003	0.003	0.003
1.002	User	-	100	0.007	0.007	0.007
1.003	User	-	100	0.067	0.067	0.067
2.000	User	-	100	0.018	0.018	0.018
1.004	User	-	100	0.034	0.034	0.034
1.005	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.134	0.134	0.134

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Network Classifications for Storm

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
1.000	1	150	0.450	0.600	Unclassified				Junction
1.001	2	150	0.600	1.050	Unclassified				Junction
1.002	3	150	1.050	1.370	Unclassified	450	0	1.050	Unclassified
1.003	4	225	1.370	1.395	Unclassified	600	0	1.370	Unclassified
2.000	5				Cellular Storage	600	0	1.549	Unclassified
1.004	5	225	1.115	1.395	Unclassified	600	0	1.395	Unclassified
1.005	6	225	1.034	1.115	Unclassified	1200	0	1.115	Unclassified

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D, L (mm)	W (mm)
1.005		49.100	47.841	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Storage Structures	2
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	FEH
Return Period (years)	30
FEH Rainfall Version	2013
Site Location	GB 469450 174000 SU 69450 74000
Data Type	Catchment
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Storm Duration (mins)	30

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Online Controls for Storm

ACO Q-Brake Manhole: 6, DS/PN: 1.005, Volume (m³): 2.1

Design Head (m) 1.300 Diameter (mm) 75
Design Flow (l/s) 3.0 Invert Level (m) 47.860

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.9	1.200	2.8	3.000	4.5	7.000	6.9
0.200	2.8	1.400	3.1	3.500	4.9	7.500	7.1
0.300	3.0	1.600	3.3	4.000	5.2	8.000	7.3
0.400	2.8	1.800	3.5	4.500	5.5	8.500	7.6
0.500	2.1	2.000	3.7	5.000	5.8	9.000	7.8
0.600	2.0	2.200	3.8	5.500	6.1	9.500	8.0
0.800	2.3	2.400	4.0	6.000	6.4		
1.000	2.6	2.600	4.2	6.500	6.6		

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<u>Rainfall Hyetograph for 15 minute 100 year Winter I+40%</u> <u>for Pipe 1.000 (Storm)</u> <table><tr><td>Time (mins)</td><td>Rain (mm/hr)</td><td>Time (mins)</td><td>Rain (mm/hr)</td><td>Time (mins)</td><td>Rain (mm/hr)</td><td>Time (mins)</td><td>Rain (mm/hr)</td><td>Time (mins)</td><td>Rain (mm/hr)</td></tr><tr><td>1</td><td>33.730</td><td>4</td><td>81.153</td><td>7</td><td>302.488</td><td>10</td><td>212.529</td><td>13</td><td>64.108</td></tr><tr><td>2</td><td>61.552</td><td>5</td><td>131.358</td><td>8</td><td>351.363</td><td>11</td><td>131.358</td><td>14</td><td>61.552</td></tr><tr><td>3</td><td>64.108</td><td>6</td><td>212.529</td><td>9</td><td>302.488</td><td>12</td><td>81.153</td><td>15</td><td>33.730</td></tr></table>						Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	1	33.730	4	81.153	7	302.488	10	212.529	13	64.108	2	61.552	5	131.358	8	351.363	11	131.358	14	61.552	3	64.108	6	212.529	9	302.488	12	81.153	15	33.730
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3	5.942	27	17.750	51	68.676	75	54.786	99	15.385																																																																																																																																																																																																																																																						
4	7.878	28	18.537	52	71.153	76	52.111	100	15.212																																																																																																																																																																																																																																																						
5	9.527	29	19.436	53	73.535	77	49.461	101	15.100																																																																																																																																																																																																																																																						
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9	13.714	33	24.714	57	81.933	81	38.839	105	15.063																																																																																																																																																																																																																																																						
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13	14.999	37	32.248	61	85.510	85	29.797	109	14.826																																																																																																																																																																																																																																																						
