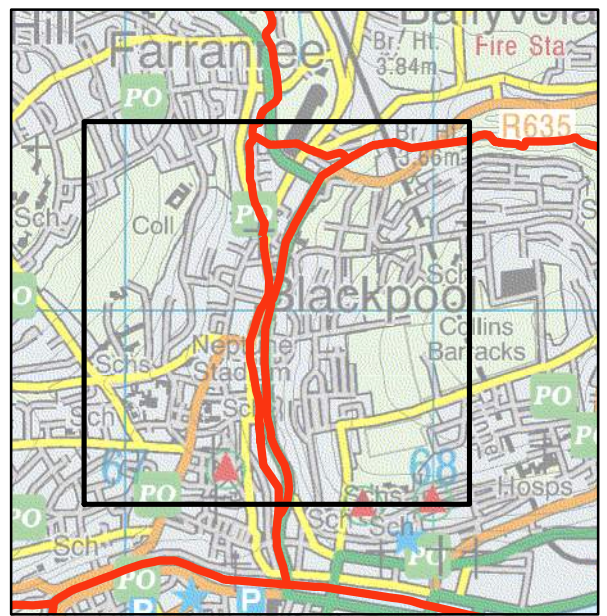
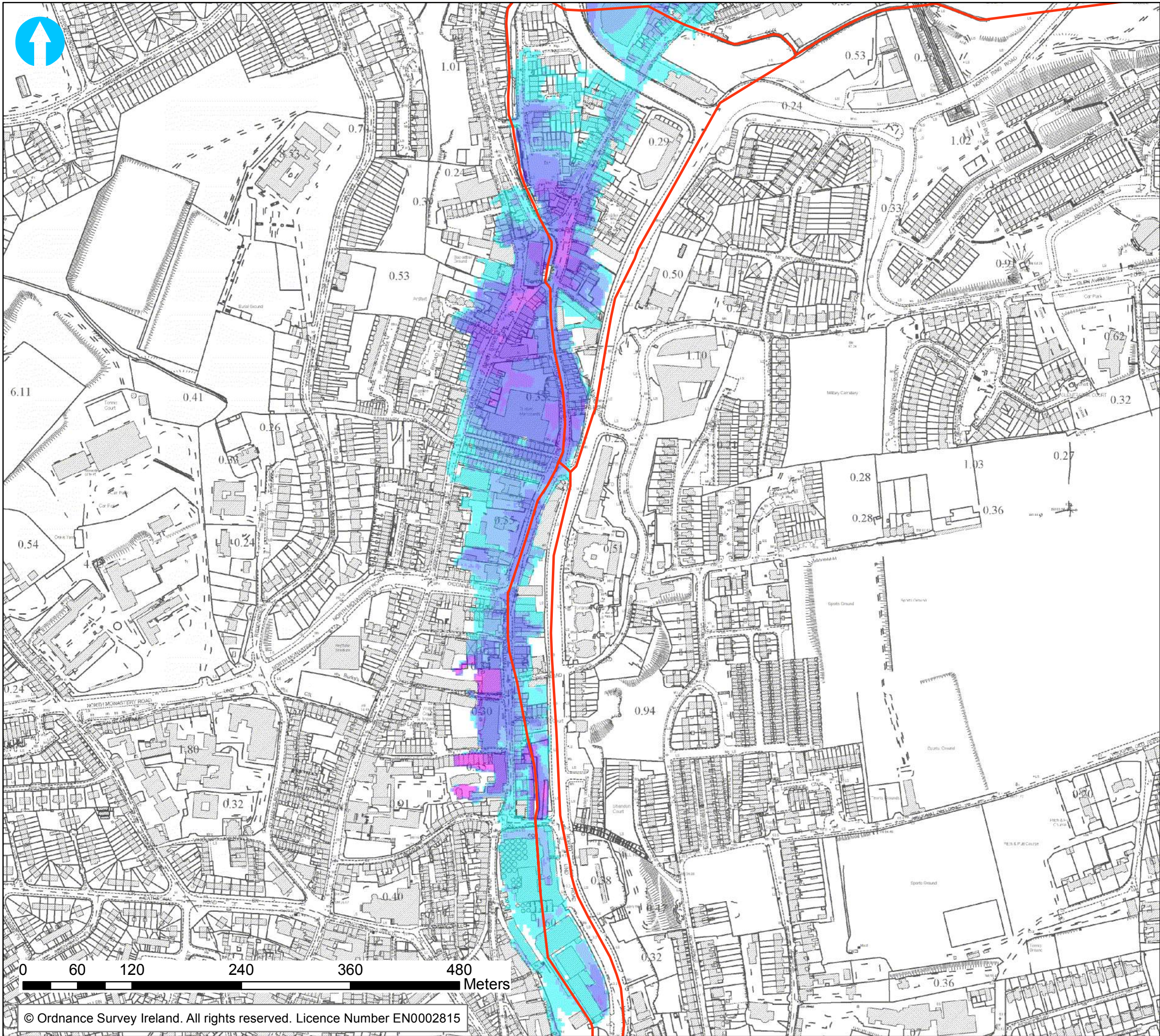




Legend

Modelled River Centreline

Flood Depth

- 0m - 0.25m
- 0.25m - 0.5m
- 0.5m - 1.0m
- 1.0m - 1.5m
- 1.5m - 2.0m
- > 2.0m



Map: Lower Lee Flood Relief Scheme

Map Type: 0.1% AEP Fluvial Flood Depth

Scenario: Current

Drawn by: AB

Checked by: DF

Project No: 2013s7174

Map No: BLK_DEP_001_003

Sheet: 3 of 3

Date: 16/Nov/2015

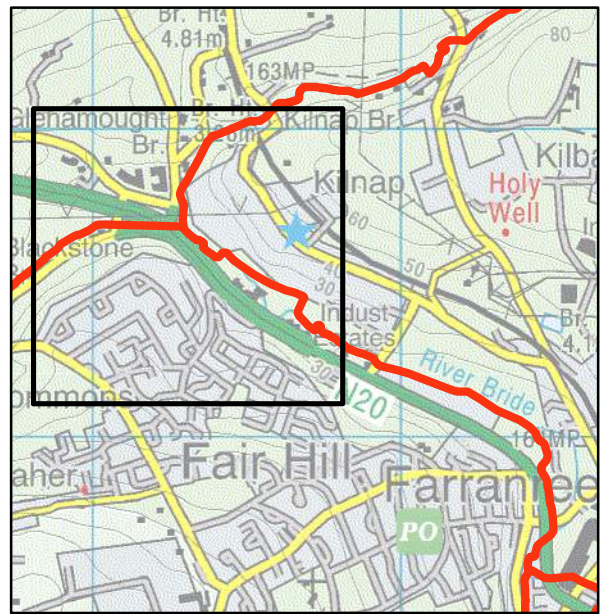
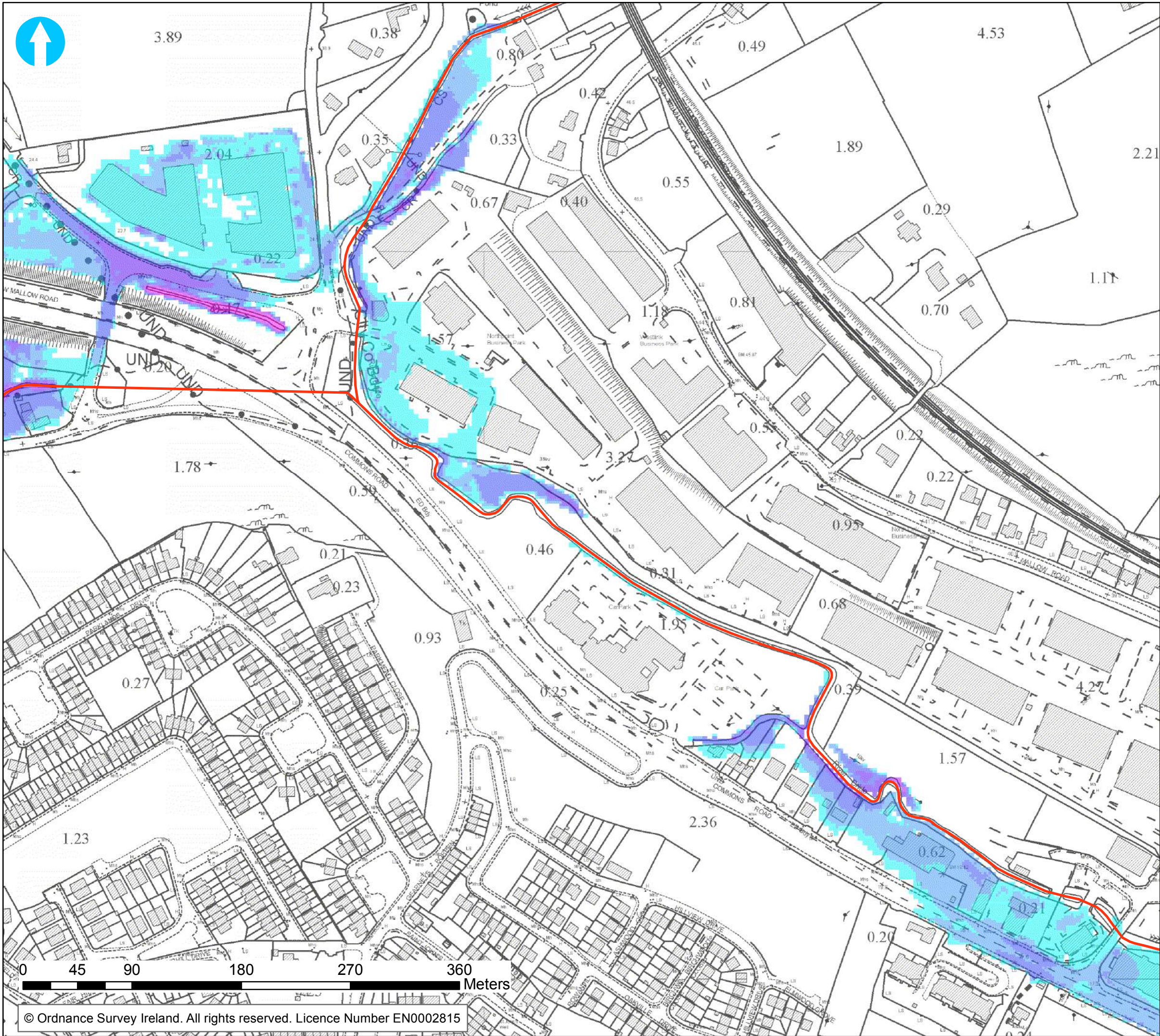
Status: Draft

Scale:
1:4000
A3

ARUP



B.2 Climate Change



Legend

Modelled River Centreline

Flood Depth

- 0m - 0.25m
- 0.25m - 0.5m
- 0.5m - 1.0m
- 1.0m - 1.5m
- 1.5m - 2.0m
- > 2.0m



Map: Lower Lee Flood Relief Scheme

Map Type: 1% AEP Fluvial Flood Depth

Scenario: MRFS

Drawn by: AB

Checked by: DF

Scale:

1:3000

A3

Project No: 2013s7174

Map No: BLK_DEP_010CC_001

Sheet: 1 of 3

Date: 16/Nov/2015

Status: Draft

ARUP





Legend

Modelled River Centreline

Flood Depth

- 0m - 0.25m
- 0.25m - 0.5m
- 0.5m - 1.0m
- 1.0m - 1.5m
- 1.5m - 2.0m
- > 2.0m



Map: Lower Lee Flood Relief Scheme

Map Type: 1% AEP Fluvial Flood Depth

Scenario: MRFS

Drawn by: AB

Checked by: DF

Project No: 2013s7174

Map No: BLK_DEP_010CC_002

Sheet: 2 of 3

Date: 16/Nov/2015

Status: Draft

Scale:
1:3000
A3

ARUP



C Model Results

C.1 Existing Scenario

C.1.1 50% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	1.11	45.34	0.52
7BRI_8331IN	1.11	44.29	0.56
7BRI_8115IN	1.11	43.72	0.40
7BRI_8007	1.11	43.62	0.21
7BRI_7907IN	1.10	43.58	0.25
7BRI_7832IN	1.10	43.53	0.35
7BRI_7782	1.10	43.43	0.57
7BRI_7767U	1.10	43.39	0.64
7BRI_7767BU	1.10	43.39	0.57
7BRI_7767SU	0.00	43.39	0.57
7BRI_7767D	1.10	43.34	0.95
7BRI_7637IN	1.10	42.34	0.96
7BRI_7507IN	1.10	41.39	0.90
7BRI_7377IN	1.10	40.38	0.96
7BRI_7247	1.10	39.48	0.81
7BRI_7173	1.10	39.13	0.76
7BRI_7165U	1.10	39.09	0.79
7BRI_7165BU	1.10	39.09	0.98
7BRI_7165SU	0.00	39.09	0.98
7BRI_7165D	1.10	39.08	0.79
7BRI_6992IN	1.10	38.22	0.81
7BRI_6822IN	1.10	37.46	0.65
7BRI_6730U	1.10	37.28	0.36
7BRI_6730BU	1.10	37.28	0.76
7BRI_6730SU	0.00	37.28	0.76
7BRI_6730D	1.10	37.27	0.40
7BRI_6620IN	1.10	37.13	0.40
7BRI_6510IN	1.10	36.97	0.42
7BRI_6400IN	1.10	36.80	0.45
7BRI_6291U	1.10	36.43	0.70
7BRI_6291BU	1.10	36.43	0.00
7BRI_6291SU	0.00	36.43	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_6291D	1.10	36.43	0.70
7BRI_6107	1.58	36.02	0.55
7BRI_5924IN	1.57	35.90	0.23
7BRI_5740IN	1.56	35.86	0.10
7BRI_5556U	1.55	35.03	1.02
7BRI_5338IN	1.55	34.11	0.68
7BRI_5118IN	1.55	33.07	0.88
7BRI_4898IN	1.55	32.28	0.56
7BRI_4678	1.55	31.18	1.02
7BRI_4508IN	2.01	30.31	0.82
7BRI_4424	2.01	29.78	1.23
7BRI_4339IN	2.01	29.39	1.15
7BRI_4169IN	2.01	28.42	1.12
7BRI_4000IN	2.01	27.45	1.12
7BRI_3915U	2.01	27.08	0.92
7BRI_3669IN	2.01	26.26	0.76
7BRI_3546IN	2.01	25.85	0.78
7BRI_3423	2.01	25.55	0.65
7BRI_3281	2.47	25.23	0.65
7BRI_3140	2.46	25.05	0.41
7BRI_2999	2.46	24.92	0.58
7BRI_2984U	2.46	24.83	0.99
7BRI_2984BU	2.46	24.83	0.54
7BRI_2984SU	0.00	24.83	0.54
7BRI_2984D	2.46	24.79	1.07
7BRI_2842IN	2.46	24.10	1.06
7BRI_2700IN	2.46	23.71	0.68
7BRI_2558	2.46	23.62	0.39
7BRI_2550	2.46	23.61	0.39
7BRI_2310	2.47	22.42	0.41
7BRI_2306U	2.47	22.42	0.56
7BRI_2306D	9.62	22.42	1.46
7BRI_2205	9.63	21.72	2.02
7BRI_2053	10.20	20.69	1.49
7BRI_1955IN	10.20	20.10	1.47
7BRI_1855u	10.20	19.33	2.13
7BRI_1855d	10.20	19.19	2.49

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1753u	10.21	18.45	1.69
7BRI_1753d	10.21	18.36	1.88
7BRI_1698IN	10.78	18.01	2.01
7BRI_1648IN	10.78	17.73	1.97
7BRI_1598	10.78	17.52	1.83
7BRI_1500	10.78	17.17	1.64
7BRI_1490U	10.78	17.12	1.64
7BRI_1490BU	10.78	17.12	1.36
7BRI_1490BUa	10.78	17.03	1.61
7BRI_1490BUb	10.78	16.98	1.65
7BRI_1490SU	0.00	17.12	1.36
7BRI_1490D	10.78	16.84	2.05
7BRI_1464U	10.78	16.89	1.61
7BRI_1464BU	10.78	16.89	1.35
7BRI_1464BUa	10.78	16.83	1.23
7BRI_1464BUb	10.78	16.81	1.25
7BRI_1464SU	0.00	16.89	1.35
7BRI_1464D	10.78	16.73	1.60
7BRI_1425U	10.78	16.72	1.09
7BRI_1425BU1	5.66	16.72	1.35
7BRI_1425SU	0.00	16.72	1.35
7BRI_1425D	10.78	15.89	2.37
7BRI_1406	10.78	15.81	1.04
7BRI_1340U	10.78	15.40	1.33
7BRI_1340BU	10.78	15.34	1.01
7BRI_1340SU	0.00	15.34	1.01
7BRI_1340D	10.78	15.36	1.25
7BRI_1319	10.78	15.27	1.30
7BRI_1251IN	10.78	14.99	1.32
7BRI_1184	10.78	14.70	1.37
7BRI_1175U	11.37	14.60	1.60
7BRI_1175BU	11.37	14.60	1.18
7BRI_1175SU	0.00	14.60	1.18
7BRI_1175D	11.37	14.62	1.26
7BRI_1161	11.37	14.49	1.68
7BRI_1117IN	11.37	14.39	0.96
7BRI_1073	11.37	14.38	0.61

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1065	11.37	13.89	0.75
7BRI_991	11.37	13.68	1.36
7BRI_916	11.37	13.09	1.74
7BRI_896	11.37	12.85	2.08
7BRI_875	11.37	12.86	0.92
7BRI_875CI	11.37	12.86	0.67
7BRI_875C	11.37	12.66	1.38
7BRI_875S	0.00	12.86	0.67
7BRI_847C	11.37	12.56	1.52
7BRI_847	11.37	12.44	1.80
7BRI_799	11.37	12.32	1.52
7BRI_752	11.37	12.27	1.20
7BRI_743D	11.37	11.83	2.44
7BRI_711	11.37	11.70	2.12
7BRI_639	11.96	11.55	1.40
7BRI_630D	11.96	11.40	1.83
7BRI_569	11.96	11.36	1.30
7BRI_557	11.96	11.28	1.59
7BRI_548U	11.96	11.32	1.22
7BRI_548CI	11.96	11.32	0.00
7BRI_548C	11.96	11.10	1.50
7BRI_548S	0.00	11.32	0.00
7BRI_522C	11.96	11.04	1.57
7BRI_522	11.96	11.01	1.37
7BRI_503	11.96	10.97	1.43
7BRI_487	11.96	10.89	1.66
7BRI_487CI	11.96	10.89	1.12
7BRI_487S	0.00	10.89	1.12
7BRI_487C	11.96	10.74	1.72
7BRI_475IN	11.96	10.70	1.76
7BRI_464IN	11.96	10.65	1.81
7BRI_453IN	11.96	10.59	1.89
7BRI_442C	11.96	10.50	2.05
7BRI_442	11.96	10.28	2.80
7BRI_430IN	11.96	10.12	2.66
7BRI_418IN	11.96	9.96	2.52
7BRI_407IN	11.96	9.83	2.36

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_396IN	11.96	9.70	2.16
7BRI_385IN	11.96	9.60	1.89
7BRI_374	11.96	9.61	1.44
7BRI_374i1	11.96	9.45	1.75
7BRI_332	11.96	9.23	2.43
7BRI_290U	11.96	9.06	1.88
7BRI_290D	12.96	9.06	2.04
7BRI_197	12.96	8.43	2.33
7BRI_188U	12.96	8.35	2.33
7BRI_188BU	12.96	8.35	1.78
7BRI_188SU	0.00	8.35	1.78
7BRI_188D	12.96	8.35	2.33
7BRI_173	12.96	8.35	1.80
7BRI_119	12.96	8.17	1.81
7BRI_112U	12.96	8.21	1.43
7BRI_112BU	12.96	8.20	0.83
7BRI_112SU	0.00	8.21	0.83
7BRI_112D	12.96	8.20	1.43
7BRI_93U	12.96	8.16	1.37
7BRI_93D	12.96	7.93	2.18
7BRI_84Cu	12.96	7.90	2.13
7BRI_84Cd	12.96	7.90	2.07
7BRI_59Cu	12.96	7.71	2.12
7BRI_59Cd	12.96	7.71	2.12
7BRI_46INu	12.96	7.62	2.16
7BRI_46INd	12.96	7.62	1.14
7BRI_18C	12.96	7.60	1.02
7BRI_18	12.96	7.55	1.44
7BRI_00u	12.96	7.55	1.11
7BRI_00	12.96	6.98	2.65
7BRI_00UA	12.96	6.94	2.62
7BRI_00UB	12.96	6.83	2.90
7BRI_0Cu	12.96	6.16	2.93
7BRI_0Cd	12.96	5.63	2.45
7BRI_0Con_u	7.89	5.63	1.49
7BRI_0Con_1	7.89	5.63	1.50
7BRI_0Con_2	7.89	5.54	1.64

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_0Con_3	7.89	5.47	1.73
7BRI_0Con_4	7.89	5.43	1.81
7BRI_0Con_d	7.89	5.42	1.84
7BRI_PHA3u	12.34	5.42	2.90
7BRI_PHA3d	12.34	2.69	3.04
7BRI_PHA2u	12.34	2.69	1.80
7BRI_PHA2i1	12.34	2.44	1.73
7BRI_PHA2d	12.34	1.86	2.56
7BRI_PHA1u	12.34	1.86	2.56
7BRI_PHA1d	12.34	1.06	2.83
7BRI_PHA_Ou	17.59	1.06	3.23
7BRI_PHA_Oi1	17.59	0.59	3.23
7BRI_PHA_Oi2	17.59	0.13	3.23
7BRI_PHA_Oi3	17.59	-0.33	3.23
7BRI_PHA_Od	17.59	-0.80	3.23
Brewery Branch			
7BREW_706A	5.07	5.63	0.00
7BREW_706B	5.07	5.14	1.98
7BREW_668u	5.07	4.83	1.99
7BREW_668d	5.09	4.83	1.60
7BREW_656u	5.09	4.80	1.47
7BREW_656d	5.12	4.80	1.44
7BREW_608u	5.12	4.48	1.34
7BREW_608d	5.15	4.48	1.41
7BREW_553u	5.15	4.16	1.22
7BREW_553d	5.17	4.16	1.55
7BREW_500u	5.17	3.70	1.63
7BREW_500d	5.20	3.70	1.62
7BREW_484u	5.20	3.48	1.83
7BREW_484d	5.22	3.48	1.67
7BREW_468	5.22	3.40	1.28
7BREW_407u	5.22	3.10	1.30
7BREW_407d	5.25	3.10	1.66
7BREW_395	5.25	2.97	1.71
7BREW_394	5.25	2.97	1.61
7BREW_394i1	5.25	2.81	1.52
7BREW_394i2	5.25	2.67	1.45

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_394i3	5.25	2.52	1.41
7BREW_331	5.25	2.35	1.47
7BREW_330	5.25	2.35	1.51
7BREW_168u	5.25	1.72	2.07
7BREW_168d_A	2.62	1.72	2.22
7BREW_023u_A	2.62	1.13	1.92
7BREW_168d_B	2.63	1.72	2.23
7BREW_023u_B	2.63	1.13	1.92
7BREW_023d	5.25	1.13	1.92
7BREW_000	5.25	1.06	2.12
Glenamought			
7BR1_3361	6.27	70.66	1.60
7BR1_3294IN	6.27	70.19	1.55
7BR1_3228	6.27	69.76	1.45
7BR1_3163IN	6.27	69.34	1.43
7BR1_3098IN	6.27	68.99	1.31
7BR1_3032	6.27	68.51	1.56
7BR1_2918IN	6.27	67.62	1.49
7BR1_2804	6.27	67.24	1.18
7BR1_2791U	6.27	67.25	0.94
7BR1_2791BU	6.27	67.25	0.00
7BR1_2791SU	0.00	67.25	1.31
7BR1_2791D	6.27	66.25	2.53
7BR1_2690	6.27	62.27	2.03
7BR1_2597IN	6.27	58.84	2.73
7BR1_2503	6.27	55.79	1.33
7BR1_2372IN	6.27	54.43	1.39
7BR1_2237IN	6.27	53.04	1.41
7BR1_2102IN	6.27	51.69	1.49
7BR1_2012IN	6.27	50.84	1.45
7BR1_1968U	6.27	50.34	1.86
7BR1_1764IN	6.27	47.85	1.75
7BR1_1554IN	6.82	45.19	1.81
7BR1_1309IN	6.82	42.07	1.91
7BR1_1297IN	6.82	41.92	1.92
7BR1_1287IN	6.82	41.79	1.94
7BR1_1277IN	6.82	41.66	1.98

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267U	6.82	41.51	2.06
7BR1_1267BU	6.82	41.51	0.00
7BR1_1267SU	0.00	41.51	0.00
7BR1_1267D	6.82	41.46	1.71
7BR1_1141IN	7.16	39.49	2.06
7BR1_1026	7.16	38.35	1.04
7BR1_1014U	7.16	38.31	1.07
7BR1_1014D	7.16	38.17	1.40
7BR1_961	7.16	37.56	1.74
7BR1_947U	7.16	37.50	1.00
7BR1_947BU	7.16	37.50	1.59
7BR1_947SU	0.00	37.50	1.59
7BR1_947D	7.16	36.99	2.03
7BR1_758IN	7.16	33.71	1.97
7BR1_570IN	7.16	30.45	1.87
7BR1_490IN	7.37	29.06	1.85
7BR1_480IN	7.37	28.90	1.80
7BR1_470U	7.37	28.76	1.69
7BR1_470BU	7.37	28.76	1.13
7BR1_470SU	0.00	28.76	1.13
7BR1_470D	7.37	28.72	1.71
7BR1_447	7.37	28.40	1.83
7BR1_403	7.37	27.66	2.14
7BR1_391U	7.37	27.46	1.76
7BR1_391BU	7.37	27.46	1.37
7BR1_391SU	0.00	27.46	1.37
7BR1_391D	7.37	27.44	1.84
7BR1_284	7.37	25.93	2.03
7BR1_195IN	7.37	24.73	1.96
7BR1_91U	7.37	23.93	0.92
7BR1_91BU	7.37	23.93	1.55
7BR1_91SU	0.00	23.93	1.55
7BR1_91D	7.37	23.74	1.18
7BR1_11	7.37	23.45	1.18
7BR1_0	7.37	23.47	0.73
7BR1_0C1U	2.34	23.31	1.50
7BR1_0C1D	2.34	23.21	1.62

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0D	7.37	23.13	0.99
7BR1_0DD	7.37	22.91	1.30
7BR1_0C1ex	2.34	23.13	0.55
7BR1_0C1I	2.34	23.47	0.00
7BR1_0C2D	2.63	23.21	1.60
7BR1_0C2ex	2.63	23.13	0.55
7BR1_0C2I	2.63	23.47	0.00
7BR1_0C2U	2.63	23.30	1.53
7BR1_0C3D	2.40	23.21	1.62
7BR1_0C3ex	2.40	23.13	0.55
7BR1_0C3I	2.40	23.47	0.51
7BR1_0C3U	2.40	23.31	1.50
Glen			
7BR2_3753	2.01	78.59	1.78
7BR2_3741	2.01	78.54	0.77
7BR2_3741CUa	2.01	78.35	2.02
7BR2_3706CD	2.01	77.78	2.21
7BR2_3741SU	0.00	78.54	1.64
7BR2_3706	2.01	77.64	1.49
7BR2_3706i4	2.01	77.22	1.14
7BR2_3629	2.01	76.35	1.99
7BR2_3629i4	2.01	75.09	1.67
7BR2_3543	2.01	73.45	1.89
7BR2_3543i4	2.01	71.70	2.18
7BR2_3468	2.01	70.09	1.79
7BR2_3468i4	2.01	68.61	1.87
7BR2_3380U	2.01	67.52	0.38
7BR2_3380SU	0.46	67.52	1.67
7BR2_3380o1	0.31	67.52	1.67
7BR2_3380o2	0.31	67.52	1.67
7BR2_3380o3	0.31	67.52	1.67
7BR2_3380o4	0.31	67.52	1.67
7BR2_3380o5	0.31	67.52	1.67
7BR2_3380D	2.01	66.99	1.76
7BR2_3278	2.01	64.11	1.71
7BR2_3163	2.01	62.02	1.27
7BR2_3028	2.01	60.86	0.68

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_3028i1	2.00	60.72	0.57
7BR2_2886	2.25	60.42	1.20
7BR2_2861U	2.25	60.38	0.69
7BR2_2861SU	0.00	60.36	0.99
7BR2_2861o1	1.65	60.36	0.82
7BR2_2861C1a	1.65	60.01	2.10
7BR2_2861C1b	1.65	59.83	2.14
7BR2_2861C2a	0.60	59.79	0.80
7BR2_2861C2b	0.60	59.77	0.81
7BR2_2861D	2.25	59.74	1.64
7BR2_2861Di7	2.24	59.12	1.21
7BR2_2740	2.24	58.22	2.23
7BR2_2617	2.24	55.08	1.93
7BR2_2617i7	2.24	53.14	2.26
7BR2_2491	2.24	51.72	1.42
7BR2_2491i8	2.25	50.33	1.36
7BR2_2491i9	2.24	49.38	0.99
7BR2_2255	2.22	49.20	0.09
7BR2_2255i9	2.15	49.19	0.14
7BR2_2089	2.14	49.12	0.55
7BR2_2082U	2.14	49.08	0.88
7BR2_2082SU	0.00	49.08	1.12
7BR2_2082BU	2.14	49.08	1.12
7BR2_2082D	2.14	48.95	1.11
7BR2_2082DD	2.14	48.88	1.27
7BR2_2061U	2.14	48.00	0.69
7BR2_2061	2.14	47.82	0.75
7BR2_2061i5	2.14	47.20	0.80
7BR2_2061i11	2.14	46.41	1.01
7BR2_1904	2.14	45.82	1.04
7BR2_1894	2.14	45.76	0.97
7BR2_1894SU	0.00	45.76	1.12
7BR2_1894C1	1.17	45.76	1.12
7BR2_1894C2	0.97	45.76	1.12
7BR2_1894C1a	1.17	45.45	2.64
7BR2_1894C1b	1.17	44.68	2.01
7BR2_1894C2a	0.97	45.47	2.62

