

Appendix B Surface Water & Attenuation Calculations

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
SMH 1.520	Manhole	724394.428	674332.909	3.261	1.241	2.020	Circular	1.350
SMH 1.510	Manhole	724359.329	674363.297	3.966	1.810	2.156	Circular	1.350
SMH 1.500	Manhole	724358.336	674364.459	4.008	1.837	2.171	Circular	1.500
SMH 22.160	Manhole	724342.223	674364.853	4.812	2.485	2.327	Circular	1.350
SMH 22.150	Manhole	724328.501	674361.497	4.925	2.551	2.374	Circular	1.350
SMH 22.140	Manhole	724311.129	674360.161	4.986	2.554	2.432	Circular	1.350
SMH 22.130	Manhole	724299.608	674361.019	5.027	2.556	2.471	Circular	1.350
SMH 22.120	Manhole	724287.446	674363.459	5.077	2.565	2.512	Circular	1.350
SMH 22.110	Manhole	724268.560	674370.739	5.169	2.590	2.579	Circular	1.350
SMH 22.100	Manhole	724248.348	674383.456	5.257	2.448	2.809	Circular	1.200
SMH 22.090	Manhole	724235.145	674398.781	5.416	2.506	2.910	Circular	1.200
SMH 22.080	Manhole	724227.908	674410.215	5.532	2.555	2.977	Circular	1.200
SMH 22.060	Manhole	724226.417	674418.401	5.618	2.599	3.019	Circular	1.350
SMH 23.000	Manhole	724206.196	674438.383	6.050	1.525	4.525	Circular	1.350
SMH 22.050	Manhole	724228.992	674434.872	5.830	2.727	3.103	Circular	1.350
SMH 22.040	Manhole	724255.998	674431.113	5.743	1.768	3.974	Circular	1.350
SMH 22.030	Manhole	724277.697	674431.548	5.806	1.724	4.083	Circular	1.350
SMH 22.020	Manhole	724297.645	674438.045	5.855	1.667	4.188	Circular	1.350
SMH 22.010	Manhole	724313.659	674440.127	5.912	1.568	4.343	Circular	1.350
SMH 22.000	Manhole	724337.040	674451.380	5.973	1.500	4.473	Circular	1.350
SMH 1.490	Manhole	724354.964	674370.076	4.780	2.499	2.281	Circular	1.500
SMH 1.480	Manhole	724368.611	674378.174	4.859	1.913	2.946	Circular	1.350
SMH 1.470	Manhole	724380.204	674387.938	4.937	1.839	3.098	Circular	1.350
SMH 1.460	Manhole	724388.366	674397.094	5.076	1.855	3.221	Circular	1.350
SMH 1.450	Manhole	724396.930	674410.034	5.092	1.716	3.376	Circular	1.350
SMH 1.440	Manhole	724402.749	674422.684	5.174	1.659	3.515	Circular	1.350
SMH 1.430	Manhole	724407.369	674438.533	5.542	1.862	3.680	Circular	1.350
SMH 1.420	Manhole	724410.776	674458.406	5.788	2.068	3.720	Circular	1.350
SMH 21.020	Manhole	724403.746	674470.596	5.862	1.668	4.194	Circular	1.350
SMH 21.010	Manhole	724387.627	674465.102	5.835	1.556	4.279	Circular	1.350
SMH 21.000	Manhole	724350.004	674452.778	5.977	1.500	4.477	Circular	1.350
SMH 1.410	Manhole	724411.562	674470.634	5.892	2.147	3.745	Circular	1.350
SMH 1.400	Manhole	724411.187	674486.526	6.099	2.322	3.777	Circular	1.350
SMH 1.390	Manhole	724409.387	674502.798	6.415	2.605	3.810	Circular	1.350
SMH 1.370	Manhole	724407.909	674510.611	6.570	2.744	3.826	Circular	1.500
SMH 18.130	Manhole	724420.926	674552.545	8.034	1.749	6.285	Circular	1.500
SMH 18.120	Manhole	724428.473	674557.298	8.314	1.850	6.464	Circular	1.500
SMH 18.110	Manhole	724433.868	674563.841	8.583	1.950	6.633	Circular	1.500
SMH 20.020	Manhole	724437.448	674600.134	9.833	1.742	8.091	Circular	1.350
SMH 20.010	Manhole	724428.555	674605.686	10.213	2.017	8.196	Circular	1.200
SMH 20.000	Manhole	724376.205	674662.315	12.927	2.625	10.302	Circular	1.350
SMH 18.100	Manhole	724446.448	674591.987	9.490	2.240	7.250	Circular	1.350
SMH 18.090	Manhole	724470.034	674610.439	10.270	2.421	7.849	Circular	1.350
SMH 18.080	Manhole	724480.550	674614.379	10.570	1.657	8.913	Circular	1.350
SMH 18.070	Manhole	724484.638	674618.204	10.728	1.703	9.025	Circular	1.350
SMH 18.060	Manhole	724489.941	674627.588	11.035	1.794	9.241	Circular	1.350
SMH 18.050	Manhole	724488.697	674635.852	11.270	1.862	9.408	Circular	1.350
SMH 18.040	Manhole	724450.083	674676.972	12.826	2.453	10.373	Circular	1.350
SMH 19.000	Manhole	724435.012	674738.097	14.451	1.650	12.801	Circular	1.350
SMH 18.030	Manhole	724412.542	674716.631	13.759	2.126	11.633	Circular	1.350
SMH 18.020	Manhole	724408.227	674718.856	13.868	1.540	12.328	Circular	1.350
SMH 18.010	Manhole	724403.365	674717.968	13.977	1.600	12.377	Circular	1.350
SMH 18.000	Manhole	724380.204	674695.873	14.630	1.933	12.697	Circular	1.200
SMH 1.360	Manhole	724398.669	674544.881	7.404	3.507	3.897	Circular	1.500
SMH 17.010	Manhole	724364.754	674561.031	8.879	2.416	6.463	Circular	1.350
SMH 17.000	Manhole	724346.406	674601.494	10.662	2.319	8.343	Circular	1.350
SMH 1.340	Manhole	724373.590	674536.545	7.377	2.942	4.435	Circular	1.500

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SMH 1.330	Manhole	724307.473	674514.374	7.799	3.225	4.574	Circular	1.500
SMH 16.030	Manhole	724292.960	674515.233	7.836	2.330	5.506	Circular	1.350
SMH 16.020	Manhole	724265.675	674505.850	8.255	2.075	6.180	Circular	1.350
SMH 16.010	Manhole	724253.218	674501.397	8.500	2.254	6.246	Circular	1.350
SMH 16.000	Manhole	724232.152	674504.474	8.938	1.698	7.240	Circular	1.350
SMH 1.320	Manhole	724301.380	674517.150	7.836	3.249	4.587	Circular	1.500
SMH 15.010	Manhole	724289.971	674588.242	10.468	1.463	9.005	Circular	1.350
SMH 15.000	Manhole	724360.291	674611.970	11.000	1.500	9.500	Circular	1.350
SMH 1.310	Manhole	724279.070	674584.249	10.407	2.980	7.427	Circular	1.500
SMH 1.300	Manhole	724273.451	674594.482	10.817	1.891	8.926	Circular	1.500
SMH 1.290	Manhole	724260.526	674630.645	12.389	2.695	9.694	Circular	1.500
SMH 14.030	Manhole	724312.737	674668.829	14.085	2.183	11.902	Circular	1.350
SMH 14.020	Manhole	724367.285	674686.937	14.598	2.409	12.189	Circular	1.350
SMH 14.010	Manhole	724375.503	674695.104	14.630	1.680	12.950	Circular	1.350
SMH 14.000	Manhole	724368.270	674715.335	15.553	2.388	13.165	Circular	1.350
SMH 1.280	Manhole	724255.779	674649.786	13.266	3.103	10.163	Circular	1.350
SMH 1.270	Manhole	724245.506	674680.534	14.566	2.216	12.350	Circular	1.350
SMH 1.260	Manhole	724230.134	674694.000	15.429	2.670	12.759	Circular	1.350
SMH 1.250	Manhole	724218.288	674698.981	16.082	3.066	13.016	Circular	1.350
SMH 1.240	Manhole	724212.607	674706.307	16.385	1.538	14.848	Circular	1.350
SMH 1.230	Manhole	724178.958	674732.452	18.168	2.255	15.913	Circular	1.350
SMH 1.220	Manhole	724172.701	674735.426	18.456	2.370	16.086	Circular	1.350
SMH 1.210	Manhole	724138.119	674762.326	20.215	3.034	17.181	Circular	1.350
SMH 1.200	Manhole	724132.452	674772.052	20.509	3.046	17.463	Circular	1.350
SMH 1.180	Manhole	724121.940	674784.107	20.923	3.060	17.863	Circular	1.350
SMH 13.060	Manhole	724081.940	674783.487	21.145	1.964	19.181	Circular	1.350
SMH 13.050	Manhole	724061.811	674801.938	22.203	2.472	19.731	Circular	1.200
SMH 13.040	Manhole	724050.298	674817.593	23.119	2.319	20.800	Circular	1.200
SMH 13.030	Manhole	724026.879	674848.904	24.966	3.092	21.874	Circular	1.200
SMH 13.020	Manhole	723997.764	674861.779	26.224	2.121	24.103	Circular	1.200
SMH 13.000	Manhole	724022.941	674918.295	27.669	1.762	25.907	Circular	1.350
SMH 13.010	Manhole	724001.467	674870.642	26.462	2.167	24.295	Circular	1.350
SMH 1.170	Manhole	724105.289	674801.961	21.557	3.084	18.473	Circular	1.500
SMH 1.160	Manhole	724122.322	674816.089	22.165	2.262	19.903	Circular	1.500
SMH 10.080	Manhole	724105.225	674853.525	23.762	2.385	21.377	Circular	1.200
SMH 12.000	Manhole	724122.088	674910.750	25.895	1.966	23.930	Circular	1.350
SMH 10.060	Manhole	724086.810	674878.138	24.983	2.350	22.633	Circular	1.200
SMH 11.010	Manhole	724095.610	674920.328	26.240	1.830	24.410	Circular	1.350
SMH 11.000	Manhole	724116.951	674950.745	27.067	1.640	25.427	Circular	1.350
SMH 10.050	Manhole	724078.751	674890.316	25.548	2.003	23.545	Circular	1.350
SMH 10.040	Manhole	724070.670	674896.684	25.850	2.127	23.723	Circular	1.350
SMH 10.030	Manhole	724024.000	674923.000	27.796	2.884	24.912	Circular	1.350
SMH 10.020	Manhole	724022.581	674929.063	27.956	2.178	25.778	Circular	1.200
SMH 10.000	Manhole	724050.588	674981.123	28.932	1.882	27.050	Circular	1.350
SMH 10.010	Manhole	724024.151	674934.680	27.990	2.154	25.836	Circular	1.200
SMH 1.150	Manhole	724131.284	674824.944	22.515	2.486	20.029	Circular	1.500
SMH 1.140	Manhole	724166.884	674858.283	23.690	3.173	20.517	Circular	1.500
SMH431.000	Manhole	724231.452	674917.788	25.080	2.017	23.063	Circular	1.350
SMH 8.000	Manhole	724216.335	674985.222	28.088	1.975	26.113	Circular	1.200
SMH 8.010	Manhole	724241.998	674956.834	26.284	1.720	24.564	Circular	1.350
SMH 9.040	Manhole	724257.983	674971.994	26.998	1.614	25.384	Circular	1.350
SMH 9.030	Manhole	724266.788	674981.641	27.449	1.739	25.710	Circular	1.200
SMH 9.020	Manhole	724271.345	674989.977	27.758	1.810	25.948	Circular	1.200
SMH 9.010	Manhole	724274.140	675001.526	28.160	1.915	26.245	Circular	1.200
SMH 9.000	Manhole	724274.384	675010.648	28.466	1.993	26.473	Circular	1.200
SMH351.000	Manhole	724254.644	674943.394	25.677	2.280	23.397	Circular	1.350
SMH 6.040	Manhole	724264.135	674951.978	25.881	2.349	23.533	Circular	1.200
SMH 6.030	Manhole	724278.338	674959.816	26.143	2.438	23.705	Circular	1.200
SMH 6.010	Manhole	724316.952	674959.503	26.784	2.056	24.728	Circular	1.200

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SMH 6.000	Manhole	724331.552	674950.980	27.182	2.009	25.173	Circular	1.200
SMH 6.020	Manhole	724300.319	674962.705	26.480	2.015	24.465	Circular	1.200
SMH 7.020	Manhole	724298.832	674973.558	26.690	1.875	24.816	Circular	1.200
SMH 7.010	Manhole	724289.668	675011.700	28.382	2.242	26.139	Circular	1.200
SMH 7.000	Manhole	724277.644	675030.439	29.358	2.477	26.881	Circular	1.200
SMH 1.130	Manhole	724197.700	674887.074	24.464	2.101	22.363	Circular	1.500
SMH 1.120	Manhole	724192.128	674893.335	24.489	2.009	22.480	Circular	1.350
SMH 1.110	Manhole	724156.833	674931.729	25.977	3.236	22.741	Circular	1.350
SMH 5.040	Manhole	724132.118	674953.379	26.938	1.909	25.029	Circular	1.200
SMH 5.030	Manhole	724108.904	674969.709	27.659	2.346	25.313	Circular	1.200
SMH 5.020	Manhole	724094.611	674978.253	28.126	1.856	26.270	Circular	1.200
SMH 5.010	Manhole	724065.328	674992.600	29.117	2.521	26.596	Circular	1.200
SMH 5.000	Manhole	724040.606	675001.780	29.784	1.513	28.271	Circular	1.200
SMH 1.090	Manhole	724148.137	674939.693	26.353	3.553	22.800	Circular	1.350
SMH 1.080	Manhole	724208.005	674994.040	28.622	3.625	24.997	Circular	1.350
SMH 1.070	Manhole	724203.803	674997.697	28.776	2.138	26.639	Circular	1.350
SMH 3.030	Manhole	724190.643	675006.981	29.178	2.203	26.975	Circular	1.200
SMH 3.010	Manhole	724212.965	675050.999	30.626	1.563	29.063	Circular	1.350
SMH 3.000	Manhole	724219.980	675071.681	31.270	1.479	29.791	Circular	1.350
SMH 3.020	Manhole	724207.869	675040.684	30.295	2.700	27.595	Circular	1.200
SMH 4.000	Manhole	724240.299	675051.964	30.313	1.500	28.813	Circular	1.350
SMH 1.060	Manhole	724188.887	675001.195	29.145	2.200	26.945	Circular	1.350
SMH 1.050	Manhole	724172.388	675005.980	29.548	1.701	27.847	Circular	1.200
SMH 1.040	Manhole	724143.331	675025.169	30.376	2.355	28.021	Circular	1.200
SMH 2.010	Manhole	724132.093	675037.681	30.801	2.477	28.324	Circular	1.200
SMH 2.000	Manhole	724160.445	675092.296	33.651	1.975	31.676	Circular	1.200
SMH 1.020	Manhole	724129.852	675033.362	30.831	2.731	28.100	Circular	1.200
SMH 1.010	Manhole	724117.220	675040.637	31.194	2.333	28.861	Circular	1.350
SMH 1.000	Manhole	724070.201	675062.543	32.384	3.419	28.965	Circular	1.350
SMH 1.350	Manhole	724375.982	674537.343	7.365	2.935	4.430	Circular	1.350
SMH 1.380	Manhole	724408.271	674508.698	6.533	2.711	3.822	Circular	1.350
SMH 22.070	Manhole	724226.754	674416.553	5.607	2.597	3.010	Circular	1.200
SMH 1.190	Manhole	724123.168	674782.698	20.880	3.064	17.816	Circular	1.350
SMH 13.070	Manhole	724083.410	674784.650	21.167	1.995	19.172	Circular	1.350
SMH 10.070	Manhole	724087.897	674876.686	24.915	2.300	22.615	Circular	1.200
SMH 1.100	Manhole	724149.622	674938.333	26.296	3.506	22.790	Circular	1.200
SMH 1.030	Manhole	724131.430	675032.403	30.785	2.694	28.091	Circular	1.200

Name	Lock
SMH 1.520	None
SMH 1.510	None
SMH 1.500	None
SMH 22.160	None
SMH 22.150	None
SMH 22.140	None
SMH 22.130	None
SMH 22.120	None
SMH 22.110	None
SMH 22.100	None
SMH 22.090	None
SMH 22.080	None
SMH 22.060	None
SMH 23.000	None
SMH 22.050	None
SMH 22.040	None
SMH 22.030	None
SMH 22.020	None
SMH 22.010	None
SMH 22.000	None
SMH 1.490	None

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SMH 1.480	None
SMH 1.470	None
SMH 1.460	None
SMH 1.450	None
SMH 1.440	None
SMH 1.430	None
SMH 1.420	None
SMH 21.020	None
SMH 21.010	None
SMH 21.000	None
SMH 1.410	None
SMH 1.400	None
SMH 1.390	None
SMH 1.370	None
SMH 18.130	None
SMH 18.120	None
SMH 18.110	None
SMH 20.020	None
SMH 20.010	None
SMH 20.000	None
SMH 18.100	None
SMH 18.090	None
SMH 18.080	None
SMH 18.070	None
SMH 18.060	None
SMH 18.050	None
SMH 18.040	None
SMH 19.000	None
SMH 18.030	None
SMH 18.020	None
SMH 18.010	None
SMH 18.000	None
SMH 1.360	None
SMH 17.010	None
SMH 17.000	None
SMH 1.340	None
SMH 1.330	None
SMH 16.030	None
SMH 16.020	None
SMH 16.010	None
SMH 16.000	None
SMH 1.320	None
SMH 15.010	None
SMH 15.000	None
SMH 1.310	None
SMH 1.300	None
SMH 1.290	None
SMH 14.030	None
SMH 14.020	None
SMH 14.010	None
SMH 14.000	None
SMH 1.280	None
SMH 1.270	None
SMH 1.260	None
SMH 1.250	None
SMH 1.240	None
SMH 1.230	None
SMH 1.220	None
SMH 1.210	None

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SMH 1.200	None
SMH 1.180	None
SMH 13.060	None
SMH 13.050	None
SMH 13.040	None
SMH 13.030	None
SMH 13.020	None
SMH 13.000	None
SMH 13.010	None
SMH 1.170	None
SMH 1.160	None
SMH 10.080	None
SMH 12.000	None
SMH 10.060	None
SMH 11.010	None
SMH 11.000	None
SMH 10.050	None
SMH 10.040	None
SMH 10.030	None
SMH 10.020	None
SMH 10.000	None
SMH 10.010	None
SMH 1.150	None
SMH 1.140	None
SMH431.000	None
SMH 8.000	None
SMH 8.010	None
SMH 9.040	None
SMH 9.030	None
SMH 9.020	None
SMH 9.010	None
SMH 9.000	None
SMH351.000	None
SMH 6.040	None
SMH 6.030	None
SMH 6.010	None
SMH 6.000	None
SMH 6.020	None
SMH 7.020	None
SMH 7.010	None
SMH 7.000	None
SMH 1.130	None
SMH 1.120	None
SMH 1.110	None
SMH 5.040	None
SMH 5.030	None
SMH 5.020	None
SMH 5.010	None
SMH 5.000	None
SMH 1.090	None
SMH 1.080	None
SMH 1.070	None
SMH 3.030	None
SMH 3.010	None
SMH 3.000	None
SMH 3.020	None
SMH 4.000	None
SMH 1.060	None
SMH 1.050	None