14	15.054	38	34.349	62	84.574	86	27.986	110	14.573																																																																																																																																																																																																																																																						
15	15.071	39	36.548	63	83.375	87	26.291	111	14.209																																																																																																																																																																																																																																																						
16	15.063	40	38.839	64	81.933	88	24.714	112	13.714																																																																																																																																																																																																																																																						
17	15.044	41	41.216	65	80.271	89	23.257	113	13.070																																																																																																																																																																																																																																																						
18	15.027	42	43.670	66	78.411	90	21.921	114	12.257																																																																																																																																																																																																																																																						
19	15.040	43	46.848	67	75.806	91	20.452	115	10.912																																																																																																																																																																																																																																																						
20	15.100	44	49.461	68	73.535	92	19.436	116	9.527																																																																																																																																																																																																																																																						
21	15.212	45	52.111	69	71.153	93	18.537	117	7.878																																																																																																																																																																																																																																																						
22	15.385	46	54.786	70	68.676	94	17.750	118	5.942																																																																																																																																																																																																																																																						
23	15.629	47	57.476	71	66.121	95	17.073	119	3.695																																																																																																																																																																																																																																																						
24	15.951	48	60.169	72	63.504	96	16.502	120	1.112																																																																																																																																																																																																																																																						
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Boundary Way 3 Grovelands Business Center Hemel Hempstead HP2 7TE									
Date 29/01/2018 16:30 File WINDES.MDX		Designed by JLawie Checked by							
XP Solutions		Network 2017.1.2							
<u>Rainfall Hyetograph for 120 minute 100 year Winter I+40%</u> <u>for Pipe 1.003 (Storm)</u>									
Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)
1	1.112	25	16.502	49	63.504	73	60.168	97	15.951
2	3.695	26	17.073	50	66.121	74	57.476	98	15.629
3	5.942	27	17.750	51	68.676	75	54.786	99	15.385
4	7.878	28	18.537	52	71.153	76	52.111	100	15.212
5	9.527	29	19.436	53	73.535	77	49.461	101	15.100
6	10.912	30	20.452	54	75.806	78	46.848	102	15.040
7	12.258	31	21.921	55	78.411	79	43.670	103	15.027
8	13.070	32	23.257	56	80.271	80	41.216	104	15.044
9	13.714	33	24.714	57	81.933	81	38.839	105	15.063
10	14.209	34	26.291	58	83.375	82	36.548	106	15.071
11	14.573	35	27.986	59	84.574	83	34.349	107	15.054
12	14.826	36	29.797	60	85.510	84	32.248	108	14.998
13	14.999	37	32.248	61	85.510	85	29.797	109	14.826
14	15.054	38	34.349	62	84.574	86	27.986	110	14.573