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1894C2b	0.97	44.65	1.82
7BR2_1842	2.14	44.60	1.58
7BR2_1842i6	4.55	43.44	1.96
7BR2_1842i13	4.55	41.96	2.24
7BR2_1667	4.55	41.07	1.80
7BR2_1594	4.55	40.05	1.93
7BR2_1594i3	4.55	39.86	1.09
7BR2_1529	6.04	39.40	1.87
7BR2_1522U	6.03	39.31	2.14
7BR2_1522SU	0.00	39.31	0.69
7BR2_1522BU	6.03	39.31	0.69
7BR2_1522D	6.03	39.37	0.67
7BR2_1511	6.03	39.35	0.54
7BR2_1511i3	6.03	39.32	0.38
7BR2_1446	6.03	39.27	0.52
7BR2_1414U	6.03	39.22	0.57
7BR2_1414SU	5.35	39.22	0.45
7BR2_1414C1	1.65	39.22	0.45
7BR2_1414C1a	1.65	39.21	1.41
7BR2_1414C1b	1.65	39.17	1.41
7BR2_1414D	6.03	39.16	1.58
7BR2_1381U	6.03	39.05	1.13
7BR2_1381SU	1.37	39.05	0.51
7BR2_1381BU	4.66	39.05	0.51
7BR2_1381D	6.03	38.23	2.13
7BR2_1354U	6.03	38.19	0.83
7BR2_1354BU	2.15	38.19	1.07
7BR2_1354SU	4.22	38.19	1.07
7BR2_1354D	6.03	37.93	2.07
7BR2_1354Di1	6.03	37.70	1.53
7BR2_1354Di2	6.95	37.47	1.68
7BR2_1303U	6.95	37.36	1.49
7BR2_1303D	6.95	36.36	0.00
7BR2_1054_1U	3.47	36.36	0.00
7BR2_1054SU	0.00	36.36	0.00
7BR2_1054_2U	3.47	36.36	0.00
7BR2_1054_1D	3.47	35.88	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_873D	6.62	33.41	4.04
7BR2_846	6.62	32.07	1.84
7BR2_846i2	6.62	31.84	1.67
7BR2_846i4	6.62	31.70	1.36
7BR2_760	6.62	31.62	0.85
7BR2_667	6.62	30.47	2.06
7BR2_667i6	6.62	27.71	3.38
7BR2_520U	6.62	25.83	1.44
7BR2_520D	6.62	25.28	1.47
7BR2_412	6.61	25.23	0.22
7BR2_404	6.61	25.22	0.31
7BR2_389U	6.61	25.20	0.71
7BR2_389C1	6.61	25.20	0.00
7BR2_389C1a	6.61	24.52	2.62
7BR2_389C1b	6.61	24.50	2.66
7BR2_389CU	6.61	19.65	5.09
7BR2_228CD	6.61	18.73	2.01
7BR2_228	6.61	18.52	2.33
7BR2_193IN	6.61	17.74	1.83
7BR2_155SU	0.00	17.45	3.71
7BR2_155U	6.61	17.45	1.05
7BR2_155C1	3.31	17.45	3.71
7BR2_155C2	3.31	17.45	3.71
7BR2_155C1a	3.31	17.40	1.45
7BR2_155C1b	3.31	17.11	1.67
7BR2_155C2a	3.31	17.40	1.45
7BR2_155C2b	3.31	17.11	1.67
7BR2_155D	6.61	17.09	1.53
7BR2_104	6.61	16.63	2.06
7BR2_104i1	6.61	16.13	2.07
7BR2_104i2	6.61	15.58	2.11
7BR2_16	6.61	15.14	1.89
7BR2_0U	6.61	14.58	3.06
7BR2_PHA4u	6.61	14.58	2.86
7BR2_PHA4uX	6.61	14.33	2.86
7BR2_PHA4u1	6.61	14.09	2.86
7BR2_PHA4u2	6.61	13.73	2.70

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i1	6.61	13.20	3.50
7BR2_PHA4ia	6.61	12.55	3.46
7BR2_PHA4ib	6.61	11.80	3.55
7BR2_PHA4i2	6.61	11.31	2.32
7BR2_PHA4i3	6.61	10.24	4.49
7BR2_PHA4id	6.61	8.42	5.29
7BR2_PHA4ie	6.61	5.94	4.40
7BR2_00	6.61	5.42	2.40

C.1.2 20% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	1.56	45.42	0.52
7BRI_8331IN	1.56	44.37	0.58
7BRI_8115IN	1.55	43.84	0.41
7BRI_8007	1.54	43.76	0.21
7BRI_7907IN	1.54	43.73	0.26
7BRI_7832IN	1.54	43.68	0.37
7BRI_7782	1.54	43.60	0.60
7BRI_7767U	1.54	43.56	0.64
7BRI_7767BU	1.54	43.56	0.57
7BRI_7767SU	0.00	43.56	0.57
7BRI_7767D	1.54	43.49	1.04
7BRI_7637IN	1.54	42.48	1.05
7BRI_7507IN	1.54	41.51	1.00
7BRI_7377IN	1.54	40.49	1.06
7BRI_7247	1.54	39.60	0.87
7BRI_7173	1.54	39.31	0.76
7BRI_7165U	1.54	39.27	0.87
7BRI_7165BU	1.54	39.27	0.98
7BRI_7165SU	0.00	39.27	0.98
7BRI_7165D	1.54	39.26	0.87
7BRI_6992IN	1.54	38.35	0.89
7BRI_6822IN	1.54	37.62	0.66
7BRI_6730U	1.54	37.48	0.37
7BRI_6730BU	1.54	37.48	0.76
7BRI_6730SU	0.00	37.48	0.76
7BRI_6730D	1.54	37.46	0.41
7BRI_6620IN	1.54	37.31	0.42
7BRI_6510IN	1.54	37.15	0.45
7BRI_6400IN	1.54	36.96	0.51
7BRI_6291U	1.53	36.61	0.71
7BRI_6291BU	1.53	36.61	0.00
7BRI_6291SU	0.00	36.61	0.00
7BRI_6291D	1.53	36.61	0.76
7BRI_6107	2.34	36.16	0.63
7BRI_5924IN	2.33	36.02	0.24

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	2.31	35.97	0.12
7BRI_5556U	2.31	35.17	1.04
7BRI_5338IN	2.31	34.22	0.72
7BRI_5118IN	2.31	33.17	0.88
7BRI_4898IN	2.31	32.33	0.57
7BRI_4678	2.31	31.26	1.00
7BRI_4508IN	3.08	30.53	0.82
7BRI_4424	3.08	29.97	1.45
7BRI_4339IN	3.08	29.58	1.19
7BRI_4169IN	3.08	28.59	1.12
7BRI_4000IN	3.08	27.63	1.16
7BRI_3915U	3.08	27.25	0.96
7BRI_3669IN	3.08	26.40	0.76
7BRI_3546IN	3.08	25.97	0.79
7BRI_3423	3.08	25.68	0.65
7BRI_3281	3.84	25.39	0.69
7BRI_3140	3.83	25.22	0.41
7BRI_2999	3.83	25.13	0.58
7BRI_2984U	3.83	25.03	1.08
7BRI_2984BU	3.83	25.03	0.54
7BRI_2984SU	0.00	25.03	0.54
7BRI_2984D	3.83	24.96	1.22
7BRI_2842IN	3.83	24.38	1.08
7BRI_2700IN	3.82	24.14	0.68
7BRI_2558	3.82	24.08	0.41
7BRI_2550	3.82	24.08	0.42
7BRI_2310	3.83	22.73	0.43
7BRI_2306U	3.84	22.73	0.65
7BRI_2306D	14.66	22.73	1.46
7BRI_2205	14.11	21.94	2.35
7BRI_2053	15.24	20.89	1.50
7BRI_1955IN	15.22	20.40	1.47
7BRI_1855u	15.22	19.64	2.40
7BRI_1855d	15.22	19.46	2.81
7BRI_1753u	15.29	18.65	1.95
7BRI_1753d	15.29	18.54	2.23
7BRI_1698IN	14.02	18.45	2.06

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	15.85	18.19	1.98
7BRI_1598	16.07	18.11	1.84
7BRI_1500	15.93	17.95	1.67
7BRI_1490U	15.96	17.90	1.67
7BRI_1490BU	15.96	17.90	1.36
7BRI_1490BUa	15.96	17.80	1.74
7BRI_1490BUb	15.97	17.76	1.77
7BRI_1490SU	0.00	17.90	1.36
7BRI_1490D	15.97	17.72	2.13
7BRI_1464U	15.92	17.78	1.66
7BRI_1464BU	15.92	17.78	1.35
7BRI_1464BUa	15.92	17.72	1.30
7BRI_1464BUb	15.89	17.70	1.32
7BRI_1464SU	0.00	17.78	1.35
7BRI_1464D	15.89	17.67	1.67
7BRI_1425U	15.84	17.67	1.14
7BRI_1425BU1	8.00	17.67	1.35
7BRI_1425SU	0.00	17.67	1.35
7BRI_1425D	15.84	16.11	2.65
7BRI_1406	15.83	16.08	1.15
7BRI_1340U	15.83	15.70	1.48
7BRI_1340BU	15.83	15.62	1.01
7BRI_1340SU	0.00	15.62	1.01
7BRI_1340D	15.83	15.64	1.45
7BRI_1319	15.84	15.55	1.50
7BRI_1251IN	15.84	15.26	1.53
7BRI_1184	15.83	14.93	1.62
7BRI_1175U	16.42	14.83	1.82
7BRI_1175BU	16.42	14.83	1.18
7BRI_1175SU	0.00	14.83	1.18
7BRI_1175D	16.42	14.86	1.51
7BRI_1161	16.42	14.71	1.89
7BRI_1117IN	16.42	14.63	1.17
7BRI_1073	16.42	14.62	0.77
7BRI_1065	16.42	14.28	0.85
7BRI_991	16.42	14.04	1.54
7BRI_916	16.42	13.35	1.95

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	16.42	13.18	2.13
7BRI_875	16.42	13.25	1.02
7BRI_875CI	16.42	13.25	0.67
7BRI_875C	16.42	12.98	1.57
7BRI_875S	0.00	13.25	0.67
7BRI_847C	16.42	12.89	1.67
7BRI_847	16.42	12.75	1.84
7BRI_799	16.19	12.69	1.52
7BRI_752	16.42	12.65	1.22
7BRI_743D	16.42	12.11	2.78
7BRI_711	16.42	12.04	2.22
7BRI_639	17.02	11.93	1.51
7BRI_630D	17.02	11.76	2.02
7BRI_569	17.02	11.74	1.42
7BRI_557	17.02	11.67	1.63
7BRI_548U	17.02	11.70	1.34
7BRI_548CI	17.02	11.70	0.00
7BRI_548C	17.02	11.41	1.74
7BRI_548S	0.00	11.70	0.00
7BRI_522C	17.02	11.36	1.80
7BRI_522	17.02	11.31	1.53
7BRI_503	17.02	11.26	1.58
7BRI_487	17.02	11.17	1.89
7BRI_487CI	17.02	11.17	1.12
7BRI_487S	0.00	11.17	1.12
7BRI_487C	17.02	10.96	2.00
7BRI_475IN	17.02	10.91	2.05
7BRI_464IN	17.02	10.86	2.10
7BRI_453IN	17.02	10.80	2.17
7BRI_442C	17.02	10.72	2.29
7BRI_442	17.02	10.45	3.17
7BRI_430IN	17.02	10.29	2.98
7BRI_418IN	17.02	10.14	2.79
7BRI_407IN	17.02	10.00	2.58
7BRI_396IN	17.02	9.89	2.34
7BRI_385IN	17.02	9.82	2.00
7BRI_374	17.02	9.84	1.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	17.02	9.67	1.97
7BRI_332	17.02	9.45	2.79
7BRI_290U	17.02	9.23	2.26
7BRI_290D	18.02	9.23	2.40
7BRI_197	18.02	8.78	2.32
7BRI_188U	18.02	8.69	2.36
7BRI_188BU	18.02	8.69	1.78
7BRI_188SU	0.00	8.69	1.78
7BRI_188D	18.02	8.69	2.36
7BRI_173	18.02	8.72	1.86
7BRI_119	18.02	8.53	1.98
7BRI_112U	18.02	8.57	1.64
7BRI_112BU	18.02	8.56	0.83
7BRI_112SU	0.00	8.57	0.83
7BRI_112D	18.02	8.56	1.64
7BRI_93U	18.02	8.53	1.50
7BRI_93D	18.02	8.27	2.37
7BRI_84Cu	18.02	8.25	2.31
7BRI_84Cd	18.02	8.25	2.26
7BRI_59Cu	18.02	8.10	2.26
7BRI_59Cd	18.02	8.10	2.26
7BRI_46INu	18.02	8.03	2.26
7BRI_46INd	18.02	8.03	1.20
7BRI_18C	18.02	8.02	1.09
7BRI_18	18.02	7.96	1.44
7BRI_00u	18.02	7.95	1.24
7BRI_00	18.02	7.23	2.99
7BRI_00UA	18.02	7.19	2.96
7BRI_00UB	18.02	7.05	3.30
7BRI_0Cu	18.01	6.38	3.27
7BRI_0Cd	18.01	5.85	2.86
7BRI_0Con_u	10.96	5.85	1.74
7BRI_0Con_1	10.96	5.84	1.75
7BRI_0Con_2	10.96	5.71	1.93
7BRI_0Con_3	10.96	5.63	2.05
7BRI_0Con_4	10.96	5.57	2.18
7BRI_0Con_d	10.96	5.55	2.21

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	15.46	5.55	3.16
7BRI_PHA3d	15.46	2.81	3.33
7BRI_PHA2u	15.46	2.81	1.98
7BRI_PHA2i1	15.46	2.55	1.92
7BRI_PHA2d	15.46	1.93	2.86
7BRI_PHA1u	15.46	1.93	2.86
7BRI_PHA1d	15.46	1.15	3.02
7BRI_PHA_Ou	22.77	1.15	3.55
7BRI_PHA_Oi1	22.77	0.69	3.55
7BRI_PHA_Oi2	22.77	0.23	3.55
7BRI_PHA_Oi3	22.77	-0.24	3.55
7BRI_PHA_Od	22.76	-0.70	3.55
Brewery Branch			
7BREW_706A	7.06	5.85	0.00
7BREW_706B	7.06	5.29	2.24
7BREW_668u	7.06	4.99	2.23
7BREW_668d	7.09	4.99	1.79
7BREW_656u	7.09	4.96	1.67
7BREW_656d	7.13	4.96	1.63
7BREW_608u	7.13	4.65	1.51
7BREW_608d	7.16	4.65	1.59
7BREW_553u	7.16	4.35	1.40
7BREW_553d	7.20	4.35	1.77
7BREW_500u	7.20	3.88	1.86
7BREW_500d	7.23	3.88	1.85
7BREW_484u	7.23	3.70	1.96
7BREW_484d	7.27	3.70	1.81
7BREW_468	7.27	3.63	1.47
7BREW_407u	7.27	3.31	1.50
7BREW_407d	7.30	3.31	1.94
7BREW_395	7.30	3.16	2.02
7BREW_394	7.30	3.16	1.86
7BREW_394i1	7.30	2.99	1.75
7BREW_394i2	7.30	2.83	1.67
7BREW_394i3	7.30	2.67	1.63
7BREW_331	7.30	2.47	1.70
7BREW_330	7.30	2.47	1.77

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	7.30	1.83	2.30
7BREW_168d_A	3.64	1.83	2.44
7BREW_023u_A	3.64	1.24	2.15
7BREW_168d_B	3.66	1.83	2.45
7BREW_023u_B	3.66	1.24	2.16
7BREW_023d	7.30	1.24	2.16
7BREW_000	7.30	1.15	2.20
Glenamought			
7BR1_3361	8.78	70.86	1.73
7BR1_3294IN	8.78	70.37	1.72
7BR1_3228	8.78	69.93	1.62
7BR1_3163IN	8.78	69.51	1.55
7BR1_3098IN	8.78	69.12	1.31
7BR1_3032	8.78	68.65	1.56
7BR1_2918IN	8.78	67.89	1.49
7BR1_2804	8.77	67.65	1.18
7BR1_2791U	8.77	67.65	0.94
7BR1_2791BU	8.49	67.65	0.00
7BR1_2791SU	0.29	67.65	1.31
7BR1_2791D	8.77	66.31	2.88
7BR1_2690	8.77	62.38	2.28
7BR1_2597IN	8.77	58.91	3.02
7BR1_2503	8.77	55.89	1.37
7BR1_2372IN	8.77	54.52	1.40
7BR1_2237IN	8.77	53.16	1.41
7BR1_2102IN	8.77	51.79	1.49
7BR1_2012IN	8.77	50.95	1.45
7BR1_1968U	8.77	50.46	1.88
7BR1_1764IN	8.77	47.97	1.75
7BR1_1554IN	9.95	45.33	1.81
7BR1_1309IN	9.95	42.27	2.00
7BR1_1297IN	9.95	42.12	2.05
7BR1_1287IN	9.95	41.98	2.12
7BR1_1277IN	9.95	41.84	2.22
7BR1_1267U	9.95	41.68	2.35
7BR1_1267BU	9.95	41.68	0.00
7BR1_1267SU	0.00	41.68	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	9.95	41.62	1.91
7BR1_1141IN	10.65	39.68	2.26
7BR1_1026	10.65	38.51	1.32
7BR1_1014U	10.65	38.45	1.39
7BR1_1014D	10.65	38.28	1.51
7BR1_961	10.65	37.86	1.73
7BR1_947U	10.65	37.78	1.15
7BR1_947BU	10.65	37.78	1.59
7BR1_947SU	0.00	37.78	1.59
7BR1_947D	10.65	37.13	2.36
7BR1_758IN	10.65	33.84	2.27
7BR1_570IN	10.65	30.58	2.14
7BR1_490IN	11.10	29.20	2.08
7BR1_480IN	11.10	29.05	1.98
7BR1_470U	11.10	28.93	1.78
7BR1_470BU	11.10	28.93	1.13
7BR1_470SU	0.00	28.93	1.13
7BR1_470D	11.10	28.86	2.00
7BR1_447	11.10	28.57	1.96
7BR1_403	11.10	27.82	2.45
7BR1_391U	11.10	27.63	1.77
7BR1_391BU	11.10	27.63	1.37
7BR1_391SU	0.00	27.63	1.37
7BR1_391D	11.10	27.60	1.84
7BR1_284	11.10	26.15	2.32
7BR1_195IN	11.10	24.94	2.16
7BR1_91U	11.10	24.35	0.96
7BR1_91BU	11.10	24.35	1.55
7BR1_91SU	0.00	24.35	1.55
7BR1_91D	11.10	24.14	1.19
7BR1_11	11.10	24.00	1.18
7BR1_0	11.10	24.01	0.78
7BR1_0C1U	3.69	23.68	2.09
7BR1_0C1D	3.69	23.52	2.11
7BR1_0D	11.10	23.37	1.19
7BR1_0DD	11.10	23.14	1.48
7BR1_0C1ex	3.69	23.37	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	3.69	24.01	0.00
7BR1_0C2D	3.70	23.52	2.09
7BR1_0C2ex	3.70	23.37	0.55
7BR1_0C2I	3.70	24.01	0.00
7BR1_0C2U	3.70	23.68	2.09
7BR1_0C3D	3.71	23.52	2.10
7BR1_0C3ex	3.71	23.37	0.55
7BR1_0C3I	3.71	24.01	0.51
7BR1_0C3U	3.71	23.68	2.10
Glen			
7BR2_3753	2.82	79.06	1.78
7BR2_3741	2.82	79.07	0.77
7BR2_3741CUa	2.82	78.87	2.80
7BR2_3706CD	2.82	77.95	2.41
7BR2_3741SU	0.00	79.07	1.64
7BR2_3706	2.82	77.79	1.61
7BR2_3706i4	2.81	77.38	1.26
7BR2_3629	2.81	76.47	2.21
7BR2_3629i4	2.81	75.19	1.67
7BR2_3543	2.81	73.53	1.93
7BR2_3543i4	2.81	71.80	2.21
7BR2_3468	2.81	70.20	1.85
7BR2_3468i4	2.81	68.69	2.06
7BR2_3380U	2.81	67.59	0.43
7BR2_3380SU	1.25	67.59	1.67
7BR2_3380o1	0.31	67.59	1.67
7BR2_3380o2	0.31	67.59	1.67
7BR2_3380o3	0.31	67.59	1.67
7BR2_3380o4	0.31	67.59	1.67
7BR2_3380o5	0.31	67.59	1.67
7BR2_3380D	2.81	67.04	1.96
7BR2_3278	2.82	64.20	1.89
7BR2_3163	2.81	62.10	1.36
7BR2_3028	2.78	61.06	0.74
7BR2_3028i1	2.72	61.00	0.61
7BR2_2886	2.87	60.97	1.20
7BR2_2861U	2.87	60.95	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	0.00	60.94	0.99
7BR2_2861o1	2.15	60.94	0.82
7BR2_2861C1a	2.15	60.34	2.74
7BR2_2861C1b	2.15	60.05	2.74
7BR2_2861C2a	0.71	59.90	0.91
7BR2_2861C2b	0.71	59.87	0.91
7BR2_2861D	2.87	59.83	1.75
7BR2_2861Di7	2.87	59.21	1.34
7BR2_2740	2.87	58.30	2.35
7BR2_2617	2.87	55.17	2.07
7BR2_2617i7	2.87	53.21	2.39
7BR2_2491	2.86	51.79	1.49
7BR2_2491i8	2.87	50.39	1.41
7BR2_2491i9	2.86	49.47	1.02
7BR2_2255	2.80	49.33	0.10
7BR2_2255i9	2.66	49.32	0.14
7BR2_2089	2.64	49.28	0.55
7BR2_2082U	2.64	49.25	0.88
7BR2_2082SU	0.00	49.25	1.12
7BR2_2082BU	2.64	49.25	1.12
7BR2_2082D	2.64	49.03	1.17
7BR2_2082DD	2.64	48.96	1.34
7BR2_2061U	2.64	48.06	0.75
7BR2_2061	2.64	47.88	0.81
7BR2_2061i5	2.64	47.28	0.82
7BR2_2061i11	2.64	46.45	1.11
7BR2_1904	2.64	45.90	1.04
7BR2_1894	2.64	45.85	1.01
7BR2_1894SU	0.00	45.85	1.12
7BR2_1894C1	1.43	45.85	1.12
7BR2_1894C2	1.21	45.85	1.12
7BR2_1894C1a	1.43	45.50	2.75
7BR2_1894C1b	1.43	44.77	2.01
7BR2_1894C2a	1.21	45.53	2.76
7BR2_1894C2b	1.21	44.74	1.82
7BR2_1842	2.64	44.69	1.57
7BR2_1842i6	5.85	43.53	2.11

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	5.85	42.06	2.36
7BR2_1667	5.85	41.19	1.87
7BR2_1594	5.85	40.17	2.03
7BR2_1594i3	5.85	39.91	1.27
7BR2_1529	7.33	39.48	1.87
7BR2_1522U	7.33	39.41	2.14
7BR2_1522SU	0.00	39.41	0.69
7BR2_1522BU	7.33	39.41	0.69
7BR2_1522D	7.33	39.47	0.66
7BR2_1511	7.33	39.45	0.54
7BR2_1511i3	7.33	39.42	0.39
7BR2_1446	7.33	39.37	0.53
7BR2_1414U	7.33	39.32	0.58
7BR2_1414SU	6.79	39.32	0.45
7BR2_1414C1	1.63	39.32	0.45
7BR2_1414C1a	1.63	39.31	1.39
7BR2_1414C1b	1.63	39.29	1.39
7BR2_1414D	7.33	39.27	1.58
7BR2_1381U	7.33	39.16	1.13
7BR2_1381SU	2.51	39.16	0.51
7BR2_1381BU	4.82	39.16	0.51
7BR2_1381D	7.33	38.29	2.48
7BR2_1354U	7.33	38.27	0.88
7BR2_1354BU	2.08	38.27	1.07
7BR2_1354SU	5.57	38.27	1.07
7BR2_1354D	7.33	38.02	1.95
7BR2_1354Di1	7.33	37.80	1.56
7BR2_1354Di2	8.25	37.55	1.75
7BR2_1303U	8.25	37.44	1.53
7BR2_1303D	8.25	36.41	0.00
7BR2_1054_1U	4.12	36.41	0.00
7BR2_1054SU	0.00	36.41	0.00
7BR2_1054_2U	4.12	36.41	0.00
7BR2_1054_1D	4.12	36.10	0.00
7BR2_873D	7.76	33.58	4.26
7BR2_846	7.76	32.15	1.96
7BR2_846i2	7.76	31.91	1.78

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	7.76	31.76	1.45
7BR2_760	7.76	31.68	0.92
7BR2_667	7.76	30.52	2.17
7BR2_667i6	7.76	27.78	3.38
7BR2_520U	7.76	25.93	1.51
7BR2_520D	7.76	25.47	1.48
7BR2_412	7.75	25.45	0.22
7BR2_404	7.75	25.44	0.31
7BR2_389U	7.75	25.42	0.71
7BR2_389C1	7.75	25.42	0.00
7BR2_389C1a	7.75	24.61	2.86
7BR2_389C1b	7.75	24.60	2.90
7BR2_389CU	7.75	19.75	5.14
7BR2_228CD	7.75	18.90	2.13
7BR2_228	7.75	18.66	2.49
7BR2_193IN	7.75	17.88	1.87
7BR2_155SU	0.00	17.63	3.71
7BR2_155U	7.75	17.63	1.07
7BR2_155C1	3.88	17.63	3.71
7BR2_155C2	3.88	17.63	3.71
7BR2_155C1a	3.88	17.56	1.66
7BR2_155C1b	3.88	17.20	1.85
7BR2_155C2a	3.88	17.56	1.66
7BR2_155C2b	3.88	17.20	1.85
7BR2_155D	7.75	17.16	1.65
7BR2_104	7.75	16.70	2.17
7BR2_104i1	7.75	16.20	2.17
7BR2_104i2	7.75	15.67	2.20
7BR2_16	7.75	15.21	2.01
7BR2_0U	7.75	14.64	3.23
7BR2_PHA4u	7.75	14.64	3.03
7BR2_PHA4uX	7.75	14.40	3.03
7BR2_PHA4u1	7.75	14.15	3.03
7BR2_PHA4u2	7.75	13.79	2.90
7BR2_PHA4i1	7.75	13.25	3.71
7BR2_PHA4ia	7.75	12.59	3.71
7BR2_PHA4ib	7.75	11.86	3.71

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	7.75	11.39	2.46
7BR2_PHA4i3	7.75	10.27	4.83
7BR2_PHA4id	7.75	8.46	5.59
7BR2_PHA4ie	7.75	5.98	4.62
7BR2_00	7.75	5.55	2.59

C.1.3 10% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	1.87	45.46	0.52
7BRI_8331IN	1.87	44.42	0.59
7BRI_8115IN	1.86	43.92	0.42
7BRI_8007	1.85	43.85	0.21
7BRI_7907IN	1.84	43.82	0.26
7BRI_7832IN	1.84	43.78	0.37
7BRI_7782	1.84	43.70	0.61
7BRI_7767U	1.84	43.67	0.64
7BRI_7767BU	1.84	43.67	0.57
7BRI_7767SU	0.00	43.67	0.57
7BRI_7767D	1.84	43.57	1.09
7BRI_7637IN	1.84	42.56	1.10
7BRI_7507IN	1.84	41.59	1.05
7BRI_7377IN	1.84	40.56	1.11
7BRI_7247	1.84	39.68	0.90
7BRI_7173	1.84	39.43	0.76
7BRI_7165U	1.84	39.37	0.92
7BRI_7165BU	1.84	39.37	0.98
7BRI_7165SU	0.00	39.37	0.98
7BRI_7165D	1.84	39.37	0.93
7BRI_6992IN	1.84	38.43	0.94
7BRI_6822IN	1.84	37.70	0.68
7BRI_6730U	1.84	37.58	0.37
7BRI_6730BU	1.84	37.58	0.76
7BRI_6730SU	0.00	37.58	0.76
7BRI_6730D	1.84	37.56	0.41
7BRI_6620IN	1.84	37.41	0.43
7BRI_6510IN	1.84	37.24	0.47
7BRI_6400IN	1.83	37.05	0.53
7BRI_6291U	1.83	36.69	0.75
7BRI_6291BU	1.83	36.69	0.00
7BRI_6291SU	0.00	36.69	0.00
7BRI_6291D	1.83	36.69	0.82
7BRI_6107	2.64	36.22	0.66
7BRI_5924IN	2.67	36.08	0.25

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	2.75	36.04	0.13
7BRI_5556U	2.78	35.27	1.04
7BRI_5338IN	2.75	34.28	0.73
7BRI_5118IN	2.74	33.22	0.88
7BRI_4898IN	2.74	32.37	0.57
7BRI_4678	2.74	31.30	1.00
7BRI_4508IN	3.49	30.61	0.82
7BRI_4424	3.49	30.03	1.51
7BRI_4339IN	3.49	29.63	1.19
7BRI_4169IN	3.49	28.64	1.12
7BRI_4000IN	3.49	27.68	1.16
7BRI_3915U	3.48	27.29	0.97
7BRI_3669IN	3.48	26.43	0.76
7BRI_3546IN	3.48	26.00	0.79
7BRI_3423	3.47	25.71	0.65
7BRI_3281	4.22	25.43	0.69
7BRI_3140	4.19	25.26	0.41
7BRI_2999	4.17	25.18	0.58
7BRI_2984U	4.17	25.09	1.08
7BRI_2984BU	4.17	25.09	0.54
7BRI_2984SU	0.00	25.09	0.54
7BRI_2984D	4.17	25.01	1.22
7BRI_2842IN	4.17	24.46	1.08
7BRI_2700IN	4.16	24.24	0.68
7BRI_2558	4.15	24.19	0.41
7BRI_2550	4.15	24.18	0.42
7BRI_2310	4.15	22.79	0.41
7BRI_2306U	4.23	22.78	0.64
7BRI_2306D	16.16	22.78	1.46
7BRI_2205	15.41	21.99	2.42
7BRI_2053	17.10	20.96	1.51
7BRI_1955IN	17.17	20.51	1.47
7BRI_1855u	17.09	19.74	2.48
7BRI_1855d	17.09	19.56	2.91
7BRI_1753u	17.11	18.83	1.98
7BRI_1753d	17.11	18.74	2.27
7BRI_1698IN	15.18	18.71	2.06