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

DONNACHADH O'BRIEN
 & ASSOCIATES CONSULTING ENGINEERS

SMH 1.040	None
SMH 2.010	None
SMH 2.000	None
SMH 1.020	None
SMH 1.010	None
SMH 1.000	None
SMH 1.350	None
SMH 1.380	None
SMH 22.070	None
SMH 1.190	None
SMH 13.070	None
SMH 10.070	None
SMH 1.100	None
SMH 1.030	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 1.520	Inlet	1.051	(None)	No Restriction
SMH 1.510	Inlet	1.050	(None)	No Restriction
SMH 1.500	Inlet	1.049	(None)	No Restriction
	Inlet (1)	44.000	(None)	No Restriction
SMH 22.160	Inlet	41.015	(None)	No Restriction
	Inlet (1)	Catchment Area (16)	(None)	No Restriction
SMH 22.150	Inlet	487.06m - 24.014 263.23m - 24.014 249.05m - 24.014 41.014	(None)	No Restriction
	Inlet (1)	Catchment Area (15)	(None)	No Restriction
SMH 22.140	Inlet	41.013 207.31m - 24.013 129.84m - 24.013 125.03m - 24.013	(None)	No Restriction
	Inlet (1)	Catchment Area (14)	(None)	No Restriction
SMH 22.130	Inlet	41.012	(None)	No Restriction
	Inlet (1)	Catchment Area (13)	(None)	No Restriction
SMH 22.120	Inlet	41.011 299.16m - 24.011 124.28m - 24.011 124.39m - 24.011	(None)	No Restriction
	Inlet (1)	Catchment Area (12)	(None)	No Restriction
SMH 22.110	Inlet	41.010 396.64m - 24.010 254.83m - 24.010 249.92m - 24.010	(None)	No Restriction
	Inlet (1)	Catchment Area (11)	(None)	No Restriction
SMH 22.100	Inlet	283.04m - 24.009 134.87m - 24.009 125.56m - 24.009 41.009	(None)	No Restriction
	Inlet (1)	Catchment Area (10)	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 22.090	Inlet	41.008	(None)	No Restriction
SMH 22.080	Inlet	41.007	(None)	No Restriction
SMH 22.060	Inlet	571.80m - 24.006 255.05m - 24.006 125.51m - 24.006 128.07m - 24.006 41.005	(None)	No Restriction
	Inlet (1)	43.000	(None)	No Restriction
SMH 23.000	Inlet	346.86m - 25.000 256.98m - 25.000	(None)	No Restriction
SMH 22.050	Inlet	42.000 41.004 184.48m - 24.005 305.94m - 24.005	(None)	No Restriction
SMH 22.040	Inlet	392.04m - 24.004 232.16m - 24.004 41.003	(None)	No Restriction
SMH 22.030	Inlet	41.002 589.62m - 24.003 104.66m - 24.003 281.81m - 24.003 91.82m - 24.003 305.93m - 24.003	(None)	No Restriction
SMH 22.020	Inlet	41.001 443.41m - 24.002 231.28m - 24.002 285.36m - 24.002 172.17m - 24.002 123.93m - 24.002	(None)	No Restriction
SMH 22.010	Inlet	642.78m - 24.001 300.48m - 24.001 210.27m - 24.001 163.87m - 24.001 175.47m - 24.001 41.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by:	Checked by:	Approved By:	
	MJC	MJC	DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 22.000	Inlet	935.44m - 24.000 608.34m - 24.000 331.55m - 24.000 163.62m - 24.000 172.25m - 24.000 290.98m - 24.000	(None)	No Restriction
SMH 1.490	Inlet	41.016 1.048	(None)	No Restriction
	Inlet (1)	Catchment Area (17)	(None)	No Restriction
SMH 1.480	Inlet	1.047	(None)	No Restriction
	Inlet (1)	Catchment Area (2)	(None)	No Restriction
SMH 1.470	Inlet	394.74m - 1.044 258.81m - 1.044 249.75m - 1.044 1.046	(None)	No Restriction
SMH 1.460	Inlet	1.045	(None)	No Restriction
	Inlet (1)	Catchment Area (3)	(None)	No Restriction
SMH 1.450	Inlet	1.044 403.66m - 1.042 121.93m - 1.042 125.61m - 1.042	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
SMH 1.440	Inlet	1.043	(None)	No Restriction
	Inlet (1)	Catchment Area (5)	(None)	No Restriction
SMH 1.430	Inlet	498.57m - 1.040 193.42m - 1.040 188.45m - 1.040 124.80m - 1.040 1.042	(None)	No Restriction
	Inlet (1)	Catchment Area (6)	(None)	No Restriction
SMH 1.420	Inlet	1.041	(None)	No Restriction
	Inlet (1)	Catchment Area (7)	(None)	No Restriction
SMH 21.020	Inlet	40.001	(None)	No Restriction
SMH 21.010	Inlet	293.96m - 23.001 207.56m - 23.001 183.73m - 23.001 40.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 21.000	Inlet	929.20m - 23.000 116.57m - 23.000 461.52m - 23.000 91.81m - 23.000 115.59m - 23.000 290.98m - 23.000	(None)	No Restriction
SMH 1.410	Inlet	40.002 1.040 317.72m - 1.038 126.04m - 1.038	(None)	No Restriction
	Inlet (1)	Catchment Area (8)	(None)	No Restriction
SMH 1.400	Inlet	95.66m - 1.037 1.039	(None)	No Restriction
	Inlet (1)	Catchment Area (9)	(None)	No Restriction
SMH 1.390	Inlet	134.87m - 1.036 1.038	(None)	No Restriction
	Inlet (1)	Catchment Area (10)	(None)	No Restriction
SMH 1.370	Inlet	1.036 44.78m - 1.035 276.49m - 1.035	(None)	No Restriction
	Inlet (1)	39.000	(None)	No Restriction
SMH 18.130	Inlet	130.60m - 20.013 181.10m - 20.013 447.35m - 20.013 34.005	(None)	No Restriction
	Inlet (1)	38.000	(None)	No Restriction
SMH 18.120	Inlet	34.004 129.76m - 20.012 264.88m - 20.012 152.90m - 20.012	(None)	No Restriction
SMH 18.110	Inlet	34.003	(None)	No Restriction
SMH 20.020	Inlet	34.001 83.99m - 22.002 127.50m - 22.002 63.59m - 22.002	(None)	No Restriction
SMH 20.010	Inlet	34.000 53.12m - 22.001 186.72m - 22.001 68.44m - 22.001	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 20.000	Inlet	336.66m - 22.000 1 (2) 399.69m - 22.000 403.00m - 22.000 859.71m - 22.000 811.43m - 22.000 134.34m - 22.000 1577.03m - 22.000	(None)	No Restriction
SMH 18.100	Inlet	288.79m - 20.010 35.009 34.002	(None)	No Restriction
SMH 18.090	Inlet	214.15m - 20.009 254.19m - 20.009 453.11m - 20.009 35.008	(None)	No Restriction
	Inlet (1)	37.000	(None)	No Restriction
SMH 18.080	Inlet	83.83m - 20.008 76.92m - 20.008 140.63m - 20.008 35.007	(None)	No Restriction
SMH 18.070	Inlet	35.006	(None)	No Restriction
SMH 18.060	Inlet	35.005 468.41m - 20.006 64.68m - 20.006 83.60m - 20.006	(None)	No Restriction
SMH 18.050	Inlet	225.15m - 20.005 66.44m - 20.005 35.004	(None)	No Restriction
SMH 18.040	Inlet	1294.62m - 20.004 448.50m - 20.004 216.52m - 20.004 646.98m - 20.004 427.11m - 20.004 622.92m - 20.004 135.21m - 20.004 35.003	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 19.000	Inlet	388.02m - 21.000 307.96m - 21.000 333.75m - 21.000	(None)	No Restriction
SMH 18.030	Inlet	36.000 1226.81m - 20.003 393.73m - 20.003 469.30m - 20.003 364.87m - 20.003 390.55m - 20.003 35.002	(None)	No Restriction
SMH 18.020	Inlet	35.001	(None)	No Restriction
SMH 18.010	Inlet	35.000	(None)	No Restriction
SMH 18.000	Inlet	676.53m - 20.000 156.50m - 20.000 162.11m - 20.000 182.34m - 20.000 214.03m - 20.000	(None)	No Restriction
SMH 1.360	Inlet	114.64m - 1.034 44.10m - 1.034 481.88m - 1.034 34.006 1.035	(None)	No Restriction
	Inlet (1)	Catchment Area (11)	(None)	No Restriction
SMH 17.010	Inlet	31.000 250.20m - 19.001	(None)	No Restriction
SMH 17.000	Inlet	794.81m - 19.000 151.56m - 19.000 149.70m - 19.000 145.80m - 19.000 524.27m - 19.000	(None)	No Restriction
SMH 1.340	Inlet	1.033 162.19m - 1.033 150.27m - 1.033 102.00m - 1.033 162.53m - 1.033 229.71m - 1.033 106.73m - 1.033 31.001	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name		Incoming Item(s)	Bypass Destination	Capacity Type
	Inlet (1)			(None)	No Restriction
	Inlet (2)			(None)	No Restriction
SMH 1.330	Inlet		134.62m - 1.032 132.22m - 1.032 135.72m - 1.032 136.69m - 1.032 136.42m - 1.032 690.83m - 1.032 1430.83m - 1.032 1.032	(None)	No Restriction
SMH 16.030	Inlet		30.002 122.36m - 18.003 134.99m - 18.003	(None)	No Restriction
SMH 16.020	Inlet		30.001 154.08m - 18.002 155.77m - 18.002 417.15m - 18.002 671.75m - 18.002 336.93m - 18.002	(None)	No Restriction
SMH 16.010	Inlet		138.64m - 18.001 68.90m - 18.001 271.78m - 18.001 30.000	(None)	No Restriction
SMH 16.000	Inlet		222.75m - 18.000 264.08m - 18.000 321.30m - 18.000 87.10m - 18.000 133.80m - 18.000 260.16m - 18.000 269.47m - 18.000	(None)	No Restriction
SMH 1.320	Inlet		1.031 175.26m - 1.031 30.003	(None)	No Restriction
SMH 15.010	Inlet		29.000 69.41m - 17.001	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
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	MJC	MJC	DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 15.000	Inlet	754.01m - 17.000 138.44m - 17.000 147.95m - 17.000 142.32m - 17.000 149.69m - 17.000 753.55m - 17.000	(None)	No Restriction
SMH 1.310	Inlet	508.82m - 1.030 149.69m - 1.030 149.69m - 1.030 150.99m - 1.030 163.92m - 1.030 1177.33m - 1.030 1.030 29.001	(None)	No Restriction
SMH 1.300	Inlet	1.029	(None)	No Restriction
SMH 1.290	Inlet	1.028 597.81m - 1.028 378.92m - 1.028 134.36m - 1.028 322.10m - 1.028 326.43m - 1.028 1156.81m - 1.028	(None)	No Restriction
SMH 14.030	Inlet	251.21m - 16.003 348.31m - 16.003 1102.75m - 16.003 134.33m - 16.003 334.17m - 16.003 268.28m - 16.003 28.002	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
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	MJC	MJC	DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 14.020	Inlet	110.41m - 16.002 488.13m - 16.002 1111.44m - 16.002 375.07m - 16.002 394.24m - 16.002 135.17m - 16.002 335.42m - 16.002 28.001	(None)	No Restriction
SMH 14.010	Inlet	28.000 81.94m - 16.001 140.08m - 16.001	(None)	No Restriction
SMH 14.000	Inlet	177.20m - 16.000 241.51m - 16.000 148.85m - 16.000	(None)	No Restriction
SMH 1.280	Inlet	28.003 380.15m - 1.027 199.86m - 1.027 494.58m - 1.027 1.027	(None)	No Restriction
SMH 1.270	Inlet	419.27m - 1.026 149.69m - 1.026 440.18m - 1.026 1.026	(None)	No Restriction
SMH 1.260	Inlet	302.07m - 1.025 151.09m - 1.025 447.51m - 1.025 1.025	(None)	No Restriction
SMH 1.250	Inlet	157.24m - 1.024 456.07m - 1.024 1 (1) 1.024	(None)	No Restriction
SMH 1.240	Inlet	1.023 144.23m - 1.023	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 1.230	Inlet	1.022 668.11m - 1.022 1148.95m - 1.022 262.83m - 1.022 149.69m - 1.022 320.00m - 1.022 105.66m - 1.022 110.01m - 1.022	(None)	No Restriction
SMH 1.220	Inlet	1.021 225.45m - 1.021	(None)	No Restriction
SMH 1.210	Inlet	605.63m - 1.020 264.08m - 1.020 336.67m - 1.020 163.28m - 1.020 299.01m - 1.020 710.90m - 1.020 1.020	(None)	No Restriction
SMH 1.200	Inlet	140.28m - 1.019 284.57m - 1.019 1310.82m - 1.019 1.019	(None)	No Restriction
SMH 1.180	Inlet	1.017 137.50m - 1.018 262.86m - 1.018 427.16m - 1.018	(None)	No Restriction
	Inlet (1)	24.000	(None)	No Restriction
	Inlet (2)	25.000	(None)	No Restriction
	Inlet (3)	26.000	(None)	No Restriction
	Inlet (4)	27.000	(None)	No Restriction
SMH 13.060	Inlet	376.38m - 14.007 22.005	(None)	No Restriction
	Inlet (1)	23.000	(None)	No Restriction
SMH 13.050	Inlet	189.01m - 14.006 22.004	(None)	No Restriction
	Inlet (1)	60.21m - 14.007	(None)	No Restriction
SMH 13.040	Inlet	22.003 123.22m - 14.005 143.48m - 14.005 184.16m - 14.005	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 13.030	Inlet	561.09m - 14.004 162.81m - 14.004 161.39m - 14.004 120.45m - 14.004 612.94m - 14.004 22.002	(None)	No Restriction
SMH 13.020	Inlet	201.50m - 14.003 22.001	(None)	No Restriction
SMH 13.000	Inlet	310.31m - 15.000 471.91m - 15.000 317.88m - 15.000 883.79m - 15.000	(None)	No Restriction
SMH 13.010	Inlet	22.000	(None)	No Restriction
SMH 1.170	Inlet	324.97m - 1.017 1.016 22.007	(None)	No Restriction
	Inlet (1)	125.34m - 14.007	(None)	No Restriction
	Inlet (2)	260.35m - 14.007	(None)	No Restriction
	Inlet (3)	226.90m - 14.007	(None)	No Restriction
SMH 1.160	Inlet	44.98m - 1.016 1.015	(None)	No Restriction
SMH 10.080	Inlet	235.31m - 10.008 276.94m - 10.008 611.98m - 10.008 17.007	(None)	No Restriction
SMH 12.000	Inlet	740.79m - 13.000 151.48m - 13.000 143.05m - 13.000 142.46m - 13.000	(None)	No Restriction
SMH 10.060	Inlet	19.000 436.55m - 10.007 426.22m - 10.007 162.81m - 10.007 256.64m - 10.007 17.005	(None)	No Restriction
	Inlet (1)	20.000	(None)	No Restriction
	Inlet (2)	21.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 11.010	Inlet	18.000 286.92m - 12.001 282.63m - 12.001 421.16m - 12.001	(None)	No Restriction
SMH 11.000	Inlet	497.60m - 12.000 451.90m - 12.000 452.21m - 12.000	(None)	No Restriction
SMH 10.050	Inlet	142.76m - 10.006 81.61m - 10.006 195.53m - 10.006 18.001 17.004	(None)	No Restriction
SMH 10.040	Inlet	17.003 76.94m - 10.005 132.58m - 10.005	(None)	No Restriction
SMH 10.030	Inlet	144.50m - 10.004 142.47m - 10.004 682.61m - 10.004 17.002	(None)	No Restriction
SMH 10.020	Inlet	17.001	(None)	No Restriction
SMH 10.000	Inlet	283.22m - 11.000 143.37m - 11.000 284.96m - 11.000 675.69m - 11.000 1397.01m - 11.000	(None)	No Restriction
SMH 10.010	Inlet	17.000	(None)	No Restriction
SMH 1.150	Inlet	1.014 17.008 20.77m - 1.015	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 1.140	Inlet	36.87m - 1.014 197.78m - 1.014 172.05m - 1.014 268.11m - 1.014 65.40m - 1.014 206.85m - 1.014 249.41m - 1.014 876.57m - 1.014 409.65m - 1.014 1.013	(None)	No Restriction
SMH431.000	Inlet	11.006 86.19m - 6.007 77.29m - 6.007 65.51m - 6.007 742.70m - 6.007 106.67m - 6.007 299.92m - 6.007	(None)	No Restriction
SMH 8.000	Inlet	607.06m - 9.000 140.25m - 9.000 208.08m - 9.000	(None)	No Restriction
SMH 8.010	Inlet	14.005 128.14m - 8.005 13.000	(None)	No Restriction
	Inlet (1)	16.000	(None)	No Restriction
SMH 9.040	Inlet	181.67m - 8.004 146.96m - 8.004 153.16m - 8.004 725.66m - 8.004 14.004	(None)	No Restriction
SMH 9.030	Inlet	14.003 98.91m - 8.003 93.19m - 8.003 154.44m - 8.003	(None)	No Restriction
	Inlet (1)	15.000	(None)	No Restriction
SMH 9.020	Inlet	14.002	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 9.010	Inlet	14.001 304.35m - 8.001 284.06m - 8.001 91.44m - 8.001	(None)	No Restriction
SMH 9.000	Inlet	153.16m - 8.000 158.33m - 8.000	(None)	No Restriction
	Inlet (1)	14.000	(None)	No Restriction
SMH351.000	Inlet	58.04m - 6.006 179.48m - 6.006 673.76m - 6.006 13.001 11.005	(None)	No Restriction
SMH 6.040	Inlet	11.004 76.35m - 6.005	(None)	No Restriction
SMH 6.030	Inlet	11.003 287.28m - 6.004	(None)	No Restriction
SMH 6.010	Inlet	206.57m - 7.001 12.000	(None)	No Restriction
SMH 6.000	Inlet	223.20m - 7.000	(None)	No Restriction
SMH 6.020	Inlet	12.001 362.67m - 6.003 11.002	(None)	No Restriction
SMH 7.020	Inlet	11.001	(None)	No Restriction
SMH 7.010	Inlet	406.82m - 6.001 11.000	(None)	No Restriction
SMH 7.000	Inlet	329.06m - 6.000	(None)	No Restriction
SMH 1.130	Inlet	11.007 47.25m - 1.013 362.83m - 1.013 23.32m - 1.013 148.90m - 1.013 1.012	(None)	No Restriction
SMH 1.120	Inlet	1.011	(None)	No Restriction
SMH 1.110	Inlet	452.64m - 1.011 261.23m - 1.011 267.16m - 1.011 276.22m - 1.011 1 1105.96m - 1.011 1.010	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 5.040	Inlet	8.003 70.72m - 5.006 160.06m - 5.006	(None)	No Restriction
SMH 5.030	Inlet	8.002 217.98m - 5.005 401.65m - 5.005 268.20m - 5.005	(None)	No Restriction
SMH 5.020	Inlet	171.32m - 5.004 317.29m - 5.004 266.14m - 5.004 8.001	(None)	No Restriction
SMH 5.010	Inlet	417.86m - 5.003 588.35m - 5.003 273.19m - 5.003 8.000	(None)	No Restriction
SMH 5.000	Inlet	293.49m - 5.002 493.42m - 5.002 273.19m - 5.002	(None)	No Restriction
SMH 1.090	Inlet	166.84m - 1.010 1.008 8.004	(None)	No Restriction
	Inlet (1)	9.000	(None)	No Restriction
	Inlet (2)	10.000	(None)	No Restriction
SMH 1.080	Inlet	86.08m - 1.009 742.12m - 1.009 153.74m - 1.009 286.19m - 1.009 153.04m - 1.009 142.76m - 1.009 1051.57m - 1.009 1.007	(None)	No Restriction
SMH 1.070	Inlet	1.006	(None)	No Restriction
SMH 3.030	Inlet	5.002	(None)	No Restriction
SMH 3.010	Inlet	5.000	(None)	No Restriction
	Inlet (1)	6.000	(None)	No Restriction
SMH 3.000	Inlet	231.71m - 4.000 283.56m - 4.000 388.70m - 4.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 3.020	Inlet	429.84m - 3.001 143.05m - 3.001 143.06m - 3.001 767.08m - 3.001 242.64m - 3.001 139.93m - 3.001 142.81m - 3.001 152.87m - 3.001 7.000 5.001	(None)	No Restriction
SMH 4.000	Inlet	448.70m - 3.000 244.50m - 3.000 142.76m - 3.000 139.60m - 3.000	(None)	No Restriction
SMH 1.060	Inlet	95.17m - 1.007 147.63m - 1.007 1.005 5.003	(None)	No Restriction
SMH 1.050	Inlet	1.004 24.85m - 1.006	(None)	No Restriction
SMH 1.040	Inlet	64.69m - 1.005 221.50m - 1.005 258.34m - 1.005 535.94m - 1.005 1.003	(None)	No Restriction
SMH 2.010	Inlet	2.000	(None)	No Restriction
SMH 2.000	Inlet	628.65m - 2.000 283.58m - 2.000 153.68m - 2.000 279.13m - 2.000 892.57m - 2.000	(None)	No Restriction
SMH 1.020	Inlet	1.001 2.001 198.81m - 1.004 143.64m - 1.004 266.14m - 1.004	(None)	No Restriction
	Inlet (1)	3.001	(None)	No Restriction
	Inlet (2)	4.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by:	Checked by:	Approved By:	
	MJC	MJC	DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

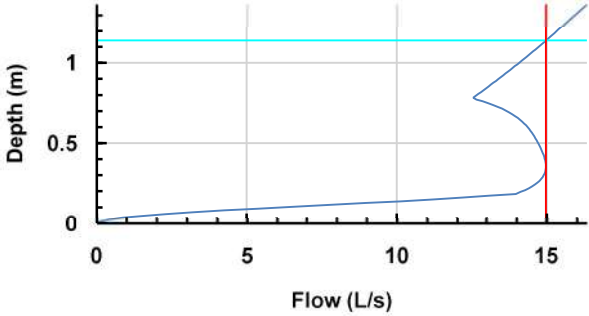
Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 1.010	Inlet	1.000 132.05m - 1.003 245.83m - 1.003	(None)	No Restriction
SMH 1.000	Inlet	187.32m - 1.002 266.14m - 1.002 424.52m - 1.002 142.76m - 1.002 561.80m - 1.002 142.76m - 1.002 287.14m - 1.002	(None)	No Restriction
SMH 1.350	Inlet	1.034	(None)	No Restriction
SMH 1.380	Inlet	1.037	(None)	No Restriction
SMH 22.070	Inlet	41.006	(None)	No Restriction
SMH 1.190	Inlet	1.018	(None)	No Restriction
SMH 13.070	Inlet	22.006	(None)	No Restriction
SMH 10.070	Inlet	17.006	(None)	No Restriction
SMH 1.100	Inlet	1.009	(None)	No Restriction
SMH 1.030	Inlet	1.002	(None)	No Restriction