15	15.071	39	36.548	63	83.375	87	26.291	111	14.209
16	15.063	40	38.839	64	81.933	88	24.714	112	13.714
17	15.044	41	41.216	65	80.271	89	23.257	113	13.070
18	15.027	42	43.670	66	78.411	90	21.921	114	12.257
19	15.040	43	46.848	67	75.806	91	20.452	115	10.912
20	15.100	44	49.461	68	73.535	92	19.436	116	9.527
21	15.212	45	52.111	69	71.153	93	18.537	117	7.878
22	15.385	46	54.786	70	68.676	94	17.750	118	5.942
23	15.629	47	57.476	71	66.121	95	17.073	119	3.695
24	15.951	48	60.169	72	63.504	96	16.502	120	1.112
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Boundary Way 3 Grovelands Business Center Hemel Hempstead HP2 7TE									
Date 29/01/2018 16:30 File WINDES.MDX		Designed by JLawie Checked by							
XP Solutions		Network 2017.1.2							
<u>Rainfall Hyetograph for 120 minute 100 year Winter I+40%</u> <u>for Pipe 2.000 (Storm)</u>									
Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)
1	1.112	25	16.502	49	63.504	73	60.168	97	15.951
2	3.695	26	17.073	50	66.121	74	57.476	98	15.629
3	5.942	27	17.750	51	68.676	75	54.786	99	15.385
4	7.878	28	18.537	52	71.153	76	52.111	100	15.212
5	9.527	29	19.436	53	73.535	77	49.461	101	15.100
6	10.912	30	20.452	54	75.806	78	46.848	102	15.040
7	12.258	31	21.921	55	78.411	79	43.670	103	15.027
8	13.070	32	23.257	56	80.271	80	41.216	104	15.044
9	13.714	33	24.714	57	81.933	81	38.839	105	15.063
10	14.209	34	26.291	58	83.375	82	36.548	106	15.071
11	14.573	35	27.986	59	84.574	83	34.349	107	15.054
12	14.826	36	29.797	60	85.510	84	32.248	108	14.998
13	14.999	37	32.248	61	85.510	85	29.797	109	14.826
14	15.054	38	34.349	62	84.574	86	27.986	110	14.573
15	15.071	39	36.548	63	83.375	87	26.291	111	14.209
16	15.063	40	38.839	64	81.933	88	24.714	112	13.714
17	15.044	41	41.216	65	80.271	89	23.257	113	13.070
18	15.027	42	43.670	66	78.411	90	21.921	114	12.257
19	15.040	43	46.848	67	75.806	91	20.452	115	10.912
20	15.100	44	49.461	68	73.535	92	19.436	116	9.527
21	15.212	45	52.111	69	71.153	93	18.537	117	7.878
22	15.385	46	54.786	70	68.676	94	17.750	118	5.942
23	15.629	47	57.476	71	66.121	95	17.073	119	3.695
24	15.951	48	60.169	72	63.504	96	16.502	120	1.112
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<u>Rainfall Hyetograph for 120 minute 100 year Winter I+40%</u> <u>for Pipe 1.004 (Storm)</u> <table><tr><th>Time (mins)</th><th>Rain (mm/hr)</th><th>Time (mins)</th><th>Rain (mm/hr)</th><th>Time (mins)</th><th>Rain (mm/hr)</th><th>Time (mins)</th><th>Rain (mm/hr)</th><th>Time (mins)</th><th>Rain (mm/hr)</th></tr><tr><td>1</td><td>1.112</td><td>25</td><td>16.502</td><td>49</td><td>63.504</td><td>73</td><td>60.168</td><td>97</td><td>15.951</td></tr><tr><td>2</td><td>3.695</td><td>26</td><td>17.073</td><td>50</td><td>66.121</td><td>74</td><td>57.476</td><td>98</td><td>15.629</td></tr><tr><td>3</td><td>5.942</td><td>27</td><td>17.750</td><td>51</td><td>68.676</td><td>75</td><td>54.786</td><td>99</td><td>15.385</td></tr><tr><td>4</td><td>7.878</td><td>28</td><td>18.537</td><td>52</td><td>71.153</td><td>76</td><td>52.111</td><td>100</td><td>15.212</td></tr><tr><td>5</td><td>9.527</td><td>29</td><td>19.436</td><td>53</td><td>73.535</td><td>77</td><td>49.461</td><td>101</td><td>15.100</td></tr><tr><td>6</td><td>10.912</td><td>30</td><td>20.452</td><td>54</td><td>75.806</td><td>78</td><td>46.848</td><td>102</td><td>15.040</td></tr><tr><td>7</td><td>12.258</td><td>31</td><td>21.921</td><td>55</td><td>78.411</td><td>79</td><td>43.670</td><td>103</td><td>15.027</td></tr><tr><td>8</td><td>13.070</td><td>32</td><td>23.257</td><td>56</td><td>80.271</td><td>80</td><td>41.216</td><td>104</td><td>15.044</td></tr><tr><td>9</td><td>13.714</td><td>33</td><td>24.714</td><td>57</td><td>81.933</td><td>81</td><td>38.839</td><td>105</td><td>15.063</td></tr><tr><td>10</td><td>14.209</td><td>34</td><td>26.291</td><td>58</td><td>83.375</td><td>82</td><td>36.548</td><td>106</td><td>15.071</td></tr><tr><td>11</td><td>14.573</td><td>35</td><td>27.986</td><td>59</td><td>84.574</td><td>83</td><td>34.349</td><td>107</td><td>15.054</td></tr><tr><td>12</td><td>14.826</td><td>36</td><td>29.797</td><td>60</td><td>85.510</td><td>84</td><td>32.248</td><td>108</td><td>14.998</td></tr><tr><td>13</td><td>14.999</td><td>37</td><td>32.248</td><td>61</td><td>85.510</td><td>85</td><td>29.797</td><td>109</td><td>14.826</td></tr><tr><td>14</td><td>15.054</td><td>38</td><td>34.349</td><td>62</td><td>84.574