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	16.91	18.69	1.98
7BRI_1598	18.08	18.59	1.84
7BRI_1500	17.99	18.51	1.67
7BRI_1490U	17.96	18.47	1.67
7BRI_1490BU	17.96	18.47	1.36
7BRI_1490BUa	17.96	18.35	1.83
7BRI_1490BUb	17.96	18.29	1.83
7BRI_1490SU	0.00	18.47	1.36
7BRI_1490D	17.96	18.23	2.13
7BRI_1464U	17.94	18.29	1.66
7BRI_1464BU	17.94	18.29	1.35
7BRI_1464BUa	17.94	18.23	1.30
7BRI_1464BUb	17.94	18.21	1.32
7BRI_1464SU	0.00	18.29	1.35
7BRI_1464D	17.94	18.16	1.67
7BRI_1425U	17.93	18.15	1.14
7BRI_1425BU1	9.03	18.15	1.35
7BRI_1425SU	0.00	18.15	1.35
7BRI_1425D	17.93	16.20	2.74
7BRI_1406	17.93	16.19	1.17
7BRI_1340U	17.93	15.82	1.52
7BRI_1340BU	17.93	15.73	1.01
7BRI_1340SU	0.00	15.73	1.01
7BRI_1340D	17.93	15.75	1.51
7BRI_1319	17.93	15.66	1.56
7BRI_1251IN	17.93	15.37	1.59
7BRI_1184	17.93	15.07	1.64
7BRI_1175U	19.18	14.95	1.93
7BRI_1175BU	19.18	14.95	1.18
7BRI_1175SU	0.00	14.95	1.18
7BRI_1175D	19.18	14.97	1.62
7BRI_1161	19.18	14.82	1.99
7BRI_1117IN	19.18	14.75	1.26
7BRI_1073	19.18	14.73	0.85
7BRI_1065	19.18	14.48	0.89
7BRI_991	19.18	14.23	1.62
7BRI_916	19.18	13.51	1.99

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	19.18	13.38	2.13
7BRI_875	19.18	13.45	1.06
7BRI_875CI	19.18	13.45	0.67
7BRI_875C	19.18	13.14	1.67
7BRI_875S	0.00	13.45	0.67
7BRI_847C	19.18	13.05	1.75
7BRI_847	19.18	12.90	1.86
7BRI_799	18.64	12.86	1.53
7BRI_752	19.18	12.82	1.26
7BRI_743D	19.18	12.27	2.87
7BRI_711	19.18	12.28	2.21
7BRI_639	20.42	12.18	1.54
7BRI_630D	20.42	12.00	2.11
7BRI_569	20.42	11.99	1.45
7BRI_557	20.42	11.94	1.63
7BRI_548U	20.42	11.96	1.39
7BRI_548CI	20.42	11.96	0.00
7BRI_548C	20.42	11.62	1.86
7BRI_548S	0.00	11.96	0.00
7BRI_522C	20.42	11.57	1.92
7BRI_522	20.42	11.50	1.57
7BRI_503	20.42	11.46	1.63
7BRI_487	20.42	11.34	2.01
7BRI_487CI	20.42	11.34	1.12
7BRI_487S	0.00	11.34	1.12
7BRI_487C	20.42	11.09	2.17
7BRI_475IN	20.42	11.04	2.21
7BRI_464IN	20.42	10.99	2.26
7BRI_453IN	20.42	10.93	2.32
7BRI_442C	20.42	10.86	2.42
7BRI_442	20.42	10.56	3.37
7BRI_430IN	20.42	10.40	3.14
7BRI_418IN	20.42	10.25	2.90
7BRI_407IN	20.42	10.13	2.66
7BRI_396IN	20.42	10.03	2.40
7BRI_385IN	20.42	10.01	2.02
7BRI_374	20.42	10.04	1.59

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	20.42	9.88	2.05
7BRI_332	20.42	9.62	2.91
7BRI_290U	20.42	9.49	2.38
7BRI_290D	21.42	9.49	2.50
7BRI_197	21.42	9.35	2.32
7BRI_188U	21.42	9.30	2.36
7BRI_188BU	21.42	9.30	1.78
7BRI_188SU	0.00	9.30	1.78
7BRI_188D	21.42	9.30	2.36
7BRI_173	21.42	9.29	1.88
7BRI_119	21.47	9.18	2.02
7BRI_112U	21.08	9.22	1.69
7BRI_112BU	21.05	9.08	0.83
7BRI_112SU	0.03	9.22	0.83
7BRI_112D	21.08	8.84	1.69
7BRI_93U	21.08	8.81	1.53
7BRI_93D	21.08	8.56	2.71
7BRI_84Cu	21.08	8.51	2.71
7BRI_84Cd	21.08	8.51	2.31
7BRI_59Cu	21.08	8.39	2.30
7BRI_59Cd	21.08	8.39	2.30
7BRI_46INu	21.08	8.34	2.29
7BRI_46INd	21.08	8.34	1.22
7BRI_18C	21.08	8.30	1.21
7BRI_18	21.33	8.23	1.44
7BRI_00u	21.30	8.22	1.30
7BRI_00	21.30	7.38	3.18
7BRI_00UA	21.30	7.34	3.15
7BRI_00UB	21.30	7.18	3.52
7BRI_0Cu	21.30	6.52	3.46
7BRI_0Cd	21.30	5.97	3.08
7BRI_0Con_u	12.91	5.97	1.87
7BRI_0Con_1	12.91	5.97	1.87
7BRI_0Con_2	12.91	5.82	2.08
7BRI_0Con_3	12.91	5.73	2.22
7BRI_0Con_4	12.91	5.66	2.37
7BRI_0Con_d	12.91	5.63	2.41

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	17.45	5.63	3.30
7BRI_PHA3d	17.45	2.88	3.50
7BRI_PHA2u	17.45	2.88	2.08
7BRI_PHA2i1	17.45	2.61	2.04
7BRI_PHA2d	17.45	1.98	3.03
7BRI_PHA1u	17.45	1.98	3.03
7BRI_PHA1d	17.45	1.21	3.12
7BRI_PHA_Ou	26.12	1.21	3.74
7BRI_PHA_Oi1	26.12	0.75	3.74
7BRI_PHA_Oi2	26.12	0.28	3.74
7BRI_PHA_Oi3	26.12	-0.18	3.74
7BRI_PHA_Od	26.12	-0.64	3.74
Brewery Branch			
7BREW_706A	8.39	5.97	0.00
7BREW_706B	8.39	5.39	2.38
7BREW_668u	8.39	5.10	2.35
7BREW_668d	8.43	5.10	1.88
7BREW_656u	8.43	5.06	1.77
7BREW_656d	8.47	5.06	1.73
7BREW_608u	8.47	4.77	1.61
7BREW_608d	8.51	4.77	1.69
7BREW_553u	8.51	4.47	1.51
7BREW_553d	8.55	4.47	1.90
7BREW_500u	8.55	4.01	1.96
7BREW_500d	8.59	4.01	1.96
7BREW_484u	8.59	3.85	2.02
7BREW_484d	8.63	3.85	1.88
7BREW_468	8.63	3.79	1.58
7BREW_407u	8.63	3.44	1.63
7BREW_407d	8.67	3.44	2.12
7BREW_395	8.67	3.27	2.22
7BREW_394	8.67	3.27	2.00
7BREW_394i1	8.67	3.09	1.88
7BREW_394i2	8.67	2.92	1.80
7BREW_394i3	8.67	2.75	1.75
7BREW_331	8.67	2.55	1.82
7BREW_330	8.67	2.55	1.91

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	8.67	1.91	2.43
7BREW_168d_A	4.33	1.91	2.57
7BREW_023u_A	4.33	1.30	2.31
7BREW_168d_B	4.35	1.91	2.58
7BREW_023u_B	4.35	1.30	2.32
7BREW_023d	8.67	1.30	2.32
7BREW_000	8.67	1.21	2.35
Glenamought			
7BR1_3361	10.54	70.97	1.73
7BR1_3294IN	10.53	70.48	1.80
7BR1_3228	10.53	70.02	1.76
7BR1_3163IN	10.53	69.58	1.61
7BR1_3098IN	10.53	69.18	1.36
7BR1_3032	10.53	68.72	1.56
7BR1_2918IN	10.53	67.98	1.49
7BR1_2804	10.53	67.74	1.19
7BR1_2791U	10.53	67.73	0.94
7BR1_2791BU	9.48	67.73	0.00
7BR1_2791SU	1.05	67.73	1.31
7BR1_2791D	10.53	66.36	3.05
7BR1_2690	10.53	62.45	2.46
7BR1_2597IN	10.53	58.96	3.16
7BR1_2503	10.53	55.94	1.38
7BR1_2372IN	10.53	54.58	1.40
7BR1_2237IN	10.53	53.21	1.41
7BR1_2102IN	10.53	51.86	1.50
7BR1_2012IN	10.53	51.01	1.45
7BR1_1968U	10.53	50.51	1.86
7BR1_1764IN	10.53	48.03	1.76
7BR1_1554IN	11.47	45.39	1.81
7BR1_1309IN	11.47	42.35	2.05
7BR1_1297IN	11.47	42.19	2.13
7BR1_1287IN	11.47	42.05	2.22
7BR1_1277IN	11.47	41.90	2.34
7BR1_1267U	11.47	41.75	2.50
7BR1_1267BU	11.47	41.75	0.00
7BR1_1267SU	0.00	41.75	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	11.47	41.67	2.03
7BR1_1141IN	12.03	39.74	2.34
7BR1_1026	12.03	38.56	1.43
7BR1_1014U	12.03	38.50	1.51
7BR1_1014D	12.03	38.32	1.52
7BR1_961	12.03	37.96	1.74
7BR1_947U	12.03	37.87	1.20
7BR1_947BU	12.03	37.87	1.59
7BR1_947SU	0.00	37.87	1.59
7BR1_947D	12.03	37.18	2.47
7BR1_758IN	12.03	33.90	2.34
7BR1_570IN	12.03	30.61	2.25
7BR1_490IN	12.39	29.24	2.14
7BR1_480IN	12.39	29.10	2.02
7BR1_470U	12.39	28.99	1.81
7BR1_470BU	12.39	28.99	1.13
7BR1_470SU	0.00	28.99	1.13
7BR1_470D	12.39	28.91	2.08
7BR1_447	12.39	28.61	2.02
7BR1_403	12.39	27.88	2.51
7BR1_391U	12.39	27.70	1.77
7BR1_391BU	12.39	27.70	1.37
7BR1_391SU	0.00	27.70	1.37
7BR1_391D	12.39	27.67	1.84
7BR1_284	12.39	26.20	2.45
7BR1_195IN	12.39	25.05	2.17
7BR1_91U	12.38	24.61	0.96
7BR1_91BU	12.38	24.61	1.55
7BR1_91SU	0.00	24.61	1.55
7BR1_91D	12.38	24.34	1.19
7BR1_11	12.38	24.25	1.18
7BR1_0	12.38	24.25	0.78
7BR1_0C1U	4.13	23.84	2.33
7BR1_0C1D	4.13	23.64	2.33
7BR1_0D	12.38	23.44	1.25
7BR1_0DD	12.38	23.21	1.53
7BR1_0C1ex	4.13	23.44	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	4.13	24.25	0.00
7BR1_0C2D	4.13	23.64	2.33
7BR1_0C2ex	4.13	23.44	0.55
7BR1_0C2I	4.13	24.25	0.00
7BR1_0C2U	4.13	23.84	2.33
7BR1_0C3D	4.13	23.64	2.33
7BR1_0C3ex	4.13	23.44	0.55
7BR1_0C3I	4.13	24.25	0.51
7BR1_0C3U	4.13	23.84	2.33
Glen			
7BR2_3753	3.38	79.31	1.78
7BR2_3741	3.38	79.32	0.77
7BR2_3741CUa	3.18	79.05	3.16
7BR2_3706CD	3.18	78.04	2.46
7BR2_3741SU	0.20	79.32	1.64
7BR2_3706	3.38	77.87	1.67
7BR2_3706i4	3.38	77.46	1.35
7BR2_3629	3.38	76.55	2.33
7BR2_3629i4	3.38	75.25	1.67
7BR2_3543	3.37	73.59	1.94
7BR2_3543i4	3.37	71.85	2.23
7BR2_3468	3.37	70.25	1.85
7BR2_3468i4	3.37	68.74	2.17
7BR2_3380U	3.37	67.62	0.47
7BR2_3380SU	1.81	67.62	1.67
7BR2_3380o1	0.31	67.62	1.67
7BR2_3380o2	0.31	67.62	1.67
7BR2_3380o3	0.31	67.62	1.67
7BR2_3380o4	0.31	67.62	1.67
7BR2_3380o5	0.31	67.62	1.67
7BR2_3380D	3.37	67.08	2.05
7BR2_3278	3.38	64.25	2.02
7BR2_3163	3.38	62.16	1.39
7BR2_3028	3.30	61.35	0.75
7BR2_3028i1	3.16	61.33	0.61
7BR2_2886	3.22	61.33	1.20
7BR2_2861U	3.21	61.31	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	0.00	61.31	0.99
7BR2_2861o1	2.41	61.31	0.82
7BR2_2861C1a	2.41	60.56	3.07
7BR2_2861C1b	2.41	60.19	3.07
7BR2_2861C2a	0.81	59.97	1.03
7BR2_2861C2b	0.81	59.93	1.03
7BR2_2861D	3.21	59.88	1.80
7BR2_2861Di7	3.21	59.27	1.40
7BR2_2740	3.21	58.34	2.42
7BR2_2617	3.21	55.21	2.13
7BR2_2617i7	3.21	53.24	2.46
7BR2_2491	3.21	51.83	1.51
7BR2_2491i8	3.21	50.42	1.47
7BR2_2491i9	3.21	49.52	1.03
7BR2_2255	3.13	49.42	0.10
7BR2_2255i9	2.96	49.42	0.14
7BR2_2089	2.94	49.39	0.55
7BR2_2082U	2.94	49.36	0.88
7BR2_2082SU	0.00	49.36	1.12
7BR2_2082BU	2.94	49.36	1.12
7BR2_2082D	2.94	49.08	1.19
7BR2_2082DD	2.94	49.00	1.37
7BR2_2061U	2.94	48.10	0.78
7BR2_2061	2.94	47.91	0.84
7BR2_2061i5	2.94	47.30	0.85
7BR2_2061i11	2.94	46.47	1.16
7BR2_1904	2.94	45.96	1.04
7BR2_1894	2.94	45.91	1.03
7BR2_1894SU	0.00	45.91	1.12
7BR2_1894C1	1.58	45.91	1.12
7BR2_1894C2	1.36	45.91	1.12
7BR2_1894C1a	1.58	45.54	2.81
7BR2_1894C1b	1.58	44.83	2.09
7BR2_1894C2a	1.36	45.56	2.83
7BR2_1894C2b	1.36	44.80	1.91
7BR2_1842	2.94	44.75	1.58
7BR2_1842i6	6.71	43.57	2.22

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	6.71	42.11	2.44
7BR2_1667	6.71	41.26	1.93
7BR2_1594	6.71	40.26	2.07
7BR2_1594i3	6.71	39.93	1.38
7BR2_1529	8.20	39.53	1.87
7BR2_1522U	8.19	39.47	2.14
7BR2_1522SU	0.00	39.47	0.69
7BR2_1522BU	8.19	39.47	0.69
7BR2_1522D	8.19	39.52	0.66
7BR2_1511	8.19	39.51	0.53
7BR2_1511i3	8.19	39.48	0.39
7BR2_1446	8.18	39.43	0.54
7BR2_1414U	8.18	39.38	0.58
7BR2_1414SU	7.66	39.38	0.45
7BR2_1414C1	1.62	39.38	0.45
7BR2_1414C1a	1.62	39.37	1.38
7BR2_1414C1b	1.62	39.35	1.38
7BR2_1414D	8.18	39.33	1.58
7BR2_1381U	8.18	39.21	1.13
7BR2_1381SU	3.30	39.21	0.51
7BR2_1381BU	4.89	39.21	0.51
7BR2_1381D	8.18	38.32	2.70
7BR2_1354U	8.18	38.32	0.92
7BR2_1354BU	2.05	38.32	1.07
7BR2_1354SU	6.45	38.32	1.07
7BR2_1354D	8.18	38.07	1.90
7BR2_1354Di1	8.18	37.86	1.56
7BR2_1354Di2	9.10	37.60	1.77
7BR2_1303U	9.10	37.49	1.55
7BR2_1303D	9.10	36.43	0.00
7BR2_1054_1U	4.55	36.43	0.00
7BR2_1054SU	0.00	36.43	0.00
7BR2_1054_2U	4.55	36.43	0.00
7BR2_1054_1D	4.55	36.24	0.00
7BR2_873D	8.52	33.69	4.39
7BR2_846	8.52	32.20	2.05
7BR2_846i2	8.52	31.95	1.85

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	8.52	31.81	1.50
7BR2_760	8.52	31.73	0.95
7BR2_667	8.52	30.55	2.23
7BR2_667i6	8.52	27.82	3.37
7BR2_520U	8.52	25.99	1.54
7BR2_520D	8.52	25.60	1.48
7BR2_412	8.50	25.59	0.22
7BR2_404	8.50	25.58	0.31
7BR2_389U	8.50	25.57	0.71
7BR2_389C1	8.50	25.57	0.00
7BR2_389C1a	8.50	24.67	3.01
7BR2_389C1b	8.50	24.66	3.05
7BR2_389CU	8.50	19.82	5.16
7BR2_228CD	8.50	19.00	2.21
7BR2_228	8.50	18.75	2.58
7BR2_193IN	8.50	17.98	1.90
7BR2_155SU	0.00	17.74	3.71
7BR2_155U	8.50	17.74	1.08
7BR2_155C1	4.25	17.74	3.71
7BR2_155C2	4.25	17.74	3.71
7BR2_155C1a	4.25	17.66	1.82
7BR2_155C1b	4.25	17.25	1.96
7BR2_155C2a	4.25	17.66	1.82
7BR2_155C2b	4.25	17.25	1.96
7BR2_155D	8.50	17.21	1.72
7BR2_104	8.50	16.75	2.22
7BR2_104i1	8.50	16.25	2.23
7BR2_104i2	8.50	15.72	2.25
7BR2_16	8.50	15.26	2.08
7BR2_0U	8.50	14.68	3.34
7BR2_PHA4u	8.50	14.68	3.14
7BR2_PHA4uX	8.50	14.43	3.14
7BR2_PHA4u1	8.50	14.19	3.13
7BR2_PHA4u2	8.50	13.82	3.02
7BR2_PHA4i1	8.50	13.29	3.83
7BR2_PHA4ia	8.50	12.62	3.85
7BR2_PHA4ib	8.50	11.90	3.80

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	8.50	11.44	2.54
7BR2_PHA4i3	8.50	10.29	5.04
7BR2_PHA4id	8.50	8.48	5.77
7BR2_PHA4ie	8.50	6.01	4.74
7BR2_00	8.50	5.63	2.65

C.1.4 5% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	2.28	45.50	0.52
7BRI_8331IN	2.28	44.47	0.59
7BRI_8115IN	2.26	44.02	0.42
7BRI_8007	2.25	43.98	0.21
7BRI_7907IN	2.24	43.95	0.26
7BRI_7832IN	2.24	43.91	0.38
7BRI_7782	2.24	43.84	0.62
7BRI_7767U	2.24	43.81	0.64
7BRI_7767BU	2.24	43.81	0.57
7BRI_7767SU	0.00	43.81	0.57
7BRI_7767D	2.24	43.68	1.14
7BRI_7637IN	2.24	42.66	1.15
7BRI_7507IN	2.24	41.68	1.10
7BRI_7377IN	2.24	40.64	1.17
7BRI_7247	2.24	39.79	0.92
7BRI_7173	2.24	39.56	0.76
7BRI_7165U	2.24	39.51	0.96
7BRI_7165BU	2.24	39.51	0.98
7BRI_7165SU	0.00	39.51	0.98
7BRI_7165D	2.24	39.49	0.97
7BRI_6992IN	2.24	38.52	1.00
7BRI_6822IN	2.24	37.80	0.69
7BRI_6730U	2.23	37.70	0.38
7BRI_6730BU	2.23	37.70	0.76
7BRI_6730SU	0.00	37.70	0.76
7BRI_6730D	2.23	37.67	0.41
7BRI_6620IN	2.23	37.52	0.44
7BRI_6510IN	2.23	37.36	0.48
7BRI_6400IN	2.23	37.16	0.56
7BRI_6291U	2.23	36.79	0.79
7BRI_6291BU	2.23	36.79	0.00
7BRI_6291SU	0.00	36.79	0.00
7BRI_6291D	2.23	36.79	0.89
7BRI_6107	3.21	36.25	0.74
7BRI_5924IN	3.20	36.09	0.31

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	3.26	36.04	0.16
7BRI_5556U	3.33	35.31	1.04
7BRI_5338IN	3.30	34.34	0.72
7BRI_5118IN	3.27	33.27	0.88
7BRI_4898IN	3.27	32.40	0.57
7BRI_4678	3.28	31.34	1.00
7BRI_4508IN	4.18	30.74	0.82
7BRI_4424	4.18	30.11	1.65
7BRI_4339IN	4.18	29.69	1.19
7BRI_4169IN	4.18	28.71	1.12
7BRI_4000IN	4.18	27.74	1.16
7BRI_3915U	4.18	27.36	0.97
7BRI_3669IN	4.18	26.47	0.76
7BRI_3546IN	4.17	26.04	0.79
7BRI_3423	4.17	25.77	0.64
7BRI_3281	5.11	25.52	0.69
7BRI_3140	5.10	25.37	0.41
7BRI_2999	5.10	25.30	0.58
7BRI_2984U	5.10	25.21	1.10
7BRI_2984BU	5.10	25.21	0.54
7BRI_2984SU	0.00	25.21	0.54
7BRI_2984D	5.10	25.11	1.26
7BRI_2842IN	5.10	24.57	1.08
7BRI_2700IN	5.10	24.36	0.68
7BRI_2558	5.10	24.31	0.41
7BRI_2550	5.11	24.31	0.43
7BRI_2310	5.11	22.90	0.41
7BRI_2306U	5.23	22.90	0.68
7BRI_2306D	19.64	22.90	1.47
7BRI_2205	18.14	22.10	2.54
7BRI_2053	20.67	21.05	1.51
7BRI_1955IN	20.67	20.52	1.59
7BRI_1855u	20.66	19.90	2.50
7BRI_1855d	20.66	19.72	3.01
7BRI_1753u	20.67	18.98	2.01
7BRI_1753d	20.67	18.87	2.32
7BRI_1698IN	18.12	18.86	2.06

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	17.01	18.84	1.98
7BRI_1598	21.34	18.73	1.84
7BRI_1500	18.47	18.68	1.67
7BRI_1490U	18.47	18.65	1.67
7BRI_1490BU	18.47	18.65	1.36
7BRI_1490BUa	18.47	18.52	1.88
7BRI_1490BUb	18.47	18.47	1.88
7BRI_1490SU	0.00	18.65	1.36
7BRI_1490D	18.47	18.38	2.13
7BRI_1464U	18.47	18.44	1.66
7BRI_1464BU	18.47	18.44	1.35
7BRI_1464BUa	18.47	18.38	1.33
7BRI_1464BUb	18.47	18.35	1.33
7BRI_1464SU	0.00	18.44	1.35
7BRI_1464D	18.47	18.29	1.67
7BRI_1425U	18.47	18.28	1.14
7BRI_1425BU1	9.32	18.28	1.35
7BRI_1425SU	0.00	18.28	1.35
7BRI_1425D	18.47	16.23	2.75
7BRI_1406	18.47	16.22	1.17
7BRI_1340U	18.56	15.86	1.54
7BRI_1340BU	18.56	15.77	1.01
7BRI_1340SU	0.00	15.77	1.01
7BRI_1340D	18.56	15.79	1.52
7BRI_1319	18.56	15.70	1.58
7BRI_1251IN	18.57	15.42	1.61
7BRI_1184	18.56	15.14	1.72
7BRI_1175U	20.10	15.02	1.94
7BRI_1175BU	20.10	15.02	1.18
7BRI_1175SU	0.00	15.02	1.18
7BRI_1175D	20.10	15.04	1.64
7BRI_1161	20.10	14.91	2.01
7BRI_1117IN	20.14	14.84	1.27
7BRI_1073	20.41	14.83	0.87
7BRI_1065	20.57	14.71	0.90
7BRI_991	21.70	14.47	1.64
7BRI_916	21.70	13.87	1.99

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	22.08	13.79	2.20
7BRI_875	22.74	13.84	1.11
7BRI_875CI	22.74	13.84	0.67
7BRI_875C	22.74	13.51	1.80
7BRI_875S	0.00	13.84	0.67
7BRI_847C	22.74	13.45	1.94
7BRI_847	22.74	13.41	1.87
7BRI_799	21.79	13.41	1.53
7BRI_752	22.77	13.39	1.29
7BRI_743D	23.63	12.62	2.98
7BRI_711	23.63	12.59	2.22
7BRI_639	25.13	12.50	1.58
7BRI_630D	25.13	12.30	2.20
7BRI_569	25.13	12.33	1.46
7BRI_557	25.13	12.28	1.64
7BRI_548U	25.13	12.29	1.43
7BRI_548CI	25.13	12.29	0.00
7BRI_548C	25.13	11.90	2.02
7BRI_548S	0.00	12.29	0.00
7BRI_522C	25.13	11.84	2.07
7BRI_522	25.13	11.76	1.62
7BRI_503	25.13	11.71	1.66
7BRI_487	25.13	11.58	2.15
7BRI_487CI	25.13	11.58	1.12
7BRI_487S	0.00	11.58	1.12
7BRI_487C	25.13	11.27	2.36
7BRI_475IN	25.13	11.22	2.40
7BRI_464IN	25.13	11.17	2.44
7BRI_453IN	25.13	11.12	2.49
7BRI_442C	25.13	11.05	2.57
7BRI_442	25.13	10.72	3.55
7BRI_430IN	25.13	10.57	3.25
7BRI_418IN	25.13	10.44	2.95
7BRI_407IN	25.13	10.34	2.68
7BRI_396IN	25.13	10.33	2.40
7BRI_385IN	25.13	10.37	2.03
7BRI_374	25.13	10.39	1.60

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	25.13	10.27	2.08
7BRI_332	25.13	9.90	2.96
7BRI_290U	25.13	9.97	2.42
7BRI_290D	26.13	9.97	2.49
7BRI_197	25.45	9.94	2.33
7BRI_188U	25.29	9.91	2.36
7BRI_188BU	25.29	9.73	1.78
7BRI_188SU	0.00	9.91	1.78
7BRI_188D	25.29	9.47	2.36
7BRI_173	25.32	9.45	1.88
7BRI_119	26.59	9.26	2.04
7BRI_112U	21.62	9.45	1.69
7BRI_112BU	21.33	9.29	0.83
7BRI_112SU	1.08	9.45	0.83
7BRI_112D	21.62	9.09	1.70
7BRI_93U	21.62	9.06	1.53
7BRI_93D	21.62	8.89	2.77
7BRI_84Cu	21.62	8.84	2.78
7BRI_84Cd	21.62	8.84	2.32
7BRI_59Cu	21.61	8.70	2.30
7BRI_59Cd	21.61	8.70	2.30
7BRI_46INu	21.61	8.63	2.29
7BRI_46INd	21.61	8.63	1.22
7BRI_18C	21.61	8.58	1.24
7BRI_18	23.45	8.51	1.44
7BRI_00u	23.89	8.49	1.30
7BRI_00	23.89	7.49	3.31
7BRI_00UA	23.89	7.45	3.28
7BRI_00UB	23.89	7.28	3.67
7BRI_0Cu	23.90	6.62	3.60
7BRI_0Cd	23.89	6.07	3.24
7BRI_0Con_u	14.44	6.07	1.96
7BRI_0Con_1	14.44	6.06	1.96
7BRI_0Con_2	14.44	5.90	2.19
7BRI_0Con_3	14.44	5.81	2.34
7BRI_0Con_4	14.44	5.72	2.50
7BRI_0Con_d	14.44	5.70	2.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	19.02	5.70	3.40
7BRI_PHA3d	19.02	2.94	3.62
7BRI_PHA2u	19.02	2.94	2.15
7BRI_PHA2i1	19.02	2.66	2.13
7BRI_PHA2d	19.02	2.01	3.17
7BRI_PHA1u	19.02	2.01	3.17
7BRI_PHA1d	19.02	1.28	3.20
7BRI_PHA_Ou	30.30	1.28	3.95
7BRI_PHA_Oi1	30.29	0.82	3.95
7BRI_PHA_Oi2	30.29	0.35	3.95
7BRI_PHA_Oi3	30.29	-0.11	3.95
7BRI_PHA_Od	30.30	-0.57	3.95
Brewery Branch			
7BREW_706A	9.46	6.07	0.00
7BREW_706B	9.46	5.47	2.48
7BREW_668u	9.46	5.18	2.43
7BREW_668d	9.51	5.18	1.95
7BREW_656u	9.51	5.15	1.85
7BREW_656d	9.56	5.15	1.80
7BREW_608u	9.56	4.86	1.67
7BREW_608d	9.60	4.86	1.76
7BREW_553u	9.60	4.56	1.58
7BREW_553d	9.65	4.56	1.98
7BREW_500u	9.65	4.17	2.02
7BREW_500d	9.70	4.17	2.02
7BREW_484u	9.70	4.04	2.06
7BREW_484d	9.75	4.04	1.92
7BREW_468	9.75	3.99	1.66
7BREW_407u	9.75	3.69	1.72
7BREW_407d	9.80	3.69	2.25
7BREW_395	9.80	3.55	2.37
7BREW_394	9.80	3.55	2.10
7BREW_394i1	10.93	3.30	1.99
7BREW_394i2	11.26	3.11	1.97
7BREW_394i3	11.46	2.92	1.97
7BREW_331	11.46	2.70	2.03
7BREW_330	11.46	2.70	2.16