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 1.510	Outlet	1.051	Free Discharge
	Outlet	1.050	Hydro-Brake®
	Invert Level (m)	2.171	
	Design Depth (m)	1.525	
	Design Flow (L/s)	108.08	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0401-1080-1525-1080	
SMH 1.500			
SMH 22.160	Outlet	41.016	Free Discharge
SMH 22.150	Outlet	41.015	Free Discharge
SMH 22.140	Outlet	41.014	Free Discharge
SMH 22.130	Outlet	41.013	Free Discharge
SMH 22.120	Outlet	41.012	Free Discharge
SMH 22.110	Outlet	41.011	Free Discharge
SMH 22.100	Outlet	41.010	Free Discharge

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		



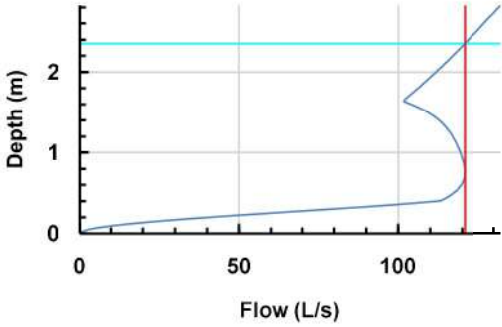
Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 22.090	Outlet	41.009	Free Discharge
SMH 22.080	Outlet	41.008	Free Discharge
SMH 22.060	Outlet	41.006	Hydro-Brake®
	Invert Level (m)	3.019	
	Design Depth (m)	1.141	
	Design Flow (L/s)	15.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0173-1500-1141-1500	
			
SMH 23.000	Outlet	42.000	Free Discharge
SMH 22.050	Outlet	41.005	Free Discharge
SMH 22.040	Outlet	41.004	Free Discharge
SMH 22.030	Outlet	41.003	Free Discharge
SMH 22.020	Outlet	41.002	Free Discharge
SMH 22.010	Outlet	41.001	Free Discharge
SMH 22.000	Outlet	41.000	Free Discharge
SMH 1.490	Outlet	1.049	Free Discharge
SMH 1.480	Outlet	1.048	Free Discharge
SMH 1.470	Outlet	1.047	Free Discharge
SMH 1.460	Outlet	1.046	Free Discharge
SMH 1.450	Outlet	1.045	Free Discharge
SMH 1.440	Outlet	1.044	Free Discharge
SMH 1.430	Outlet	1.043	Free Discharge
SMH 1.420	Outlet	1.042	Free Discharge
SMH 21.020	Outlet	40.002	Free Discharge
SMH 21.010	Outlet	40.001	Free Discharge
SMH 21.000	Outlet	40.000	Free Discharge
SMH 1.410	Outlet	1.041	Free Discharge
SMH 1.400	Outlet	1.040	Free Discharge
SMH 1.390	Outlet	1.039	Free Discharge
	Outlet	1.037	Hydro-Brake®

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 1.370	Invert Level (m)	3.826	
	Design Depth (m)	1.525	
	Design Flow (L/s)	83.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0359-8300-1525-8300	
SMH 18.130	Outlet	34.006	Free Discharge
SMH 18.120	Outlet	34.005	Free Discharge
SMH 18.110	Outlet	34.004	Free Discharge
SMH 20.020	Outlet	34.002	Free Discharge
SMH 20.010	Outlet	34.001	Free Discharge
SMH 20.000	Outlet	34.000	Free Discharge
SMH 18.100	Outlet	34.003	Free Discharge
SMH 18.090	Outlet	35.009	Free Discharge
SMH 18.080	Outlet	35.008	Free Discharge
SMH 18.070	Outlet	35.007	Free Discharge
SMH 18.060	Outlet	35.006	Free Discharge
SMH 18.050	Outlet	35.005	Free Discharge
SMH 18.040	Outlet	35.004	Free Discharge
SMH 19.000	Outlet	36.000	Free Discharge
SMH 18.030	Outlet	35.003	Free Discharge
SMH 18.020	Outlet	35.002	Free Discharge
SMH 18.010	Outlet	35.001	Free Discharge
SMH 18.000	Outlet	35.000	Free Discharge
SMH 1.360	Outlet	1.036	Free Discharge
SMH 17.010	Outlet	31.001	Free Discharge
SMH 17.000	Outlet	31.000	Free Discharge
	Outlet	1.034	Hydro-Brake®

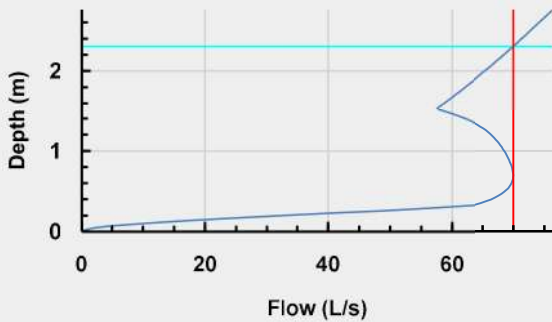
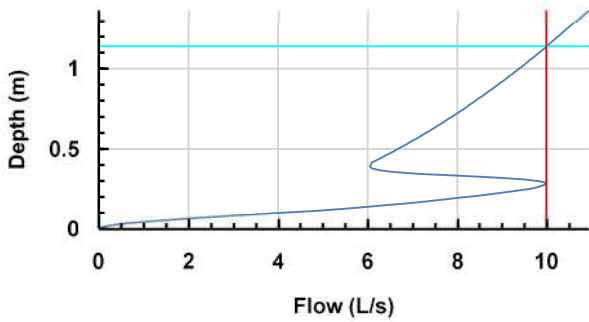
Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		



Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 1.340	Invert Level (m)	4.435	
	Design Depth (m)	2.353	
	Design Flow (L/s)	121.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0411-1210-2353-1210	
			
SMH 1.330	Outlet	1.033	Free Discharge
SMH 16.030	Outlet	30.003	Free Discharge
SMH 16.020	Outlet	30.002	Free Discharge
SMH 16.010	Outlet	30.001	Free Discharge
SMH 16.000	Outlet	30.000	Free Discharge
SMH 1.320	Outlet	1.032	Free Discharge
SMH 15.010	Outlet	29.001	Free Discharge
SMH 15.000	Outlet	29.000	Free Discharge
SMH 1.310	Outlet	1.031	Free Discharge
SMH 1.300	Outlet	1.030	Free Discharge
SMH 1.290	Outlet	1.029	Free Discharge
SMH 14.030	Outlet	28.003	Free Discharge
SMH 14.020	Outlet	28.002	Free Discharge
SMH 14.010	Outlet	28.001	Free Discharge
SMH 14.000	Outlet	28.000	Free Discharge
SMH 1.280	Outlet	1.028	Free Discharge
SMH 1.270	Outlet	1.027	Free Discharge
SMH 1.260	Outlet	1.026	Free Discharge
SMH 1.250	Outlet	1.025	Free Discharge
SMH 1.240	Outlet	1.024	Free Discharge
SMH 1.230	Outlet	1.023	Free Discharge
SMH 1.220	Outlet	1.022	Free Discharge
SMH 1.210	Outlet	1.021	Free Discharge
SMH 1.200	Outlet	1.020	Free Discharge
	Outlet	1.018	Hydro-Brake®

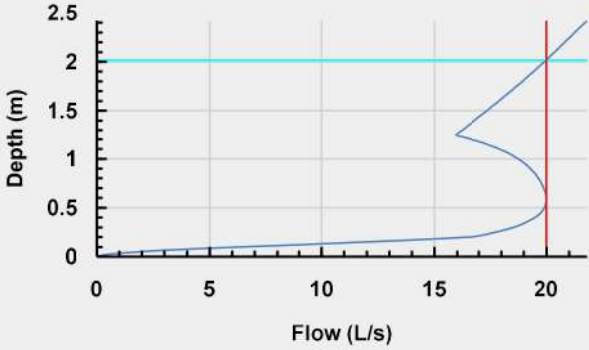
Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 1.180	Invert Level (m)	17.863	
	Design Depth (m)	2.302	
	Design Flow (L/s)	70.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0323-7000-2302-7000	
			
	Outlet	22.006	
	Invert Level (m)	19.181	
SMH 13.060	Design Depth (m)	1.140	Hydro-Brake®
	Design Flow (L/s)	10.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0136-1000-1140-1000	
			
	Outlet	22.005	
	Free Discharge		
	Free Discharge		
SMH 13.050	Outlet	22.005	Free Discharge
SMH 13.040	Outlet	22.004	Free Discharge
SMH 13.030	Outlet	22.003	Free Discharge
SMH 13.020	Outlet	22.002	Free Discharge
SMH 13.000	Outlet	22.000	Free Discharge
SMH 13.010	Outlet	22.001	Free Discharge
SMH 1.170	Outlet	1.017	Free Discharge
SMH 1.160	Outlet	1.016	Free Discharge
SMH 10.080	Outlet	17.008	Free Discharge
SMH 12.000	Outlet	19.000	Free Discharge
	Outlet	17.006	Hydro-Brake®

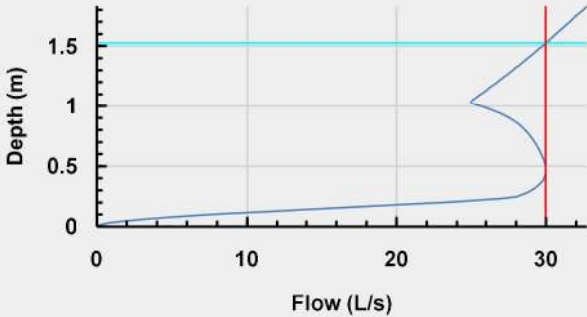
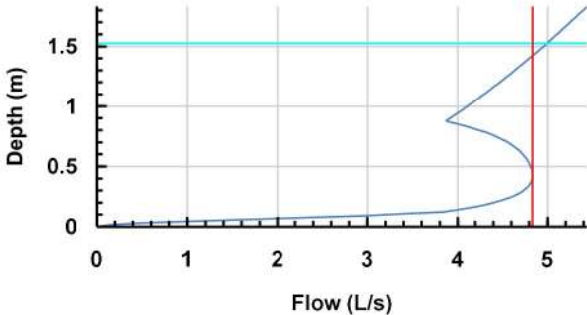
Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		



Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 10.060	Invert Level (m)	22.633	
	Design Depth (m)	2.018	
	Design Flow (L/s)	20.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0184-2000-2018-2000	
			
SMH 11.010	Outlet	18.001	Free Discharge
SMH 11.000	Outlet	18.000	Free Discharge
SMH 10.050	Outlet	17.005	Free Discharge
SMH 10.040	Outlet	17.004	Free Discharge
SMH 10.030	Outlet	17.003	Free Discharge
SMH 10.020	Outlet	17.002	Free Discharge
SMH 10.000	Outlet	17.000	Free Discharge
SMH 10.010	Outlet	17.001	Free Discharge
SMH 1.150	Outlet	1.015	Free Discharge
SMH 1.140	Outlet	1.014	Free Discharge
SMH431.000	Outlet	11.007	Free Discharge
SMH 8.000	Outlet	13.000	Free Discharge
SMH 8.010	Outlet	13.001	Free Discharge
SMH 9.040	Outlet	14.005	Free Discharge
SMH 9.030	Outlet	14.004	Free Discharge
SMH 9.020	Outlet	14.003	Free Discharge
SMH 9.010	Outlet	14.002	Free Discharge
SMH 9.000	Outlet	14.001	Free Discharge
SMH351.000	Outlet	11.006	Free Discharge
SMH 6.040	Outlet	11.005	Free Discharge
SMH 6.030	Outlet	11.004	Free Discharge
SMH 6.010	Outlet	12.001	Free Discharge
SMH 6.000	Outlet	12.000	Free Discharge
SMH 6.020	Outlet	11.003	Free Discharge
SMH 7.020	Outlet	11.002	Free Discharge
SMH 7.010	Outlet	11.001	Free Discharge
SMH 7.000	Outlet	11.000	Free Discharge
SMH 1.130	Outlet	1.013	Free Discharge
SMH 1.120	Outlet	1.012	Free Discharge
SMH 1.110	Outlet	1.011	Free Discharge
SMH 5.040	Outlet	8.004	Free Discharge
SMH 5.030	Outlet	8.003	Free Discharge
SMH 5.020	Outlet	8.002	Free Discharge
SMH 5.010	Outlet	8.001	Free Discharge
SMH 5.000	Outlet	8.000	Free Discharge
	Outlet	1.009	Hydro-Brake®

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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Junction	Outlet Name	Outgoing Connection	Outlet Type		
SMH 1.090	Invert Level (m)	22.800			
	Design Depth (m)	1.525			
	Design Flow (L/s)	30.0			
	Objective	Minimise Upstream Storage Requirements			
	Application	Surface Water Only			
	Sump Available	☒			
	Unit Reference	SHE-0230-3000-1525-3000			
	SMH 1.080	Outlet		1.008	Free Discharge
	SMH 1.070	Outlet		1.007	Free Discharge
	SMH 3.030	Outlet		5.003	Free Discharge
SMH 3.010	Outlet	5.001	Free Discharge		
SMH 3.000	Outlet	5.000	Free Discharge		
SMH 3.020	Outlet	5.002	Free Discharge		
SMH 4.000	Outlet	7.000	Free Discharge		
SMH 1.060	Outlet	1.006	Free Discharge		
SMH 1.050	Outlet	1.005	Free Discharge		
SMH 1.040	Outlet	1.004	Free Discharge		
SMH 2.010	Outlet	2.001	Free Discharge		
SMH 2.000	Outlet	2.000	Free Discharge		
SMH 1.020	Outlet	1.002	Hydro-Brake®		
	Invert Level (m)	28.100			
	Design Depth (m)	1.525			
	Design Flow (L/s)	5.0			
	Objective	Minimise Upstream Storage Requirements			
	Application	Surface Water Only			
	Sump Available	☒			
	Unit Reference	SHE-0098-5000-1525-5000			
	SMH 1.010	Outlet		1.001	Free Discharge
	SMH 1.000	Outlet		1.000	Free Discharge
SMH 1.350	Outlet	1.035		Free Discharge	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 1.380	Outlet	1.038	Free Discharge
SMH 22.070	Outlet	41.007	Free Discharge
SMH 1.190	Outlet	1.019	Free Discharge
SMH 13.070	Outlet	22.007	Free Discharge
SMH 10.070	Outlet	17.007	Free Discharge
SMH 1.100	Outlet	1.010	Free Discharge
SMH 1.030	Outlet	1.003	Free Discharge

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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BR_1

Type : Bioretention

Ponding Area

Exceedance Level (m)	30.210
Depth (m)	0.150
Base Level (m)	30.060
Top Area (m²)	366.60
Side Slope (1:X)	3.00
Base Area (m²)	337.55
Freeboard (mm)	50
Porosity (%)	100
Length (m)	32.268
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	136.760

Filter Area

Base Level (m)	29.310
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	512.89m - 3.000
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	6.000
Outlet Type	Under Drain

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Advanced

Ponding Area

Base Perimeter (m)	85.458
Top Perimeter (m)	87.258



BR_2

Type : Bioretention

Ponding Area

Exceedance Level (m)	28.500
Depth (m)	0.150
Base Level (m)	28.350
Top Area (m²)	277.15
Side Slope (1:X)	3.00
Base Area (m²)	243.75
Freeboard (mm)	50
Porosity (%)	100
Length (m)	37.107
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	99.500

Filter Area

Base Level (m)	27.600
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	535.67m - 8.000
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Outlets

Outlet

Outgoing Connection	14.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	87.352
Top Perimeter (m)	89.152



BR_3

Type : Bioretention

Ponding Area

Exceedance Level (m)	27.400
Depth (m)	0.150
Base Level (m)	27.250
Top Area (m²)	317.90
Side Slope (1:X)	3.00
Base Area (m²)	295.64
Freeboard (mm)	50
Porosity (%)	100
Length (m)	24.724
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	119.589

Filter Area

Base Level (m)	26.500
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Outlets

Outlet

Outgoing Connection	15.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	73.363
Top Perimeter (m)	75.163



BR_4

Type : Bioretention

Ponding Area

Exceedance Level (m)	25.885
Depth (m)	0.150
Base Level (m)	25.735
Top Area (m²)	110.93
Side Slope (1:X)	3.00
Base Area (m²)	92.67
Freeboard (mm)	50
Porosity (%)	100
Length (m)	20.288
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	38.159

Filter Area

Base Level (m)	24.985
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	725.66m - 8.004 (1)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	16.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	49.711
Top Perimeter (m)	51.511



BR_5

Type : Bioretention

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Ponding Area

Exceedance Level (m)	10.230
Depth (m)	0.150
Base Level (m)	10.080
Top Area (m²)	967.87
Side Slope (1:X)	3.00
Base Area (m²)	904.81
Freeboard (mm)	50
Porosity (%)	100
Length (m)	70.063
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	365.699

Filter Area

Base Level (m)	9.330
----------------	-------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	1775.51m - 20.011
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	37.000
Outlet Type	Under Drain

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Advanced

Ponding Area

Base Perimeter (m)	165.955
Top Perimeter (m)	167.755



BR_6

Type : Bioretention

Ponding Area

Exceedance Level (m)	8.228
Depth (m)	0.150
Base Level (m)	8.078
Top Area (m²)	1063.15
Side Slope (1:X)	3.00
Base Area (m²)	1006.37
Freeboard (mm)	50
Porosity (%)	100
Length (m)	63.096
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.015
Total Volume (m³)	405.945

Filter Area

Base Level (m)	7.328
----------------	-------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	1775.51m - 20.011 (1)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Outlets	
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Outlet	
Outgoing Connection	38.000
Outlet Type	Under Drain

Advanced	
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Ponding Area	
Base Perimeter (m)	158.091
Top Perimeter (m)	159.891

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_1

Type : Tank

Dimensions

Exceedance Level (m)	30.831
Depth (m)	2.731
Base Level (m)	28.100
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-6.858
Total Volume (m³)	353.519

Depth (m)	Area (m²)	Volume (m³)
0.000	345.228	0.000
1.525	345.228	352.736
1.526	0.001	352.814

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	3.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	3.001
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	29.269

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_2

Type : Tank

Dimensions

Exceedance Level (m)	26.343
Depth (m)	3.543
Base Level (m)	22.800
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-7.228
Total Volume (m³)	393.588

Depth (m)	Area (m²)	Volume (m³)
0.000	383.446	0.000
1.525	383.446	391.786
1.526	0.001	391.872

Inlets

Outlets

Outlet	
Outgoing Connection	9.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	28.822

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_3

Type : Tank

Dimensions

Exceedance Level (m)	24.974
Depth (m)	2.342
Base Level (m)	22.633
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-9.097
Total Volume (m³)	260.365

Depth (m)	Area (m²)	Volume (m³)
0.000	339.603	0.000
1.140	339.603	259.389
1.141	0.001	259.465

Inlets

Outlets

Outlet

Outgoing Connection	20.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	30.778

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_5

Type : Tank

Dimensions

Exceedance Level (m)	20.934
Depth (m)	3.071
Base Level (m)	17.863
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-6.699
Total Volume (m³)	337.908

Depth (m)	Area (m²)	Volume (m³)
0.000	329.424	0.000
1.525	329.424	336.589
1.526	0.001	336.663

Inlets

Outlets

Outlet	
Outgoing Connection	25.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	25.780

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_6

Type : Tank

Dimensions

Exceedance Level (m)	20.934
Depth (m)	3.071
Base Level (m)	17.863
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-5.601
Total Volume (m³)	236.763

Depth (m)	Area (m²)	Volume (m³)
0.000	230.454	0.000
1.525	230.454	235.466
1.526	0.001	235.518

Inlets

Outlets

Outlet	
Outgoing Connection	24.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	22.022

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_7

Type : Tank

Dimensions

Exceedance Level (m)	7.361
Depth (m)	2.926
Base Level (m)	4.435
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-15.271
Total Volume (m³)	1747.388

Depth (m)	Area (m²)	Volume (m³)
0.000	1708.741	0.000
1.525	1708.741	1745.906
1.526	0.001	1746.288

Inlets

Outlets

Outlet

Outgoing Connection	32.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	62.918

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_9

Type : Tank

Dimensions

Exceedance Level (m)	5.618
Depth (m)	2.599
Base Level (m)	3.019
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-8.269
Total Volume (m³)	215.654

Depth (m)	Area (m²)	Volume (m³)
0.000	280.745	0.000
1.140	280.745	214.433
1.141	0.001	214.496

Inlets

Inlet

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

Outlets

Outlet

Outgoing Connection	43.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	24.303

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_10

Type : Tank

Dimensions

Exceedance Level (m)	4.008
Depth (m)	1.837
Base Level (m)	2.171
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-6.55
Total Volume (m³)	322.232

Depth (m)	Area (m²)	Volume (m³)
0.000	315.000	0.000
1.525	315.000	321.851
1.526	0.001	321.922

Inlets

Outlets

Outlet	
Outgoing Connection	44.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	21.697

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_8

Type : Tank

Dimensions

Exceedance Level (m)	6.570
Depth (m)	2.744
Base Level (m)	3.826
Freeboard (mm)	200
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-9.378
Total Volume (m³)	660.191

Depth (m)	Area (m²)	Volume (m³)
0.000	645.000	0.000
1.525	645.000	659.029
1.526	0.001	659.173

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	39.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	36.552

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_1

Type : Pond

Dimensions

Exceedance Level (m)	30.831
Depth (m)	0.891
Base Level (m)	29.940
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	5.796
Total Volume (m³)	47.144

Depth (m)	Area (m²)	Volume (m³)
0.000	70.380	0.000
0.275	107.225	24.244
0.276	187.865	24.389
0.891	307.770	175.288