</td><td>86</td><td>27.986</td><td>110</td><td>14.573</td></tr><tr><td>15</td><td>15.071</td><td>39</td><td>36.548</td><td>63</td><td>83.375</td><td>87</td><td>26.291</td><td>111</td><td>14.209</td></tr><tr><td>16</td><td>15.063</td><td>40</td><td>38.839</td><td>64</td><td>81.933</td><td>88</td><td>24.714</td><td>112</td><td>13.714</td></tr><tr><td>17</td><td>15.044</td><td>41</td><td>41.216</td><td>65</td><td>80.271</td><td>89</td><td>23.257</td><td>113</td><td>13.070</td></tr><tr><td>18</td><td>15.027</td><td>42</td><td>43.670</td><td>66</td><td>78.411</td><td>90</td><td>21.921</td><td>114</td><td>12.257</td></tr><tr><td>19</td><td>15.040</td><td>43</td><td>46.848</td><td>67</td><td>75.806</td><td>91</td><td>20.452</td><td>115</td><td>10.912</td></tr><tr><td>20</td><td>15.100</td><td>44</td><td>49.461</td><td>68</td><td>73.535</td><td>92</td><td>19.436</td><td>116</td><td>9.527</td></tr><tr><td>21</td><td>15.212</td><td>45</td><td>52.111</td><td>69</td><td>71.153</td><td>93</td><td>18.537</td><td>117</td><td>7.878</td></tr><tr><td>22</td><td>15.385</td><td>46</td><td>54.786</td><td>70</td><td>68.676</td><td>94</td><td>17.750</td><td>118</td><td>5.942</td></tr><tr><td>23</td><td>15.629</td><td>47</td><td>57.476</td><td>71</td><td>66.121</td><td>95</td><td>17.073</td><td>119</td><td>3.695</td></tr><tr><td>24</td><td>15.951</td><td>48</td><td>60.169</td><td>72</td><td>63.504</td><td>96</td><td>16.502</td><td>120</td><td>1.112</td></tr></table>						Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	1	1.112	25	16.502	49	63.504	73	60.168	97	15.951	2	3.695	26	17.073	50	66.121	74	57.476	98	15.629	3	5.942	27	17.750	51	68.676	75	54.786	99	15.385	4	7.878	28	18.537	52	71.153	76	52.111	100	15.212	5	9.527	29	19.436	53	73.535	77	49.461	101	15.100	6	10.912	30	20.452	54	75.806	78	46.848	102	15.040	7	12.258	31	21.921	55	78.411	79	43.670	103	15.027	8	13.070	32	23.257	56	80.271	80	41.216	104	15.044	9	13.714	33	24.714	57	81.933	81	38.839	105	15.063	10	14.209	34	26.291	58	83.375	82	36.548	106	15.071	11	14.573	35	27.986	59	84.574	83	34.349	107	15.054	12	14.826	36	29.797	60	85.510	84	32.248	108	14.998	13	14.999	37	32.248	61	85.510	85	29.797	109	14.826	14	15.054	38	34.349	62	84.574	86	27.986	110	14.573	15	15.071	39	36.548	63	83.375	87	26.291	111	14.209	16	15.063	40	38.839	64	81.933	88	24.714	112	13.714	17	15.044	41	41.216	65	80.271	89	23.257	113	13.070	18	15.027	42	43.670	66	78.411	90	21.921	114	12.257	19	15.040	43	46.848	67	75.806	91	20.452	115	10.912	20	15.100	44	49.461	68	73.535	92	19.436	116	9.527	21	15.212	45	52.111	69	71.153	93	18.537	117	7.878	22	15.385	46	54.786	70	68.676	94	17.750	118	5.942	23	15.629	47	57.476	71	66.121	95	17.073	119	3.695	24	15.951	48	60.169	72	63.504	96	16.502	120	1.112
Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)																																																																																																																																																																																																																																																						
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2	3.695	26	17.073	50	66.121	74	57.476	98	15.629																																																																																																																																																																																																																																																						
3	5.942	27	17.750	51	68.676	75	54.786	99	15.385																																																																																																																																																																																																																																																						
4	7.878	28	18.537	52	71.153	76	52.111	100	15.212																																																																																																																																																																																																																																																						
5	9.527	29	19.436	53	73.535	77	49.461	101	15.100																																																																																																																																																																																																																																																						