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	11.43	2.04	2.66
7BREW_168d_A	5.70	2.04	2.77
7BREW_023u_A	5.70	1.40	2.69
7BREW_168d_B	5.73	2.04	2.79
7BREW_023u_B	5.73	1.40	2.70
7BREW_023d	11.42	1.40	2.70
7BREW_000	11.42	1.28	2.76
Glenamought			
7BR1_3361	12.86	71.08	1.73
7BR1_3294IN	12.85	70.61	1.80
7BR1_3228	12.85	70.12	1.93
7BR1_3163IN	12.85	69.68	1.67
7BR1_3098IN	12.85	69.26	1.41
7BR1_3032	12.85	68.80	1.56
7BR1_2918IN	12.85	68.07	1.50
7BR1_2804	12.85	67.82	1.18
7BR1_2791U	12.85	67.81	0.94
7BR1_2791BU	10.66	67.81	0.00
7BR1_2791SU	2.19	67.81	1.31
7BR1_2791D	12.85	66.41	3.25
7BR1_2690	12.85	62.53	2.64
7BR1_2597IN	12.85	59.03	3.30
7BR1_2503	12.85	55.99	1.38
7BR1_2372IN	12.85	54.64	1.40
7BR1_2237IN	12.85	53.27	1.41
7BR1_2102IN	12.85	51.92	1.49
7BR1_2012IN	12.85	51.08	1.45
7BR1_1968U	12.85	50.58	1.86
7BR1_1764IN	12.84	48.10	1.76
7BR1_1554IN	13.99	45.48	1.81
7BR1_1309IN	13.99	42.48	2.12
7BR1_1297IN	13.99	42.31	2.23
7BR1_1287IN	13.99	42.17	2.36
7BR1_1277IN	13.99	42.01	2.52
7BR1_1267U	13.99	41.85	2.69
7BR1_1267BU	13.99	41.85	0.00
7BR1_1267SU	0.00	41.85	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	13.99	41.76	2.18
7BR1_1141IN	14.68	39.85	2.47
7BR1_1026	14.68	38.65	1.61
7BR1_1014U	14.68	38.57	1.72
7BR1_1014D	14.68	38.43	1.54
7BR1_961	14.68	38.13	1.73
7BR1_947U	14.68	38.02	1.30
7BR1_947BU	14.68	38.02	1.59
7BR1_947SU	0.00	38.02	1.59
7BR1_947D	14.68	37.26	2.69
7BR1_758IN	14.68	33.98	2.51
7BR1_570IN	14.68	30.68	2.42
7BR1_490IN	15.11	29.33	2.23
7BR1_480IN	15.11	29.19	2.10
7BR1_470U	15.11	29.10	1.85
7BR1_470BU	15.11	29.10	1.13
7BR1_470SU	0.00	29.10	1.13
7BR1_470D	15.11	28.99	2.26
7BR1_447	15.11	28.69	2.15
7BR1_403	15.11	28.00	2.58
7BR1_391U	15.11	27.84	1.77
7BR1_391BU	15.11	27.84	1.37
7BR1_391SU	0.00	27.84	1.37
7BR1_391D	15.11	27.81	1.84
7BR1_284	15.11	26.24	2.93
7BR1_195IN	13.42	25.36	2.17
7BR1_91U	14.60	25.21	0.96
7BR1_91BU	14.60	25.21	1.55
7BR1_91SU	0.00	25.21	1.55
7BR1_91D	14.60	24.84	1.19
7BR1_11	14.37	24.80	1.18
7BR1_0	14.99	24.79	0.78
7BR1_0C1U	5.00	24.19	2.83
7BR1_0C1D	5.00	23.90	2.83
7BR1_0D	14.99	23.59	1.36
7BR1_0DD	14.99	23.35	1.63
7BR1_0C1ex	5.00	23.59	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	5.00	24.79	0.00
7BR1_0C2D	5.00	23.90	2.83
7BR1_0C2ex	5.00	23.59	0.55
7BR1_0C2I	5.00	24.79	0.00
7BR1_0C2U	5.00	24.19	2.83
7BR1_0C3D	5.00	23.90	2.83
7BR1_0C3ex	5.00	23.59	0.55
7BR1_0C3I	5.00	24.79	0.51
7BR1_0C3U	5.00	24.19	2.83
Glen			
7BR2_3753	4.13	79.45	1.78
7BR2_3741	4.13	79.46	0.77
7BR2_3741CUa	3.35	79.06	3.33
7BR2_3706CD	3.35	78.12	2.47
7BR2_3741SU	0.78	79.46	1.64
7BR2_3706	4.13	77.98	1.74
7BR2_3706i4	4.12	77.58	1.40
7BR2_3629	4.12	76.64	2.47
7BR2_3629i4	4.12	75.31	1.67
7BR2_3543	4.12	73.65	1.94
7BR2_3543i4	4.11	71.92	2.23
7BR2_3468	4.11	70.31	1.86
7BR2_3468i4	4.11	68.79	2.30
7BR2_3380U	4.12	67.66	0.51
7BR2_3380SU	2.58	67.66	1.67
7BR2_3380o1	0.31	67.66	1.67
7BR2_3380o2	0.31	67.66	1.67
7BR2_3380o3	0.31	67.66	1.67
7BR2_3380o4	0.31	67.66	1.67
7BR2_3380o5	0.31	67.66	1.67
7BR2_3380D	4.12	67.14	2.13
7BR2_3278	4.12	64.30	2.22
7BR2_3163	4.12	62.25	1.42
7BR2_3028	3.92	61.74	0.77
7BR2_3028i1	3.63	61.73	0.61
7BR2_2886	3.62	61.73	1.21
7BR2_2861U	3.58	61.73	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	0.00	61.72	0.99
7BR2_2861o1	2.67	61.72	0.82
7BR2_2861C1a	2.67	60.80	3.40
7BR2_2861C1b	2.67	60.35	3.40
7BR2_2861C2a	0.90	60.05	1.15
7BR2_2861C2b	0.90	60.00	1.15
7BR2_2861D	3.58	59.94	1.83
7BR2_2861Di7	3.58	59.32	1.45
7BR2_2740	3.58	58.38	2.50
7BR2_2617	3.57	55.26	2.18
7BR2_2617i7	3.57	53.28	2.52
7BR2_2491	3.57	51.87	1.52
7BR2_2491i8	3.57	50.43	1.51
7BR2_2491i9	3.56	49.58	1.03
7BR2_2255	3.47	49.51	0.10
7BR2_2255i9	3.31	49.51	0.14
7BR2_2089	3.29	49.49	0.55
7BR2_2082U	3.29	49.46	0.88
7BR2_2082SU	0.00	49.46	1.12
7BR2_2082BU	3.29	49.46	1.12
7BR2_2082D	3.29	49.13	1.20
7BR2_2082DD	3.29	49.05	1.41
7BR2_2061U	3.29	48.13	0.81
7BR2_2061	3.29	47.94	0.88
7BR2_2061i5	3.29	47.33	0.90
7BR2_2061i11	3.29	46.49	1.21
7BR2_1904	3.29	46.02	1.04
7BR2_1894	3.29	45.97	1.05
7BR2_1894SU	0.00	45.97	1.12
7BR2_1894C1	1.76	45.97	1.12
7BR2_1894C2	1.53	45.97	1.12
7BR2_1894C1a	1.76	45.57	2.88
7BR2_1894C1b	1.76	44.90	2.23
7BR2_1894C2a	1.53	45.59	2.91
7BR2_1894C2b	1.53	44.88	2.07
7BR2_1842	3.29	44.83	1.65
7BR2_1842i6	7.81	43.63	2.34

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	7.81	42.18	2.51
7BR2_1667	7.81	41.35	1.96
7BR2_1594	7.82	40.33	2.07
7BR2_1594i3	7.82	39.96	1.50
7BR2_1529	9.30	39.58	1.87
7BR2_1522U	9.30	39.54	2.14
7BR2_1522SU	0.00	39.54	0.69
7BR2_1522BU	9.30	39.54	0.69
7BR2_1522D	9.30	39.59	0.66
7BR2_1511	9.29	39.58	0.53
7BR2_1511i3	9.29	39.55	0.40
7BR2_1446	9.28	39.50	0.55
7BR2_1414U	9.28	39.45	0.59
7BR2_1414SU	8.78	39.45	0.45
7BR2_1414C1	1.60	39.45	0.45
7BR2_1414C1a	1.60	39.44	1.37
7BR2_1414C1b	1.60	39.42	1.37
7BR2_1414D	9.28	39.40	1.58
7BR2_1381U	9.28	39.29	1.13
7BR2_1381SU	4.45	39.29	0.51
7BR2_1381BU	4.88	39.29	0.51
7BR2_1381D	9.28	38.41	2.86
7BR2_1354U	9.28	38.37	0.96
7BR2_1354BU	2.03	38.37	1.07
7BR2_1354SU	7.55	38.37	1.07
7BR2_1354D	9.28	38.13	1.87
7BR2_1354Di1	9.28	37.93	1.56
7BR2_1354Di2	10.20	37.67	1.79
7BR2_1303U	10.20	37.55	1.58
7BR2_1303D	10.20	36.55	0.00
7BR2_1054_1U	5.06	36.55	0.00
7BR2_1054SU	0.00	36.55	0.00
7BR2_1054_2U	5.06	36.55	0.00
7BR2_1054_1D	5.06	36.40	0.00
7BR2_873D	9.39	33.80	4.54
7BR2_846	9.39	32.25	2.14
7BR2_846i2	9.39	32.00	1.93

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	9.39	31.86	1.55
7BR2_760	9.39	31.78	0.99
7BR2_667	9.39	30.58	2.32
7BR2_667i6	9.39	27.86	3.38
7BR2_520U	9.39	26.06	1.58
7BR2_520D	9.39	25.74	1.48
7BR2_412	9.38	25.75	0.23
7BR2_404	9.38	25.74	0.31
7BR2_389U	9.38	25.73	0.71
7BR2_389C1	9.38	25.73	0.00
7BR2_389C1a	9.38	24.73	3.18
7BR2_389C1b	9.38	24.72	3.21
7BR2_389CU	9.38	19.90	5.19
7BR2_228CD	9.38	19.11	2.31
7BR2_228	9.38	18.84	2.69
7BR2_193IN	9.38	18.09	1.91
7BR2_155SU	0.00	17.88	3.71
7BR2_155U	9.38	17.88	1.08
7BR2_155C1	4.69	17.88	3.71
7BR2_155C2	4.69	17.88	3.71
7BR2_155C1a	4.69	17.78	2.01
7BR2_155C1b	4.69	17.32	2.09
7BR2_155C2a	4.69	17.78	2.01
7BR2_155C2b	4.69	17.32	2.09
7BR2_155D	9.38	17.26	1.80
7BR2_104	9.38	16.80	2.29
7BR2_104i1	9.38	16.30	2.30
7BR2_104i2	9.38	15.78	2.30
7BR2_16	9.38	15.31	2.17
7BR2_0U	9.38	14.72	3.45
7BR2_PHA4u	9.38	14.72	3.25
7BR2_PHA4uX	9.38	14.48	3.25
7BR2_PHA4u1	9.38	14.24	3.24
7BR2_PHA4u2	9.38	13.86	3.16
7BR2_PHA4i1	9.38	13.32	3.97
7BR2_PHA4ia	9.38	12.66	4.00
7BR2_PHA4ib	9.38	11.94	3.89

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	9.38	11.49	2.63
7BR2_PHA4i3	9.38	10.31	5.27
7BR2_PHA4id	9.38	8.50	5.96
7BR2_PHA4ie	9.38	6.04	4.86
7BR2_00	9.38	5.70	2.72

C.1.5 2% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	2.57	45.52	0.52
7BRI_8331IN	2.57	44.51	0.59
7BRI_8115IN	2.54	44.09	0.42
7BRI_8007	2.53	44.05	0.22
7BRI_7907IN	2.52	44.02	0.26
7BRI_7832IN	2.52	43.99	0.38
7BRI_7782	2.52	43.92	0.62
7BRI_7767U	2.52	43.89	0.64
7BRI_7767BU	2.52	43.89	0.57
7BRI_7767SU	0.00	43.89	0.57
7BRI_7767D	2.52	43.75	1.17
7BRI_7637IN	2.52	42.72	1.18
7BRI_7507IN	2.52	41.74	1.14
7BRI_7377IN	2.52	40.69	1.21
7BRI_7247	2.52	39.86	0.94
7BRI_7173	2.52	39.64	0.76
7BRI_7165U	2.52	39.58	1.00
7BRI_7165BU	2.52	39.58	0.98
7BRI_7165SU	0.00	39.58	0.98
7BRI_7165D	2.52	39.56	1.02
7BRI_6992IN	2.52	38.56	1.01
7BRI_6822IN	2.52	37.87	0.70
7BRI_6730U	2.51	37.77	0.38
7BRI_6730BU	2.51	37.77	0.76
7BRI_6730SU	0.00	37.77	0.76
7BRI_6730D	2.51	37.74	0.42
7BRI_6620IN	2.51	37.59	0.44
7BRI_6510IN	2.51	37.43	0.49
7BRI_6400IN	2.51	37.22	0.57
7BRI_6291U	2.51	36.86	0.81
7BRI_6291BU	2.51	36.86	0.00
7BRI_6291SU	0.00	36.86	0.00
7BRI_6291D	2.51	36.86	0.92
7BRI_6107	3.60	36.28	0.77
7BRI_5924IN	3.60	36.09	0.34

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	3.61	36.04	0.18
7BRI_5556U	3.61	35.33	1.04
7BRI_5338IN	3.61	34.35	0.73
7BRI_5118IN	3.61	33.31	0.88
7BRI_4898IN	3.61	32.41	0.58
7BRI_4678	3.61	31.37	1.00
7BRI_4508IN	4.68	30.83	0.82
7BRI_4424	4.68	30.16	1.74
7BRI_4339IN	4.68	29.74	1.19
7BRI_4169IN	4.68	28.75	1.12
7BRI_4000IN	4.68	27.77	1.16
7BRI_3915U	4.68	27.39	0.96
7BRI_3669IN	4.68	26.50	0.76
7BRI_3546IN	4.68	26.08	0.79
7BRI_3423	4.68	25.81	0.64
7BRI_3281	5.73	25.58	0.69
7BRI_3140	5.72	25.43	0.41
7BRI_2999	5.72	25.37	0.58
7BRI_2984U	5.72	25.29	1.10
7BRI_2984BU	5.72	25.29	0.54
7BRI_2984SU	0.00	25.29	0.54
7BRI_2984D	5.72	25.18	1.29
7BRI_2842IN	5.72	24.63	1.08
7BRI_2700IN	5.72	24.42	0.68
7BRI_2558	5.73	24.36	0.41
7BRI_2550	5.73	24.35	0.44
7BRI_2310	5.73	22.99	0.40
7BRI_2306U	5.78	22.98	0.70
7BRI_2306D	21.65	22.98	1.47
7BRI_2205	20.05	22.18	2.62
7BRI_2053	23.59	21.12	1.53
7BRI_1955IN	23.62	20.66	1.60
7BRI_1855u	23.59	20.03	2.50
7BRI_1855d	23.59	19.86	3.02
7BRI_1753u	23.59	19.06	2.02
7BRI_1753d	23.59	18.94	2.33
7BRI_1698IN	20.75	18.92	2.07

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	18.79	18.92	1.98
7BRI_1598	24.04	18.78	1.84
7BRI_1500	18.84	18.76	1.67
7BRI_1490U	18.66	18.73	1.67
7BRI_1490BU	18.66	18.73	1.36
7BRI_1490BUa	18.66	18.60	1.90
7BRI_1490BUb	18.66	18.55	1.90
7BRI_1490SU	0.00	18.73	1.36
7BRI_1490D	18.66	18.45	2.13
7BRI_1464U	18.66	18.51	1.66
7BRI_1464BU	18.66	18.51	1.35
7BRI_1464BUa	18.66	18.44	1.35
7BRI_1464BUb	18.66	18.42	1.35
7BRI_1464SU	0.00	18.51	1.35
7BRI_1464D	18.66	18.35	1.67
7BRI_1425U	18.66	18.35	1.14
7BRI_1425BU1	9.45	18.35	1.35
7BRI_1425SU	0.00	18.35	1.35
7BRI_1425D	18.93	16.26	3.09
7BRI_1406	19.92	16.28	1.26
7BRI_1340U	20.22	15.97	1.62
7BRI_1340BU	20.22	15.89	1.01
7BRI_1340SU	0.00	15.89	1.01
7BRI_1340D	20.22	15.90	1.63
7BRI_1319	18.87	15.84	1.58
7BRI_1251IN	19.97	15.64	1.64
7BRI_1184	19.01	15.49	1.73
7BRI_1175U	20.79	15.42	1.93
7BRI_1175BU	20.79	15.42	1.18
7BRI_1175SU	0.00	15.42	1.18
7BRI_1175D	20.79	15.23	1.64
7BRI_1161	20.79	15.15	2.00
7BRI_1117IN	20.98	15.11	1.27
7BRI_1073	22.36	15.12	0.92
7BRI_1065	21.91	15.03	0.90
7BRI_991	24.17	14.83	1.64
7BRI_916	24.17	14.19	1.99

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	25.07	14.12	2.19
7BRI_875	25.86	14.16	1.09
7BRI_875CI	25.86	14.16	0.67
7BRI_875C	25.86	13.80	1.75
7BRI_875S	0.00	14.16	0.67
7BRI_847C	25.86	13.74	1.88
7BRI_847	25.86	13.68	1.88
7BRI_799	24.51	13.69	1.53
7BRI_752	25.20	13.67	1.29
7BRI_743D	27.24	12.82	3.03
7BRI_711	27.24	12.85	2.22
7BRI_639	29.10	12.76	1.59
7BRI_630D	29.10	12.55	2.25
7BRI_569	29.10	12.61	1.46
7BRI_557	29.10	12.57	1.64
7BRI_548U	29.09	12.57	1.45
7BRI_548CI	29.09	12.57	0.00
7BRI_548C	29.09	12.12	2.15
7BRI_548S	0.00	12.57	0.00
7BRI_522C	29.09	12.06	2.20
7BRI_522	29.09	11.96	1.66
7BRI_503	29.09	11.92	1.69
7BRI_487	29.09	11.77	2.24
7BRI_487CI	29.09	11.77	1.12
7BRI_487S	0.00	11.77	1.12
7BRI_487C	29.09	11.42	2.51
7BRI_475IN	29.09	11.36	2.55
7BRI_464IN	29.09	11.31	2.59
7BRI_453IN	29.09	11.26	2.64
7BRI_442C	29.09	11.20	2.70
7BRI_442	29.09	10.82	3.73
7BRI_430IN	29.09	10.67	3.41
7BRI_418IN	29.09	10.54	3.07
7BRI_407IN	29.09	10.44	2.75
7BRI_396IN	29.09	10.42	2.41
7BRI_385IN	29.09	10.47	2.04
7BRI_374	29.09	10.49	1.60

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	29.09	10.34	2.09
7BRI_332	29.09	10.00	3.19
7BRI_290U	29.09	9.99	2.43
7BRI_290D	30.09	9.99	2.50
7BRI_197	25.84	10.03	2.33
7BRI_188U	25.50	10.03	2.36
7BRI_188BU	25.50	9.85	1.78
7BRI_188SU	0.00	10.03	1.78
7BRI_188D	25.50	9.62	2.36
7BRI_173	25.55	9.60	1.88
7BRI_119	29.52	9.27	2.25
7BRI_112U	21.64	9.53	1.69
7BRI_112BU	21.34	9.37	0.83
7BRI_112SU	1.90	9.53	0.83
7BRI_112D	21.64	9.18	1.69
7BRI_93U	21.64	9.16	1.53
7BRI_93D	21.64	8.98	2.78
7BRI_84Cu	21.64	8.93	2.78
7BRI_84Cd	21.64	8.93	2.32
7BRI_59Cu	21.63	8.79	2.30
7BRI_59Cd	21.63	8.79	2.30
7BRI_46INu	21.62	8.72	2.30
7BRI_46INd	21.62	8.72	1.22
7BRI_18C	21.62	8.67	1.24
7BRI_18	24.32	8.67	1.44
7BRI_00u	25.19	8.64	1.30
7BRI_00	25.19	7.58	3.45
7BRI_00UA	25.19	7.51	3.45
7BRI_00UB	25.19	7.33	3.74
7BRI_0Cu	25.19	6.67	3.67
7BRI_0Cd	25.19	6.11	3.31
7BRI_0Con_u	15.20	6.11	2.00
7BRI_0Con_1	15.20	6.11	2.01
7BRI_0Con_2	15.20	5.94	2.24
7BRI_0Con_3	15.20	5.84	2.40
7BRI_0Con_4	15.20	5.75	2.57
7BRI_0Con_d	15.20	5.73	2.62

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	19.82	5.73	3.45
7BRI_PHA3d	19.82	2.97	3.68
7BRI_PHA2u	19.82	2.97	2.18
7BRI_PHA2i1	19.82	2.69	2.17
7BRI_PHA2d	19.82	2.02	3.25
7BRI_PHA1u	19.82	2.02	3.25
7BRI_PHA1d	19.82	1.34	3.22
7BRI_PHA_Ou	34.31	1.34	4.13
7BRI_PHA_Oi1	34.32	0.88	4.13
7BRI_PHA_Oi2	34.33	0.42	4.13
7BRI_PHA_Oi3	34.34	-0.05	4.13
7BRI_PHA_Od	34.34	-0.51	4.13
Brewery Branch			
7BREW_706A	9.99	6.11	0.00
7BREW_706B	9.99	5.51	2.52
7BREW_668u	9.99	5.24	2.47
7BREW_668d	10.04	5.24	1.97
7BREW_656u	10.05	5.20	1.87
7BREW_656d	10.10	5.20	1.83
7BREW_608u	10.09	4.94	1.70
7BREW_608d	10.15	4.94	1.78
7BREW_553u	10.15	4.68	1.61
7BREW_553d	10.21	4.68	2.01
7BREW_500u	10.21	4.37	2.03
7BREW_500d	10.27	4.37	2.04
7BREW_484u	10.27	4.29	2.07
7BREW_484d	10.32	4.29	1.94
7BREW_468	10.32	4.23	1.69
7BREW_407u	10.33	3.97	1.75
7BREW_407d	10.38	3.97	2.31
7BREW_395	10.38	3.81	2.42
7BREW_394	10.38	3.81	2.13
7BREW_394i1	13.08	3.51	2.06
7BREW_394i2	13.70	3.32	2.04
7BREW_394i3	14.48	3.08	2.16
7BREW_331	14.53	2.87	2.19
7BREW_330	14.53	2.87	2.37

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	14.51	2.19	2.88
7BREW_168d_A	7.23	2.19	2.96
7BREW_023u_A	7.22	1.48	3.06
7BREW_168d_B	7.28	2.19	2.98
7BREW_023u_B	7.27	1.48	3.08
7BREW_023d	14.50	1.48	3.07
7BREW_000	14.49	1.34	3.23
Glenamought			
7BR1_3361	14.49	71.16	1.73
7BR1_3294IN	14.48	70.77	1.80
7BR1_3228	14.48	70.19	2.03
7BR1_3163IN	14.48	69.75	1.71
7BR1_3098IN	14.48	69.31	1.45
7BR1_3032	14.48	68.85	1.56
7BR1_2918IN	14.48	68.13	1.50
7BR1_2804	14.48	67.87	1.20
7BR1_2791U	14.48	67.85	0.93
7BR1_2791BU	11.33	67.85	0.00
7BR1_2791SU	3.15	67.85	1.31
7BR1_2791D	14.48	66.44	3.41
7BR1_2690	14.48	62.59	2.74
7BR1_2597IN	14.48	59.08	3.38
7BR1_2503	14.48	56.03	1.38
7BR1_2372IN	14.48	54.68	1.40
7BR1_2237IN	14.48	53.31	1.41
7BR1_2102IN	14.48	51.96	1.50
7BR1_2012IN	14.47	51.11	1.45
7BR1_1968U	14.48	50.62	1.87
7BR1_1764IN	14.48	48.13	1.76
7BR1_1554IN	15.77	45.54	1.81
7BR1_1309IN	15.77	42.56	2.17
7BR1_1297IN	15.77	42.39	2.30
7BR1_1287IN	15.77	42.24	2.44
7BR1_1277IN	15.77	42.09	2.61
7BR1_1267U	15.77	41.93	2.80
7BR1_1267BU	15.77	41.93	0.00
7BR1_1267SU	0.00	41.93	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	15.77	41.82	2.27
7BR1_1141IN	16.54	39.92	2.54
7BR1_1026	16.54	38.71	1.74
7BR1_1014U	16.54	38.62	1.87
7BR1_1014D	16.54	38.51	1.54
7BR1_961	16.54	38.25	1.73
7BR1_947U	16.54	38.13	1.36
7BR1_947BU	16.54	38.13	1.59
7BR1_947SU	0.00	38.13	1.59
7BR1_947D	16.54	37.32	2.81
7BR1_758IN	16.54	34.03	2.61
7BR1_570IN	16.54	30.74	2.50
7BR1_490IN	17.03	29.39	2.28
7BR1_480IN	17.03	29.26	2.13
7BR1_470U	17.03	29.17	1.87
7BR1_470BU	17.03	29.17	1.13
7BR1_470SU	0.00	29.17	1.13
7BR1_470D	17.03	29.05	2.38
7BR1_447	17.03	28.75	2.23
7BR1_403	17.03	28.10	2.58
7BR1_391U	17.03	27.95	1.77
7BR1_391BU	17.03	27.95	1.37
7BR1_391SU	0.00	27.95	1.37
7BR1_391D	17.03	27.92	1.84
7BR1_284	17.03	26.25	3.20
7BR1_195IN	13.53	25.48	2.18
7BR1_91U	14.80	25.39	0.96
7BR1_91BU	14.80	25.39	1.55
7BR1_91SU	0.00	25.39	1.55
7BR1_91D	14.80	25.03	1.20
7BR1_11	15.97	24.99	1.18
7BR1_0	15.63	24.99	0.78
7BR1_0C1U	5.21	24.33	2.95
7BR1_0C1D	5.21	24.01	2.95
7BR1_0D	15.63	23.66	1.37
7BR1_0DD	16.22	23.42	1.68
7BR1_0C1ex	5.21	23.66	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	5.21	24.99	0.00
7BR1_0C2D	5.21	24.01	2.95
7BR1_0C2ex	5.21	23.66	0.55
7BR1_0C2I	5.21	24.99	0.00
7BR1_0C2U	5.21	24.33	2.95
7BR1_0C3D	5.21	24.01	2.95
7BR1_0C3ex	5.21	23.66	0.55
7BR1_0C3I	5.21	24.99	0.51
7BR1_0C3U	5.21	24.33	2.95
Glen			
7BR2_3753	4.65	79.54	1.78
7BR2_3741	4.65	79.54	0.77
7BR2_3741CUa	3.44	79.09	3.42
7BR2_3706CD	3.44	78.16	2.47
7BR2_3741SU	1.21	79.54	1.64
7BR2_3706	4.65	78.04	1.80
7BR2_3706i4	4.65	77.64	1.43
7BR2_3629	4.65	76.69	2.56
7BR2_3629i4	4.64	75.35	1.67
7BR2_3543	4.64	73.69	1.94
7BR2_3543i4	4.64	71.96	2.23
7BR2_3468	4.63	70.34	1.86
7BR2_3468i4	4.64	68.83	2.38
7BR2_3380U	4.64	67.69	0.54
7BR2_3380SU	3.12	67.69	1.67
7BR2_3380o1	0.31	67.69	1.67
7BR2_3380o2	0.31	67.69	1.67
7BR2_3380o3	0.31	67.69	1.67
7BR2_3380o4	0.31	67.69	1.67
7BR2_3380o5	0.31	67.69	1.67
7BR2_3380D	4.64	67.17	2.16
7BR2_3278	4.65	64.34	2.35
7BR2_3163	4.64	62.32	1.44
7BR2_3028	4.38	61.87	0.78
7BR2_3028i1	4.29	61.87	0.62
7BR2_2886	4.53	61.86	1.21
7BR2_2861U	4.52	61.86	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	0.92	61.86	0.99
7BR2_2861o1	2.72	61.86	0.82
7BR2_2861C1a	2.72	60.92	3.47
7BR2_2861C1b	2.72	60.46	3.47
7BR2_2861C2a	0.92	60.17	1.17
7BR2_2861C2b	0.92	60.12	1.17
7BR2_2861D	4.52	60.06	1.96
7BR2_2861Di7	4.52	59.41	1.62
7BR2_2740	4.51	58.48	2.61
7BR2_2617	4.52	55.36	2.35
7BR2_2617i7	4.52	53.35	2.57
7BR2_2491	4.52	51.93	1.52
7BR2_2491i8	4.52	50.48	1.50
7BR2_2491i9	4.47	49.64	1.04
7BR2_2255	4.19	49.59	0.10
7BR2_2255i9	3.62	49.59	0.14
7BR2_2089	3.55	49.57	0.55
7BR2_2082U	3.55	49.56	0.88
7BR2_2082SU	0.00	49.56	1.12
7BR2_2082BU	3.55	49.56	1.12
7BR2_2082D	3.55	49.16	1.21
7BR2_2082DD	3.55	49.08	1.42
7BR2_2061U	3.55	48.16	0.84
7BR2_2061	3.55	47.97	0.90
7BR2_2061i5	3.55	47.35	0.93
7BR2_2061i11	3.55	46.51	1.24
7BR2_1904	3.55	46.06	1.04
7BR2_1894	3.55	46.01	1.06
7BR2_1894SU	0.00	46.01	1.12
7BR2_1894C1	1.89	46.01	1.12
7BR2_1894C2	1.66	46.01	1.12
7BR2_1894C1a	1.89	45.60	2.92
7BR2_1894C1b	1.89	44.95	2.29
7BR2_1894C2a	1.66	45.62	2.95
7BR2_1894C2b	1.66	44.93	2.13
7BR2_1842	3.56	44.88	1.70
7BR2_1842i6	8.56	43.67	2.40

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	8.56	42.23	2.55
7BR2_1667	8.56	41.41	1.99
7BR2_1594	8.56	40.37	2.06
7BR2_1594i3	8.56	39.99	1.56
7BR2_1529	10.05	39.62	1.86
7BR2_1522U	10.04	39.59	2.14
7BR2_1522SU	0.00	39.59	0.69
7BR2_1522BU	10.04	39.59	0.69
7BR2_1522D	10.04	39.63	0.65
7BR2_1511	10.04	39.62	0.52
7BR2_1511i3	10.03	39.59	0.40
7BR2_1446	10.03	39.54	0.55
7BR2_1414U	10.03	39.49	0.59
7BR2_1414SU	9.53	39.49	0.45
7BR2_1414C1	1.59	39.49	0.45
7BR2_1414C1a	1.59	39.49	1.36
7BR2_1414C1b	1.59	39.47	1.36
7BR2_1414D	10.03	39.45	1.58
7BR2_1381U	10.03	39.33	1.13
7BR2_1381SU	5.23	39.33	0.51
7BR2_1381BU	4.89	39.33	0.51
7BR2_1381D	10.03	38.47	2.97
7BR2_1354U	10.03	38.40	0.99
7BR2_1354BU	2.02	38.40	1.07
7BR2_1354SU	8.30	38.40	1.07
7BR2_1354D	10.03	38.16	1.85
7BR2_1354Di1	10.03	37.97	1.56
7BR2_1354Di2	10.95	37.73	1.79
7BR2_1303U	10.95	37.58	1.61
7BR2_1303D	10.95	36.68	0.00
7BR2_1054_1U	5.30	36.68	0.00
7BR2_1054SU	0.00	36.68	0.00
7BR2_1054_2U	5.30	36.68	0.00
7BR2_1054_1D	5.30	36.51	0.00
7BR2_873D	10.01	33.88	4.63
7BR2_846	10.01	32.28	2.20
7BR2_846i2	10.01	32.03	1.97