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	2085.40m - 1.003
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	3.000
Outlet Type	Filtration
Permeability Coefficient (m/hr)	0.25
Safety Factor	10.000
Bed Depth (m)	0.500
Area (m²)	220.00
Invert Level (m)	29.940

Outlet (1)

Outgoing Connection	4.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	26.375
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_2

Type : Pond

Dimensions

Exceedance Level (m)	26.271
Depth (m)	1.446
Base Level (m)	24.825
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	5.367
Total Volume (m³)	426.043

Depth (m)	Area (m²)	Volume (m³)
0.000	158.201	0.000
0.477	263.276	99.464
0.478	392.493	99.790
1.446	693.423	618.512

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	2335.78m - 5.006
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	10.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	42.414
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_3

Type : Pond

Dimensions

Exceedance Level (m)	24.951
Depth (m)	0.678
Base Level (m)	24.273
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	7.469
Total Volume (m³)	69.541

Depth (m)	Area (m²)	Volume (m³)
0.000	117.484	0.000
0.283	174.476	41.047
0.284	289.138	41.277
0.678	392.601	175.061

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	1607.50m - 10.006
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	21.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	34.809
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
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Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_4

Type : Pond

Dimensions

Exceedance Level (m)	20.665
Depth (m)	1.162
Base Level (m)	19.503
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.587
Total Volume (m³)	79.506

Depth (m)	Area (m²)	Volume (m³)
0.000	80.889	0.000
0.662	164.171	79.506
0.663	245.950	79.709
1.162	340.092	225.294

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	744.19m - 1.017
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	26.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	25.872
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_5

Type : Pond

Dimensions

Exceedance Level (m)	20.665
Depth (m)	1.162
Base Level (m)	19.503
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.716
Total Volume (m³)	83.299

Depth (m)	Area (m²)	Volume (m³)
0.000	84.228	0.000
0.662	172.664	83.299
0.663	258.163	83.513
1.162	356.873	236.301

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	1543.80m - 1.017
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	27.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	25.543
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_6

Type : Pond

Dimensions

Exceedance Level (m)	7.280
Depth (m)	1.028
Base Level (m)	6.252
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	5.69
Total Volume (m³)	439.458

Depth (m)	Area (m²)	Volume (m³)
0.000	692.788	0.000
0.437	865.449	339.776
0.438	1077.341	340.745
1.028	1346.029	1054.170

Inlets

Inlet

Inlet Type	Lateral Inflow
	1231.11m
	- 17.000
	1070.44m
	- 1.030
Incoming Item(s)	1419.34m
	- 1.032
	1041.79m
	- 19.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	33.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	62.389
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_4

Type : Tank

Dimensions

Exceedance Level (m)	21.045
Depth (m)	1.864
Base Level (m)	19.181
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-9.142
Total Volume (m³)	262.488

Depth (m)	Area (m²)	Volume (m³)
0.000	343.007	0.000
1.140	343.007	261.989
1.141	0.001	262.065

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	1992.87m - 14.006
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	23.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	30.115

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by:	Checked by:	Approved By:	
	MJC	MJC	DOB	
Report Details: Type: Connections Storm Phase: Phase 1_East Catchment			Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare	

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
2.000	61.536	Pipe	30.000		0.6	225	33.651	31.676
1.000	51.871	Pipe	500.000		0.6	300	32.384	28.965
5.001	11.505	Pipe	29.999		0.6	225	30.626	29.063
5.000	21.840	Pipe	29.999		0.6	225	31.270	29.791
7.000	34.336	Pipe	28.190		0.6	225	30.313	28.813
22.001	9.606	Pipe	50.000		0.6	300	26.462	24.295
8.000	26.371	Pipe	39.999		0.6	300	29.784	28.271
8.001	32.608	Pipe	100.025		0.6	300	29.117	26.596
5.003	6.046	Pipe	200.000		0.6	300	29.178	26.975
1.006	15.321	Pipe	50.000		0.6	300	29.145	26.945
1.005	17.179	Pipe	200.000		0.6	300	29.548	27.847
8.004	21.069	Pipe	100.000		0.6	300	26.938	25.029
8.003	28.383	Pipe	100.011		0.6	300	27.659	25.313
1.004	34.822	Pipe	200.000		0.6	300	30.376	28.021
17.002	6.226	Pipe	100.000		0.6	300	27.956	25.778
17.001	5.832	Pipe	100.000		0.6	300	27.990	25.836
17.004	10.289	Pipe	100.000		0.6	300	25.850	23.723
18.001	34.423	Pipe	60.285		0.6	225	26.240	24.410
17.005	14.603	Pipe	100.000		0.6	375	25.548	23.545
17.003	53.579	Pipe	100.000		0.6	300	27.796	24.912
1.012	8.381	Pipe	200.000		0.6	300	24.489	22.480
1.011	52.152	Pipe	200.000		0.6	300	25.977	22.741
1.013	42.172	Pipe	100.000		0.6	375	24.464	22.363
8.002	16.652	Pipe	99.713		0.6	300	28.126	26.270
17.000	53.441	Pipe	100.000		0.6	225	28.932	27.050
19.000	48.042	Pipe	100.000		0.6	225	25.895	23.930
18.000	37.157	Pipe	59.998		0.6	225	27.067	25.427
14.002	11.883	Pipe	40.010		0.6	225	28.160	26.245
14.001	9.125	Pipe	39.988		0.6	225	28.466	26.473
11.000	22.264	Pipe	29.998		0.6	225	29.358	26.881
13.000	38.268	Pipe	30.000		0.6	225	28.088	26.113
14.004	13.061	Pipe	39.992		0.6	225	27.449	25.710
11.002	10.955	Pipe	31.246		0.6	225	26.690	24.816
11.005	12.797	Pipe	94.230		0.6	225	25.881	23.533
11.004	16.222	Pipe	94.206		0.6	225	26.143	23.705
11.003	22.171	Pipe	29.172		0.6	225	26.480	24.465
14.003	9.500	Pipe	39.998		0.6	225	27.758	25.948
13.001	18.454	Pipe	199.937		0.6	225	26.284	24.564
14.005	22.030	Pipe	80.021		0.6	225	26.998	25.384
11.001	39.228	Pipe	29.637		0.6	225	28.382	26.139
12.000	16.906	Pipe	37.990		0.6	225	27.182	25.173
12.001	16.938	Pipe	64.403		0.6	225	26.784	24.728
11.006	34.548	Pipe	103.436		0.6	375	25.677	23.397
22.004	19.432	Pipe	200.000		0.6	300	23.119	20.800
22.005	27.306	Pipe	200.000		0.6	375	22.203	19.731
1.015	12.599	Pipe	100.000		0.6	375	22.515	20.029
1.016	22.130	Pipe	100.000		0.6	375	22.165	19.903
1.020	11.257	Pipe	40.003		0.6	375	20.509	17.463
1.017	24.414	Pipe	40.022		0.6	375	21.557	18.473
1.022	6.928	Pipe	40.000		0.6	375	18.456	16.086
1.021	43.812	Pipe	40.000		0.6	375	20.215	17.181
1.024	9.270	Pipe	40.009		0.6	375	16.385	14.848
1.025	12.851	Pipe	50.002		0.6	375	16.082	13.016
1.026	20.436	Pipe	50.002		0.6	375	15.429	12.759
1.027	32.419	Pipe	49.998		0.6	375	14.566	12.350
28.001	11.586	Pipe	99.880		0.6	300	14.630	12.950

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Connections Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

28.000	21.485 Pipe	99.930	0.6	300	15.553	13.165
35.000	32.010 Pipe	100.000	0.6	225	14.630	12.697
28.002	57.475 Pipe	199.981	0.6	375	14.598	12.189
28.003	60.058 Pipe	199.992	0.6	375	14.085	11.902
1.007	5.570 Pipe	50.000	0.6	300	28.776	26.639
11.007	45.635 Pipe	82.822	0.6	375	25.080	23.063
1.008	80.857 Pipe	200.000	0.6	300	28.622	24.997
22.003	39.101 Pipe	200.000	0.6	300	24.966	21.874
17.008	38.677 Pipe	99.992	0.6	300	23.762	21.377
1.014	48.774 Pipe	100.000	0.6	375	23.690	20.517
1.023	42.613 Pipe	39.997	0.6	375	18.168	15.913
1.029	38.403 Pipe	50.003	0.6	525	12.389	9.694
1.030	11.674 Pipe	60.000	0.6	525	10.817	8.926
29.001	11.609 Pipe	150.000	0.6	225	10.468	9.005
31.001	26.031 Pipe	49.382	0.6	225	8.879	6.463
31.000	44.429 Pipe	50.000	0.6	225	10.662	8.343
30.000	21.289 Pipe	200.000	0.6	225	8.938	7.240
30.003	8.635 Pipe	200.000	0.6	375	7.836	5.506
30.002	28.854 Pipe	200.000	0.6	300	8.255	6.180
30.001	13.229 Pipe	200.000	0.6	300	8.500	6.246
41.000	25.948 Pipe	200.062	0.6	300	5.973	4.473
40.001	17.029 Pipe	200.107	0.6	300	5.835	4.279
40.000	39.591 Pipe	199.952	0.6	300	5.977	4.477
1.031	70.712 Pipe	50.000	0.6	525	10.407	7.427
1.033	69.735 Pipe	500.000	0.6	750	7.799	4.574
1.032	6.696 Pipe	500.000	0.6	750	7.836	4.587
41.001	16.148 Pipe	199.853	0.6	300	5.912	4.343
29.000	74.215 Pipe	149.930	0.6	225	11.000	9.500
41.005	16.671 Pipe	198.938	0.6	375	5.830	3.103
41.008	13.532 Pipe	200.182	0.6	300	5.532	2.978
41.003	21.703 Pipe	200.028	0.6	375	5.806	4.083
41.011	20.241 Pipe	300.316	0.6	450	5.169	2.579
41.012	12.404 Pipe	299.604	0.6	450	5.077	2.512
41.009	20.228 Pipe	199.880	0.6	300	5.416	2.910
41.010	23.880 Pipe	300.000	0.6	300	5.257	2.809
41.004	27.267 Pipe	200.050	0.6	375	5.743	3.974
1.046	12.265 Pipe	100.000	0.6	450	5.076	3.221
1.045	15.518 Pipe	100.000	0.6	450	5.092	3.376
1.044	13.924 Pipe	100.000	0.6	450	5.174	3.515
41.014	17.423 Pipe	299.880	0.6	450	4.986	2.432
41.015	14.127 Pipe	299.932	0.6	450	4.925	2.374
1.050	1.529 Pipe	100.559	0.6	450	4.008	2.171
1.049	6.552 Pipe	59.563	0.6	525	4.780	2.281
1.048	15.869 Pipe	100.000	0.6	450	4.859	2.946
1.047	15.157 Pipe	100.000	0.6	450	4.937	3.098
41.016	13.770 Pipe	299.989	0.6	450	4.812	2.327
41.013	11.554 Pipe	300.094	0.6	450	5.027	2.471
1.051	46.426 Pipe	341.867	0.6	450	3.966	2.156
42.000	23.064 Pipe	100.019	0.6	225	6.050	4.525
41.002	20.980 Pipe	199.999	0.6	375	5.855	4.188
22.002	31.834 Pipe	50.000	0.6	300	26.224	24.103
22.000	52.268 Pipe	50.000	0.6	225	27.669	25.907
1.028	19.721 Pipe	50.003	0.6	450	13.266	10.163
35.002	4.855 Pipe	100.000	0.6	225	13.868	12.328
35.003	54.609 Pipe	100.000	0.6	300	13.759	11.633
36.000	31.076 Pipe	50.001	0.6	225	14.451	12.801
34.002	12.140 Pipe	100.000	0.6	300	9.833	8.091
34.001	10.484 Pipe	100.000	0.6	300	10.213	8.196
35.006	10.779 Pipe	50.000	0.6	375	11.035	9.241

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Connections Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

35.007	5.598 Pipe	50.000	0.6	375	10.728	9.025
35.005	8.357 Pipe	50.000	0.6	375	11.270	9.408
35.008	11.230 Pipe	50.000	0.6	375	10.570	8.913
34.005	8.919 Pipe	49.993	0.6	375	8.314	6.464
34.004	8.481 Pipe	50.006	0.6	375	8.583	6.633
35.009	29.946 Pipe	50.000	0.6	375	10.270	7.849
34.003	30.829 Pipe	49.998	0.6	375	9.490	7.250
1.042	20.163 Pipe	500.000	0.6	450	5.788	3.720
1.041	12.253 Pipe	500.000	0.6	450	5.892	3.745
1.039	16.371 Pipe	500.000	0.6	450	6.415	3.810
1.040	15.896 Pipe	500.000	0.6	450	6.099	3.777
35.004	56.408 Pipe	100.000	0.6	375	12.826	10.373
35.001	4.942 Pipe	100.000	0.6	225	13.977	12.377
34.006	23.540 Pipe	50.000	0.6	375	8.034	6.285
40.002	7.817 Pipe	200.000	0.6	300	5.862	4.194
1.036	35.494 Pipe	500.000	0.6	675	7.404	3.897
1.043	16.509 Pipe	100.000	0.6	450	5.542	3.680
34.000	77.119 Pipe	50.000	0.6	300	12.927	10.302
2.001	4.866 Pipe	200.000	0.6	225	30.801	28.324
1.001	14.577 Pipe	500.000	0.6	300	31.194	28.861
5.002	37.851 Pipe	200.268	0.6	300	30.295	27.595
3.001	18.480 Pipe	0.000	0.6	300	30.831	28.100
6.000	6.354 Pipe	21.402	0.6	225	30.210	29.360
14.000	13.000 Pipe	11.045	0.6	225	28.500	27.650
15.000	3.982 Pipe	4.742	0.6	225	27.400	26.550
16.000	8.256 Pipe	17.526	0.6	225	25.885	25.035
9.000	15.681 Pipe	0.000	0.6	300	26.343	22.800
20.000	13.182 Pipe	0.000	0.6	300	24.974	22.633
24.000	16.636 Pipe	0.000	0.6	300	20.934	17.863
25.000	7.597 Pipe	0.000	0.6	300	20.934	17.863
32.000	19.697 Pipe	0.000	0.6	750	7.361	4.435
37.000	12.699 Pipe	8.722	0.6	225	10.230	9.380
38.000	11.388 Pipe	10.423	0.6	225	8.228	7.378
39.000	19.526 Pipe	0.000	0.6	450	6.570	3.826
44.000	26.016 Pipe	0.000	0.6	300	4.008	2.171
43.000	12.435 Pipe	0.000	0.6	300	5.618	3.019
3.000	2.122 No Delay					
4.000	27.044 Pipe	0.000	0.6	225	30.831	29.940
10.000	20.402 Pipe	0.000	0.6	225	26.271	24.825
21.000	19.637 Pipe	0.000	0.6	225	24.951	24.273
26.000	14.917 Pipe	0.000	0.6	225	20.665	19.503
27.000	22.183 Pipe	0.000	0.6	225	20.665	19.503
33.000	41.136 Pipe	0.000	0.6	750	7.280	6.252
23.000	22.378 Pipe	0.000	0.6	300	21.045	19.181
1.034	2.521 Pipe	500.000	0.6	675	7.377	4.435
1.035	23.906 Pipe	500.000	0.6	675	7.365	4.430
1.037	1.947 Pipe	500.000	0.6	450	6.570	3.826
1.038	6.005 Pipe	500.000	0.6	450	6.533	3.822
41.006	1.878 Pipe	198.000	0.6	300	5.618	3.019
41.007	6.442 Pipe	195.210	0.6	300	5.607	3.010
1.018	1.869 Pipe	40.000	0.6	375	20.923	17.863
1.019	14.126 Pipe	39.993	0.6	375	20.880	17.816
22.006	1.875 Pipe	200.000	0.6	375	21.145	19.181
22.007	27.899 Pipe	199.947	0.6	375	21.167	19.172
17.006	1.814 Pipe	100.000	0.6	300	24.983	22.633
17.007	28.926 Pipe	99.883	0.6	300	24.915	22.615
1.009	2.014 Pipe	200.000	0.6	300	26.353	22.800
1.010	9.778 Pipe	200.000	0.6	300	26.296	22.790
1.002	1.847 Pipe	200.000	0.6	300	30.831	28.100

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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1.003	13.926	Pipe	200.000	0.6	300	30.785	28.091
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Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)
2.000	30.801	29.625	All	
1.000	31.194	28.861	All	
5.001	30.295	28.680	All	
5.000	30.626	29.063	All	
7.000	30.295	27.595	All	
22.001	26.224	24.103	All	
8.000	29.117	27.612	All	
8.001	28.126	26.270	All	
5.003	29.145	26.945	All	
1.006	28.776	26.639	All	
1.005	29.145	27.761	All	
8.004	26.353	24.818	All	
8.003	26.938	25.029	All	
1.004	29.548	27.847	All	
17.002	27.796	25.716	All	
17.001	27.956	25.778	All	
17.004	25.548	23.620	All	
18.001	25.548	23.839	All	
17.005	24.983	23.399	All	
17.003	25.850	24.376	All	
1.012	24.464	22.438	All	
1.011	24.489	22.480	All	
1.013	23.690	21.941	All	
8.002	27.659	26.103	All	
17.000	27.990	26.516	All	
19.000	24.983	23.449	All	
18.000	26.240	24.808	All	
14.002	27.758	25.948	All	
14.001	28.160	26.245	All	
11.000	28.382	26.139	All	
13.000	26.284	24.838	All	
14.004	26.998	25.384	All	
11.002	26.480	24.465	All	
11.005	25.677	23.397	All	
11.004	25.881	23.533	All	
11.003	26.143	23.705	All	
14.003	27.449	25.710	All	
13.001	25.677	24.472	All	
14.005	26.284	25.108	All	
11.001	26.690	24.816	All	
12.000	26.784	24.728	All	
12.001	26.480	24.465	All	
11.006	25.080	23.063	All	
22.004	22.203	20.703	All	
22.005	21.145	19.594	All	
1.015	22.165	19.903	All	
1.016	21.557	19.682	All	
1.020	20.215	17.181	All	
1.017	20.923	17.863	All	
1.022	18.168	15.913	All	
1.021	18.456	16.086	All	
1.024	16.082	14.616	All	
1.025	15.429	12.759	All	
1.026	14.566	12.350	All	
1.027	13.266	11.702	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Connections Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

DONNACHADH O'BRIEN
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28.001	14.598	12.834	All	
28.000	14.630	12.950	All	
35.000	13.977	12.377	All	
28.002	14.085	11.902	All	
28.003	13.266	11.602	All	
1.007	28.622	26.528	All	
11.007	24.464	22.512	All	
1.008	26.353	24.593	All	
22.003	23.119	21.678	All	
17.008	22.515	20.990	All	
1.014	22.515	20.029	All	
1.023	16.385	14.848	All	
1.029	10.817	8.926	All	
1.030	10.407	8.731	All	
29.001	10.407	8.928	All	
31.001	7.377	5.936	All	
31.000	8.879	7.454	All	
30.000	8.500	7.134	All	
30.003	7.836	5.463	All	
30.002	7.836	6.036	All	
30.001	8.255	6.180	All	
41.000	5.912	4.343	All	
40.001	5.862	4.194	All	
40.000	5.835	4.279	All	
1.031	7.836	6.013	All	
1.033	7.377	4.435	All	
1.032	7.799	4.574	All	
41.001	5.855	4.263	All	
29.000	10.468	9.005	All	
41.005	5.618	3.019	All	
41.008	5.416	2.910	All	
41.003	5.743	3.974	All	
41.011	5.077	2.512	All	
41.012	5.027	2.471	All	
41.009	5.257	2.809	All	
41.010	5.169	2.729	All	
41.004	5.830	3.838	All	
1.046	4.937	3.098	All	
1.045	5.076	3.221	All	
1.044	5.092	3.376	All	
41.014	4.925	2.374	All	
41.015	4.812	2.327	All	
1.050	3.966	2.156	All	118.0
1.049	4.008	2.171	All	
1.048	4.780	2.787	All	
1.047	4.859	2.946	All	
41.016	4.780	2.281	All	
41.013	4.986	2.432	All	
1.051	3.261	2.020	All	
42.000	5.830	4.294	All	
41.002	5.806	4.083	All	
22.002	24.966	23.466	All	
22.000	26.462	24.862	All	
1.028	12.389	9.769	All	
35.002	13.759	12.279	All	
35.003	12.826	11.087	All	
36.000	13.759	12.180	All	
34.002	9.490	7.970	All	
34.001	9.833	8.091	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Connections Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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DONNACHADH O'BRIEN