6	10.912	30	20.452	54	75.806	78	46.848	102	15.040																																																																																																																																																																																																																																																						
7	12.258	31	21.921	55	78.411	79	43.670	103	15.027																																																																																																																																																																																																																																																						
8	13.070	32	23.257	56	80.271	80	41.216	104	15.044																																																																																																																																																																																																																																																						
9	13.714	33	24.714	57	81.933	81	38.839	105	15.063																																																																																																																																																																																																																																																						
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12	14.826	36	29.797	60	85.510	84	32.248	108	14.998																																																																																																																																																																																																																																																						
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18	15.027	42	43.670	66	78.411	90	21.921	114	12.257																																																																																																																																																																																																																																																						
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22	15.385	46	54.786	70	68.676	94	17.750	118	5.942																																																																																																																																																																																																																																																						
23	15.629	47	57.476	71	66.121	95	17.073	119	3.695																																																																																																																																																																																																																																																						
24	15.951	48	60.169	72	63.504	96	16.502	120	1.112																																																																																																																																																																																																																																																						
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Boundary Way 3 Grovelands Business Center Hemel Hempstead HP2 7TE									
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XP Solutions		Network 2017.1.2							
<u>Rainfall Hyetograph for 120 minute 100 year Winter I+40%</u> <u>for Pipe 1.005 (Storm)</u>									
Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)	Time (mins)	Rain (mm/hr)
1	1.112	25	16.502	49	63.504	73	60.168	97	15.951
2	3.695	26	17.073	50	66.121	74	57.476	98	15.629
3	5.942	27	17.750	51	68.676	75	54.786	99	15.385
4	7.878	28	18.537	52	71.153	76	52.111	100	15.212
5	9.527	29	19.436	53	73.535	77	49.461	101	15.100
6	10.912	30	20.452	54	75.806	78	46.848	102	15.040
7	12.258	31	21.921	55	78.411	79	43.670	103	15.027
8	13.070	32	23.257	56	80.271	80	41.216	104	15.044
9	13.714	33	24.714	57	81.933	81	38.839	105	15.063
10	14.209	34	26.291	58	83.375	82	36.548	106	15.071
11	14.573	35	27.986	59	84.574	83	34.349	107	15.054
12	14.826	36	29.797	60	85.510	84	32.248	108	14.998
13	14.999	37	32.248	61	85.510	85	29.797	109	14.826
14	15.054	38	34.349	62	84.574	86	27.986	110	14.573
15	15.071	39	36.548	63	83.375	87	26.291	111	14.209
16	15.063	40	38.839	64	81.933	88	24.714	112	13.714
17	15.044	41	41.216	65	80.271	89	23.257	113	13.070
18	15.027	42	43.670	66	78.411	90	21.921	114	12.257
19	15.040	43	46.848	67	75.806	91	20.452	115	10.912
20	15.100	44	49.461	68	73.535	92	19.436	116	9.527
21	15.212	45	52.111	69	71.153	93	18.537	117	7.878
22	15.385	46	54.786	70	68.676	94	17.750	118	5.942
23	15.629	47	57.476	71	66.121	95	17.073	119	3.695
24	15.951	48	60.169	72	63.504	96	16.502	120	1.112
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