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	10.01	31.89	1.58
7BR2_760	10.01	31.83	1.01
7BR2_667	10.01	30.60	2.40
7BR2_667i6	10.01	27.89	3.42
7BR2_520U	10.01	26.11	1.61
7BR2_520D	10.01	25.85	1.48
7BR2_412	10.00	25.86	0.23
7BR2_404	10.00	25.86	0.31
7BR2_389U	10.00	25.84	0.71
7BR2_389C1	10.00	25.84	0.00
7BR2_389C1a	10.00	24.78	3.30
7BR2_389C1b	10.00	24.76	3.33
7BR2_389CU	10.00	19.96	5.20
7BR2_228CD	10.00	19.19	2.37
7BR2_228	10.00	18.90	2.75
7BR2_193IN	10.00	18.18	1.91
7BR2_155SU	0.00	17.99	3.71
7BR2_155U	10.00	17.99	1.08
7BR2_155C1	5.00	17.99	3.71
7BR2_155C2	5.00	17.99	3.71
7BR2_155C1a	5.00	17.87	2.14
7BR2_155C1b	5.00	17.36	2.19
7BR2_155C2a	5.00	17.87	2.14
7BR2_155C2b	5.00	17.36	2.19
7BR2_155D	10.00	17.29	1.85
7BR2_104	10.00	16.83	2.33
7BR2_104i1	10.00	16.34	2.34
7BR2_104i2	10.00	15.81	2.34
7BR2_16	10.00	15.34	2.23
7BR2_0U	10.00	14.75	3.53
7BR2_PHA4u	10.00	14.75	3.33
7BR2_PHA4uX	10.00	14.51	3.32
7BR2_PHA4u1	10.00	14.27	3.32
7BR2_PHA4u2	10.00	13.89	3.24
7BR2_PHA4i1	10.00	13.35	4.06
7BR2_PHA4ia	10.00	12.68	4.10
7BR2_PHA4ib	10.00	11.97	3.95

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	10.00	11.53	2.69
7BR2_PHA4i3	10.00	10.33	5.43
7BR2_PHA4id	10.00	8.52	6.08
7BR2_PHA4ie	10.00	6.07	4.92
7BR2_00	9.99	5.73	2.76

C.1.6 1% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	2.91	45.54	0.52
7BRI_8331IN	2.91	44.56	0.59
7BRI_8115IN	2.89	44.18	0.42
7BRI_8007	2.87	44.14	0.22
7BRI_7907IN	2.86	44.12	0.26
7BRI_7832IN	2.86	44.08	0.38
7BRI_7782	2.86	44.01	0.63
7BRI_7767U	2.86	43.99	0.65
7BRI_7767BU	2.86	43.99	0.57
7BRI_7767SU	0.00	43.99	0.57
7BRI_7767D	2.86	43.82	1.21
7BRI_7637IN	2.86	42.79	1.22
7BRI_7507IN	2.86	41.80	1.18
7BRI_7377IN	2.86	40.75	1.25
7BRI_7247	2.86	39.93	0.96
7BRI_7173	2.85	39.73	0.76
7BRI_7165U	2.85	39.67	1.04
7BRI_7165BU	2.85	39.67	0.98
7BRI_7165SU	0.00	39.67	0.98
7BRI_7165D	2.85	39.64	1.07
7BRI_6992IN	2.85	38.62	1.03
7BRI_6822IN	2.85	37.94	0.70
7BRI_6730U	2.84	37.86	0.38
7BRI_6730BU	2.84	37.86	0.76
7BRI_6730SU	0.00	37.86	0.76
7BRI_6730D	2.84	37.81	0.42
7BRI_6620IN	2.84	37.67	0.44
7BRI_6510IN	2.84	37.50	0.49
7BRI_6400IN	2.84	37.30	0.58
7BRI_6291U	2.84	36.94	0.84
7BRI_6291BU	2.84	36.94	0.00
7BRI_6291SU	0.00	36.94	0.00
7BRI_6291D	2.84	36.93	0.96
7BRI_6107	4.08	36.33	0.81
7BRI_5924IN	4.08	36.09	0.36

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	4.09	36.04	0.20
7BRI_5556U	4.09	35.36	1.04
7BRI_5338IN	4.09	34.38	0.73
7BRI_5118IN	4.08	33.35	0.88
7BRI_4898IN	4.08	32.41	0.62
7BRI_4678	4.08	31.41	1.00
7BRI_4508IN	5.28	30.93	0.82
7BRI_4424	5.27	30.22	1.84
7BRI_4339IN	5.27	29.79	1.19
7BRI_4169IN	5.27	28.78	1.12
7BRI_4000IN	5.27	27.81	1.16
7BRI_3915U	5.27	27.42	0.97
7BRI_3669IN	5.28	26.53	0.76
7BRI_3546IN	5.28	26.11	0.79
7BRI_3423	5.28	25.86	0.64
7BRI_3281	6.44	25.64	0.69
7BRI_3140	6.43	25.51	0.42
7BRI_2999	6.43	25.45	0.58
7BRI_2984U	6.43	25.38	1.10
7BRI_2984BU	6.43	25.38	0.54
7BRI_2984SU	0.00	25.38	0.54
7BRI_2984D	6.43	25.24	1.30
7BRI_2842IN	6.43	24.69	1.08
7BRI_2700IN	6.43	24.46	0.68
7BRI_2558	6.44	24.41	0.42
7BRI_2550	6.44	24.40	0.45
7BRI_2310	6.44	23.05	0.39
7BRI_2306U	6.48	23.05	0.71
7BRI_2306D	23.50	23.05	1.48
7BRI_2205	21.92	22.25	2.70
7BRI_2053	26.41	21.20	1.56
7BRI_1955IN	26.53	20.77	1.62
7BRI_1855u	26.64	20.13	2.51
7BRI_1855d	26.64	19.96	3.14
7BRI_1753u	26.74	19.14	2.12
7BRI_1753d	26.74	19.01	2.40
7BRI_1698IN	23.25	18.98	2.10

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	20.70	18.99	2.00
7BRI_1598	27.01	18.82	1.84
7BRI_1500	19.64	18.82	1.67
7BRI_1490U	18.74	18.80	1.69
7BRI_1490BU	18.74	18.80	1.36
7BRI_1490BUa	18.74	18.67	1.91
7BRI_1490BUb	18.74	18.61	1.91
7BRI_1490SU	0.00	18.80	1.36
7BRI_1490D	18.74	18.52	2.13
7BRI_1464U	18.81	18.56	1.66
7BRI_1464BU	18.81	18.56	1.35
7BRI_1464BUa	18.81	18.50	1.36
7BRI_1464BUb	18.81	18.47	1.36
7BRI_1464SU	0.00	18.56	1.35
7BRI_1464D	18.81	18.41	1.67
7BRI_1425U	18.97	18.40	1.14
7BRI_1425BU1	9.60	18.40	1.35
7BRI_1425SU	0.00	18.40	1.35
7BRI_1425D	19.27	16.35	3.28
7BRI_1406	23.19	16.37	1.57
7BRI_1340U	22.15	16.08	1.93
7BRI_1340BU	22.15	16.01	1.01
7BRI_1340SU	0.00	16.01	1.01
7BRI_1340D	22.15	16.02	2.33
7BRI_1319	22.57	16.14	2.22
7BRI_1251IN	26.51	15.81	3.05
7BRI_1184	23.85	15.70	2.31
7BRI_1175U	22.45	15.63	2.10
7BRI_1175BU	22.45	15.63	1.18
7BRI_1175SU	0.00	15.63	1.18
7BRI_1175D	22.45	15.41	1.79
7BRI_1161	22.92	15.35	2.05
7BRI_1117IN	27.11	15.33	1.54
7BRI_1073	24.35	15.35	0.97
7BRI_1065	22.70	15.30	0.90
7BRI_991	26.13	15.13	1.66
7BRI_916	26.11	14.55	2.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	28.93	14.45	2.25
7BRI_875	29.55	14.50	1.14
7BRI_875CI	29.55	14.50	0.67
7BRI_875C	29.55	14.07	1.88
7BRI_875S	0.00	14.50	0.67
7BRI_847C	29.58	14.01	2.04
7BRI_847	29.58	13.92	1.89
7BRI_799	28.74	13.92	1.54
7BRI_752	27.70	13.92	1.29
7BRI_743D	30.39	13.14	3.03
7BRI_711	31.15	13.15	2.20
7BRI_639	33.73	13.07	1.60
7BRI_630D	33.73	12.86	2.26
7BRI_569	33.73	12.93	1.46
7BRI_557	33.73	12.91	1.64
7BRI_548U	33.73	12.89	1.46
7BRI_548CI	33.73	12.89	0.00
7BRI_548C	33.73	12.38	2.30
7BRI_548S	0.00	12.89	0.00
7BRI_522C	33.73	12.32	2.34
7BRI_522	33.73	12.19	1.69
7BRI_503	33.73	12.15	1.72
7BRI_487	33.73	11.99	2.33
7BRI_487CI	33.73	11.99	1.12
7BRI_487S	0.00	11.99	1.12
7BRI_487C	33.73	11.57	2.67
7BRI_475IN	33.73	11.52	2.71
7BRI_464IN	33.73	11.47	2.75
7BRI_453IN	33.73	11.42	2.79
7BRI_442C	33.73	11.36	2.85
7BRI_442	33.73	10.94	3.92
7BRI_430IN	33.73	10.79	3.57
7BRI_418IN	33.73	10.66	3.22
7BRI_407IN	33.74	10.56	2.89
7BRI_396IN	33.75	10.53	2.46
7BRI_385IN	33.75	10.59	2.04
7BRI_374	33.76	10.62	1.68

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	33.75	10.44	2.23
7BRI_332	33.76	10.13	3.44
7BRI_290U	33.75	10.03	2.45
7BRI_290D	34.75	10.03	2.52
7BRI_197	26.81	10.12	2.33
7BRI_188U	25.61	10.17	2.36
7BRI_188BU	25.61	10.00	1.78
7BRI_188SU	0.00	10.17	1.78
7BRI_188D	25.61	9.82	2.36
7BRI_173	25.70	9.79	1.88
7BRI_119	33.56	9.29	2.53
7BRI_112U	21.87	9.66	1.69
7BRI_112BU	21.39	9.50	0.83
7BRI_112SU	3.43	9.66	0.83
7BRI_112D	21.87	9.34	1.69
7BRI_93U	21.84	9.32	1.53
7BRI_93D	21.84	9.14	2.80
7BRI_84Cu	21.84	9.09	2.80
7BRI_84Cd	21.84	9.09	2.32
7BRI_59Cu	21.81	8.94	2.30
7BRI_59Cd	21.81	8.94	2.30
7BRI_46INu	21.80	8.87	2.33
7BRI_46INd	21.80	8.87	1.24
7BRI_18C	21.80	8.82	1.25
7BRI_18	24.91	8.81	1.44
7BRI_00u	26.39	8.78	1.30
7BRI_00	26.39	7.68	3.62
7BRI_00UA	26.39	7.60	3.62
7BRI_00UB	26.39	7.40	3.77
7BRI_0Cu	26.39	6.80	3.69
7BRI_0Cd	26.39	6.16	3.44
7BRI_0Con_u	15.83	6.16	2.06
7BRI_0Con_1	15.83	6.15	2.06
7BRI_0Con_2	15.83	5.98	2.28
7BRI_0Con_3	15.83	5.88	2.44
7BRI_0Con_4	15.83	5.78	2.61
7BRI_0Con_d	15.83	5.76	2.66

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	20.62	5.76	3.50
7BRI_PHA3d	20.62	2.99	3.74
7BRI_PHA2u	20.62	2.99	2.22
7BRI_PHA2i1	20.62	2.71	2.21
7BRI_PHA2d	20.62	2.04	3.30
7BRI_PHA1u	20.62	2.04	3.30
7BRI_PHA1d	20.62	1.42	3.25
7BRI_PHA_Ou	39.60	1.42	4.35
7BRI_PHA_Oi1	39.60	0.96	4.35
7BRI_PHA_Oi2	39.59	0.50	4.35
7BRI_PHA_Oi3	39.59	0.03	4.35
7BRI_PHA_Od	39.59	-0.43	4.35
Brewery Branch			
7BREW_706A	10.56	6.16	0.00
7BREW_706B	10.56	5.58	2.55
7BREW_668u	10.56	5.37	2.49
7BREW_668d	10.62	5.37	2.00
7BREW_656u	10.62	5.35	1.90
7BREW_656d	10.68	5.35	1.86
7BREW_608u	10.68	5.16	1.72
7BREW_608d	10.74	5.16	1.80
7BREW_553u	10.74	4.99	1.63
7BREW_553d	10.80	4.99	2.04
7BREW_500u	10.80	4.81	2.04
7BREW_500d	10.86	4.81	2.05
7BREW_484u	10.86	4.75	2.08
7BREW_484d	10.92	4.75	1.95
7BREW_468	10.92	4.67	1.71
7BREW_407u	10.92	4.36	1.77
7BREW_407d	10.98	4.36	2.35
7BREW_395	10.98	4.18	2.48
7BREW_394	10.98	4.18	2.17
7BREW_394i1	16.38	3.79	2.19
7BREW_394i2	17.27	3.61	2.15
7BREW_394i3	18.87	3.32	2.37
7BREW_331	19.00	3.10	2.36
7BREW_330	19.00	3.10	2.64

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	19.01	2.38	3.17
7BREW_168d_A	9.46	2.38	3.19
7BREW_023u_A	9.46	1.60	3.54
7BREW_168d_B	9.54	2.38	3.22
7BREW_023u_B	9.54	1.60	3.57
7BREW_023d	19.00	1.60	3.55
7BREW_000	18.99	1.42	3.86
Glenamought			
7BR1_3361	16.43	71.23	1.73
7BR1_3294IN	16.43	70.88	1.80
7BR1_3228	16.42	70.26	2.15
7BR1_3163IN	16.42	69.81	1.76
7BR1_3098IN	16.42	69.36	1.50
7BR1_3032	16.42	68.91	1.57
7BR1_2918IN	16.42	68.18	1.50
7BR1_2804	16.42	67.91	1.24
7BR1_2791U	16.42	67.90	0.95
7BR1_2791BU	12.14	67.90	0.00
7BR1_2791SU	4.28	67.90	1.31
7BR1_2791D	16.42	66.48	3.56
7BR1_2690	16.42	62.65	2.86
7BR1_2597IN	16.42	59.12	3.42
7BR1_2503	16.42	56.07	1.38
7BR1_2372IN	16.42	54.71	1.40
7BR1_2237IN	16.42	53.35	1.41
7BR1_2102IN	16.42	52.00	1.50
7BR1_2012IN	16.42	51.15	1.45
7BR1_1968U	16.42	50.66	1.87
7BR1_1764IN	16.42	48.18	1.76
7BR1_1554IN	17.85	45.60	1.81
7BR1_1309IN	17.84	42.66	2.21
7BR1_1297IN	17.84	42.48	2.36
7BR1_1287IN	17.84	42.33	2.52
7BR1_1277IN	17.84	42.18	2.69
7BR1_1267U	17.84	42.01	2.90
7BR1_1267BU	17.84	42.01	0.00
7BR1_1267SU	0.00	42.01	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	17.84	41.89	2.36
7BR1_1141IN	18.71	40.00	2.62
7BR1_1026	18.70	38.79	1.85
7BR1_1014U	18.70	38.69	2.00
7BR1_1014D	18.70	38.60	1.54
7BR1_961	18.71	38.37	1.74
7BR1_947U	18.71	38.25	1.43
7BR1_947BU	18.71	38.25	1.59
7BR1_947SU	0.00	38.25	1.59
7BR1_947D	18.71	37.39	2.95
7BR1_758IN	18.70	34.10	2.70
7BR1_570IN	18.70	30.79	2.62
7BR1_490IN	19.26	29.46	2.30
7BR1_480IN	19.26	29.34	2.13
7BR1_470U	19.26	29.25	1.88
7BR1_470BU	19.26	29.25	1.13
7BR1_470SU	0.00	29.25	1.13
7BR1_470D	19.26	29.11	2.49
7BR1_447	19.26	28.80	2.31
7BR1_403	19.26	28.20	2.59
7BR1_391U	19.26	28.08	1.77
7BR1_391BU	19.26	28.08	1.37
7BR1_391SU	0.00	28.08	1.37
7BR1_391D	19.26	28.04	1.84
7BR1_284	19.26	26.29	3.45
7BR1_195IN	13.63	25.57	2.18
7BR1_91U	14.87	25.50	0.96
7BR1_91BU	14.87	25.50	1.55
7BR1_91SU	0.00	25.50	1.55
7BR1_91D	14.87	25.18	1.20
7BR1_11	20.07	25.10	1.18
7BR1_0	15.97	25.12	0.78
7BR1_0C1U	5.32	24.44	3.01
7BR1_0C1D	5.32	24.11	3.01
7BR1_0D	15.97	23.74	1.37
7BR1_0DD	17.38	23.47	1.71
7BR1_0C1ex	5.32	23.74	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	5.32	25.12	0.00
7BR1_0C2D	5.32	24.11	3.01
7BR1_0C2ex	5.32	23.74	0.55
7BR1_0C2I	5.32	25.12	0.00
7BR1_0C2U	5.32	24.44	3.01
7BR1_0C3D	5.32	24.11	3.01
7BR1_0C3ex	5.32	23.74	0.55
7BR1_0C3I	5.32	25.12	0.51
7BR1_0C3U	5.32	24.44	3.01
Glen			
7BR2_3753	5.28	79.63	1.78
7BR2_3741	5.28	79.62	0.77
7BR2_3741CUa	3.53	79.15	3.51
7BR2_3706CD	3.53	78.22	2.47
7BR2_3741SU	1.74	79.62	1.64
7BR2_3706	5.28	78.12	1.85
7BR2_3706i4	5.28	77.72	1.47
7BR2_3629	5.27	76.76	2.66
7BR2_3629i4	5.27	75.39	1.68
7BR2_3543	5.27	73.73	1.94
7BR2_3543i4	5.27	71.99	2.24
7BR2_3468	5.27	70.37	1.86
7BR2_3468i4	5.27	68.87	2.46
7BR2_3380U	5.27	67.71	0.57
7BR2_3380SU	3.76	67.71	1.67
7BR2_3380o1	0.31	67.71	1.67
7BR2_3380o2	0.31	67.71	1.67
7BR2_3380o3	0.31	67.71	1.67
7BR2_3380o4	0.31	67.71	1.67
7BR2_3380o5	0.31	67.71	1.67
7BR2_3380D	5.27	67.21	2.22
7BR2_3278	5.27	64.38	2.45
7BR2_3163	5.26	62.36	1.46
7BR2_3028	5.20	61.91	0.79
7BR2_3028i1	5.17	61.90	0.63
7BR2_2886	5.41	61.90	1.22
7BR2_2861U	5.40	61.89	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	1.89	61.89	0.99
7BR2_2861o1	2.73	61.89	0.82
7BR2_2861C1a	2.73	61.00	3.47
7BR2_2861C1b	2.73	60.56	3.47
7BR2_2861C2a	0.92	60.29	1.17
7BR2_2861C2b	0.92	60.25	1.17
7BR2_2861D	5.40	60.19	2.02
7BR2_2861Di7	5.40	59.50	1.74
7BR2_2740	5.40	58.58	2.70
7BR2_2617	5.40	55.44	2.49
7BR2_2617i7	5.40	53.40	2.58
7BR2_2491	5.39	51.99	1.52
7BR2_2491i8	5.39	50.52	1.48
7BR2_2491i9	5.32	49.75	1.04
7BR2_2255	4.90	49.73	0.10
7BR2_2255i9	4.13	49.72	0.14
7BR2_2089	3.95	49.71	0.55
7BR2_2082U	3.95	49.70	0.88
7BR2_2082SU	0.00	49.70	1.12
7BR2_2082BU	3.95	49.70	1.12
7BR2_2082D	3.95	49.21	1.22
7BR2_2082DD	3.95	49.13	1.44
7BR2_2061U	3.95	48.19	0.87
7BR2_2061	3.95	48.00	0.93
7BR2_2061i5	3.95	47.38	0.99
7BR2_2061i11	3.95	46.54	1.27
7BR2_1904	3.95	46.13	1.04
7BR2_1894	3.95	46.08	1.08
7BR2_1894SU	0.00	46.08	1.12
7BR2_1894C1	2.09	46.08	1.12
7BR2_1894C2	1.86	46.08	1.12
7BR2_1894C1a	2.09	45.65	2.96
7BR2_1894C1b	2.09	45.03	2.35
7BR2_1894C2a	1.86	45.66	3.01
7BR2_1894C2b	1.86	45.00	2.20
7BR2_1842	3.95	44.95	1.74
7BR2_1842i6	9.54	43.72	2.47

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	9.54	42.29	2.61
7BR2_1667	9.54	41.47	2.03
7BR2_1594	9.54	40.42	2.07
7BR2_1594i3	9.54	40.04	1.58
7BR2_1529	11.02	39.67	1.86
7BR2_1522U	11.02	39.64	2.13
7BR2_1522SU	0.00	39.64	0.69
7BR2_1522BU	11.02	39.64	0.69
7BR2_1522D	11.02	39.69	0.65
7BR2_1511	11.01	39.68	0.52
7BR2_1511i3	11.01	39.65	0.41
7BR2_1446	11.01	39.60	0.57
7BR2_1414U	11.00	39.55	0.60
7BR2_1414SU	10.51	39.55	0.45
7BR2_1414C1	1.58	39.55	0.45
7BR2_1414C1a	1.58	39.54	1.35
7BR2_1414C1b	1.58	39.52	1.35
7BR2_1414D	11.00	39.50	1.58
7BR2_1381U	11.00	39.39	1.13
7BR2_1381SU	6.27	39.39	0.51
7BR2_1381BU	4.89	39.39	0.51
7BR2_1381D	11.00	38.55	3.09
7BR2_1354U	11.00	38.44	1.02
7BR2_1354BU	2.00	38.44	1.07
7BR2_1354SU	9.28	38.44	1.07
7BR2_1354D	11.00	38.20	1.83
7BR2_1354Di1	11.00	38.01	1.56
7BR2_1354Di2	11.92	37.78	1.80
7BR2_1303U	11.92	37.63	1.63
7BR2_1303D	11.92	36.87	0.00
7BR2_1054_1U	5.65	36.87	0.00
7BR2_1054SU	0.00	36.87	0.00
7BR2_1054_2U	5.65	36.87	0.00
7BR2_1054_1D	5.65	36.65	0.00
7BR2_873D	10.81	33.99	4.73
7BR2_846	10.81	32.33	2.27
7BR2_846i2	10.81	32.07	2.03

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	10.81	31.94	1.62
7BR2_760	10.81	31.88	1.04
7BR2_667	10.81	30.62	2.49
7BR2_667i6	10.81	27.91	3.49
7BR2_520U	10.81	26.17	1.64
7BR2_520D	10.81	25.98	1.49
7BR2_412	10.80	26.00	0.23
7BR2_404	10.80	26.00	0.31
7BR2_389U	10.80	25.98	0.71
7BR2_389C1	10.80	25.98	0.00
7BR2_389C1a	10.80	24.83	3.44
7BR2_389C1b	10.80	24.82	3.47
7BR2_389CU	10.80	20.04	5.21
7BR2_228CD	10.79	19.29	2.44
7BR2_228	10.79	18.98	2.82
7BR2_193IN	10.79	18.31	1.91
7BR2_155SU	0.00	18.15	3.71
7BR2_155U	10.79	18.15	1.08
7BR2_155C1	5.40	18.15	3.71
7BR2_155C2	5.40	18.15	3.71
7BR2_155C1a	5.40	18.01	2.31
7BR2_155C1b	5.40	17.42	2.32
7BR2_155C2a	5.40	18.01	2.31
7BR2_155C2b	5.40	17.42	2.32
7BR2_155D	10.79	17.33	1.91
7BR2_104	10.79	16.87	2.38
7BR2_104i1	10.79	16.39	2.38
7BR2_104i2	10.79	15.86	2.39
7BR2_16	10.79	15.38	2.30
7BR2_0U	10.79	14.79	3.62
7BR2_PHA4u	10.79	14.79	3.42
7BR2_PHA4uX	10.79	14.55	3.41
7BR2_PHA4u1	10.79	14.30	3.41
7BR2_PHA4u2	10.79	13.93	3.35
7BR2_PHA4i1	10.79	13.38	4.18
7BR2_PHA4ia	10.79	12.71	4.22
7BR2_PHA4ib	10.79	12.00	4.03

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	10.79	11.58	2.77
7BR2_PHA4i3	10.79	10.35	5.62
7BR2_PHA4id	10.79	8.54	6.24
7BR2_PHA4ie	10.79	6.10	4.99
7BR2_00	10.79	5.76	2.79

C.1.7 0.1% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	4.42	45.66	0.52
7BRI_8331IN	4.38	44.75	0.60
7BRI_8115IN	4.31	44.53	0.42
7BRI_8007	4.27	44.51	0.22
7BRI_7907IN	4.24	44.49	0.27
7BRI_7832IN	4.24	44.46	0.38
7BRI_7782	4.23	44.41	0.64
7BRI_7767U	4.23	44.39	0.65
7BRI_7767BU	4.23	44.39	0.57
7BRI_7767SU	0.00	44.39	0.57
7BRI_7767D	4.23	44.07	1.34
7BRI_7637IN	4.23	43.02	1.33
7BRI_7507IN	4.23	42.03	1.29
7BRI_7377IN	4.23	40.97	1.37
7BRI_7247	4.23	40.21	1.00
7BRI_7173	4.23	40.09	0.76
7BRI_7165U	4.23	40.00	1.11
7BRI_7165BU	4.22	40.00	0.98
7BRI_7165SU	0.01	40.00	0.98
7BRI_7165D	4.23	39.91	1.22
7BRI_6992IN	4.23	38.81	1.08
7BRI_6822IN	4.23	38.19	0.71
7BRI_6730U	4.22	38.14	0.38
7BRI_6730BU	4.13	38.14	0.76
7BRI_6730SU	0.09	38.14	0.76
7BRI_6730D	4.22	38.03	0.42
7BRI_6620IN	4.21	37.89	0.45
7BRI_6510IN	4.21	37.75	0.49
7BRI_6400IN	4.21	37.56	0.58
7BRI_6291U	4.21	37.19	0.93
7BRI_6291BU	4.21	37.19	0.00
7BRI_6291SU	0.00	37.19	0.00
7BRI_6291D	4.21	37.16	1.12
7BRI_6107	6.05	36.49	0.85
7BRI_5924IN	6.05	36.20	0.44

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_5740IN	6.06	36.07	0.26
7BRI_5556U	6.06	35.44	1.03
7BRI_5338IN	6.06	34.47	0.73
7BRI_5118IN	6.06	33.47	0.88
7BRI_4898IN	6.05	32.52	0.70
7BRI_4678	6.05	31.51	0.99
7BRI_4508IN	8.59	31.16	0.83
7BRI_4424	8.73	30.54	2.04
7BRI_4339IN	8.51	29.98	1.35
7BRI_4169IN	8.34	28.93	1.11
7BRI_4000IN	8.09	27.92	1.16
7BRI_3915U	8.16	27.54	0.97
7BRI_3669IN	7.82	26.64	0.76
7BRI_3546IN	7.82	26.26	0.79
7BRI_3423	7.83	26.07	0.59
7BRI_3281	9.56	25.93	0.70
7BRI_3140	9.55	25.85	0.42
7BRI_2999	9.56	25.81	0.58
7BRI_2984U	9.56	25.79	1.10
7BRI_2984BU	9.56	25.79	0.54
7BRI_2984SU	0.00	25.79	0.54
7BRI_2984D	9.56	25.45	1.31
7BRI_2842IN	9.56	24.87	1.09
7BRI_2700IN	9.56	24.61	0.73
7BRI_2558	9.57	24.53	0.41
7BRI_2550	9.57	24.52	0.50
7BRI_2310	9.57	23.30	0.37
7BRI_2306U	9.59	23.29	0.68
7BRI_2306D	30.80	23.29	1.47
7BRI_2205	28.18	22.49	2.85
7BRI_2053	38.60	21.50	1.62
7BRI_1955IN	38.67	21.17	1.62
7BRI_1855u	38.69	20.48	2.59
7BRI_1855d	38.69	20.28	3.13
7BRI_1753u	38.66	19.43	2.47
7BRI_1753d	38.66	19.25	2.85
7BRI_1698IN	33.00	19.18	2.06