 & ASSOCIATES CONSULTING ENGINEERS

35.006	10.728	9.025	All	
35.007	10.570	8.913	All	
35.005	11.035	9.241	All	
35.008	10.270	8.688	All	
34.005	8.034	6.285	All	
34.004	8.314	6.464	All	
35.009	9.490	7.250	All	
34.003	8.583	6.633	All	
1.042	5.542	3.680	All	
1.041	5.788	3.720	All	
1.039	6.099	3.777	All	
1.040	5.892	3.745	All	
35.004	11.270	9.809	All	
35.001	13.868	12.328	All	
34.006	7.404	5.815	All	
40.002	5.892	4.155	All	
1.036	6.570	3.826	All	
1.043	5.174	3.515	All	
34.000	10.213	8.760	All	
2.001	30.831	28.300	All	
1.001	30.831	28.832	All	
5.002	29.178	27.406	All	
3.001	30.831	28.100	All	
6.000	30.626	29.063	All	0.0
14.000	28.466	26.473	All	0.0
15.000	27.449	25.710	All	0.0
16.000	26.284	24.564	All	0.0
9.000	26.353	22.800	All	
20.000	24.983	22.633	All	
24.000	20.923	17.863	All	
25.000	20.923	17.863	All	
32.000	7.377	4.435	All	
37.000	10.270	7.924	All	0.0
38.000	8.034	6.285	All	0.0
39.000	6.570	3.826	All	
44.000	4.008	2.171	All	
43.000	5.618	3.019	All	
3.000				
4.000	30.831	29.940	All	
10.000	26.353	24.825	All	
21.000	24.983	24.273	All	
26.000	20.923	19.503	All	
27.000	20.923	19.503	All	
33.000	7.377	6.252	All	
23.000	21.145	19.181	All	
1.034	7.365	4.430	All	132.2
1.035	7.404	4.382	All	
1.037	6.533	3.822	All	90.6
1.038	6.415	3.810	All	
41.006	5.607	3.010	All	16.3
41.007	5.532	2.977	All	
1.018	20.880	17.816	All	76.4
1.019	20.509	17.463	All	
22.006	21.167	19.172	All	10.9
22.007	21.557	19.032	All	
17.006	24.915	22.615	All	21.5
17.007	23.762	22.325	All	
1.009	26.296	22.790	All	32.7
1.010	25.977	22.741	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Connections Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

1.002	30.785	28.091	All	5.4
1.003	30.376	28.021	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			& ASSOCIATES CONSULTING ENGINEERS

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
1	SMH 1.110		Time of Concentration	0.027	95	10	104.5	0.029
1 (1)	SMH 1.250		Time of Concentration	0.014	95	10	104.5	0.014
1 (2)	SMH 20.000		Time of Concentration	0.032	95	10	104.5	0.034
20.77m - 1.015	SMH 1.150		Time of Concentration	0.002	80	0	80.0	0.002
23.32m - 1.013	SMH 1.130		Time of Concentration	0.002	80	0	80.0	0.002
24.85m - 1.006	SMH 1.050		Time of Concentration	0.002	80	0	80.0	0.002
36.87m - 1.014	SMH 1.140		Time of Concentration	0.004	80	0	80.0	0.003
44.10m - 1.034	SMH 1.360		Time of Concentration	0.004	10	0	10.0	0.000
44.78m - 1.035	SMH 1.370		Time of Concentration	0.004	10	0	10.0	0.000
44.98m - 1.016	SMH 1.160		Time of Concentration	0.004	80	0	80.0	0.004
47.25m - 1.013	SMH 1.130		Time of Concentration	0.005	80	0	80.0	0.004
53.12m - 22.001	SMH 20.010		Time of Concentration	0.005	95	10	104.5	0.006
58.04m - 6.006	SMH351.000		Time of Concentration	0.006	80	0	80.0	0.005
60.21m - 14.007	SMH 13.050		Time of Concentration	0.006	80	0	80.0	0.005
63.59m - 22.002	SMH 20.020		Time of Concentration	0.006	10	0	10.0	0.001
64.68m - 20.006	SMH 18.060		Time of Concentration	0.006	10	0	10.0	0.001
64.69m - 1.005	SMH 1.040		Time of Concentration	0.006	80	0	80.0	0.005
65.40m - 1.014	SMH 1.140		Time of Concentration	0.007	80	0	80.0	0.005
65.51m - 6.007	SMH431.000		Time of Concentration	0.007	95	10	104.5	0.007
66.44m - 20.005	SMH 18.050		Time of Concentration	0.007	95	10	104.5	0.007
68.44m - 22.001	SMH 20.010		Time of Concentration	0.007	10	0	10.0	0.001
68.90m - 18.001	SMH 16.010		Time of Concentration	0.007	95	10	104.5	0.007
69.41m - 17.001	SMH 15.010		Time of Concentration	0.007	80	0	80.0	0.006
70.72m - 5.006	SMH 5.040		Time of Concentration	0.007	80	0	80.0	0.006
76.35m - 6.005	SMH 6.040		Time of Concentration	0.008	80	0	80.0	0.006
76.92m - 20.008	SMH 18.080		Time of Concentration	0.008	10	0	10.0	0.001
76.94m - 10.005	SMH 10.040		Time of Concentration	0.008	10	0	10.0	0.001
77.29m - 6.007	SMH431.000		Time of Concentration	0.008	10	0	10.0	0.001
81.61m - 10.006	SMH 10.050		Time of Concentration	0.008	10	0	10.0	0.001
81.94m - 16.001	SMH 14.010		Time of Concentration	0.008	95	10	104.5	0.009
83.60m - 20.006	SMH 18.060		Time of Concentration	0.008	95	10	104.5	0.009
83.83m - 20.008	SMH 18.080		Time of Concentration	0.008	95	10	104.5	0.009

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

83.99m - 22.002	SMH 20.020		Time of Concentration	0.008	95	10	104.5	0.009
86.08m - 1.009	SMH 1.080		Time of Concentration	0.009	80	0	80.0	0.007
86.19m - 6.007	SMH431.000		Time of Concentration	0.009	80	0	80.0	0.007
87.10m - 18.000	SMH 16.000		Time of Concentration	0.009	95	10	104.5	0.009
91.44m - 8.001	SMH 9.010		Time of Concentration	0.009	10	0	10.0	0.001
91.81m - 23.000	SMH 21.000		Time of Concentration	0.009	95	10	104.5	0.010
91.82m - 24.003	SMH 22.030		Time of Concentration	0.009	95	10	104.5	0.010
93.19m - 8.003	SMH 9.030		Time of Concentration	0.009	80	0	80.0	0.007
95.17m - 1.007	SMH 1.060		Time of Concentration	0.010	80	0	80.0	0.008
95.66m - 1.037	SMH 1.400		Time of Concentration	0.010	10	0	10.0	0.001
98.91m - 8.003	SMH 9.030		Time of Concentration	0.010	10	0	10.0	0.001
102.00m - 1.033	SMH 1.340		Time of Concentration	0.010	80	0	80.0	0.008
104.66m - 24.003	SMH 22.030		Time of Concentration	0.010	10	0	10.0	0.001
105.66m - 1.022	SMH 1.230		Time of Concentration	0.011	95	10	104.5	0.011
106.67m - 6.007	SMH431.000		Time of Concentration	0.011	95	10	104.5	0.011
106.73m - 1.033	SMH 1.340		Time of Concentration	0.011	80	0	80.0	0.009
110.01m - 1.022	SMH 1.230		Time of Concentration	0.011	95	10	104.5	0.011
110.41m - 16.002	SMH 14.020		Time of Concentration	0.011	10	0	10.0	0.001
114.64m - 1.034	SMH 1.360		Time of Concentration	0.011	80	0	80.0	0.009
115.59m - 23.000	SMH 21.000		Time of Concentration	0.012	95	10	104.5	0.012
116.57m - 23.000	SMH 21.000		Time of Concentration	0.012	10	0	10.0	0.001
120.45m - 14.004	SMH 13.030		Time of Concentration	0.012	95	10	104.5	0.013
121.93m - 1.042	SMH 1.450		Time of Concentration	0.012	10	0	10.0	0.001
122.36m - 18.003	SMH 16.030		Time of Concentration	0.012	80	0	80.0	0.010
123.22m - 14.005	SMH 13.040		Time of Concentration	0.012	95	10	104.5	0.013
123.93m - 24.002	SMH 22.020		Time of Concentration	0.012	95	10	104.5	0.013
124.28m - 24.011	SMH 22.120		Time of Concentration	0.012	10	0	10.0	0.001
124.39m - 24.011	SMH 22.120		Time of Concentration	0.012	95	10	104.5	0.013
124.80m - 1.040	SMH 1.430		Time of Concentration	0.012	95	10	104.5	0.013
125.03m - 24.013	SMH 22.140		Time of Concentration	0.013	95	10	104.5	0.013
125.34m - 14.007	SMH 1.170		Time of Concentration	0.013	80	0	80.0	0.010
125.51m - 24.006	SMH 22.060		Time of Concentration	0.013	95	10	104.5	0.013
125.56m - 24.009	SMH 22.100		Time of Concentration	0.013	95	10	104.5	0.013
125.61m - 1.042	SMH 1.450		Time of Concentration	0.013	95	10	104.5	0.013

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

126.04m - 1.038	SMH 1.410		Time of Concentration	0.013	10	0	10.0	0.001
127.50m - 22.002	SMH 20.020		Time of Concentration	0.013	100	0	100.0	0.013
128.07m - 24.006	SMH 22.060		Time of Concentration	0.013	95	10	104.5	0.013
128.14m - 8.005	SMH 8.010		Time of Concentration	0.013	80	0	80.0	0.010
129.76m - 20.012	SMH 18.120		Time of Concentration	0.013	95	10	104.5	0.014
129.84m - 24.013	SMH 22.140		Time of Concentration	0.013	10	0	10.0	0.001
130.60m - 20.013	SMH 18.130		Time of Concentration	0.013	95	10	104.5	0.014
132.05m - 1.003	SMH 1.010		Time of Concentration	0.013	10	0	10.0	0.001
132.22m - 1.032	SMH 1.330		Time of Concentration	0.013	95	10	104.5	0.014
132.58m - 10.005	SMH 10.040		Time of Concentration	0.013	80	0	80.0	0.011
133.80m - 18.000	SMH 16.000		Time of Concentration	0.013	10	0	10.0	0.001
134.33m - 16.003	SMH 14.030		Time of Concentration	0.013	95	10	104.5	0.014
134.34m - 22.000	SMH 20.000		Time of Concentration	0.013	95	10	104.5	0.014
134.36m - 1.028	SMH 1.290		Time of Concentration	0.013	95	10	104.5	0.014
134.62m - 1.032	SMH 1.330		Time of Concentration	0.013	95	10	104.5	0.014
134.87m - 1.036	SMH 1.390		Time of Concentration	0.013	80	0	80.0	0.011
134.87m - 24.009	SMH 22.100		Time of Concentration	0.013	10	0	10.0	0.001
134.99m - 18.003	SMH 16.030		Time of Concentration	0.013	95	10	104.5	0.014
135.17m - 16.002	SMH 14.020		Time of Concentration	0.014	95	10	104.5	0.014
135.21m - 20.004	SMH 18.040		Time of Concentration	0.014	95	10	104.5	0.014
135.72m - 1.032	SMH 1.330		Time of Concentration	0.014	95	10	104.5	0.014
136.42m - 1.032	SMH 1.330		Time of Concentration	0.014	95	10	104.5	0.014
136.69m - 1.032	SMH 1.330		Time of Concentration	0.014	95	10	104.5	0.014
137.50m - 1.018	SMH 1.180		Time of Concentration	0.014	95	10	104.5	0.014
138.44m - 17.000	SMH 15.000		Time of Concentration	0.014	95	10	104.5	0.014
138.64m - 18.001	SMH 16.010		Time of Concentration	0.014	10	0	10.0	0.001
139.60m - 3.000	SMH 4.000		Time of Concentration	0.014	95	10	104.5	0.015
139.93m - 3.001	SMH 3.020		Time of Concentration	0.014	95	10	104.5	0.015
140.08m - 16.001	SMH 14.010		Time of Concentration	0.014	10	0	10.0	0.001
140.25m - 9.000	SMH 8.000		Time of Concentration	0.014	95	0	95.0	0.013
140.28m - 1.019	SMH 1.200		Time of Concentration	0.014	10	0	10.0	0.001
140.63m - 20.008	SMH 18.080		Time of Concentration	0.014	80	0	80.0	0.011
142.32m - 17.000	SMH 15.000		Time of Concentration	0.014	95	10	104.5	0.015
142.46m - 13.000	SMH 12.000		Time of Concentration	0.014	95	10	104.5	0.015

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

142.47m - 10.004	SMH 10.030		Time of Concentration	0.014	95	10	104.5	0.015
142.76m - 1.002	SMH 1.000		Time of Concentration	0.014	95	10	104.5	0.015
142.76m - 1.002	SMH 1.000		Time of Concentration	0.014	95	10	104.5	0.015
142.76m - 1.009	SMH 1.080		Time of Concentration	0.014	95	10	104.5	0.015
142.76m - 3.000	SMH 4.000		Time of Concentration	0.014	95	10	104.5	0.015
142.76m - 10.006	SMH 10.050		Time of Concentration	0.014	95	10	104.5	0.015
142.81m - 3.001	SMH 3.020		Time of Concentration	0.014	95	10	104.5	0.015
143.05m - 3.001	SMH 3.020		Time of Concentration	0.014	95	10	104.5	0.015
143.05m - 13.000	SMH 12.000		Time of Concentration	0.014	95	10	104.5	0.015
143.06m - 3.001	SMH 3.020		Time of Concentration	0.014	95	10	104.5	0.015
143.37m - 11.000	SMH 10.000		Time of Concentration	0.014	10	0	10.0	0.001
143.48m - 14.005	SMH 13.040		Time of Concentration	0.014	100	0	100.0	0.014
143.64m - 1.004	SMH 1.020		Time of Concentration	0.014	10	0	10.0	0.001
144.23m - 1.023	SMH 1.240		Time of Concentration	0.014	95	10	104.5	0.015
144.50m - 10.004	SMH 10.030		Time of Concentration	0.014	10	0	10.0	0.001
145.80m - 19.000	SMH 17.000		Time of Concentration	0.015	95	10	104.5	0.015
146.96m - 8.004	SMH 9.040		Time of Concentration	0.015	10	0	10.0	0.001
147.63m - 1.007	SMH 1.060		Time of Concentration	0.015	80	0	80.0	0.012
147.95m - 17.000	SMH 15.000		Time of Concentration	0.015	95	10	104.5	0.015
148.85m - 16.000	SMH 14.000		Time of Concentration	0.015	95	10	104.5	0.016
148.90m - 1.013	SMH 1.130		Time of Concentration	0.015	80	0	80.0	0.012
149.69m - 1.022	SMH 1.230		Time of Concentration	0.015	95	10	104.5	0.016
149.69m - 1.026	SMH 1.270		Time of Concentration	0.015	95	10	104.5	0.016
149.69m - 1.030	SMH 1.310		Time of Concentration	0.015	95	10	104.5	0.016
149.69m - 1.030	SMH 1.310		Time of Concentration	0.015	95	10	104.5	0.016
149.69m - 17.000	SMH 15.000		Time of Concentration	0.015	95	10	104.5	0.016
149.70m - 19.000	SMH 17.000		Time of Concentration	0.015	95	10	104.5	0.016
150.27m - 1.033	SMH 1.340		Time of Concentration	0.015	95	10	104.5	0.016
150.99m - 1.030	SMH 1.310		Time of Concentration	0.015	95	10	104.5	0.016
151.09m - 1.025	SMH 1.260		Time of Concentration	0.015	95	10	104.5	0.016
151.48m - 13.000	SMH 12.000		Time of Concentration	0.015	95	10	104.5	0.016
151.56m - 19.000	SMH 17.000		Time of Concentration	0.015	95	10	104.5	0.016
152.87m - 3.001	SMH 3.020		Time of Concentration	0.015	95	10	104.5	0.016
152.90m - 20.012	SMH 18.120		Time of Concentration	0.015	10	0	10.0	0.002

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
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Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

153.04m - 1.009	SMH 1.080		Time of Concentration	0.015	95	10	104.5	0.016
153.16m - 8.000	SMH 9.000		Time of Concentration	0.015	95	10	104.5	0.016
153.16m - 8.004	SMH 9.040		Time of Concentration	0.015	95	10	104.5	0.016
153.68m - 2.000	SMH 2.000		Time of Concentration	0.015	95	10	104.5	0.016
153.74m - 1.009	SMH 1.080		Time of Concentration	0.015	95	10	104.5	0.016
154.08m - 18.002	SMH 16.020		Time of Concentration	0.015	10	0	10.0	0.002
154.44m - 8.003	SMH 9.030		Time of Concentration	0.015	80	0	80.0	0.012
155.77m - 18.002	SMH 16.020		Time of Concentration	0.016	95	10	104.5	0.016
156.50m - 20.000	SMH 18.000		Time of Concentration	0.016	10	0	10.0	0.002
157.24m - 1.024	SMH 1.250		Time of Concentration	0.016	10	0	10.0	0.002
158.33m - 8.000	SMH 9.000		Time of Concentration	0.016	10	0	10.0	0.002
160.06m - 5.006	SMH 5.040		Time of Concentration	0.016	80	0	80.0	0.013
161.39m - 14.004	SMH 13.030		Time of Concentration	0.016	95	10	104.5	0.017
162.11m - 20.000	SMH 18.000		Time of Concentration	0.016	10	0	10.0	0.002
162.19m - 1.033	SMH 1.340		Time of Concentration	0.016	10	0	10.0	0.002
162.53m - 1.033	SMH 1.340		Time of Concentration	0.016	95	10	104.5	0.017
162.81m - 10.007	SMH 10.060		Time of Concentration	0.016	95	10	104.5	0.017
162.81m - 14.004	SMH 13.030		Time of Concentration	0.016	95	10	104.5	0.017
163.28m - 1.020	SMH 1.210		Time of Concentration	0.016	95	10	104.5	0.017
163.62m - 24.000	SMH 22.000		Time of Concentration	0.016	95	10	104.5	0.017
163.87m - 24.001	SMH 22.010		Time of Concentration	0.016	95	10	104.5	0.017
163.92m - 1.030	SMH 1.310		Time of Concentration	0.016	10	0	10.0	0.002
166.84m - 1.010	SMH 1.090		Time of Concentration	0.017	80	0	80.0	0.013
171.32m - 5.004	SMH 5.020		Time of Concentration	0.017	10	0	10.0	0.002
172.05m - 1.014	SMH 1.140		Time of Concentration	0.017	95	10	104.5	0.018
172.17m - 24.002	SMH 22.020		Time of Concentration	0.017	95	10	104.5	0.018
172.25m - 24.000	SMH 22.000		Time of Concentration	0.017	95	10	104.5	0.018
175.26m - 1.031	SMH 1.320		Time of Concentration	0.018	10	0	10.0	0.002
175.47m - 24.001	SMH 22.010		Time of Concentration	0.018	95	10	104.5	0.018
177.20m - 16.000	SMH 14.000		Time of Concentration	0.018	10	0	10.0	0.002
179.48m - 6.006	SMH351.000		Time of Concentration	0.018	95	10	104.5	0.019
181.10m - 20.013	SMH 18.130		Time of Concentration	0.018	10	0	10.0	0.002
181.67m - 8.004	SMH 9.040		Time of Concentration	0.018	80	0	80.0	0.015
182.34m - 20.000	SMH 18.000		Time of Concentration	0.018	95	10	104.5	0.019

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

183.73m - 23.001	SMH 21.010		Time of Concentration	0.018	95	10	104.5	0.019
184.16m - 14.005	SMH 13.040		Time of Concentration	0.018	80	0	80.0	0.015
184.48m - 24.005	SMH 22.050		Time of Concentration	0.018	80	0	80.0	0.015
186.72m - 22.001	SMH 20.010		Time of Concentration	0.019	100	0	100.0	0.019
187.32m - 1.002	SMH 1.000		Time of Concentration	0.019	10	0	10.0	0.002
188.45m - 1.040	SMH 1.430		Time of Concentration	0.019	95	10	104.5	0.020
189.01m - 14.006	SMH 13.050		Time of Concentration	0.019	80	0	80.0	0.015
193.42m - 1.040	SMH 1.430		Time of Concentration	0.019	10	0	10.0	0.002
195.53m - 10.006	SMH 10.050		Time of Concentration	0.020	80	0	80.0	0.016
197.78m - 1.014	SMH 1.140		Time of Concentration	0.020	10	0	10.0	0.002
198.81m - 1.004	SMH 1.020		Time of Concentration	0.020	80	0	80.0	0.016
199.86m - 1.027	SMH 1.280		Time of Concentration	0.020	95	10	104.5	0.021
201.50m - 14.003	SMH 13.020		Time of Concentration	0.020	80	0	80.0	0.016
206.57m - 7.001	SMH 6.010		Time of Concentration	0.021	80	0	80.0	0.017
206.85m - 1.014	SMH 1.140		Time of Concentration	0.021	10	0	10.0	0.002
207.31m - 24.013	SMH 22.140		Time of Concentration	0.021	80	0	80.0	0.017
207.56m - 23.001	SMH 21.010		Time of Concentration	0.021	10	0	10.0	0.002
208.08m - 9.000	SMH 8.000		Time of Concentration	0.021	10	0	10.0	0.002
210.27m - 24.001	SMH 22.010		Time of Concentration	0.021	10	0	10.0	0.002
214.03m - 20.000	SMH 18.000		Time of Concentration	0.021	95	10	104.5	0.022
214.15m - 20.009	SMH 18.090		Time of Concentration	0.021	95	10	104.5	0.022
216.52m - 20.004	SMH 18.040		Time of Concentration	0.022	10	0	10.0	0.002
217.98m - 5.005	SMH 5.030		Time of Concentration	0.022	10	0	10.0	0.002
221.50m - 1.005	SMH 1.040		Time of Concentration	0.022	10	0	10.0	0.002
222.75m - 18.000	SMH 16.000		Time of Concentration	0.022	10	0	10.0	0.002
223.20m - 7.000	SMH 6.000		Time of Concentration	0.022	80	0	80.0	0.018
225.15m - 20.005	SMH 18.050		Time of Concentration	0.023	10	0	10.0	0.002
225.45m - 1.021	SMH 1.220		Time of Concentration	0.023	80	0	80.0	0.018
226.90m - 14.007	SMH 1.170		Time of Concentration	0.023	80	0	80.0	0.018
229.71m - 1.033	SMH 1.340		Time of Concentration	0.023	10	0	10.0	0.002
231.28m - 24.002	SMH 22.020		Time of Concentration	0.023	10	0	10.0	0.002
231.71m - 4.000	SMH 3.000		Time of Concentration	0.023	10	0	10.0	0.002
232.16m - 24.004	SMH 22.040		Time of Concentration	0.023	10	0	10.0	0.002
235.31m - 10.008	SMH 10.080		Time of Concentration	0.024	10	0	10.0	0.002

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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241.51m - 16.000	SMH 14.000		Time of Concentration	0.024	80	0	80.0	0.019
242.64m - 3.001	SMH 3.020		Time of Concentration	0.024	10	0	10.0	0.002
244.50m - 3.000	SMH 4.000		Time of Concentration	0.024	10	0	10.0	0.002
245.83m - 1.003	SMH 1.010		Time of Concentration	0.025	80	0	80.0	0.020
249.05m - 24.014	SMH 22.150		Time of Concentration	0.025	95	10	104.5	0.026
249.41m - 1.014	SMH 1.140		Time of Concentration	0.025	95	10	104.5	0.026
249.75m - 1.044	SMH 1.470		Time of Concentration	0.025	95	10	104.5	0.026
249.92m - 24.010	SMH 22.110		Time of Concentration	0.025	95	10	104.5	0.026
250.20m - 19.001	SMH 17.010		Time of Concentration	0.025	10	0	10.0	0.003
251.21m - 16.003	SMH 14.030		Time of Concentration	0.025	10	0	10.0	0.003
254.19m - 20.009	SMH 18.090		Time of Concentration	0.025	10	0	10.0	0.003
254.83m - 24.010	SMH 22.110		Time of Concentration	0.025	10	0	10.0	0.003
255.05m - 24.006	SMH 22.060		Time of Concentration	0.026	10	0	10.0	0.003
256.64m - 10.007	SMH 10.060		Time of Concentration	0.026	95	10	104.5	0.027
256.98m - 25.000	SMH 23.000		Time of Concentration	0.026	95	10	104.5	0.027
258.34m - 1.005	SMH 1.040		Time of Concentration	0.026	95	10	104.5	0.027
258.81m - 1.044	SMH 1.470		Time of Concentration	0.026	10	0	10.0	0.003
260.16m - 18.000	SMH 16.000		Time of Concentration	0.026	95	10	104.5	0.027
260.35m - 14.007	SMH 1.170		Time of Concentration	0.026	95	10	104.5	0.027
261.23m - 1.011	SMH 1.110		Time of Concentration	0.026	10	0	10.0	0.003
262.83m - 1.022	SMH 1.230		Time of Concentration	0.026	95	10	104.5	0.027
262.86m - 1.018	SMH 1.180		Time of Concentration	0.026	80	0	80.0	0.021
263.23m - 24.014	SMH 22.150		Time of Concentration	0.026	10	0	10.0	0.003
264.08m - 1.020	SMH 1.210		Time of Concentration	0.026	95	10	104.5	0.028
264.08m - 18.000	SMH 16.000		Time of Concentration	0.026	95	10	104.5	0.028
264.88m - 20.012	SMH 18.120		Time of Concentration	0.026	80	0	80.0	0.021
266.14m - 1.002	SMH 1.000		Time of Concentration	0.027	95	10	104.5	0.028
266.14m - 1.004	SMH 1.020		Time of Concentration	0.027	95	10	104.5	0.028
266.14m - 5.004	SMH 5.020		Time of Concentration	0.027	95	10	104.5	0.028
267.16m - 1.011	SMH 1.110		Time of Concentration	0.027	95	10	104.5	0.028
268.11m - 1.014	SMH 1.140		Time of Concentration	0.027	80	0	80.0	0.021
268.20m - 5.005	SMH 5.030		Time of Concentration	0.027	95	10	104.5	0.028
268.28m - 16.003	SMH 14.030		Time of Concentration	0.027	95	10	104.5	0.028
269.47m - 18.000	SMH 16.000		Time of Concentration	0.027	80	0	80.0	0.022

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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271.78m - 18.001	SMH 16.010		Time of Concentration	0.027	80	0	80.0	0.022
273.19m - 5.002	SMH 5.000		Time of Concentration	0.027	95	10	104.5	0.029
273.19m - 5.003	SMH 5.010		Time of Concentration	0.027	95	10	104.5	0.029
276.22m - 1.011	SMH 1.110		Time of Concentration	0.028	95	10	104.5	0.029
276.49m - 1.035	SMH 1.370		Time of Concentration	0.028	80	0	80.0	0.022
276.94m - 10.008	SMH 10.080		Time of Concentration	0.028	95	10	104.5	0.029
279.13m - 2.000	SMH 2.000		Time of Concentration	0.028	95	10	104.5	0.029
281.81m - 24.003	SMH 22.030		Time of Concentration	0.028	10	0	10.0	0.003
282.63m - 12.001	SMH 11.010		Time of Concentration	0.028	95	10	104.5	0.030
283.04m - 24.009	SMH 22.100		Time of Concentration	0.028	80	0	80.0	0.023
283.22m - 11.000	SMH 10.000		Time of Concentration	0.028	10	0	10.0	0.003
283.56m - 4.000	SMH 3.000		Time of Concentration	0.028	95	10	104.5	0.030
283.58m - 2.000	SMH 2.000		Time of Concentration	0.028	95	10	104.5	0.030
284.06m - 8.001	SMH 9.010		Time of Concentration	0.028	95	10	104.5	0.030
284.57m - 1.019	SMH 1.200		Time of Concentration	0.028	80	0	80.0	0.023
284.96m - 11.000	SMH 10.000		Time of Concentration	0.028	10	0	10.0	0.003
285.36m - 24.002	SMH 22.020		Time of Concentration	0.029	10	0	10.0	0.003
286.19m - 1.009	SMH 1.080		Time of Concentration	0.029	95	10	104.5	0.030
286.92m - 12.001	SMH 11.010		Time of Concentration	0.029	10	0	10.0	0.003
287.14m - 1.002	SMH 1.000		Time of Concentration	0.029	80	0	80.0	0.023
287.28m - 6.004	SMH 6.030		Time of Concentration	0.029	80	0	80.0	0.023
288.79m - 20.010	SMH 18.100		Time of Concentration	0.029	80	0	80.0	0.023
290.98m - 23.000	SMH 21.000		Time of Concentration	0.029	95	10	104.5	0.030
290.98m - 24.000	SMH 22.000		Time of Concentration	0.029	95	10	104.5	0.030
293.49m - 5.002	SMH 5.000		Time of Concentration	0.029	10	0	10.0	0.003
293.96m - 23.001	SMH 21.010		Time of Concentration	0.029	80	0	80.0	0.024
299.01m - 1.020	SMH 1.210		Time of Concentration	0.030	95	10	104.5	0.031
299.16m - 24.011	SMH 22.120		Time of Concentration	0.030	80	0	80.0	0.024
299.92m - 6.007	SMH431.000		Time of Concentration	0.030	10	0	10.0	0.003
300.48m - 24.001	SMH 22.010		Time of Concentration	0.030	10	0	10.0	0.003
302.07m - 1.025	SMH 1.260		Time of Concentration	0.030	10	0	10.0	0.003
304.35m - 8.001	SMH 9.010		Time of Concentration	0.030	80	0	80.0	0.024
305.93m - 24.003	SMH 22.030		Time of Concentration	0.031	95	10	104.5	0.032
305.94m - 24.005	SMH 22.050		Time of Concentration	0.031	95	10	104.5	0.032

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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307.96m - 21.000	SMH 19.000		Time of Concentration	0.031	10	0	10.0	0.003
310.31m - 15.000	SMH 13.000		Time of Concentration	0.031	95	10	104.5	0.032
317.29m - 5.004	SMH 5.020		Time of Concentration	0.032	80	0	80.0	0.025
317.72m - 1.038	SMH 1.410		Time of Concentration	0.032	80	0	80.0	0.025
317.88m - 15.000	SMH 13.000		Time of Concentration	0.032	95	10	104.5	0.033
320.00m - 1.022	SMH 1.230		Time of Concentration	0.032	100	0	100.0	0.032
321.30m - 18.000	SMH 16.000		Time of Concentration	0.032	80	0	80.0	0.026
322.10m - 1.028	SMH 1.290		Time of Concentration	0.032	95	10	104.5	0.034
324.97m - 1.017	SMH 1.170		Time of Concentration	0.032	80	0	80.0	0.026
326.43m - 1.028	SMH 1.290		Time of Concentration	0.033	95	10	104.5	0.034
329.06m - 6.000	SMH 7.000		Time of Concentration	0.033	80	0	80.0	0.026
331.55m - 24.000	SMH 22.000		Time of Concentration	0.033	10	0	10.0	0.003
333.75m - 21.000	SMH 19.000		Time of Concentration	0.033	95	10	104.5	0.035
334.17m - 16.003	SMH 14.030		Time of Concentration	0.033	95	10	104.5	0.035
335.42m - 16.002	SMH 14.020		Time of Concentration	0.034	95	10	104.5	0.035
336.66m - 22.000	SMH 20.000		Time of Concentration	0.034	95	10	104.5	0.035
336.67m - 1.020	SMH 1.210		Time of Concentration	0.034	95	10	104.5	0.035
336.93m - 18.002	SMH 16.020		Time of Concentration	0.034	95	10	104.5	0.035
346.86m - 25.000	SMH 23.000		Time of Concentration	0.035	80	0	80.0	0.028
348.31m - 16.003	SMH 14.030		Time of Concentration	0.035	10	0	10.0	0.003
362.67m - 6.003	SMH 6.020		Time of Concentration	0.036	80	0	80.0	0.029
362.83m - 1.013	SMH 1.130		Time of Concentration	0.036	80	0	80.0	0.029
364.87m - 20.003	SMH 18.030		Time of Concentration	0.036	95	10	104.5	0.038
375.07m - 16.002	SMH 14.020		Time of Concentration	0.038	10	0	10.0	0.004
376.38m - 14.007	SMH 13.060		Time of Concentration	0.038	80	0	80.0	0.030
378.92m - 1.028	SMH 1.290		Time of Concentration	0.038	10	0	10.0	0.004
380.15m - 1.027	SMH 1.280		Time of Concentration	0.038	10	0	10.0	0.004
388.02m - 21.000	SMH 19.000		Time of Concentration	0.039	80	0	80.0	0.031
388.70m - 4.000	SMH 3.000		Time of Concentration	0.039	80	0	80.0	0.031
390.55m - 20.003	SMH 18.030		Time of Concentration	0.039	95	10	104.5	0.041
392.04m - 24.004	SMH 22.040		Time of Concentration	0.039	80	0	80.0	0.031
393.73m - 20.003	SMH 18.030		Time of Concentration	0.039	10	0	10.0	0.004
394.24m - 16.002	SMH 14.020		Time of Concentration	0.039	95	10	104.5	0.041
394.74m - 1.044	SMH 1.470		Time of Concentration	0.039	80	0	80.0	0.032

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396.64m - 24.010	SMH 22.110		Time of Concentration	0.040	80	0	80.0	0.032
399.69m - 22.000	SMH 20.000		Time of Concentration	0.040	95	10	104.5	0.042
401.65m - 5.005	SMH 5.030		Time of Concentration	0.040	80	0	80.0	0.032
403.00m - 22.000	SMH 20.000		Time of Concentration	0.040	95	10	104.5	0.042
403.66m - 1.042	SMH 1.450		Time of Concentration	0.040	80	0	80.0	0.032
406.82m - 6.001	SMH 7.010		Time of Concentration	0.041	80	0	80.0	0.033
409.65m - 1.014	SMH 1.140		Time of Concentration	0.041	10	0	10.0	0.004
417.15m - 18.002	SMH 16.020		Time of Concentration	0.042	10	0	10.0	0.004
417.86m - 5.003	SMH 5.010		Time of Concentration	0.042	10	0	10.0	0.004
419.27m - 1.026	SMH 1.270		Time of Concentration	0.042	10	0	10.0	0.004
421.16m - 12.001	SMH 11.010		Time of Concentration	0.042	80	0	80.0	0.034
424.52m - 1.002	SMH 1.000		Time of Concentration	0.042	10	0	10.0	0.004
426.22m - 10.007	SMH 10.060		Time of Concentration	0.043	10	0	10.0	0.004
427.11m - 20.004	SMH 18.040		Time of Concentration	0.043	95	10	104.5	0.045
427.16m - 1.018	SMH 1.180		Time of Concentration	0.043	95	10	104.5	0.045
429.84m - 3.001	SMH 3.020		Time of Concentration	0.043	10	0	10.0	0.004
436.55m - 10.007	SMH 10.060		Time of Concentration	0.044	80	0	80.0	0.035
440.18m - 1.026	SMH 1.270		Time of Concentration	0.044	80	0	80.0	0.035
443.41m - 24.002	SMH 22.020		Time of Concentration	0.044	80	0	80.0	0.035
447.35m - 20.013	SMH 18.130		Time of Concentration	0.045	80	0	80.0	0.036
447.51m - 1.025	SMH 1.260		Time of Concentration	0.045	80	0	80.0	0.036
448.50m - 20.004	SMH 18.040		Time of Concentration	0.045	10	0	10.0	0.004
448.70m - 3.000	SMH 4.000		Time of Concentration	0.045	80	0	80.0	0.036
451.90m - 12.000	SMH 11.000		Time of Concentration	0.045	80	0	80.0	0.036
452.21m - 12.000	SMH 11.000		Time of Concentration	0.045	95	10	104.5	0.047
452.64m - 1.011	SMH 1.110		Time of Concentration	0.045	10	0	10.0	0.005
453.11m - 20.009	SMH 18.090		Time of Concentration	0.045	80	0	80.0	0.036
456.07m - 1.024	SMH 1.250		Time of Concentration	0.046	80	0	80.0	0.036
461.52m - 23.000	SMH 21.000		Time of Concentration	0.046	10	0	10.0	0.005
468.41m - 20.006	SMH 18.060		Time of Concentration	0.047	80	0	80.0	0.037
469.30m - 20.003	SMH 18.030		Time of Concentration	0.047	10	0	10.0	0.005
471.91m - 15.000	SMH 13.000		Time of Concentration	0.047	10	0	10.0	0.005
481.88m - 1.034	SMH 1.360		Time of Concentration	0.048	80	0	80.0	0.039
487.06m - 24.014	SMH 22.150		Time of Concentration	0.049	80	0	80.0	0.039

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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488.13m - 16.002	SMH 14.020		Time of Concentration	0.049	10	0	10.0	0.005
493.42m - 5.002	SMH 5.000		Time of Concentration	0.049	80	0	80.0	0.039
494.58m - 1.027	SMH 1.280		Time of Concentration	0.049	80	0	80.0	0.040
497.60m - 12.000	SMH 11.000		Time of Concentration	0.050	10	0	10.0	0.005
498.57m - 1.040	SMH 1.430		Time of Concentration	0.050	80	0	80.0	0.040
508.82m - 1.030	SMH 1.310		Time of Concentration	0.051	10	0	10.0	0.005
512.89m - 3.000	BR_1		Time of Concentration	0.051	30	0	30.0	0.015
524.27m - 19.000	SMH 17.000		Time of Concentration	0.052	80	0	80.0	0.042
535.67m - 8.000	BR_2		Time of Concentration	0.054	30	0	30.0	0.016
535.94m - 1.005	SMH 1.040		Time of Concentration	0.054	80	0	80.0	0.043
561.09m - 14.004	SMH 13.030		Time of Concentration	0.056	10	0	10.0	0.006
561.80m - 1.002	SMH 1.000		Time of Concentration	0.056	80	0	80.0	0.045
571.80m - 24.006	SMH 22.060		Time of Concentration	0.057	80	0	80.0	0.046
588.35m - 5.003	SMH 5.010		Time of Concentration	0.059	80	0	80.0	0.047
589.62m - 24.003	SMH 22.030		Time of Concentration	0.059	80	0	80.0	0.047
597.81m - 1.028	SMH 1.290		Time of Concentration	0.060	10	0	10.0	0.006
605.63m - 1.020	SMH 1.210		Time of Concentration	0.061	10	0	10.0	0.006
607.06m - 9.000	SMH 8.000		Time of Concentration	0.061	80	0	80.0	0.049
608.34m - 24.000	SMH 22.000		Time of Concentration	0.061	10	0	10.0	0.006
611.98m - 10.008	SMH 10.080		Time of Concentration	0.061	80	0	80.0	0.049
612.94m - 14.004	SMH 13.030		Time of Concentration	0.061	80	0	80.0	0.049
622.92m - 20.004	SMH 18.040		Time of Concentration	0.062	95	10	104.5	0.065
628.65m - 2.000	SMH 2.000		Time of Concentration	0.063	10	0	10.0	0.006
642.78m - 24.001	SMH 22.010		Time of Concentration	0.064	80	0	80.0	0.051
646.98m - 20.004	SMH 18.040		Time of Concentration	0.065	10	0	10.0	0.006
668.11m - 1.022	SMH 1.230		Time of Concentration	0.067	10	0	10.0	0.007
671.75m - 18.002	SMH 16.020		Time of Concentration	0.067	80	0	80.0	0.054
673.76m - 6.006	SMH351.000		Time of Concentration	0.067	80	0	80.0	0.054
675.69m - 11.000	SMH 10.000		Time of Concentration	0.068	10	0	10.0	0.007
676.53m - 20.000	SMH 18.000		Time of Concentration	0.068	80	0	80.0	0.054
682.61m - 10.004	SMH 10.030		Time of Concentration	0.068	80	0	80.0	0.055
690.83m - 1.032	SMH 1.330		Time of Concentration	0.069	10	0	10.0	0.007
710.90m - 1.020	SMH 1.210		Time of Concentration	0.071	100	0	100.0	0.071
725.66m - 8.004	SMH 9.040		Time of Concentration	0.066	30	0	30.0	0.020

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

725.66m - 8.004 (1)	BR_4		Time of Concentration	0.019	30	0	30.0	0.006
740.79m - 13.000	SMH 12.000		Time of Concentration	0.074	80	0	80.0	0.059
742.12m - 1.009	SMH 1.080		Time of Concentration	0.074	10	0	10.0	0.007
742.70m - 6.007	SMH431.000		Time of Concentration	0.074	80	0	80.0	0.059
744.19m - 1.017	POND_4		Time of Concentration	0.074	30	0	30.0	0.022
753.55m - 17.000	SMH 15.000		Time of Concentration	0.075	80	0	80.0	0.060
754.01m - 17.000	SMH 15.000		Time of Concentration	0.075	10	0	10.0	0.008
767.08m - 3.001	SMH 3.020		Time of Concentration	0.077	80	0	80.0	0.061
794.81m - 19.000	SMH 17.000		Time of Concentration	0.079	10	0	10.0	0.008
811.43m - 22.000	SMH 20.000		Time of Concentration	0.081	10	0	10.0	0.008
859.71m - 22.000	SMH 20.000		Time of Concentration	0.086	10	0	10.0	0.009
876.57m - 1.014	SMH 1.140		Time of Concentration	0.088	80	0	80.0	0.070
883.79m - 15.000	SMH 13.000		Time of Concentration	0.088	80	0	80.0	0.071
892.57m - 2.000	SMH 2.000		Time of Concentration	0.089	80	0	80.0	0.071
929.20m - 23.000	SMH 21.000		Time of Concentration	0.093	80	0	80.0	0.074
935.44m - 24.000	SMH 22.000		Time of Concentration	0.094	80	0	80.0	0.075
1041.79m - 19.000	POND_6		Time of Concentration	0.104	30	0	30.0	0.031
1051.57m - 1.009	SMH 1.080		Time of Concentration	0.105	80	0	80.0	0.084
1070.44m - 1.030	POND_6		Time of Concentration	0.107	30	0	30.0	0.032
1102.75m - 16.003	SMH 14.030		Time of Concentration	0.110	80	0	80.0	0.088
1105.96m - 1.011	SMH 1.110		Time of Concentration	0.111	80	0	80.0	0.088
1111.44m - 16.002	SMH 14.020		Time of Concentration	0.111	80	0	80.0	0.089
1148.95m - 1.022	SMH 1.230		Time of Concentration	0.115	80	0	80.0	0.092
1156.81m - 1.028	SMH 1.290		Time of Concentration	0.116	80	0	80.0	0.093
1177.33m - 1.030	SMH 1.310		Time of Concentration	0.118	80	0	80.0	0.094
1226.81m - 20.003	SMH 18.030		Time of Concentration	0.123	80	0	80.0	0.098
1231.11m - 17.000	POND_6		Time of Concentration	0.123	30	0	30.0	0.037
1294.62m - 20.004	SMH 18.040		Time of Concentration	0.129	80	0	80.0	0.104
1310.82m - 1.019	SMH 1.200		Time of Concentration	0.131	80	0	80.0	0.105
1397.01m - 11.000	SMH 10.000		Time of Concentration	0.140	80	0	80.0	0.112
1419.34m - 1.032	POND_6		Time of Concentration	0.142	30	0	30.0	0.043
1430.83m - 1.032	SMH 1.330		Time of Concentration	0.143	80	0	80.0	0.114
1543.80m - 1.017	POND_5		Time of Concentration	0.081	30	0	30.0	0.024
1577.03m - 22.000	SMH 20.000		Time of Concentration	0.158	80	0	80.0	0.126