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1648IN	27.55	19.24	1.99
7BRI_1598	38.05	18.92	1.96
7BRI_1500	26.57	18.95	1.67
7BRI_1490U	18.78	19.03	1.67
7BRI_1490BU	18.78	19.03	1.36
7BRI_1490BUa	18.78	18.92	1.91
7BRI_1490BUb	18.78	18.87	1.91
7BRI_1490SU	0.00	19.03	1.36
7BRI_1490D	18.78	18.76	2.13
7BRI_1464U	19.31	18.79	1.66
7BRI_1464BU	19.31	18.79	1.35
7BRI_1464BUa	19.31	18.72	1.39
7BRI_1464BUb	19.31	18.69	1.39
7BRI_1464SU	0.00	18.79	1.35
7BRI_1464D	19.31	18.61	1.67
7BRI_1425U	19.01	18.62	1.14
7BRI_1425BU1	9.70	18.62	1.35
7BRI_1425SU	0.00	18.62	1.35
7BRI_1425D	19.08	16.57	3.22
7BRI_1406	19.01	16.70	1.17
7BRI_1340U	20.46	16.55	1.72
7BRI_1340BU	20.46	16.50	1.01
7BRI_1340SU	0.00	16.50	1.01
7BRI_1340D	20.46	16.38	1.80
7BRI_1319	20.46	16.35	1.61
7BRI_1251IN	21.43	16.25	1.67
7BRI_1184	21.38	16.19	1.70
7BRI_1175U	25.22	16.13	1.93
7BRI_1175BU	25.22	16.13	1.18
7BRI_1175SU	0.00	16.13	1.18
7BRI_1175D	25.22	15.86	1.63
7BRI_1161	25.21	15.82	2.00
7BRI_1117IN	27.84	15.78	1.29
7BRI_1073	20.28	15.82	0.86
7BRI_1065	21.81	15.80	0.90
7BRI_991	25.58	15.75	1.64
7BRI_916	25.55	15.40	2.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_896	29.97	15.32	2.18
7BRI_875	35.94	15.30	1.13
7BRI_875CI	35.94	15.30	0.67
7BRI_875C	35.94	14.67	2.23
7BRI_875S	0.00	15.30	0.67
7BRI_847C	35.94	14.57	2.23
7BRI_847	35.94	14.40	1.86
7BRI_799	30.58	14.47	1.53
7BRI_752	31.84	14.42	1.29
7BRI_743D	31.39	14.39	2.99
7BRI_711	34.37	14.39	2.12
7BRI_639	40.10	14.27	1.60
7BRI_630D	42.54	13.79	2.26
7BRI_569	45.60	13.81	1.46
7BRI_557	45.70	13.81	1.64
7BRI_548U	45.70	13.78	1.46
7BRI_548CI	45.70	13.78	0.00
7BRI_548C	45.70	13.07	2.70
7BRI_548S	0.00	13.78	0.00
7BRI_522C	45.70	13.01	2.72
7BRI_522	45.70	12.78	1.71
7BRI_503	45.70	12.75	1.74
7BRI_487	45.70	12.55	2.49
7BRI_487CI	45.70	12.55	1.12
7BRI_487S	0.00	12.55	1.12
7BRI_487C	45.70	11.97	3.05
7BRI_475IN	45.70	11.91	3.08
7BRI_464IN	45.70	11.86	3.11
7BRI_453IN	45.70	11.81	3.14
7BRI_442C	45.70	11.75	3.19
7BRI_442	45.70	11.23	4.25
7BRI_430IN	45.69	11.08	3.87
7BRI_418IN	45.71	10.95	3.49
7BRI_407IN	45.70	10.85	3.15
7BRI_396IN	45.72	10.83	2.71
7BRI_385IN	45.72	10.89	2.23
7BRI_374	45.73	10.93	1.90

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_374i1	45.73	10.67	2.66
7BRI_332	45.74	10.44	3.96
7BRI_290U	45.69	10.18	3.01
7BRI_290D	47.69	10.18	3.14
7BRI_197	43.39	10.20	2.32
7BRI_188U	25.56	10.38	2.36
7BRI_188BU	25.56	10.14	1.78
7BRI_188SU	0.00	10.38	1.78
7BRI_188D	25.56	9.94	2.36
7BRI_173	29.99	9.91	1.88
7BRI_119	35.82	9.87	2.64
7BRI_112U	21.78	9.91	1.69
7BRI_112BU	21.36	9.80	0.83
7BRI_112SU	7.15	9.91	0.83
7BRI_112D	21.78	9.70	1.69
7BRI_93U	21.77	9.69	1.53
7BRI_93D	21.77	9.53	2.79
7BRI_84Cu	21.77	9.48	2.80
7BRI_84Cd	21.77	9.48	2.32
7BRI_59Cu	21.76	9.34	2.30
7BRI_59Cd	21.76	9.34	2.30
7BRI_46INu	21.75	9.28	2.30
7BRI_46INd	21.75	9.28	1.22
7BRI_18C	21.75	9.24	1.25
7BRI_18	25.84	9.23	1.40
7BRI_00u	29.44	9.17	1.30
7BRI_00	29.44	8.59	4.03
7BRI_00UA	29.44	8.49	4.03
7BRI_00UB	29.44	8.24	4.03
7BRI_0Cu	29.44	7.35	3.83
7BRI_0Cd	29.44	6.44	3.83
7BRI_0Con_u	19.18	6.44	2.50
7BRI_0Con_1	19.18	6.43	2.50
7BRI_0Con_2	19.18	6.17	2.50
7BRI_0Con_3	19.18	6.03	2.64
7BRI_0Con_4	19.18	5.93	2.84
7BRI_0Con_d	19.18	5.90	2.89

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA3u	24.27	5.90	3.70
7BRI_PHA3d	24.26	3.11	4.01
7BRI_PHA2u	24.26	3.11	2.38
7BRI_PHA2i1	24.27	2.77	2.47
7BRI_PHA2d	24.26	2.17	3.37
7BRI_PHA1u	24.26	2.17	3.37
7BRI_PHA1d	24.26	1.71	3.31
7BRI_PHA_Ou	60.89	1.71	5.06
7BRI_PHA_Oi1	60.91	1.25	5.06
7BRI_PHA_Oi2	60.88	0.79	5.06
7BRI_PHA_Oi3	60.90	0.33	5.06
7BRI_PHA_Od	60.89	-0.14	5.06
Brewery Branch			
7BREW_706A	11.46	6.44	0.00
7BREW_706B	11.46	6.36	2.56
7BREW_668u	11.45	6.26	2.46
7BREW_668d	11.54	6.26	1.99
7BREW_656u	11.52	6.25	1.89
7BREW_656d	11.61	6.25	1.86
7BREW_608u	11.60	6.17	1.72
7BREW_608d	11.69	6.17	1.81
7BREW_553u	11.66	6.07	1.64
7BREW_553d	12.06	6.07	2.06
7BREW_500u	12.07	5.91	2.03
7BREW_500d	13.16	5.91	2.07
7BREW_484u	13.16	5.84	2.08
7BREW_484d	14.26	5.84	2.03
7BREW_468	14.26	5.76	2.02
7BREW_407u	14.26	5.46	2.05
7BREW_407d	15.35	5.46	3.20
7BREW_395	15.35	5.28	3.21
7BREW_394	15.35	5.28	2.54
7BREW_394i1	25.46	4.86	2.57
7BREW_394i2	25.17	4.85	2.42
7BREW_394i3	25.21	4.83	2.44
7BREW_331	36.62	4.43	2.50
7BREW_330	36.62	4.43	3.80

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BREW_168u	36.66	3.02	4.26
7BREW_168d_A	18.22	3.02	3.89
7BREW_023u_A	18.20	1.99	4.89
7BREW_168d_B	18.44	3.02	3.93
7BREW_023u_B	18.42	1.99	4.95
7BREW_023d	36.62	1.99	4.92
7BREW_000	36.63	1.71	5.64
Glenamought			
7BR1_3361	24.96	71.51	1.73
7BR1_3294IN	24.93	71.29	1.80
7BR1_3228	24.93	70.53	2.59
7BR1_3163IN	24.93	70.05	2.00
7BR1_3098IN	24.93	69.57	1.68
7BR1_3032	24.93	69.11	1.56
7BR1_2918IN	24.93	68.39	1.50
7BR1_2804	24.93	68.07	1.12
7BR1_2791U	24.93	68.04	0.83
7BR1_2791BU	15.11	68.04	0.00
7BR1_2791SU	9.82	68.04	1.31
7BR1_2791D	24.93	66.65	4.05
7BR1_2690	24.93	62.87	3.35
7BR1_2597IN	24.94	59.24	3.48
7BR1_2503	24.93	56.19	1.38
7BR1_2372IN	24.95	54.84	1.43
7BR1_2237IN	24.94	53.51	1.41
7BR1_2102IN	24.96	52.15	1.49
7BR1_2012IN	24.95	51.32	1.45
7BR1_1968U	24.95	50.81	1.86
7BR1_1764IN	24.95	48.35	1.76
7BR1_1554IN	27.11	45.82	1.81
7BR1_1309IN	27.11	43.03	2.34
7BR1_1297IN	27.11	42.86	2.52
7BR1_1287IN	27.11	42.70	2.70
7BR1_1277IN	27.11	42.55	2.90
7BR1_1267U	27.11	42.40	3.12
7BR1_1267BU	27.11	42.40	0.00
7BR1_1267SU	0.00	42.40	0.00

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_1267D	27.11	42.18	2.64
7BR1_1141IN	28.43	40.33	2.89
7BR1_1026	28.42	39.14	2.22
7BR1_1014U	28.42	39.01	2.40
7BR1_1014D	28.42	38.96	1.54
7BR1_961	28.42	38.87	1.73
7BR1_947U	28.42	38.71	1.68
7BR1_947BU	28.42	38.71	1.59
7BR1_947SU	0.00	38.71	1.59
7BR1_947D	28.42	37.64	3.46
7BR1_758IN	28.42	34.34	3.04
7BR1_570IN	28.42	30.98	2.97
7BR1_490IN	29.26	29.74	2.34
7BR1_480IN	29.26	29.64	2.13
7BR1_470U	29.26	29.61	1.88
7BR1_470BU	29.26	29.61	1.13
7BR1_470SU	0.00	29.61	1.13
7BR1_470D	29.26	29.36	2.93
7BR1_447	29.26	29.06	2.44
7BR1_403	29.26	28.62	2.60
7BR1_391U	29.26	28.64	1.77
7BR1_391BU	29.26	28.64	1.37
7BR1_391SU	0.00	28.64	1.37
7BR1_391D	29.26	28.61	1.84
7BR1_284	29.26	26.47	4.45
7BR1_195IN	13.77	25.75	2.18
7BR1_91U	15.00	25.73	0.97
7BR1_91BU	15.00	25.73	1.55
7BR1_91SU	0.00	25.73	1.55
7BR1_91D	15.00	25.61	1.20
7BR1_11	35.08	25.36	1.32
7BR1_0	16.38	25.50	0.78
7BR1_0C1U	5.46	24.77	3.09
7BR1_0C1D	5.46	24.43	3.09
7BR1_0D	16.38	24.01	1.37
7BR1_0DD	21.75	23.68	1.85
7BR1_0C1ex	5.46	24.01	0.55

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_0C1I	5.46	25.50	0.00
7BR1_0C2D	5.46	24.43	3.09
7BR1_0C2ex	5.46	24.01	0.55
7BR1_0C2I	5.46	25.50	0.00
7BR1_0C2U	5.46	24.77	3.09
7BR1_0C3D	5.46	24.43	3.09
7BR1_0C3ex	5.46	24.01	0.55
7BR1_0C3I	5.46	25.50	0.51
7BR1_0C3U	5.46	24.77	3.09
Glen			
7BR2_3753	8.02	79.90	1.78
7BR2_3741	8.01	79.88	0.77
7BR2_3741CUa	3.81	79.34	3.79
7BR2_3706CD	3.81	78.35	2.47
7BR2_3741SU	4.20	79.88	1.64
7BR2_3706	8.01	78.33	2.17
7BR2_3706i4	8.01	77.96	1.48
7BR2_3629	8.00	76.98	2.87
7BR2_3629i4	7.99	75.54	1.67
7BR2_3543	7.98	73.86	1.94
7BR2_3543i4	7.99	72.10	2.23
7BR2_3468	8.00	70.49	1.85
7BR2_3468i4	8.00	69.01	2.58
7BR2_3380U	7.98	67.80	0.66
7BR2_3380SU	6.52	67.80	1.67
7BR2_3380o1	0.31	67.80	1.67
7BR2_3380o2	0.31	67.80	1.67
7BR2_3380o3	0.31	67.80	1.67
7BR2_3380o4	0.31	67.80	1.67
7BR2_3380o5	0.31	67.80	1.67
7BR2_3380D	7.98	67.33	2.46
7BR2_3278	7.98	64.55	2.75
7BR2_3163	7.97	62.49	1.52
7BR2_3028	7.99	61.99	0.82
7BR2_3028i1	7.97	61.98	0.63
7BR2_2886	8.21	61.97	1.20
7BR2_2861U	8.21	61.96	0.69

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_2861SU	4.86	61.96	0.99
7BR2_2861o1	2.72	61.96	0.82
7BR2_2861C1a	2.72	61.14	3.47
7BR2_2861C1b	2.72	60.74	3.47
7BR2_2861C2a	0.92	60.55	1.17
7BR2_2861C2b	0.92	60.51	1.17
7BR2_2861D	8.21	60.45	2.17
7BR2_2861Di7	8.21	59.73	2.04
7BR2_2740	8.20	58.80	3.00
7BR2_2617	8.21	55.64	2.79
7BR2_2617i7	8.21	53.57	2.60
7BR2_2491	8.22	52.12	1.76
7BR2_2491i8	8.23	50.63	1.45
7BR2_2491i9	7.90	50.25	1.05
7BR2_2255	7.05	50.25	0.12
7BR2_2255i9	5.71	50.25	0.14
7BR2_2089	5.36	50.25	0.55
7BR2_2082U	5.35	50.24	0.88
7BR2_2082SU	0.00	50.24	1.12
7BR2_2082BU	5.35	50.24	1.12
7BR2_2082D	5.35	49.35	1.25
7BR2_2082DD	5.35	49.26	1.48
7BR2_2061U	5.35	48.32	0.97
7BR2_2061	5.35	48.13	1.02
7BR2_2061i5	5.35	47.45	1.15
7BR2_2061i11	5.35	46.66	1.31
7BR2_1904	5.35	46.37	1.04
7BR2_1894	5.35	46.31	1.14
7BR2_1894SU	0.00	46.31	1.12
7BR2_1894C1	2.80	46.31	1.12
7BR2_1894C2	2.56	46.31	1.12
7BR2_1894C1a	2.80	45.82	3.10
7BR2_1894C1b	2.80	45.34	2.55
7BR2_1894C2a	2.56	45.82	3.17
7BR2_1894C2b	2.56	45.32	2.41
7BR2_1842	5.36	45.25	1.87
7BR2_1842i6	14.29	43.93	2.81

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_1842i13	14.29	42.52	2.82
7BR2_1667	14.29	41.73	2.23
7BR2_1594	14.28	40.63	2.07
7BR2_1594i3	14.28	40.22	1.61
7BR2_1529	15.75	39.90	1.87
7BR2_1522U	15.75	39.88	2.15
7BR2_1522SU	0.00	39.88	0.69
7BR2_1522BU	15.75	39.88	0.69
7BR2_1522D	15.75	39.92	0.65
7BR2_1511	15.75	39.91	0.52
7BR2_1511i3	15.74	39.89	0.44
7BR2_1446	15.73	39.83	0.61
7BR2_1414U	15.74	39.78	0.65
7BR2_1414SU	15.28	39.78	0.45
7BR2_1414C1	1.57	39.78	0.45
7BR2_1414C1a	1.57	39.78	1.34
7BR2_1414C1b	1.57	39.76	1.34
7BR2_1414D	15.74	39.74	1.58
7BR2_1381U	15.74	39.61	1.13
7BR2_1381SU	11.78	39.61	0.51
7BR2_1381BU	4.88	39.61	0.51
7BR2_1381D	15.74	39.02	3.22
7BR2_1354U	15.74	38.63	1.17
7BR2_1354BU	1.98	38.63	1.07
7BR2_1354SU	14.01	38.63	1.07
7BR2_1354D	15.74	38.38	1.82
7BR2_1354Di1	15.74	38.20	1.56
7BR2_1354Di2	16.66	37.98	1.79
7BR2_1303U	16.66	37.83	1.68
7BR2_1303D	16.66	37.35	0.00
7BR2_1054_1U	7.89	37.35	0.00
7BR2_1054SU	0.00	37.35	0.00
7BR2_1054_2U	7.89	37.35	0.00
7BR2_1054_1D	7.89	37.26	0.00
7BR2_873D	14.56	34.29	4.73
7BR2_846	14.55	32.54	2.51
7BR2_846i2	14.55	32.30	2.18

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_846i4	14.55	32.23	1.69
7BR2_760	14.55	32.20	1.09
7BR2_667	14.54	30.69	2.95
7BR2_667i6	14.55	28.08	3.59
7BR2_520U	14.54	26.69	1.68
7BR2_520D	14.54	26.60	1.49
7BR2_412	14.51	26.62	0.23
7BR2_404	14.51	26.62	0.30
7BR2_389U	14.51	26.61	0.71
7BR2_389C1	14.51	26.61	0.00
7BR2_389C1a	14.51	25.05	4.05
7BR2_389C1b	14.51	25.04	4.08
7BR2_389CU	14.51	20.36	5.67
7BR2_228CD	14.51	19.74	2.86
7BR2_228	14.51	19.54	2.83
7BR2_193IN	14.51	19.19	1.92
7BR2_155SU	0.00	19.13	3.71
7BR2_155U	14.51	19.13	1.08
7BR2_155C1	7.25	19.13	3.71
7BR2_155C2	7.25	19.13	3.71
7BR2_155C1a	7.25	18.88	3.10
7BR2_155C1b	7.25	17.78	3.10
7BR2_155C2a	7.25	18.88	3.10
7BR2_155C2b	7.25	17.78	3.10
7BR2_155D	14.51	17.53	2.16
7BR2_104	14.51	17.06	2.59
7BR2_104i1	14.51	16.57	2.59
7BR2_104i2	14.51	16.05	2.59
7BR2_16	14.51	15.56	2.52
7BR2_0U	14.51	14.96	4.00
7BR2_PHA4u	14.51	14.96	3.79
7BR2_PHA4uX	14.51	14.71	3.79
7BR2_PHA4u1	14.51	14.47	3.79
7BR2_PHA4u2	14.51	14.08	3.80
7BR2_PHA4i1	14.51	13.51	4.65
7BR2_PHA4ia	14.51	12.84	4.68
7BR2_PHA4ib	14.51	12.15	4.43

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i2	14.51	11.72	3.25
7BR2_PHA4i3	14.18	10.43	6.33
7BR2_PHA4id	14.18	8.63	6.82
7BR2_PHA4ie	14.18	6.24	5.26
7BR2_00	14.18	5.90	3.00

C.2 Optimised Preferred Option

C.2.8 1% AEP Model Run

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
Bride			
7BRI_8655	2.91	45.56	0.51
7BRI_8493	2.91	45.07	0.50
7BRI_8331IN	2.91	44.57	0.59
7BRI_8115IN	2.88	44.18	0.42
7BRI_8007	2.86	44.14	0.22
7BRI_7907IN	2.85	44.12	0.26
7BRI_7832IN	2.85	44.08	0.38
7BRI_7782	2.85	44.02	0.63
7BRI_7767U	2.85	43.99	0.65
7BRI_7767BU	2.85	43.99	0.57
7BRI_7767SU	0	43.99	0.57
7BRI_7767D	2.85	43.82	1.21
7BRI_7637IN	2.85	42.79	1.22
7BRI_7507IN	2.85	41.81	1.17
7BRI_7377IN	2.85	40.76	1.24
7BRI_7247	2.85	39.94	0.94
7BRI_7173	2.85	39.75	0.76
7BRI_7165U	2.85	39.69	1.02
7BRI_7165BU	2.85	39.69	0.98
7BRI_7165SU	0	39.69	0.98
7BRI_7165D	2.85	39.67	1.04
7BRI_6992IN	2.85	38.64	1.06
7BRI_6822IN	2.84	37.94	0.71
7BRI_6730U	2.84	37.86	0.38
7BRI_6730BU	2.84	37.86	0.76
7BRI_6730SU	0	37.86	0.76
7BRI_6730D	2.84	37.81	0.42
7BRI_6620IN	2.84	37.67	0.44
7BRI_6510IN	2.83	37.50	0.49
7BRI_6400IN	2.83	37.30	0.58
7BRI_6291U	2.83	36.94	0.84
7BRI_6291BU	2.83	36.94	0.84

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_6291SU	0	36.94	0
7BRI_6291D	2.83	36.93	0.96
7BRI_6107	4.08	36.33	0.81
7BRI_5924IN	4.08	36.09	0.36
7BRI_5740IN	4.09	36.04	0.20
7BRI_5556U	4.09	35.36	1.04
7BRI_5338IN	4.09	34.38	0.72
7BRI_5118IN	4.08	33.36	0.86
7BRI_4898IN	4.09	32.42	0.62
7BRI_4678	4.08	31.41	1.00
7BRI_4508IN	5.30	30.94	0.81
7BRI_4424	5.29	30.23	1.83
7BRI_4339IN	5.29	29.79	1.20
7BRI_4169IN	5.29	28.80	1.14
7BRI_4000IN	5.29	27.82	1.18
7BRI_3915U	5.29	27.43	0.97
7BRI_3669IN	5.29	26.54	0.76
7BRI_3546IN	5.29	26.12	0.79
7BRI_3423	5.30	25.86	0.65
7BRI_3281	6.48	25.65	0.69
7BRI_3140	6.47	25.52	0.41
7BRI_2999	6.47	25.46	0.56
7BRI_2984U	6.47	25.39	1.09
7BRI_2984BU	6.47	25.39	0.54
7BRI_2984SU	0	25.39	0.54
7BRI_2984D	6.47	25.25	1.30
7BRI_2842IN	6.47	24.69	1.08
7BRI_2700IN	6.47	24.46	0.68
7BRI_2558	6.47	24.40	0.41
7BRI_2550	6.473	24.39	0.46
7BRI_2310	6.48	22.86	0.36
7BRI_2306U	6.48	22.86	0.61
7BRI_2306D	25.30	22.86	1.49
7BRI_2205	25.30	22.25	1.59
7BRI_2053	26.86	21.29	1.39
7BRI_1955IN	26.86	20.94	1.37
7BRI_1855u	26.86	20.25	2.35

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1855d	26.86	20.11	2.80
7BRI_1753u	26.85	19.46	1.76
7BRI_1753d	26.85	19.37	1.92
7BRI_1698IN	29.35	19.10	1.97
7BRI_1648IN	29.35	18.96	1.86
7BRI_1598	29.35	18.86	1.69
7BRI_1500	29.35	18.63	1.81
7BRI_1490U	29.35	18.52	2.10
7BRI_1490BU	29.35	18.52	1.36
7BRI_1490BUa	29.35	18.20	2.98
7BRI_1490Bub	29.35	18.06	3.01
7BRI_1490SU	0	18.52	1.36
7BRI_1490D	29.35	17.60	3.26
7BRI_1464U	29.35	17.77	2.11
7BRI_1464BU	29.35	17.77	1.35
7BRI_1464BUa	29.35	17.55	2.44
7BRI_1464Bub	29.35	17.46	2.51
7BRI_1464SU	0	17.77	1.35
7BRI_1464D	29.35	17.14	1.35
7BRI_1425U	29.35	17.06	2.38
7BRI_1425BU1	29.35	17.06	1.35
7BRI_1425B1U	29.35	16.94	2.30
7BRI_1425B1D	29.76	16.93	2.56
7BRI_1425SU	0	17.06	1.35
7BRI_1425D	29.76	16.69	3.98
7BRI_1406	36.41	16.88	2.24
7BRI_1340U	29.40	16.83	1.80
7BRI_1340BU	29.40	16.79	1.01
7BRI_1340SU	0	16.79	1.01
7BRI_1340D	29.40	16.38	1.84
7BRI_1319	29.44	16.31	1.87
7BRI_1251IN	33.19	16.08	2.04
7BRI_1184	30.37	15.89	2.15
7BRI_1175U	32.04	15.79	2.44
7BRI_1175BU	32.04	15.79	1.18
7BRI_1175SU	0	15.79	1.18
7BRI_1175D	32.04	15.33	2.20

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_1161	32.15	15.07	2.79
7BRI_1117IN	32.41	14.93	1.95
7BRI_1073	32.56	14.91	1.39
7BRI_1065	32.55	14.91	1.34
7BRI_991	32.35	14.44	2.50
7BRI_916	32.22	13.97	2.58
7BRI_896	32.48	13.81	2.76
7BRI_875	32.87	13.93	1.49
7BRI_875CI	32.87	13.93	0.67
7BRI_875C	32.87	13.69	2.06
7BRI_875S	0	13.93	0.67
7BRI_847C	33.11	13.63	2.22
7BRI_847	33.11	13.47	2.62
7BRI_799	34.39	13.46	2.25
7BRI_752	34.39	13.47	1.87
7BRI_743D	34.39	13.33	3.01
7BRI_711	34.50	13.32	2.22
7BRI_639	34.50	13.23	1.68
7BRI_630D	34.50	13.11	2.41
7BRI_569	34.50	13.14	1.43
7BRI_557	34.50	13.14	1.53
7BRI_548U	34.50	13.12	1.42
7BRI_548CI	34.50	13.12	1.42
7BRI_548C	34.50	12.65	2.28
7BRI_548S	0	13.12	1.42
7BRI_522C	35.08	12.58	2.30
7BRI_522	35.08	12.45	1.61
7BRI_503	34.79	12.43	1.56
7BRI_487	34.53	12.30	2.09
7BRI_487CI	34.53	12.30	1.18
7BRI_487S	0	12.30	1.18
7BRI_487C	34.53	11.57	2.91
7BRI_475IN	34.52	11.52	3.01
7BRI_464IN	34.48	11.47	3.13
7BRI_453IN	34.46	11.41	3.24
7BRI_442C	34.53	11.33	3.36
7BRI_442	34.53	11.33	4.11

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_430IN	34.53	11.24	4.08
7BRI_418IN	34.51	11.22	4.04
7BRI_407IN	34.30	11.22	4.09
7BRI_396IN	34.26	11.16	4.18
7BRI_385IN	34.26	11.10	4.37
7BRI_374	34.26	11.04	4.82
7BRI_374A	34.26	11.04	4.82
7BRI_93U	34.26	10.22	2.97
7BRI_93D	34.26	10.22	3.40
7BRI_84Cu	34.26	10.15	3.40
7BRI_84Cd	34.26	10.15	3.40
7BRI_59Cu	34.26	9.66	3.40
7BRI_59Cd	34.26	9.66	3.40
7BRI_46INu	34.26	9.42	3.51
7BRI_46INd	34.26	9.42	3.06
7BRI_18C	34.26	9.13	3.27
7BRI_00u	34.26	8.94	2.97
7BRI_00	34.26	8.87	3.66
7BRI_00UA	34.26	8.82	3.62
7BRI_00UB	34.26	8.63	4.70
7BRI_0Cu	34.26	7.54	4.46
7BRI_0Cd	34.26	6.30	4.46
7BRI_0Con_u	24.78	6.30	3.23
7BRI_0Con_1	24.78	6.28	3.23
7BRI_0Con_2	24.78	6.28	3.23
7BRI_0Con_3	24.78	6.11	3.24
7BRI_0Con_4	24.78	6.11	3.24
7BRI_0Con_d	24.78	6.09	3.28
7BRI_PHA3u	29.48	6.09	3.95
7BRI_PHA3d	29.48	3.26	4.33
7BRI_PHA2u	29.48	3.26	2.57
7BRI_PHA2i1	29.48	2.91	2.70
7BRI_PHA2d	29.48	2.25	3.70
7BRI_PHA1u	29.48	2.25	3.70
7BRI_PHA1d	29.48	1.42	4.06
7BRI_PHA_Ou	39.38	1.42	4.34
7BRI_PHA_Oi1	39.38	0.96	4.34

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BRI_PHA_Oi2	39.38	0.49	4.34
7BRI_PHA_Oi3	39.38	0.03	4.34
7BRI_PHA_Od	39.38	-0.43	4.34
Brewery Branch			
7BREW_706A	9.48	6.30	2.55
7BREW_706B	9.48	5.44	2.55
7BREW_668u	9.48	5.18	2.45
7BREW_668d	9.54	5.18	1.96
7BREW_656u	9.54	5.15	1.84
7BREW_656d	9.61	5.15	1.81
7BREW_608u	9.61	4.87	1.67
7BREW_608d	9.67	4.87	1.76
7BREW_553u	9.67	4.57	1.58
7BREW_553d	9.73	4.57	1.99
7BREW_500u	9.73	4.14	2.02
7BREW_500d	9.79	4.14	2.03
7BREW_484u	9.79	3.99	2.06
7BREW_484d	9.85	3.99	1.93
7BREW_468	9.85	3.92	1.67
7BREW_407u	9.85	3.56	1.73
7BREW_407d	9.91	3.56	2.27
7BREW_395	9.91	3.37	2.39
7BREW_394	9.91	3.37	2.11
7BREW_394i1	9.91	3.18	1.99
7BREW_394i2	9.91	3.00	1.90
7BREW_394i3	9.91	2.83	1.85
7BREW_331	9.91	2.61	1.93
7BREW_330	9.91	2.61	2.03
7BREW_168u	9.91	1.97	2.51
7BREW_168d_A	4.94	1.97	2.64
7BREW_023u_A	4.94	1.45	2.39
7BREW_168d_B	4.97	1.97	2.65
7BREW_023u_B	4.97	1.45	2.40
7BREW_023d	9.91	1.45	2.40
7BREW_000	9.91	1.42	2.41
Glenamought			
7BR1_3361	16.43	71.23	1.73

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_3294IN	16.42	70.88	1.78
7BR1_3228	16.42	70.26	2.14
7BR1_3163IN	16.42	69.82	1.76
7BR1_3098IN	16.42	69.36	1.49
7BR1_3032	16.42	68.91	1.56
7BR1_2918IN	16.42	68.18	1.50
7BR1_2804	16.42	67.91	1.24
7BR1_2791U	16.42	67.90	1.03
7BR1_2791BU	12.202	67.90	1.30
7BR1_2791SU	4.21	67.90	1.31
7BR1_2791D	16.42	66.49	1.31
7BR1_2690	16.42	62.65	2.86
7BR1_2597IN	16.42	59.12	3.43
7BR1_2503	16.42	56.07	1.38
7BR1_2372IN	16.42	54.71	1.40
7BR1_2237IN	16.42	53.36	1.41
7BR1_2102IN	16.42	52.01	1.49
7BR1_2012IN	16.42	51.16	1.46
7BR1_1968U	16.42	50.66	1.87
7BR1_1764IN	16.42	48.18	1.76
7BR1_1554IN	17.86	45.60	1.81
7BR1_1309IN	17.86	42.66	2.21
7BR1_1297IN	17.86	42.49	2.35
7BR1_1287IN	17.86	42.34	2.51
7BR1_1277IN	17.86	42.18	2.69
7BR1_1267U	17.86	42.02	2.90
7BR1_1267BU	17.86	42.02	2.90
7BR1_1267SU	0	42.02	2.90
7BR1_1267D	17.86	41.90	2.36
7BR1_1141IN	18.73	40.01	2.61
7BR1_1026	18.73	38.79	1.85
7BR1_1014U	18.73	38.69	2.00
7BR1_1014D	18.73	38.60	1.54
7BR1_961	18.73	38.38	1.74
7BR1_947U	18.73	38.25	1.43
7BR1_947BU	18.73	38.25	1.59
7BR1_947SU	0	38.25	1.59

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR1_947D	18.73	37.39	2.95
7BR1_758IN	18.73	34.10	2.70
7BR1_570IN	18.73	30.79	2.61
7BR1_490IN	19.29	29.46	2.33
7BR1_480IN	19.29	29.34	2.16
7BR1_470U	19.29	29.26	1.88
7BR1_470BU	19.29	29.26	1.13
7BR1_470SU	0	29.26	1.13
7BR1_470D	19.29	29.11	2.49
7BR1_447	19.29	28.82	2.26
7BR1_403	19.29	28.10	2.75
7BR1_391U	19.29	27.91	1.83
7BR1_391BU	19.29	27.91	1.37
7BR1_391SU	0	27.91	1.83
7BR1_391D	19.29	27.85	2.00
7BR1_284	19.29	26.48	2.43
7BR1_195IN	19.29	25.25	2.52
7BR1_91U	19.29	24.33	1.63
7BR1_91BU	19.29	24.33	1.55
7BR1_91SU	0	24.33	1.55
7BR1_91D	19.29	24.33	1.63
7BR1_11	19.29	23.91	1.82
7BR1_0	19.29	23.93	1.41
7BR1_0C1U	19.29	23.89	1.18
7BR1_0C1D	19.29	23.89	1.18
7BR1_0D	19.29	23.81	1.51
7BR1_0DD	19.29	23.57	1.78
Glen			
7BR2_104	10.80	16.88	2.38
7BR2_104i1	10.80	16.39	2.38
7BR2_104i2	10.80	15.86	2.39
7BR2_16	10.80	15.38	2.30
7BR2_0U	10.80	14.79	3.62
7BR2_PHA4u	10.80	14.79	3.42
7BR2_PHA4uX	10.80	14.55	3.42
7BR2_PHA4u1	10.80	14.30	3.41
7BR2_PHA4u2	10.80	13.93	3.36

Model XS	Max Flow (m3/s)	Max Level (mOD)	Max Velocity (m/s)
7BR2_PHA4i1	10.80	13.38	4.18
7BR2_PHA4ia	10.80	12.71	4.22
7BR2_PHA4ib	10.80	12.00	4.03
7BR2_PHA4i2	10.80	11.58	2.76
7BR2_PHA4i3	10.80	10.35	5.63
7BR2_PHA4id	10.80	8.54	6.23
7BR2_PHA4ie	10.80	6.14	4.91
7BR2_00	10.80	6.09	2.66

D Hydraulic Check File

1 Blackpool – hydraulic model check file

1.1 Overview

This document describes the hydraulic modelling for the detailed Blackpool village model. It is intended for a technical audience only and will form part of the hydraulic model handover package. It is to be read in conjunction with the Blackpool Hydraulic Modelling Report and the Lower Lee Hydrology Report.