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1			Date: 27/02/2025					
			Designed by: MJC	Checked by: MJC	Approved By: DOB			
Report Details: Type: Inflow Summary Storm Phase: Phase 1_East Catchment			Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare					

1607.50m - 10.006	POND_3		Time of Concentration	0.161	30	0	30.0	0.048
1775.51m - 20.011	BR_5		Time of Concentration	0.164	30	0	30.0	0.049
1775.51m - 20.011 (1)	BR_6		Time of Concentration	0.134	30	0	30.0	0.040
1992.87m - 14.006	ATT_4		Time of Concentration	0.199	30	0	30.0	0.060
2085.40m - 1.003	POND_1		Time of Concentration	0.209	30	0	30.0	0.063
2335.78m - 5.006	POND_2		Time of Concentration	0.234	30	0	30.0	0.070
Catchment Area	ATT_9		Time of Concentration	0.063	30	0	30.0	0.019
Catchment Area (1)	ATT_8		Time of Concentration	0.090	30	0	30.0	0.027
Catchment Area (2)	SMH 1.480		Time of Concentration	0.007	80	0	80.0	0.006
Catchment Area (3)	SMH 1.460		Time of Concentration	0.010	80	0	80.0	0.008
Catchment Area (4)	SMH 1.450		Time of Concentration	0.009	80	0	80.0	0.007
Catchment Area (5)	SMH 1.440		Time of Concentration	0.006	80	0	80.0	0.005
Catchment Area (6)	SMH 1.430		Time of Concentration	0.007	80	0	80.0	0.005
Catchment Area (7)	SMH 1.420		Time of Concentration	0.007	80	0	80.0	0.006
Catchment Area (8)	SMH 1.410		Time of Concentration	0.005	80	0	80.0	0.004
Catchment Area (9)	SMH 1.400		Time of Concentration	0.010	80	0	80.0	0.008
Catchment Area (10)	SMH 1.390		Time of Concentration	0.007	80	0	80.0	0.005
Catchment Area (11)	SMH 1.360		Time of Concentration	0.013	80	0	80.0	0.011
Catchment Area (12)	SMH 22.100		Time of Concentration	0.008	80	0	80.0	0.006
Catchment Area (13)	SMH 22.120		Time of Concentration	0.009	80	0	80.0	0.007
Catchment Area (14)	SMH 22.130		Time of Concentration	0.010	80	0	80.0	0.008
Catchment Area (15)	SMH 22.150		Time of Concentration	0.007	80	0	80.0	0.006
Catchment Area (16)	SMH 22.160		Time of Concentration	0.006	80	0	80.0	0.005
Catchment Area (17)	SMH 1.490		Time of Concentration	0.007	80	0	80.0	0.005
TOTAL		0.0		14.195				8.787

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Network Design Criteria Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Flow Options

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

Pipe Options

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

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Manhole Options

Apply Offset	☐
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Manhole Size Library

Default

Additional Sizing

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

Benching Requirements

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

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
Outfall West	Manhole	724046.781	674371.978	4.500	0.924	3.576	Circular	0.000
SMH 24.340	Manhole	724047.571	674373.079	5.000	1.413	3.587	Circular	1.350
SMH 24.330	Manhole	724065.178	674397.618	6.853	3.021	3.832	Circular	1.200
SMH 24.320	Manhole	724066.228	674399.082	7.454	3.617	3.837	Circular	1.200
SMH 31.130	Manhole	724054.767	674419.542	8.742	3.374	5.368	Circular	1.200
SMH 31.120	Manhole	724033.650	674441.049	9.253	3.825	5.428	Circular	1.350
SMH 31.100	Manhole	724016.013	674465.154	9.755	2.580	7.175	Circular	1.350
SMH 37.000	Manhole	724079.271	674542.909	10.526	1.686	8.840	Circular	1.350
SMH 31.090	Manhole	724005.100	674484.907	10.073	1.935	8.138	Circular	1.350
SMH 31.080	Manhole	723993.472	674511.572	10.819	2.536	8.283	Circular	1.350
SMH 31.070	Manhole	723984.854	674525.421	11.320	2.874	8.446	Circular	1.350
SMH 36.010	Manhole	724008.298	674566.509	12.274	2.452	9.822	Circular	1.350
SMH 36.000	Manhole	724055.152	674602.986	13.773	1.868	11.905	Circular	1.350
SMH 31.060	Manhole	723974.209	674539.735	11.943	3.332	8.611	Circular	1.350
SMH 31.050	Manhole	723958.141	674560.507	12.756	1.795	10.961	Circular	1.350
SMH 31.010	Manhole	723912.348	674623.950	15.534	2.180	13.354	Circular	1.350
SMH 31.000	Manhole	723978.379	674675.359	17.165	1.388	15.777	Circular	1.350
SMH 31.020	Manhole	723915.870	674610.817	15.060	2.785	12.275	Circular	1.200
SMH 32.000	Manhole	723905.052	674620.538	15.621	2.323	13.298	Circular	1.200
SMH 24.310	Manhole	724071.266	674406.402	8.355	4.500	3.855	Circular	1.500
SMH 24.300	Manhole	724084.161	674397.282	8.100	4.164	3.936	Circular	1.200
SMH 24.290	Manhole	724103.140	674385.842	7.663	3.690	3.973	Circular	1.500
SMH 24.280	Manhole	724122.877	674377.156	7.369	3.360	4.009	Circular	1.500
SMH 24.270	Manhole	724153.287	674368.936	7.369	3.307	4.062	Circular	1.500
SMH 24.260	Manhole	724176.479	674366.514	6.615	2.514	4.101	Circular	1.500
SMH 24.240	Manhole	724205.136	674367.429	5.648	1.349	4.299	Circular	1.500
SMH 24.230	Manhole	724201.298	674438.939	6.102	1.465	4.637	Circular	1.350
SMH 30.060	Manhole	724159.078	674445.537	6.896	1.789	5.107	Circular	1.350
SMH 30.050	Manhole	724144.596	674448.589	7.276	2.021	5.255	Circular	1.350
SMH 30.040	Manhole	724124.591	674456.603	7.817	1.822	5.995	Circular	1.350
SMH 30.030	Manhole	724103.975	674469.156	8.435	2.199	6.236	Circular	1.350
SMH 30.020	Manhole	724087.362	674485.725	8.728	1.228	7.501	Circular	1.350
SMH 30.010	Manhole	724078.241	674497.269	8.860	1.065	7.795	Circular	1.350
SMH 30.000	Manhole	724062.670	674517.326	9.882	1.579	8.303	Circular	1.350
SMH 24.220	Manhole	724180.111	674442.173	6.369	1.625	4.744	Circular	1.350
SMH 24.210	Manhole	724179.025	674446.936	6.517	1.600	4.917	Circular	1.350
SMH 24.200	Manhole	724183.359	674470.449	7.445	2.130	5.315	Circular	1.350
SMH 28.060	Manhole	724225.636	674505.705	9.049	2.029	7.020	Circular	1.350
SMH 28.050	Manhole	724227.128	674510.985	9.129	2.091	7.038	Circular	1.350
SMH 28.040	Manhole	724206.869	674571.408	11.600	3.069	8.531	Circular	1.350
SMH 29.000	Manhole	724153.030	674556.688	12.254	1.502	10.752	Circular	1.350
SMH 28.030	Manhole	724203.588	674573.696	11.708	2.498	9.210	Circular	1.350
SMH 28.020	Manhole	724203.898	674580.214	11.865	2.525	9.340	Circular	1.350
SMH 28.010	Manhole	724200.195	674592.875	12.379	1.500	10.879	Circular	1.350
SMH 28.000	Manhole	724189.437	674626.055	13.735	2.083	11.652	Circular	1.350
SMH 24.180	Manhole	724190.516	674511.515	9.657	3.428	6.229	Circular	1.500
SMH 24.170	Manhole	724185.804	674515.829	9.778	1.802	7.976	Circular	1.350
SMH 24.160	Manhole	724159.605	674520.455	10.151	1.909	8.242	Circular	1.350
SMH 24.150	Manhole	724146.798	674524.095	10.367	1.992	8.375	Circular	1.350
SMH 24.140	Manhole	724137.667	674530.645	10.549	2.062	8.487	Circular	1.350
SMH 24.130	Manhole	724113.264	674562.485	11.317	2.429	8.888	Circular	1.350
SMH 24.120	Manhole	724105.754	674568.270	11.757	2.039	9.718	Circular	1.350
SMH 24.110	Manhole	724088.824	674589.977	13.025	2.756	10.269	Circular	1.350
SMH 24.100	Manhole	724083.279	674594.187	13.367	1.841	11.526	Circular	1.350
SMH 25.070	Manhole	724090.120	674613.256	13.933	1.738	12.195	Circular	1.350
SMH 25.060	Manhole	724096.108	674617.200	13.989	1.758	12.231	Circular	1.350
SMH 27.010	Manhole	724183.578	674649.240	14.730	1.626	13.104	Circular	1.350

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		



SMH 27.000	Manhole	724210.617	674683.434	15.609	1.633	13.976	Circular	1.350
SMH 25.050	Manhole	724171.903	674642.533	14.655	2.024	12.631	Circular	1.350
SMH 25.040	Manhole	724169.729	674649.985	14.749	1.716	13.033	Circular	1.350
SMH 25.030	Manhole	724165.064	674655.222	15.013	1.835	13.178	Circular	1.350
SMH 25.020	Manhole	724153.436	674658.942	15.412	2.112	13.300	Circular	1.350
SMH 25.000	Manhole	724084.000	674713.119	18.378	2.221	16.157	Circular	1.350
SMH 25.010	Manhole	724130.444	674677.301	16.409	2.740	13.669	Circular	1.350
SMH 26.040	Manhole	724124.244	674677.166	16.592	1.659	14.933	Circular	1.350
SMH 26.030	Manhole	724110.429	674673.031	17.028	1.806	15.222	Circular	1.200
SMH 26.020	Manhole	724099.442	674688.204	17.521	1.849	15.672	Circular	1.200
SMH 26.010	Manhole	724088.226	674693.278	17.915	1.573	16.342	Circular	1.350
SMH 26.000	Manhole	724076.953	674708.635	18.467	1.744	16.723	Circular	1.200
SMH 24.090	Manhole	724076.157	674601.951	13.906	2.169	11.737	Circular	1.200
SMH 24.080	Manhole	724048.396	674638.124	15.450	2.726	12.724	Circular	1.350
SMH 24.070	Manhole	724042.259	674641.028	15.660	2.004	13.656	Circular	1.350
SMH 24.060	Manhole	724037.544	674644.836	15.826	2.049	13.777	Circular	1.350
SMH 24.050	Manhole	724010.766	674679.304	17.140	2.490	14.650	Circular	1.350
SMH 24.030	Manhole	724003.252	674691.687	17.643	2.920	14.723	Circular	1.350
SMH 24.010	Manhole	724028.100	674745.742	20.068	1.886	18.182	Circular	1.200
SMH 24.000	Manhole	724058.162	674765.571	20.713	2.096	18.617	Circular	1.200
SMH 24.020	Manhole	723988.970	674725.862	19.293	2.551	16.742	Circular	1.200
SMH 34.000	Manhole	723985.985	674646.413	16.500	1.500	15.000	Circular	1.200
SMH 34.010	Manhole	723970.254	674633.295	16.500	1.841	14.659	Circular	1.200
SMH 34.020	Manhole	723977.600	674609.462	16.300	2.057	14.243	Circular	1.200
SMH 34.030	Manhole	723940.217	674594.117	14.500	1.956	12.544	Circular	1.200
SMH 31.040	Manhole	723934.459	674588.693	14.035	2.338	11.697	Circular	1.200
SMH 35.000	Manhole	724009.650	674622.087	16.500	1.425	15.075	Circular	1.200
SMH 31.030	Manhole	723919.615	674606.360	14.839	2.680	12.159	Circular	1.200
SMH 33.020	Manhole	723928.575	674613.443	15.500	1.719	13.781	Circular	1.200
SMH 33.010	Manhole	723963.936	674641.556	16.500	1.626	14.874	Circular	1.200
SMH 33.000	Manhole	723956.688	674651.220	16.500	1.425	15.075	Circular	1.200
SMH 24.250	Manhole	724202.617	674367.349	5.664	1.518	4.146	Circular	1.500
SMH 24.190	Manhole	724190.267	674508.682	9.531	3.361	6.170	Circular	1.350
SMH 31.110	Manhole	724017.265	674463.444	9.723	2.590	7.133	Circular	1.200
SMH 32.010	Manhole	723906.255	674619.457	15.557	2.291	13.266	Circular	1.200
SMH 34.040	Manhole	723938.928	674592.902	14.461	1.926	12.535	Circular	1.200
SMH 24.040	Manhole	724004.003	674689.953	17.583	2.869	14.714	Circular	1.200

Name	Lock
Outfall West	None
SMH 24.340	None
SMH 24.330	None
SMH 24.320	None
SMH 31.130	None
SMH 31.120	None
SMH 31.100	None
SMH 37.000	None
SMH 31.090	None
SMH 31.080	None
SMH 31.070	None
SMH 36.010	None
SMH 36.000	None
SMH 31.060	None
SMH 31.050	None
SMH 31.010	None
SMH 31.000	None
SMH 31.020	None
SMH 32.000	None
SMH 24.310	None
SMH 24.300	None

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 24.290	None
SMH 24.280	None
SMH 24.270	None
SMH 24.260	None
SMH 24.240	None
SMH 24.230	None
SMH 30.060	None
SMH 30.050	None
SMH 30.040	None
SMH 30.030	None
SMH 30.020	None
SMH 30.010	None
SMH 30.000	None
SMH 24.220	None
SMH 24.210	None
SMH 24.200	None
SMH 28.060	None
SMH 28.050	None
SMH 28.040	None
SMH 29.000	None
SMH 28.030	None
SMH 28.020	None
SMH 28.010	None
SMH 28.000	None
SMH 24.180	None
SMH 24.170	None
SMH 24.160	None
SMH 24.150	None
SMH 24.140	None
SMH 24.130	None
SMH 24.120	None
SMH 24.110	None
SMH 24.100	None
SMH 25.070	None
SMH 25.060	None
SMH 27.010	None
SMH 27.000	None
SMH 25.050	None
SMH 25.040	None
SMH 25.030	None
SMH 25.020	None
SMH 25.000	None
SMH 25.010	None
SMH 26.040	None
SMH 26.030	None
SMH 26.020	None
SMH 26.010	None
SMH 26.000	None
SMH 24.090	None
SMH 24.080	None
SMH 24.070	None
SMH 24.060	None
SMH 24.050	None
SMH 24.030	None
SMH 24.010	None
SMH 24.000	None
SMH 24.020	None
SMH 34.000	None
SMH 34.010	None

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 34.020	None
SMH 34.030	None
SMH 31.040	None
SMH 35.000	None
SMH 31.030	None
SMH 33.020	None
SMH 33.010	None
SMH 33.000	None
SMH 24.250	None
SMH 24.190	None
SMH 31.110	None
SMH 32.010	None
SMH 34.040	None
SMH 24.040	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Outfall West	Inlet	45.035	(None)	No Restriction
SMH 24.340	Inlet	45.034	(None)	No Restriction
SMH 24.330	Inlet	45.033	(None)	No Restriction
SMH 24.320	Inlet	45.032	(None)	No Restriction
SMH 31.130	Inlet	57.004 135.94m - 16.017 227.29m - 16.017 369.26m - 16.017	(None)	No Restriction
SMH 31.120	Inlet	72.68m - 16.016 199.09m - 16.016 255.56m - 16.016 101.23m - 16.016 559.38m - 16.016 57.003	(None)	No Restriction
SMH 31.100	Inlet	263.31m - 16.015 286.69m - 16.015 500.53m - 16.015 57.001	(None)	No Restriction
	Inlet (1)	70.000	(None)	No Restriction
SMH 37.000	Inlet	396.19m - 21.000 875.60m - 21.000 1404.38m - 21.000 397.37m - 21.000	(None)	No Restriction
SMH 31.090	Inlet	57.000 58.008 257.51m - 16.014	(None)	No Restriction
SMH 31.080	Inlet	394.38m - 16.013 58.007	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 31.070	Inlet	58.006 100.73m - 16.012 369.44m - 16.012	(None)	No Restriction
SMH 36.010	Inlet	410.61m - 20.001 474.24m - 20.001 167.45m - 20.001 68.000	(None)	No Restriction
SMH 36.000	Inlet	1134.49m - 20.000 207.61m - 20.000 512.51m - 20.000	(None)	No Restriction
	Inlet (1)	Catchment Area (22)	(None)	No Restriction
SMH 31.060	Inlet	100.70m - 16.011 321.58m - 16.011 68.001 58.005	(None)	No Restriction
	Inlet (1)	69.000	(None)	No Restriction
SMH 31.050	Inlet	308.20m - 16.010 58.004	(None)	No Restriction
	Inlet (1)	Catchment Area (18)	(None)	No Restriction
SMH 31.010	Inlet	58.000 57.12m - 19.001	(None)	No Restriction
SMH 31.000	Inlet	1097.61m - 19.000	(None)	No Restriction
SMH 31.020	Inlet	808.49m - 16.009 58.001 59.001	(None)	No Restriction
SMH 32.000	Inlet	82.29m - 16.008	(None)	No Restriction
SMH 24.310	Inlet	45.031 57.005	(None)	No Restriction
SMH 24.300	Inlet	136.31m - 1.047 187.60m - 1.047 220.10m - 1.047 45.030	(None)	No Restriction
SMH 24.290	Inlet	45.029 261.84m - 1.046 239.97m - 1.046 396.97m - 1.046	(None)	No Restriction
SMH 24.280	Inlet	135.78m - 1.045 316.40m - 1.045 381.15m - 1.045 45.028	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 24.270	Inlet	45.027 198.95m - 1.044 73.40m - 1.044 402.59m - 1.044 602.29m - 1.044	(None)	No Restriction
SMH 24.260	Inlet	264.04m - 1.043 310.65m - 1.043 474.05m - 1.043 45.026	(None)	No Restriction
SMH 24.240	Inlet	289.70m - 1.042 45.024	(None)	No Restriction
	Inlet (1)	56.000	(None)	No Restriction
SMH 24.230	Inlet	45.022	(None)	No Restriction
SMH 30.060	Inlet	55.005 307.07m - 15.006 298.58m - 15.006 457.02m - 15.006 254.03m - 15.006	(None)	No Restriction
SMH 30.050	Inlet	207.33m - 15.005 172.86m - 15.005 825.97m - 15.005 438.02m - 15.005 55.004	(None)	No Restriction
SMH 30.040	Inlet	344.59m - 15.004 309.48m - 15.004 74.13m - 15.004 132.82m - 15.004 123.18m - 15.004 124.31m - 15.004 519.34m - 15.004 55.003	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 30.030	Inlet	55.002 244.63m - 15.003 292.99m - 15.003 193.25m - 15.003 123.39m - 15.003 123.67m - 15.003 697.68m - 15.003	(None)	No Restriction
SMH 30.020	Inlet	170.22m - 15.002 311.40m - 15.002 116.09m - 15.002 72.58m - 15.002 173.52m - 15.002 553.12m - 15.002 55.001	(None)	No Restriction
SMH 30.010	Inlet	55.000 229.28m - 15.001 157.83m - 15.001 156.25m - 15.001 150.21m - 15.001 330.78m - 15.001	(None)	No Restriction
SMH 30.000	Inlet	299.25m - 15.000 59.75m - 15.000 212.53m - 15.000 75.34m - 15.000 501.61m - 15.000	(None)	No Restriction
SMH 24.220	Inlet	55.006 525.92m - 1.040 340.85m - 1.040 45.021	(None)	No Restriction
SMH 24.210	Inlet	45.020	(None)	No Restriction
SMH 24.200	Inlet	45.019	(None)	No Restriction
SMH 28.060	Inlet	313.70m - 13.006 625.25m - 13.006 51.005	(None)	No Restriction
SMH 28.050	Inlet	51.004	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 28.040	Inlet	161.89m - 13.004 163.29m - 13.004 163.28m - 13.004 163.29m - 13.004 891.27m - 13.004 532.31m - 13.004 335.52m - 13.004 156.24m - 13.004 51.003	(None)	No Restriction
SMH 29.000	Inlet	478.67m - 14.000 600.14m - 14.000 670.33m - 14.000	(None)	No Restriction
SMH 28.030	Inlet	52.000 51.002	(None)	No Restriction
SMH 28.020	Inlet	51.001	(None)	No Restriction
SMH 28.010	Inlet	163.28m - 13.001 142.88m - 13.001 83.53m - 13.001 61.16m - 13.001 51.000	(None)	No Restriction
SMH 28.000	Inlet	322.04m - 13.000 588.20m - 13.000 625.68m - 13.000 282.15m - 13.000 303.09m - 13.000	(None)	No Restriction
SMH 24.180	Inlet	51.006 150.27m - 1.037 150.27m - 1.037 550.78m - 1.037 45.017	(None)	No Restriction
	Inlet (1)	53.000	(None)	No Restriction
	Inlet (2)	54.000	(None)	No Restriction
SMH 24.170	Inlet	45.016	(None)	No Restriction
SMH 24.160	Inlet	45.015 163.26m - 1.035 324.66m - 1.035 489.20m - 1.035	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 24.150	Inlet	160.51m - 1.034 298.83m - 1.034 221.88m - 1.034 45.014	(None)	No Restriction
SMH 24.140	Inlet	45.013 154.81m - 1.033 257.27m - 1.033 188.89m - 1.033	(None)	No Restriction
SMH 24.130	Inlet	159.93m - 1.032 265.38m - 1.032 440.30m - 1.032 646.04m - 1.032 134.23m - 1.032 240.14m - 1.032 216.49m - 1.032 45.012	(None)	No Restriction
SMH 24.120	Inlet	45.011 49.77m - 1.031 234.95m - 1.031	(None)	No Restriction
SMH 24.110	Inlet	280.09m - 1.030 377.67m - 1.030 182.82m - 1.030 709.57m - 1.030 169.41m - 1.030 45.010	(None)	No Restriction
SMH 24.100	Inlet	45.009 193.68m - 1.029	(None)	No Restriction
SMH 25.070	Inlet	137.91m - 10.011 406.33m - 10.011 48.010	(None)	No Restriction
SMH 25.060	Inlet	48.009 181.19m - 10.010	(None)	No Restriction
SMH 27.010	Inlet	50.000 176.50m - 12.001	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 27.000	Inlet	331.45m - 12.000 321.32m - 12.000 833.90m - 12.000 806.16m - 12.000 329.21m - 12.000	(None)	No Restriction
SMH 25.050	Inlet	155.28m - 10.009 319.64m - 10.009 904.43m - 10.009 321.04m - 10.009 319.66m - 10.009 1471.72m - 10.009 576.82m - 10.009 50.001 48.008	(None)	No Restriction
SMH 25.040	Inlet	524.90m - 10.008 48.007	(None)	No Restriction
SMH 25.030	Inlet	48.006 193.93m - 10.007	(None)	No Restriction
SMH 25.020	Inlet	48.005	(None)	No Restriction
SMH 25.000	Inlet	263.44m - 11.000 384.11m - 11.000 212.67m - 11.000 351.59m - 11.000 1046.87m - 11.000 321.53m - 11.000 324.77m - 11.000	(None)	No Restriction
SMH 25.010	Inlet	49.000 373.37m - 10.005 150.22m - 10.005 364.02m - 10.005 523.85m - 10.005 48.004	(None)	No Restriction
SMH 26.040	Inlet	37.49m - 10.004 48.003	(None)	No Restriction
SMH 26.030	Inlet	48.002 229.62m - 10.003 222.80m - 10.003	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