1.2 Model management

To provide clarity within the model deliverables a consistent filing convention has been adopted for all models. The purpose of this system is to facilitate the identification of the different files required for a given model and so support the ongoing use and development of these models in future projects.

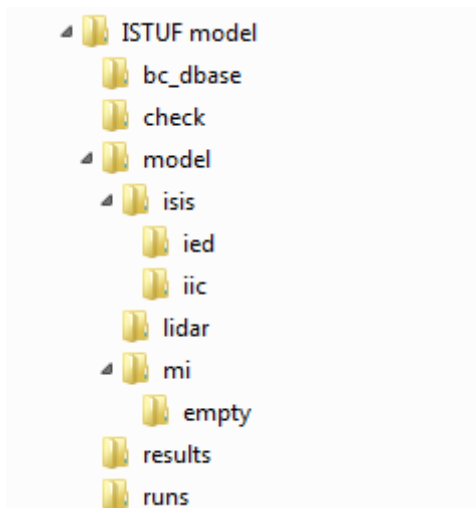
1.2.1 Linked 1D-2D model filing system

Figure 1-1 details the filing structure for a linked 1D-2D hydraulic model. The system for the linked 1D-2D model builds on that described for the 1D model.

Files required as part of the model build itself are located within the 'model' file. In this case GIS files for the 2D model are saved under an 'mi', 'shp' or 'gis' folder depending on the GIS software used and the LiDAR grid under a folder of the same name. The 2D model geometry, boundary and roughness files (.tgc, .tbc and .tmf) were saved directly under the 'model' folder. Any 2D hydraulic boundary data files are saved under the 'bc_dbase' folder.

Again model run files (.ief files) and model results are saved within separate folders and are further broken down into consistently labelled files detailing the model run with which they are associated with.

Figure 1-1: Linked 1D-2D modeling filing system

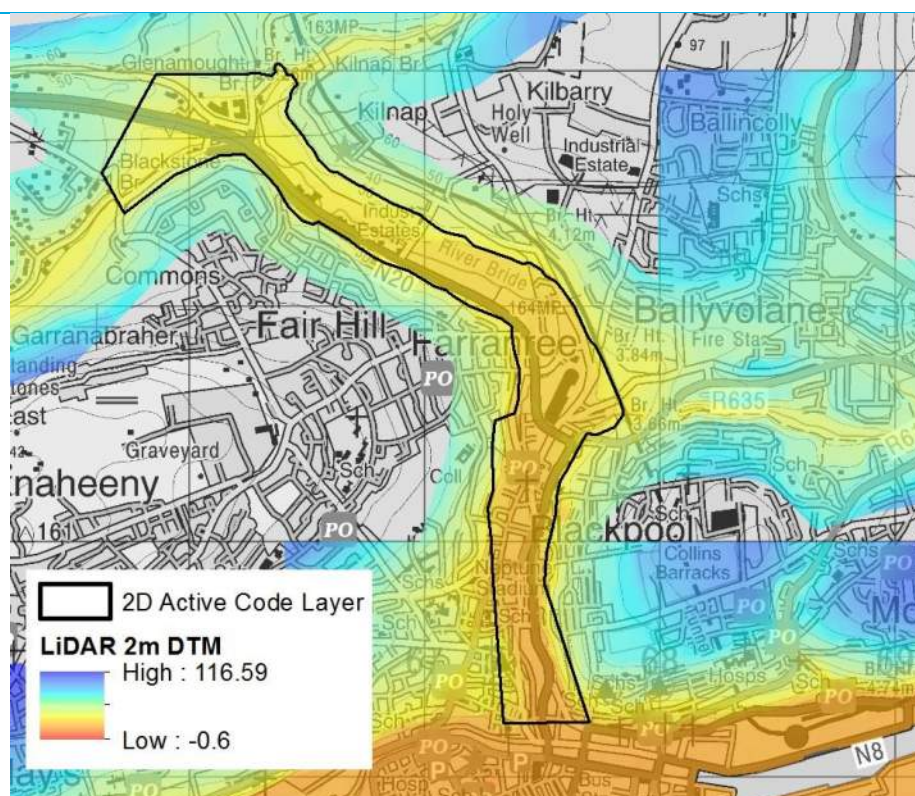
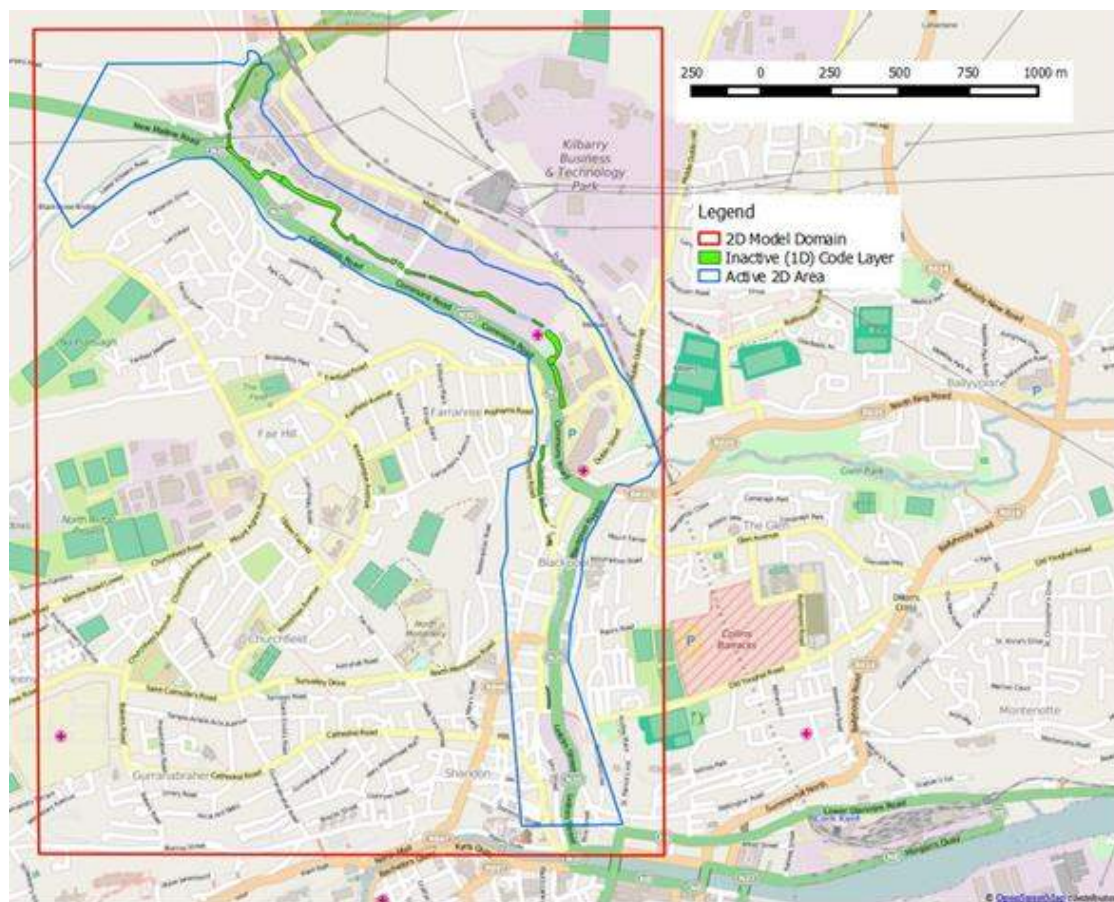


1.3 Modelling software

TuFLOW version used at time of construction?	TUFLOW.2013-12-AD
ISIS version used at time of construction?	ISIS v3.7
Additional software?	None.

1.4 Model schematisation

Schematic of 2D Model Domain



2 1D model build

2.1 Roughness reaches

2.1.1 Bride River

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
1	7BRI_8655	7BRI_7767U	0.05 0.1



Photo of 7BRI_7782 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
2	7BRI_7767D	7BRI_6730U	0.05 0.06 & 0.1



Photo of 7BRI_6730

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
3	7BRI_6730D	7BRI_6291U	0.06 0.08 & 0.01



Photo of 7BRI_6291 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
4	7BRI_6291D	7BRI_5556U	0.05 0.07 & 0.1



Photo of 7BRI_5556U looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
5	7BRI_5556D	7BRI_2550	0.04 0.07 & 0.1



Photo of 7BRI_4678 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
6	7BRI_2310	7BRI_2306U	0.05 0.075 & 0.1



Photo of 7BRI_2306 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
7	7BRI_2306D	7BRI_1753d	0.035 0.055 & 0.08



Photo of 7BRI_2205 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
8	7BRI_1598	7BRI_1490U	0.035 0.045, 0.055, 0.08

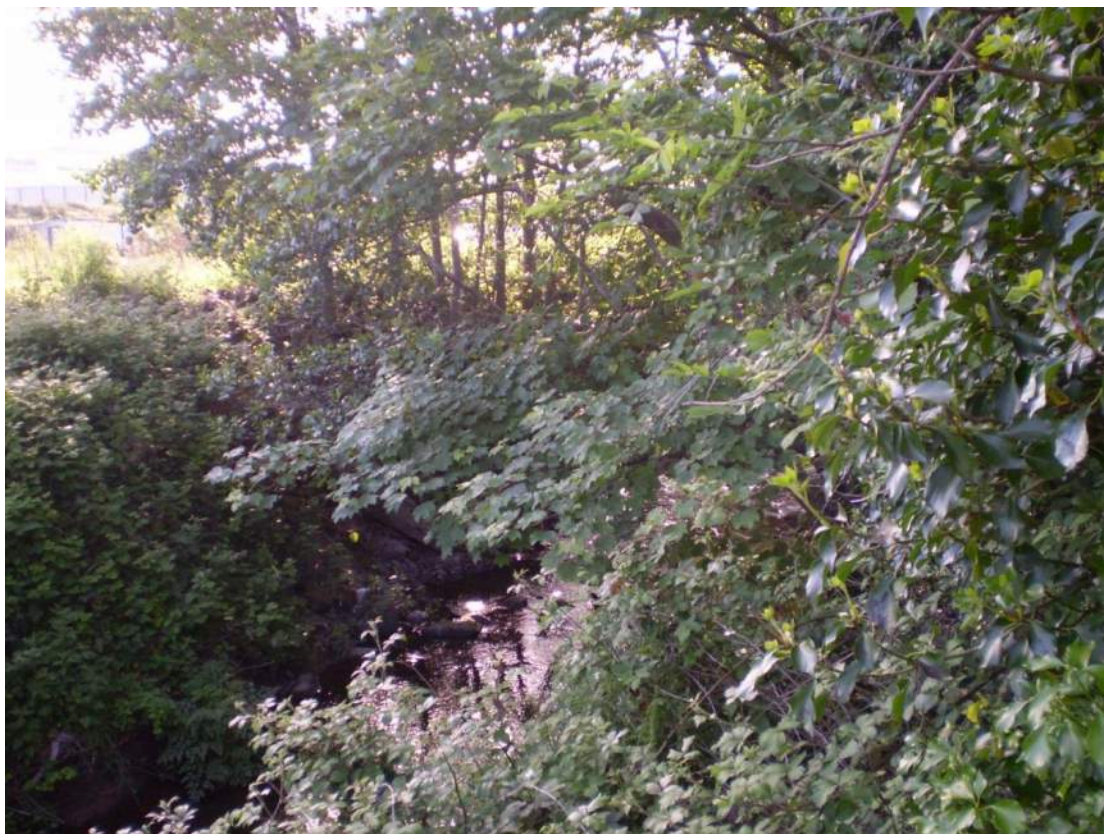


Photo of 7BRI_1598 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
9	7BRI_1490D	7BRI_1425D	0.03 & 0.035 0.1



Photo of 7BRI_1432 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
10	7BRI_1406	7BRI_1340U	0.05 0.035 & 0.1



Photo of 7BRI_1406 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
11	7BRI_1340D	7BRI_1073	0.035 & 0.04 0.1



Photo of 7BRI_1184 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
12	7BRI_1072	7BRI_875	0.04 & 0.045 0.1



Photo of 7BRI_991 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
13	7BRI_847	7BRI_548U	0.03 & 0.045 0.1



Photo of 7BRI_743 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
14	7BRI_522	7BRI_487	0.03 & 0.035 0.1



Photo of 7BRI_487 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
15	7BRI_442	7BRI_112U	0.03 & 0.035 0.045 & 0.05

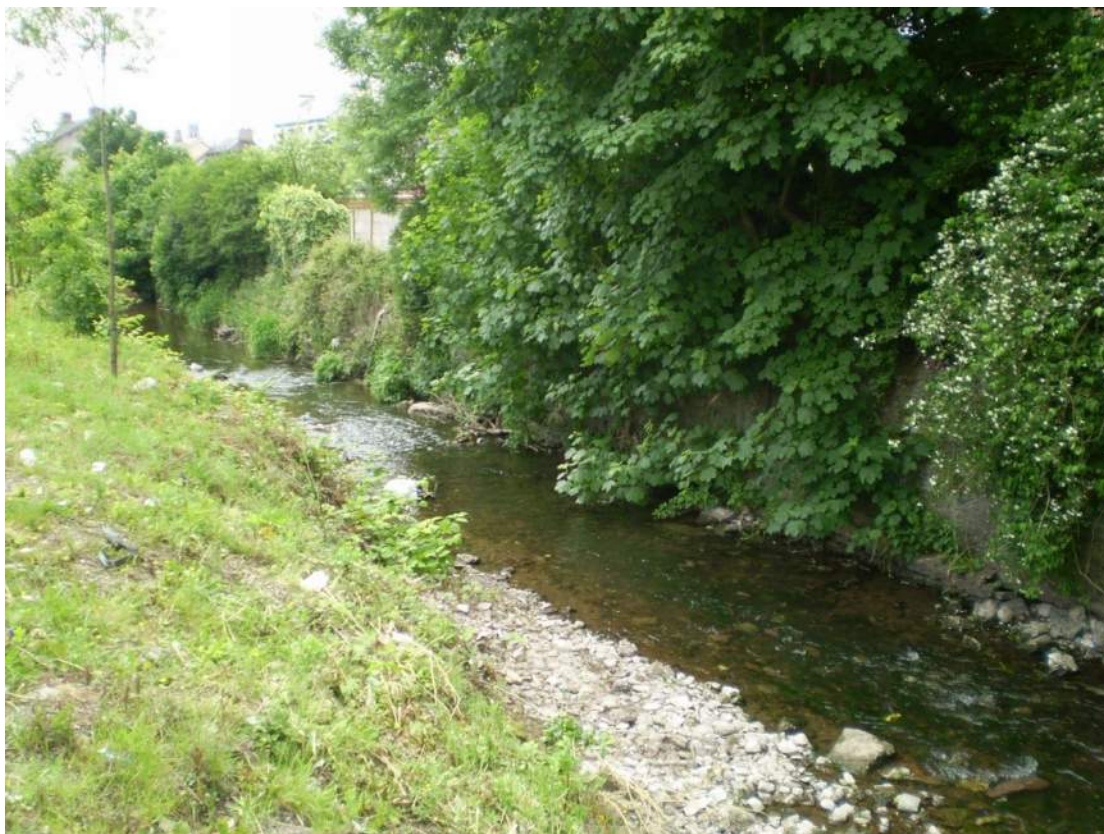


Photo of 7BRI_290 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
16	7BRI_112D	7BRI_93U	0.04 0.045



Photo of 7BRI_96 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
17	7BRI_18	7BRI_00u	0.02 0.02



Photo of 7BRI_00 looking upstream

2.1.2 Glenamought River

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
18	7BR1_3361	7BR1_1267U	0.04 0.07 & 0.1



Photo of 7BR1_2503 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
19	7BR1_1267D	7BR1_0	0.04 0.08 & 0.1

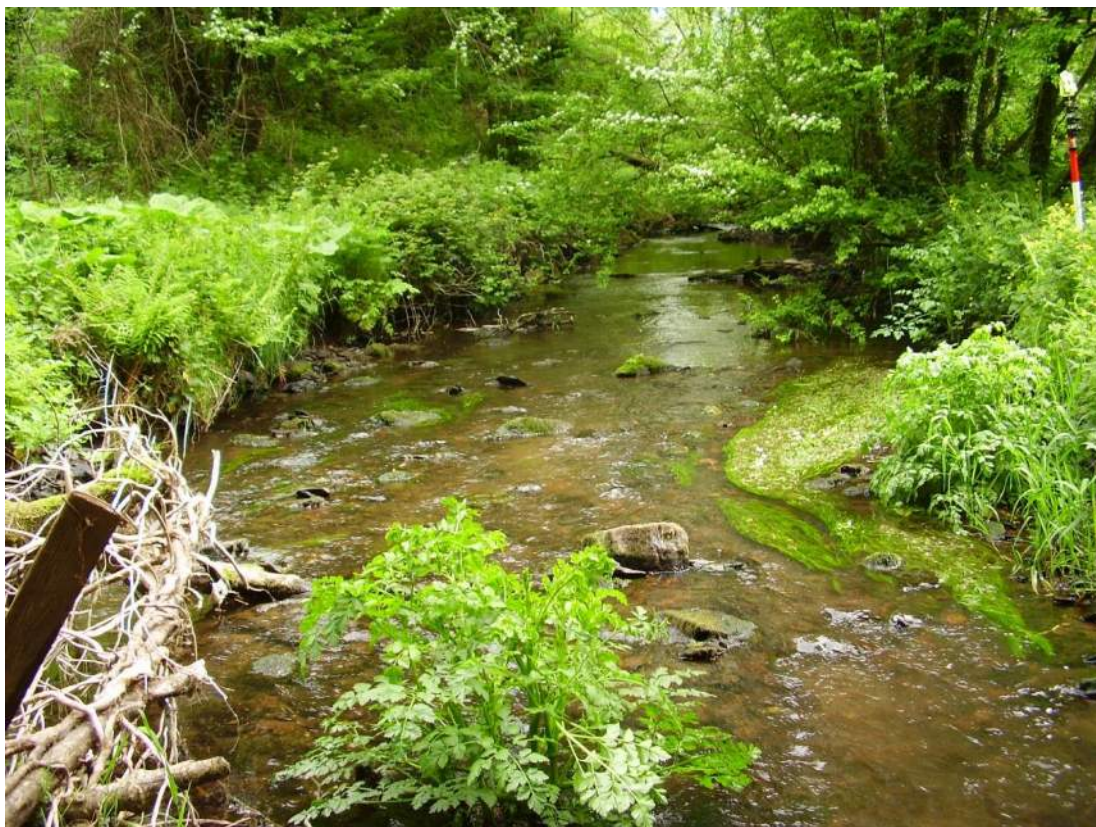


Photo of 7BR1_961 looking upstream

2.1.3 Glen Stream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
20	7BR2_3753	7BR2_3380U	0.05 0.07 & 0.1



Photo of 7BR2_3468 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
21	7BR2_3380D	7BR2_2082DD	0.04 0.06 & 0.1



Photo of 7BR2_3028 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
22	7BR2_2061U	7BR2_1894	0.08 0.1

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
23	7BR2_1842	7BR2_1522U	0.04 0.06 & 0.1



Photo of 7BR2_1667 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
24	7BR2_1522D	7BR2_1414U	0.045 0.07 & 0.1



Photo of 7BR2_1446 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
25	7BR2_1414D	7BR2_1303U	0.04 0.06 & 0.1



Photo of 7BR2_1414 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
26	7BR2_873D	7BR2_389U	0.04 0.08 & 0.1



Photo of 7BR2_412 looking upstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
27	7BR2_228	7BR2_155U	0.055 0.1



Photo of 7BR2_228 looking downstream

Reach No.	Upstream Label	Downstream Label	Bed Roughness Bank Roughness
28	7BR2_155D	7BR2_0U	0.045 0.08 & 0.1



Photo of 7BR2_104 looking downstream

2.2 Hydraulic structures

This section provides a summary of each structure included within the model. All structure geometry has been taken from the survey data collected as part of the Lee CFRAM study. The culverts within Blackpool village have been modelled as per the GBK scheme construction drawings. Any assumptions made when incorporating structures within the model are recorded on the following pages and are documented within the ISIS model.

2.2.1 Glenamought River

Name of structure	Access Bridge to Kilnap Glen House at 7BR1_91U
Included in model (state reason if not)	Yes
Grid Ref	166308, 74834
Type	USBPR Unit
How has structure been modelled?	Soffit Level: 24.13 mOD Deck Level: Varies. Approx. 25.10 mOD Approx. Skew Angle: n/a Length: 5.50m (USF to DSF)
Photograph	
	7BR1_91U Photograph looking downstream, taken from left bank
Other Comments	

Name of structure	North Point Business Park Culvert at 7BR1_0	
Included in model (state reason if not)	Yes	
Grid Ref	166298, 74750	
Type	Triple Circular Conduits (in model as Symmetrical Conduits)	
How has structure been modelled?	Soffit Level: 23.40 mOD (varies) Deck Level: Varies. Approx. 24.30 mOD Approx. Skew Angle: n/a Length: 20m (USF to DSF) Structure prone to blockage. Blockage units have been attached to inlets in the June 2012 validation model to replicate observed conditions.	
Photograph	 7BR1_0 Photograph looking downstream, taken from left bank	
Other Comments		

2.2.2 Bride River

Name of structure	Sprung Arch Culvert at 7BRI_1490U
Included in model (state reason if not)	Yes
Grid Ref	166867, 74272
Type	Sprung Arch Conduit
How has structure been modelled?	Soffit Level: 18.16 mOD Deck Level: Varies. Approx. 18.75 mOD Approx. Skew Angle: n/a Length: 11.76m (USF to DSF)
Photograph	 7BRI_1490U Photograph looking downstream, taken from left bank
Other Comments	

Name of structure	Sprung Arch Culvert at 7BRI_1464U	
Included in model (state reason if not)	Yes	
Grid Ref	166893, 74265	
Type	Sprung Arch Conduit	
How has structure been modelled?	Soffit Level: 18.25 mOD Deck Level: Varies. Approx. 18.57 mOD Approx. Skew Angle: n/a Length: 12.76m (USF to DSF)	
Photograph		
	7BRI_1464U Photograph looking downstream, taken from left bank	
Other Comments		

Name of structure	Fitz's Boreen Arch Bridge at 7BRI_1425U
Included in model (state reason if not)	Yes
Grid Ref	166921, 74245
Type	Sprung Arch Culverts (modelled as two openings)
How has structure been modelled?	Soffit Level: 16.60 mOD (varies) Deck Level: Varies. Approx. 18.30 mOD Approx. Skew Angle: n/a Length: 7.47m (USF to DSF) Structure prone to blockage. Blockage units have been attached to inlets in the June 2012 validation model to replicate observed conditions.
Photograph	 7BRI_1425U Photograph looking downstream, taken from left bank
Other Comments	

Name of structure	Dulux Access Bridge at 7BRI_1340U
Included in model (state reason if not)	Yes
Grid Ref	167000, 74215
Type	USBPR Unit
How has structure been modelled?	Soffit Level: 16.34 mOD (varies) Deck Level: Varies. Approx. 16.94 mOD Approx. Skew Angle: n/a Length: 13.85m (USF to DSF)
Photograph	 7BRI_1340U Photograph looking downstream, taken from right bank
Other Comments	

Name of structure	Access Bridge at 7BRI_1175U	
Included in model (state reason if not)	Yes	
Grid Ref	167154, 74156	
Type	USBPR Unit	
How has structure been modelled?	Soffit Level: 15.14 mOD (varies) Deck Level: Varies. Approx. 15.85 mOD Approx. Skew Angle: n/a Length: 7.71m (USF to DSF)	
Photograph		
	7BRI_1175U Photograph looking downstream, taken from right bank	
Other Comments		

Name of structure	Long Sunbeam Industrial Estate Culvert at 7BRI_991	
Included in model (state reason if not)	Yes	
Grid Ref	167323, 74082	
Type	Rectangular Culvert (modelled as Symmetrical Conduit)	
How has structure been modelled?	Soffit Level: 14.17 mOD (varies) Deck Level: Varies. Approx. 14.81 mOD Approx. Skew Angle: n/a Length: 70.85m (USF to DSF)	
Photograph		
	7BRI_991 Photograph looking downstream, taken from right bank	
Other Comments		

Name of structure	Short Sunbeam Industrial Estate Culvert at 7BRI_875	
Included in model (state reason if not)	Yes	
Grid Ref	167423, 74030	
Type	Sprung Arch Culvert (modelled as Symmetrical Conduit)	
How has structure been modelled?	Soffit Level: 14.17 mOD (varies) Deck Level: Varies. Approx. 14.90 mOD Approx. Skew Angle: n/a Length: 21.59m (USF to DSF) Structure prone to blockage. Blockage has been included in the culvert inlet as part of the June 2012 validation model to replicate observed conditions.	
Photograph	 7BRI_875 Photograph looking downstream, taken from right bank	
Other Comments		

Name of structure	Footbridge at 7BRI_743U
Included in model (state reason if not)	Yes
Grid Ref	167473, 73920
Type	ARCH Unit
How has structure been modelled?	Soffit Level: 13.03 mOD (varies) Deck Level: Varies. Approx. 13.83 mOD Approx. Skew Angle: n/a Length: 2.84m (USF to DSF)
Photograph	 7BRI_743 Photograph looking upstream, taken from right bank
Other Comments	

Name of structure	Footbridge at 7BRI_630U
Included in model (state reason if not)	Yes
Grid Ref	167483, 73818
Type	ARCH Unit
How has structure been modelled?	Soffit Level: 13.35 mOD (varies) Deck Level: Varies. Approx. 14.17 mOD Approx. Skew Angle: n/a Length: 2.91m (USF to DSF)
Photograph	 7BRI_630U Photograph looking downstream, taken from left bank
Other Comments	

Name of structure	Blackpool Shopping Centre Culvert at 7BRI_548U	
Included in model (state reason if not)	Yes	
Grid Ref	167496, 73736	
Type	Sprung Arch Culvert (modelled as Symmetrical Conduit)	
How has structure been modelled?	Soffit Level: 13.24 mOD (varies) Deck Level: Varies. Approx. 15.26 mOD Approx. Skew Angle: n/a Length: 26.17m (USF to DSF) Structure prone to blockage. Blockage has been included in the culvert inlet as part of the June 2012 validation model to replicate observed conditions.	
Photograph	 7BRI_548U Photograph looking downstream, taken from left bank	
Other Comments		

Name of structure	Arch Culvert at 7BRI_487
Included in model (state reason if not)	Yes
Grid Ref	167488, 73678
Type	Sprung Arch Culvert (modelled as Symmetrical Conduit)
How has structure been modelled?	Soffit Level: 13.24 mOD (varies) Deck Level: Varies. Approx. 14.38 mOD Approx. Skew Angle: n/a Length: 45m (USF to DSF)
Photograph	 7BRI_487 Photograph looking downstream, taken from structure upstream
Other Comments	

Name of structure	Orchard Court Road Bridge at 7BRI_188U	
Included in model (state reason if not)	Yes	
Grid Ref	167408, 73420	
Type	ARCH Unit	
How has structure been modelled?	Soffit Level: 9.42 mOD Deck Level: 10.06 – 10.68 mOD Approx. Skew Angle: n/a Length: 8.89m (USF to DSF) Structure prone to blockage. Blockage unit has been attached to upstream face in the June 2012 validation model to replicate observed conditions.	
Photograph	 7BRI_188BU Photograph looking downstream, taken from left bank	
Other Comments	The trash screen on the upstream face of this culvert has been removed since the June 2012 event and, as such, has not been included in the Damages model.	

Name of structure	Orchard Court Pedestrian Bridge at 7BRI_112U	
Included in model (state reason if not)	Yes	
Grid Ref	167425, 73346	
Type	ARCH Unit	
How has structure been modelled?	Soffit Level: 8.768 mOD Deck Level: 9.44 mOD Approx. Skew Angle: n/a Length: 2.96m (USF to DSF) Structure prone to blockage. Blockage unit has been attached to upstream face in the June 2012 validation model to replicate observed conditions.	
Photograph	 7BRI_112BU Photograph looking downstream, taken from left bank	
Other Comments		

Name of structure	Orchard Court Culvert at 7BRI_93C	
Included in model (state reason if not)	Yes	
Grid Ref	167436, 73320	
Type	Rectangular Culvert (modelled as Symmetrical Conduit Unit)	
How has structure been modelled?	Soffit Level: 8.31 mOD Invert Level: 6.65 mOD Deck Level: 8.56 mOD Approx. Skew Angle: n/a Length: 75.2m (USF to DSF)	
Photograph	 7BRI_93C Photograph looking downstream, taken from Orchard Court Pedestrian Bridge	

Other Comments

Roughness values range from 0.3m to 0.6m CWF on the culvert invert and 0.003m on the walls. The relatively high CWF values have been chosen to reflect the poor conditions on the culvert floor in terms of debris and sediment build-up. The photo below illustrates how much bed load there is on the floor of the culvert prior to the cleaning operation in the summer of 2014.



Other Comments

This culvert travels from Orchard Court before transitioning to an open channel adjacent to Blackpool Church. There is an ESB services tray approximately 35m inside the upstream face. This is a major source of blockage during times of flooding as floating debris can get trapped around its suspension struts, as shown in the figure below. The services tray has been included in the model as a pair of orifice units. The orifices correspond to the parts of the culvert above and below the soffit of the services tray respectively.



Photograph of ESB services tray in Orchard Court Culvert

Name of structure	Blackpool Church Culvert at 7BRI_00	
Included in model (state reason if not)	Yes	
Grid Ref	167447, 73240	
Type	Symmetrical Conduit Unit	
How has structure been modelled?	Soffit Level: 5.91 mOD Invert Level: 7.51 mOD Approx. Skew Angle: n/a Length: 205.29m (USF to DSF)	
Photograph	 7BRI_00 Photograph looking downstream, taken from exit of Orchard Court Culvert	
Roughness (Colebrook-White)	Roughness values range from 0.3m to 0.5m on the culvert invert and 0.003m on the walls. The relatively high CW values have been chosen to reflect the poor conditions on the culvert floor in terms of debris and sediment build-up.	

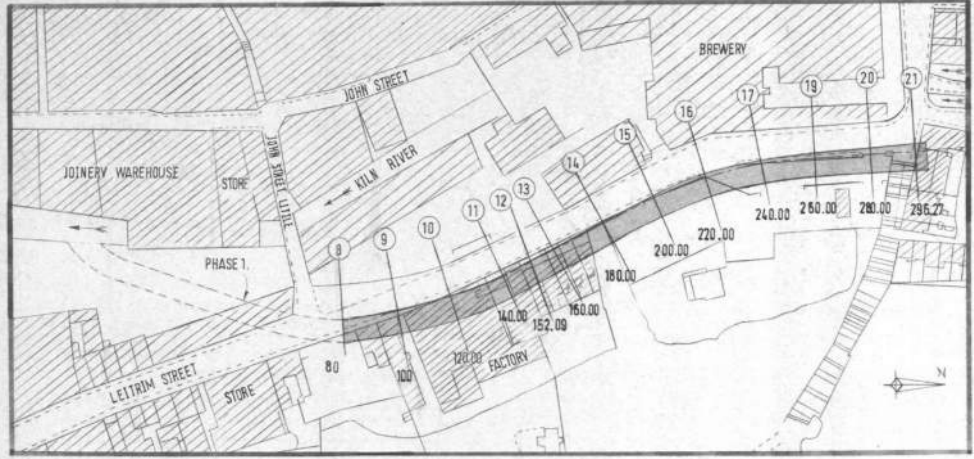
Name of structure	Brewery Branch Culvert at 7BREW_706A	
Included in model (state reason if not)	Yes	
Grid Ref	167453, 73032	
Type	Full Arch, Sprung Arch Conduits	
How has structure been modelled?	Soffit Level: 6.68 mOD Invert Level: 4.53 mOD Approx. Skew Angle: n/a Length: 310.7m (USF to DSF)	
Photograph	 7BREW_706A Photograph looking downstream, taken from Maddens Buildings junction prior to removal of the diversion block	
Roughness (Colebrook-White)	Roughness values range from 0.13m on the culvert invert and 0.05m on the walls. The relatively high CW values have been chosen to reflect the conditions on the culvert floor in terms of debris and sediment build-up. The photo below illustrates how much bed load there is on the floor of the culvert.	

Name of structure	Cathedral Walk Culvert at 7BREW_330
Included in model (state reason if not)	Yes
Grid Ref	167435, 72651
Type	Sprung Arch and Rectangular Conduits
How has structure been modelled?	Soffit Level: 3.94 mOD Invert Level: 1.74 mOD Approx. Skew Angle: n/a Length: 330.8m (USF to DSF)
Photograph	 7BREW_330 Photograph looking downstream, taken from open channel section just upstream of culvert inlet
Roughness (Colebrook-White)	Roughness values range from 0.015m on the culvert invert and 0.015m on the walls. The relatively high CW values have been chosen to reflect the poor conditions on the culvert floor in terms of debris and sediment build-up. The photo below illustrates how much bed load there is on the floor of the culvert.

2.2.3 Glen River

Name of structure	Phase 4 GBK (Glen Avenue) Culvert at 7BR2_PHA4u
Included in model (state reason if not)	Yes
Grid Ref	167723, 73490
Type	Symmetrical Conduits
How has structure been modelled?	Soffit Level: 15.30 mOD Invert Level: 14.00 mOD Approx. Skew Angle: n/a Length: 537.5m (USF to DSF)
Photograph	 7BR2_PHA4u Photograph looking downstream, taken from left bank just upstream of the culvert inlet
Roughness (Colebrook-White)	Roughness values range from 0.0213m on the culvert invert and 0.0016m on the walls. The relatively high CW values have been chosen to reflect the poor conditions on the culvert floor in terms of debris and sediment build-up. The photo below illustrates how much bed load there is on the floor of the culvert.
Other Comments	A blockage unit has been added to the upstream face of the structure to represent the head losses represented by the attached trash screen.

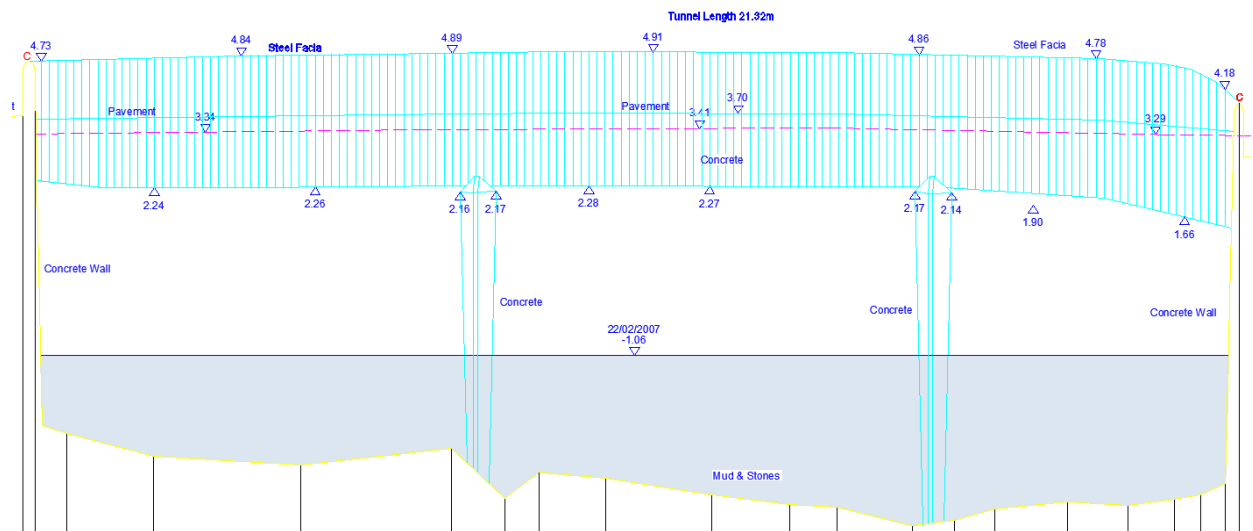
Name of structure	Phase 3 GBK (N20) Culvert at 7BR2_PHA3u	
Included in model (state reason if not)	Yes	
Grid Ref	167474, 73031	
Type	Symmetrical Conduits	
How has structure been modelled?	Soffit Level: 6.12 mOD Invert Level: 4.52 mOD Approx. Skew Angle: n/a Length: 388m (USF to DSF)	
Photograph	 7BR2_PHA3u Photograph looking upstream, taken from just downstream of the culvert inlet	
Roughness (Colebrook-White)	Roughness values are 0.08m on the culvert invert and 0.0016m on the walls.	

Name of structure	Phase 2 GBK (N20) Culvert at 7BRI_PHA2u
Included in model (state reason if not)	Yes
Grid Ref	167464, 72649
Type	Symmetrical Conduits
How has structure been modelled?	Soffit Level: 3.53 mOD Invert Level: 1.83 mOD Approx. Skew Angle: n/a Length: 110m (USF to DSF)
Location Plan	
Roughness (Colebrook-White)	Roughness values are 0.08m on the culvert invert and 0.0016m on the walls.

2.3 Other information of note in model build

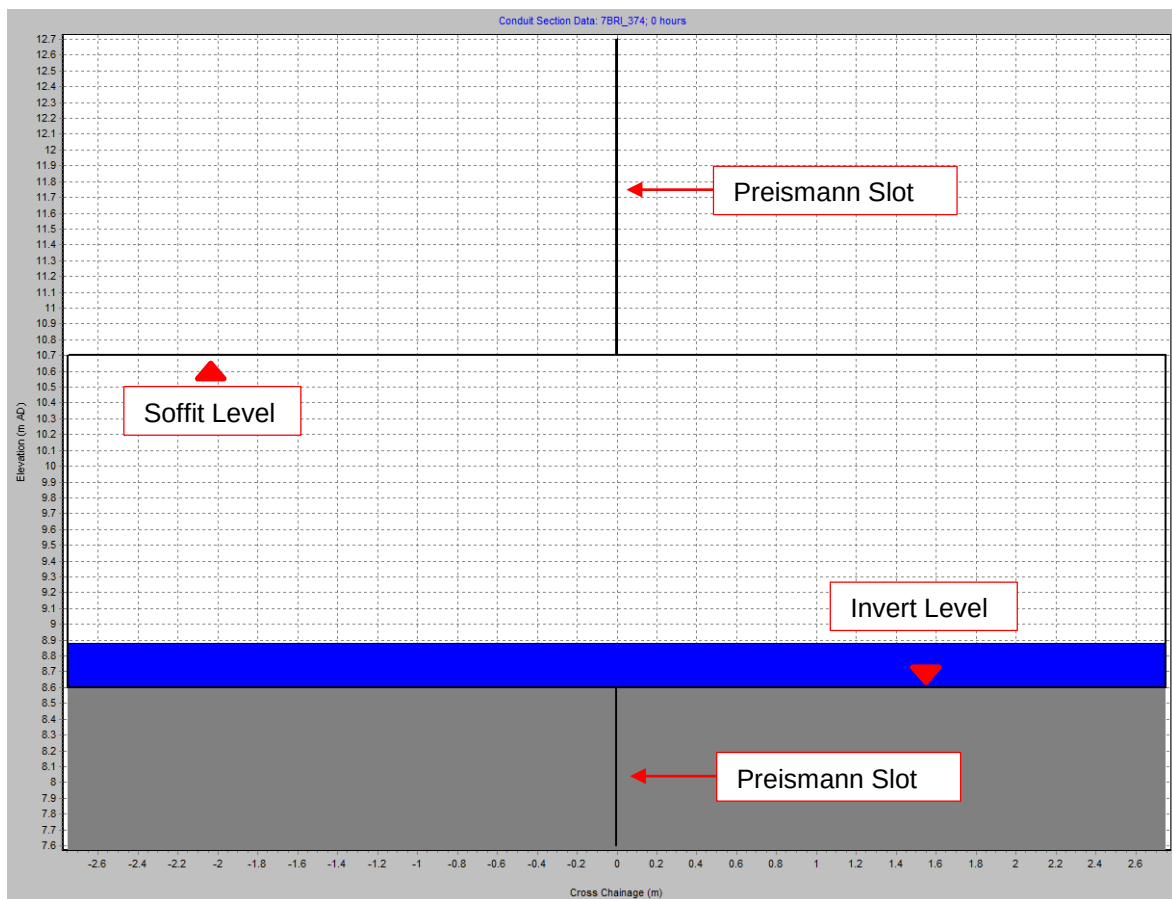
2.3.1 Downstream Boundary

The downstream boundary, for ease of simplicity, has been set as a Normal Depth unit. A tidal (HT) boundary has not been used as it causes significant stability problem close to event-peaks. As well as this, the tidal influence of the River Lee only extends as far upstream as the Heineken Brewery.



2.3.2 Preissmann Slots

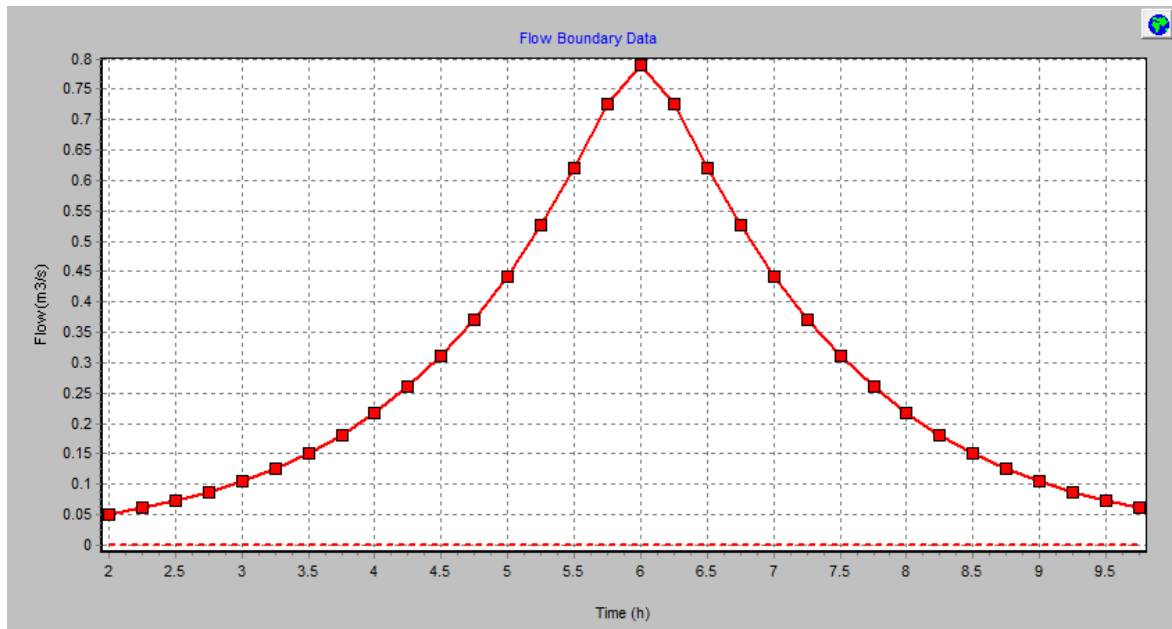
A Preissman slot is a conceptual, vertical and narrow slot providing a conceptual free surface condition for flow when the water level is above the top of a closed conduit .i.e. it helps the 1D hydraulic model to run when the culvert system is heavily surcharged. It can also help the 1D hydraulic model to resolve itself in low-flow conditions by placing the slot on the culvert floor as shown below:



Preissmann slots have been added to the hydraulic model in culverts that regularly experience surcharged conditions and tend to cause instabilities and errors in the model run. These slots became more important in the options testing and refinement as different flow scenarios were being run.

2.3.3 Surface water contributions

See Section 2.3 in the main hydraulics report for further information. One of the 7 equal sewer contributions for the 1% AEP is shown in the following figure:



3 2D model build

3.1 TUFLOW Domain Summary

What is the cell size and why has it been chosen?	4m cell size chosen. Majority of out of bank flow is on roadways; 1 complex flow route through urban area at Blackpool Village. The detail of a 4m cell size is considered appropriate; particularly in the climate change runs and run times are acceptable.
What is (are) the grid orientation(s)? What is the reason for choosing this (these) orientation(s)?	The grid is orientated in a southerly direction following the Bride River. The Bride and the Glenamought are the only modelled watercourses in the 2D model area. However, the Glen Stream is also included in 1D in the model. The cell orientation ensures that model stability is maximised during bank overtopping.
Describe the justification for the location for the 1D-2D boundary. Is it located at the top of bank based on survey sections or LIDAR, have there been any reasons to adjust this. Refer to schematic if necessary.	Bank tops are generally well defined and the 1D-2D boundary is located at the top of the bank on survey sections.
Does the 2D domain extend for the full length of the HPW model?	Yes

3.2 Detailed Model Construction

The following table summarises each of the code layers in the same order that they are read into the geometry control file.

Layer name	Command (eg "Read GIS Z Shape AODD")	Purpose of code layer
N/A	Set Code	==0. This sets the z-point layer to inactive.
2d_code_Blackpool_006_R	Read GIS Code	This sets an area of z-points to active. See figure in model schematisation section.
2d_code_Blackpool_inactive_010_R	Read GIS Code	Layer used to set Bride and Glenamought channels inactive (these are modelled in ISIS 1D).

The following table summarises each of the topographical layers in the same order that they are read into the geometry control file.

Layer name	Command (eg "Read GIS Z Shape")	Purpose of terrain modification and source of elevation data
lidar_2m_dtm_grd_blackpool_entire_2m.txt	Read GRID Zpts	Base zpt grid (from 2m filtered LIDAR)
2d_bc_Blackpool_009_L 2d_bc_Blackpool_010_P	Read GIS Z HX Line	Layers used to transfer water level from 1D nodes to 2D domain and incorporate bank heights from survey into 2D domain.
2d_bc_Blackpool_Wall_Gaps_001_4m_L	Read GIS BC	Layer used to transfer flow through the ESTRY component representing the open railings at Blackpool Church.

The following table summarises modelling of flow routes within the 2D domain either through modifications to the DTM or through inclusion of structures within ESTRY.

Layer name	Command (e.g. "Read MI Z Shape AODD")	Description
2d_zsh_Blackpool_Buildings_002_R	Read GIS Zpts	Layer used to raise elevation of buildings to mean level of footprint sampled from filtered LIDAR.
2d_zsh_CommonsRoad_Buildings_002_R	Read GIS Zpts	Layer used to raise elevation of buildings on the Commons Road to mean level of footprint sampled from filtered LIDAR.
2d_zsh_Blackpool_N20_Flyover	Read GIS Zpts	Layer used to locally modify LiDAR and remove N20 flyover from model domain.
2d_z_BlackpoolSC_Wall_001_R	Read GIS Z Line THICK	Layer used to model wall in Blackpool Shopping Centre car-park.
2d_z_BlackpoolSC_Wall_001_P	Read GIS Z Line THICK	Layer used to model wall in Blackpool Shopping Centre car-park.

3.3 Other Data Layers

All remaining layers included in the model are summarised here.

Layer name	Command (e.g. "Read MI Z Shape AODD")	Description
1d_nd_Blackpool_007_P	Read GIS ISIS Network	Layer is used to locate position of all 1D ISIS node labels on all watercourses.
1d_nd_Blackpool_Wall_Gaps_001_P	Read GIS ISIS Network	Layer is used to locate position of openings in the railings at Blackpool Church.
1d_nwk_Blackpool_007_L	Read GIS ISIS Network	Layer is used to define the channel location in the 1D domain.

3.4 Bed and Floodplain Resistance

Approach to building bed and floodplain resistance	Within the 2D model, roughness values have been specified based upon land-use. This was incorporated into the model via material GIS layers (titled below) and *.tmf file. Land use has been defined based upon OSi NTF data and specified in a .mat layer included within the TuFLOW model. The roughness values used for each land use are given below.		
Material Layer Name	Material layers are included in the following order so the earliest layers are overwritten by the later layers. Material_1_General_Natural_Surfaces.shp Material_5_Roads_and_Tracks_and_Paths.shp 2d_mat_Buildings_Entire_001.shp 2d_mat_Stability_Patch_001_R.shp		
Manning's roughness coefficients n used	Land Cover Category	Land Type	Manning's n
	1	General Natural Surfaces	0.040
	2	Buildings	0.300
	3	Inland Water	0.035
	5	Roads Tracks and Paths	0.015
	7	Non-coniferous Woodland	0.070
	9	Coniferous Trees	0.100
	10	General Manmade Surfaces	0.017
	12	Glass Houses	0.200
	13	Rock	0.050
	14	Mixed Vegetation	0.080
	98	Unknown Background Surfaces	0.050
	99	Stability Patches	0.500

4 Model runs

4.1 Existing risk runs

Describe the flow hydrograph used and what this is based on.	The flow hydrograph is the symmetrical hydrograph of the FSR unit.
Model start time (hrs)	0
Model run time (hrs)	23
CPU time (hrs)	2.5 hours on standard dual core PC
Initial conditions files (ISIS and TuFLOW)	ISIS from DAT file TuFLOW domain starts dry.
Results save interval (ISIS and TuFLOW)	ISIS – every 5 mins TuFLOW – every 30 minutes
Map save interval (TuFLOW)	TuFLOW – every 30 minutes
PO save interval (TuFLOW)	N/A
Have 1D-2D fluxes been recorded as additional (zzx) results files?	Yes
Map Save Options (TuFLOW)	Depth, velocity, water level and flood hazard
Discuss any ISIS parameters that have been changed from default settings.	None
Discuss any TuFLOW parameters that have been changed from default settings.	None
ISIS data file names	Damages Model June 2015.dat
ISIS event file names	June2015_Q2.ief June2015_Q5.ief June2015_Q10.ief June2015_Q20.ief June2015_Q50.ief June2015_Q100.ief June2015_Q200.ief June2015_Q1000.ief
TuFLOW control file names	June2015_Q2_Damages.tcf June2015_Q5_Damages.tcf June2015_Q10_Damages.tcf June2015_Q20_Damages.tcf June2015_Q50_Damages.tcf June2015_Q100_Damages.tcf June2015_Q200_Damages.tcf June2015_Q1000_Damages.tcf
Summary of any other specific modifications for this group of models.	None

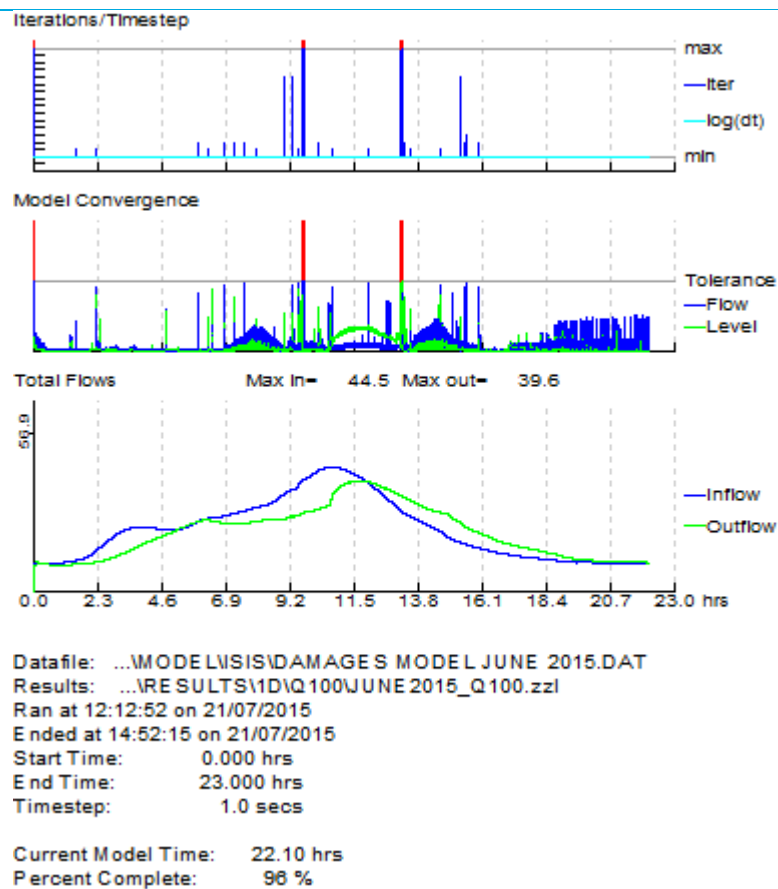
5 Model results

5.1 Summary of 1% AEP existing risk model stability

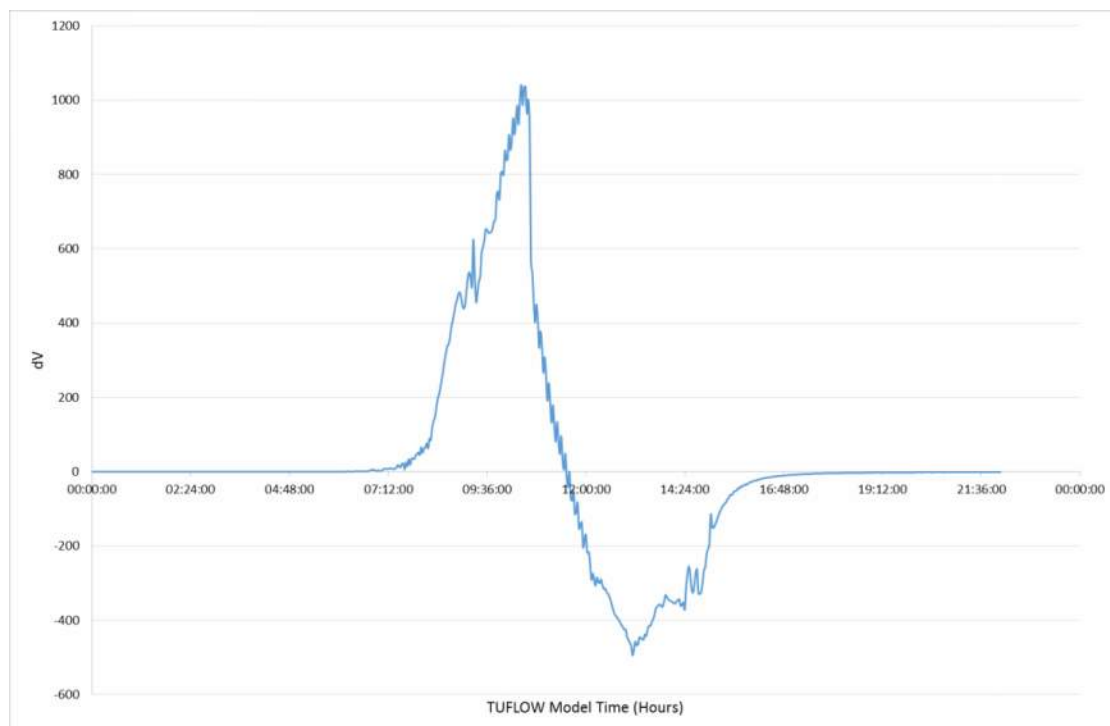
Check	Yes/No	Comments
Is there any non convergence in the ISIS model? If yes where and what steps have been taken to minimise it?	Yes	The peaks of non-convergence (in red) are associated with the change in flow modes at a Dulux Access Bridge. Orifice flow has been turned on in ISIS and sections trimmed appropriately to the 1D domain.
Are there any warnings and/or checks generated by the TuFLOW model? If yes how many, to what do they refer, and what if any impact do they have on model results?	No	
Does the plot of dV indicate any periods of instability?	Yes	The spikes in the dV plot are consistent with the periods of non-convergence in ISIS. DV Plot is provided below.
Has the ISIS additional output 2D flow been generated? If yes does this provide any information on localised areas of instability across the ISIS-TuFLOW domain boundaries?	Yes	1D-2D flux data is plotted below.

5.1.1 Summary of run Information

ISIS Run Time Plot

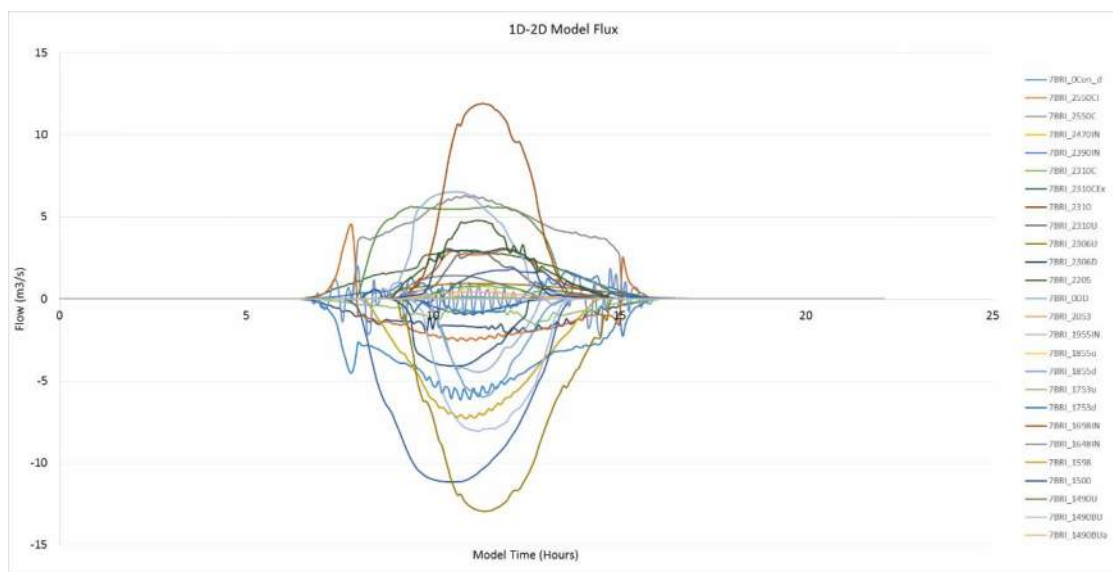


TuFLOW DV



This graph shows the change in volume of water in the 2D domain and its direction of travel (i.e. from/into the 1D domain).

1D-2D Model Flux



This graph shows the quantity of flow spilling over the HX line at each cross-section from the 1D channel into the 2D domain.
A smooth curve indicates reasonable model health.

Appendices

A Hydraulic Model Node Locations