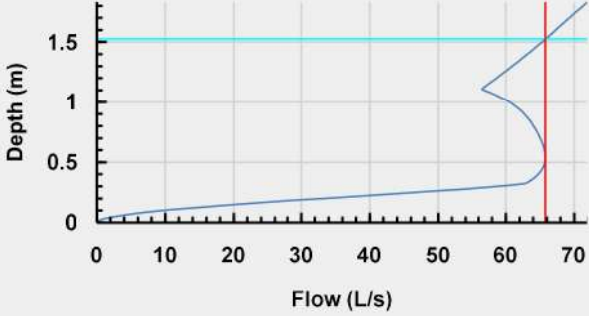
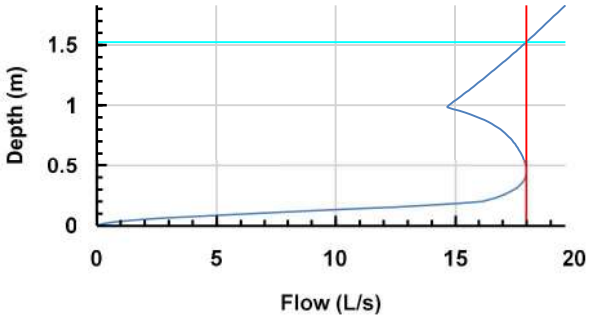
Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 26.020	Inlet	311.47m - 10.002 48.001	(None)	No Restriction
SMH 26.010	Inlet	48.000 160.85m - 10.001 152.24m - 10.001 332.42m - 10.001	(None)	No Restriction
SMH 26.000	Inlet	336.68m - 10.000 368.34m - 10.000 495.35m - 10.000	(None)	No Restriction
SMH 24.090	Inlet	45.008 48.011 201.53m - 1.028 169.92m - 1.028	(None)	No Restriction
SMH 24.080	Inlet	297.28m - 1.027 133.05m - 1.027 309.13m - 1.027 888.67m - 1.027 265.28m - 1.027 45.007	(None)	No Restriction
SMH 24.070	Inlet	45.006 257.89m - 1.026	(None)	No Restriction
SMH 24.060	Inlet	45.005 124.95m - 1.025	(None)	No Restriction
SMH 24.050	Inlet	305.72m - 1.024 345.40m - 1.024 380.34m - 1.024 1043.72m - 1.024 45.004	(None)	No Restriction
SMH 24.030	Inlet	361.04m - 1.023 207.86m - 1.023 45.002	(None)	No Restriction
	Inlet (1)	46.000	(None)	No Restriction
	Inlet (2)	47.000	(None)	No Restriction
SMH 24.010	Inlet	653.72m - 9.004 45.000	(None)	No Restriction
SMH 24.000	Inlet	899.15m - 9.003	(None)	No Restriction
SMH 24.020	Inlet	45.001 516.74m - 1.022	(None)	No Restriction
SMH 34.000	Inlet (1)	Catchment Area (14)	(None)	No Restriction
	Inlet	61.000	(None)	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1		Date: 27/02/2025		
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment		Designed by: MJC	Checked by: MJC	
		Approved By: DOB		
		Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SMH 34.010	Inlet (1)	Catchment Area (7)	(None)	No Restriction
	Inlet (2)	62.000	(None)	No Restriction
	Inlet	61.001 Catchment Area (11)	(None)	No Restriction
SMH 34.020	Inlet (1)	63.001	(None)	No Restriction
	Inlet (2)	Catchment Area (10)	(None)	No Restriction
	Inlet (3)	64.000	(None)	No Restriction
	Inlet (4)	65.000	(None)	No Restriction
	Inlet	61.002	(None)	No Restriction
SMH 34.030	Inlet (2)	66.000	(None)	No Restriction
	Inlet (3)	67.000	(None)	No Restriction
	Inlet	58.003	(None)	No Restriction
SMH 31.040	Inlet (1)	61.004	(None)	No Restriction
	Inlet	Catchment Area (8)	(None)	No Restriction
SMH 35.000	Inlet (1)	Catchment Area (15)	(None)	No Restriction
	Inlet (2)	Catchment Area (17)	(None)	No Restriction
	Inlet (3)	63.000	(None)	No Restriction
	Inlet	58.002	(None)	No Restriction
SMH 31.030	Inlet (1)	60.002	(None)	No Restriction
	Inlet	60.001	(None)	No Restriction
SMH 33.020	Inlet	60.000	(None)	No Restriction
SMH 33.010	Inlet (1)	Catchment Area (1)	(None)	No Restriction
	Inlet (2)	Catchment Area (2)	(None)	No Restriction
	Inlet	Catchment Area	(None)	No Restriction
SMH 33.000	Inlet	45.025	(None)	No Restriction
SMH 24.250	Inlet	45.018	(None)	No Restriction
SMH 24.190	Inlet	57.002	(None)	No Restriction
SMH 31.110	Inlet	59.000	(None)	No Restriction
SMH 32.010	Inlet	61.003	(None)	No Restriction
SMH 34.040	Inlet	45.003	(None)	No Restriction
SMH 24.040	Inlet			

Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 24.340	Outlet	45.035	Free Discharge
SMH 24.330	Outlet	45.034	Free Discharge
	Outlet	45.033	Hydro-Brake®

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		
			DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 24.320	Invert Level (m)	3.838	
	Design Depth (m)	1.525	
	Design Flow (L/s)	65.83	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0324-6583-1525-6583	
			
	Outlet	57.005	Free Discharge
	Outlet	57.004	Free Discharge
SMH 31.130	Outlet	57.002	Hydro-Brake®
SMH 31.100	Invert Level (m)	7.175	
	Design Depth (m)	1.525	
	Design Flow (L/s)	18.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0182-1800-1525-1800	
			
	Outlet	57.000	Free Discharge
	Outlet	57.001	Free Discharge
SMH 31.090	Outlet	58.008	Free Discharge
SMH 31.080	Outlet	58.007	Free Discharge
SMH 31.070	Outlet	68.001	Free Discharge
SMH 36.010	Outlet	68.000	Free Discharge
SMH 36.000	Outlet	58.006	Free Discharge
SMH 31.060	Outlet	58.005	Free Discharge
SMH 31.050	Outlet	58.001	Free Discharge
SMH 31.010	Outlet	58.000	Free Discharge
SMH 31.000	Outlet	58.002	Free Discharge
SMH 31.020	Outlet	59.000	Hydro-Brake®

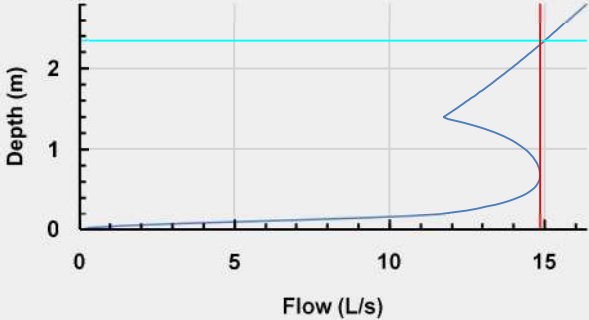
Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
	Designed by: MJC	Checked by: MJC	Approved By: DOB
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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 & ASSOCIATES CONSULTING ENGINEERS

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 32.000	Invert Level (m)	13.298	
	Design Depth (m)	1.140	
	Design Flow (L/s)	25.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0205-2500-1140-2500	
	Outlet	45.032	Free Discharge
	Outlet	45.031	Free Discharge
SMH 24.310	Outlet	45.032	Free Discharge
SMH 24.300	Outlet	45.031	Free Discharge
SMH 24.290	Outlet	45.030	Free Discharge
SMH 24.280	Outlet	45.029	Free Discharge
SMH 24.270	Outlet	45.028	Free Discharge
SMH 24.260	Outlet	45.027	Free Discharge
SMH 24.240	Outlet	45.025	Hydro-Brake®
	Invert Level (m)	4.299	
	Design Depth (m)	1.525	
	Design Flow (L/s)	48.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0283-4800-1525-4800	
	Outlet	45.023	Free Discharge
SMH 24.230	Outlet	45.023	Free Discharge
SMH 30.060	Outlet	55.006	Free Discharge
SMH 30.050	Outlet	55.005	Free Discharge
SMH 30.040	Outlet	55.004	Free Discharge
SMH 30.030	Outlet	55.003	Free Discharge
SMH 30.020	Outlet	55.002	Free Discharge
SMH 30.010	Outlet	55.001	Free Discharge
SMH 30.000	Outlet	55.000	Free Discharge
SMH 24.220	Outlet	45.022	Free Discharge

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 24.210	Outlet	45.021	Free Discharge
SMH 24.200	Outlet	45.020	Free Discharge
SMH 28.060	Outlet	51.006	Free Discharge
SMH 28.050	Outlet	51.005	Free Discharge
SMH 28.040	Outlet	51.004	Free Discharge
SMH 29.000	Outlet	52.000	Free Discharge
SMH 28.030	Outlet	51.003	Free Discharge
SMH 28.020	Outlet	51.002	Free Discharge
SMH 28.010	Outlet	51.001	Free Discharge
SMH 28.000	Outlet	51.000	Free Discharge
SMH 24.180	Outlet	45.018	Hydro-Brake®
	Invert Level (m)	6.229	
	Design Depth (m)	2.341	
	Design Flow (L/s)	15.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0155-1500-2341-1500	
			
SMH 24.170	Outlet	45.017	Free Discharge
SMH 24.160	Outlet	45.016	Free Discharge
SMH 24.150	Outlet	45.015	Free Discharge
SMH 24.140	Outlet	45.014	Free Discharge
SMH 24.130	Outlet	45.013	Free Discharge
SMH 24.120	Outlet	45.012	Free Discharge
SMH 24.110	Outlet	45.011	Free Discharge
SMH 24.100	Outlet	45.010	Free Discharge
SMH 25.070	Outlet	48.011	Free Discharge
SMH 25.060	Outlet	48.010	Free Discharge
SMH 27.010	Outlet	50.001	Free Discharge
SMH 27.000	Outlet	50.000	Free Discharge
SMH 25.050	Outlet	48.009	Free Discharge
SMH 25.040	Outlet	48.008	Free Discharge
SMH 25.030	Outlet	48.007	Free Discharge
SMH 25.020	Outlet	48.006	Free Discharge
SMH 25.000	Outlet	49.000	Free Discharge
SMH 25.010	Outlet	48.005	Free Discharge
SMH 26.040	Outlet	48.004	Free Discharge
SMH 26.030	Outlet	48.003	Free Discharge
SMH 26.020	Outlet	48.002	Free Discharge
SMH 26.010	Outlet	48.001	Free Discharge
SMH 26.000	Outlet	48.000	Free Discharge
SMH 24.090	Outlet	45.009	Free Discharge
SMH 24.080	Outlet	45.008	Free Discharge
SMH 24.070	Outlet	45.007	Free Discharge
SMH 24.060	Outlet	45.006	Free Discharge
SMH 24.050	Outlet	45.005	Free Discharge
	Outlet	45.003	Hydro-Brake®

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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 & ASSOCIATES CONSULTING ENGINEERS

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 24.030	Invert Level (m)	14.723	
	Design Depth (m)	2.240	
	Design Flow (L/s)	40.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0251-4000-2240-4000	
	Outlet	45.001	Free Discharge
	Outlet	45.000	Free Discharge
SMH 24.020	Outlet	45.002	Free Discharge
SMH 34.000	Outlet	61.000	Free Discharge
SMH 34.010	Outlet	61.001	Free Discharge
SMH 34.020	Outlet	61.002	Free Discharge
SMH 34.030	Outlet	61.003	Hydro-Brake®
	Invert Level (m)	12.544	
	Design Depth (m)	1.140	
	Design Flow (L/s)	15.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0163-1500-1140-1500	
	Outlet	58.004	Free Discharge
SMH 35.000	Outlet	63.001	Free Discharge
SMH 31.030	Outlet	58.003	Free Discharge
SMH 33.020	Outlet	60.002	Free Discharge
SMH 33.010	Outlet	60.001	Free Discharge
SMH 33.000	Outlet	60.000	Free Discharge
SMH 24.250	Outlet	45.026	Free Discharge
SMH 24.190	Outlet	45.019	Free Discharge
SMH 31.110	Outlet	57.003	Free Discharge

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Storm Phase: Phase 1_West Catchment			Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare	

Junction	Outlet Name	Outgoing Connection	Outlet Type
SMH 32.010	Outlet	59.001	Free Discharge
SMH 34.040	Outlet	61.004	Free Discharge
SMH 24.040	Outlet	45.004	Free Discharge

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



BR_8

Type : Bioretention

Ponding Area

Exceedance Level (m)	16.300
Depth (m)	0.150
Base Level (m)	16.150
Top Area (m²)	391.35
Side Slope (1:X)	4.00
Base Area (m²)	351.97
Freeboard (mm)	0
Porosity (%)	100
Length (m)	32.809
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	162.124

Filter Area

Base Level (m)	15.400
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (4)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (5)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (6)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	65.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	87.074
Top Perimeter (m)	89.474



BR_9

Type : Bioretention

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Ponding Area

Exceedance Level (m)	16.500
Depth (m)	0.150
Base Level (m)	16.350
Top Area (m²)	122.001
Side Slope (1:X)	4.00
Base Area (m²)	89.96
Freeboard (mm)	0
Porosity (%)	100
Length (m)	26.700
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	43.522

Filter Area

Base Level (m)	15.600
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

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

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (16)
Bypass Destination	(None)
Inlet Destination	Subsurface Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	63.000
Outlet Type	Under Drain

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Advanced

Ponding Area

Base Perimeter (m)	60.139
Top Perimeter (m)	62.539



BR_10

Type : Bioretention

Ponding Area

Exceedance Level (m)	16.300
Depth (m)	0.150
Base Level (m)	16.150
Top Area (m²)	92.86
Side Slope (1:X)	4.00
Base Area (m²)	66.80
Freeboard (mm)	0
Porosity (%)	100
Length (m)	21.719
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	32.533

Filter Area

Base Level (m)	15.400
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (9)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Outlets

Outlet

Outgoing Connection	64.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	49.589
Top Perimeter (m)	51.989



BR_11

Type : Bioretention

Ponding Area

Exceedance Level (m)	14.500
Depth (m)	0.150
Base Level (m)	14.350
Top Area (m²)	155.84
Side Slope (1:X)	4.00
Base Area (m²)	123.16
Freeboard (mm)	0
Porosity (%)	100
Length (m)	27.241
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	58.521

Filter Area

Base Level (m)	13.600
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Inlets

Inlet

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

Outlets

Outlet

Outgoing Connection	66.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	63.524
Top Perimeter (m)	65.924



BR_7

Type : Bioretention

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Ponding Area

Exceedance Level (m)	16.500
Depth (m)	0.150
Base Level (m)	16.350
Top Area (m²)	51.60
Side Slope (1:X)	4.00
Base Area (m²)	30.45
Freeboard (mm)	0
Porosity (%)	100
Length (m)	17.622
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	15.711

Filter Area

Base Level (m)	15.600
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	750	40	500.0	

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (3)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	62.000
Outlet Type	Under Drain

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Advanced

Ponding Area

Base Perimeter (m)	38.701
Top Perimeter (m)	41.101



BR_12

Type : Bioretention

Ponding Area

Exceedance Level (m)	12.500
Depth (m)	0.150
Base Level (m)	12.350
Top Area (m²)	151.54
Side Slope (1:X)	4.00
Base Area (m²)	89.63
Freeboard (mm)	0
Porosity (%)	100
Length (m)	51.599
Long. Slope (1:X)	0.00
Filtration Rate (m/hr)	0.25
Friction Scheme	Manning's n
n	0.01
Total Volume (m³)	55.169

Filter Area

Base Level (m)	11.350
----------------	--------

Under Drain

Height Above Base (m)	0.050
Diameter (mm)	225
No. of Barrels	1
Friction Scheme	Manning's n
n	0.015
Release Height (m)	0.000

Filtration Layers

Use	Name	Filtration Layer Depth (mm)	Porosity (%)	Conductivity (m/hr)	Soil Type
☐	Soil	0	0	0.0	Soil Type
	Storage	1000	40	500.0	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (19)
Bypass Destination	(None)
Inlet Destination	Subsurface Area
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (20)
Bypass Destination	(None)
Inlet Destination	Subsurface Area
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (21)
Bypass Destination	(None)
Inlet Destination	Ponding Area
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	69.000
Outlet Type	Under Drain

Advanced

Ponding Area

Base Perimeter (m)	106.672
Top Perimeter (m)	109.072

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_11

Type : Tank

Dimensions		
Exceedance Level (m)	17.463	
Depth (m)	2.740	
Base Level (m)	14.723	
Freeboard (mm)	500	
Initial Depth (m)	0.000	
Porosity (%)	67	
Average Slope (1:X)	0.00	
Total Volume (m³)	859.373	
Depth (m)	Area (m²)	Volume (m³)
0.000	1122.704	0.000
1.141	1122.704	858.274
Inlets		
Outlets		
Outlet		
Outgoing Connection	46.000	
Outlet Type	Free Discharge	
Advanced		
Perimeter	Circular	
Length (m)	63.878	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_12

Type : Tank

Dimensions

Exceedance Level (m)	9.070
Depth (m)	2.841
Base Level (m)	6.229
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-12.84
Total Volume (m³)	1235.941

Depth (m)	Area (m²)	Volume (m³)
0.000	1208.373	0.000
1.525	1208.373	1234.655
1.526	0.001	1234.926

Inlets

Outlets

Outlet	
Outgoing Connection	53.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	52.933

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_9

Type : Pond

Dimensions

Exceedance Level (m)	5.500
Depth (m)	1.201
Base Level (m)	4.299
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.828
Total Volume (m³)	554.021

Depth (m)	Area (m²)	Volume (m³)
0.000	451.116	0.000
0.701	651.633	384.366
0.702	814.493	385.097
1.201	993.362	835.419

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	45.023
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (29)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	45.024
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	45.213
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_14

Type : Tank

Dimensions

Exceedance Level (m)	14.500
Depth (m)	1.956
Base Level (m)	12.544
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-7.217
Total Volume (m³)	163.787

Depth (m)	Area (m²)	Volume (m³)
0.000	213.962	0.000
1.140	213.962	163.424
1.141	0.001	163.472

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (23)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	67.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	24.892

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_15

Type : Tank

Dimensions

Exceedance Level (m)	9.660
Depth (m)	2.485
Base Level (m)	7.175
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-10.616
Total Volume (m³)	844.894

Depth (m)	Area (m²)	Volume (m³)
0.000	826.278	0.000
1.525	826.278	844.250
1.526	0.001	844.435

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	1531.12m - 16.014
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	70.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	46.169

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_7

Type : Pond

Dimensions

Exceedance Level (m)	17.463
Depth (m)	0.915
Base Level (m)	16.548
Freeboard (mm)	500
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	7.198
Total Volume (m³)	76.836

Depth (m)	Area (m²)	Volume (m³)
0.000	138.046	0.000
0.415	236.650	76.836
0.416	384.540	77.144
0.915	548.664	308.768

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	2239.86m - 1.022
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	47.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	46.652
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



POND_8

Type : Pond

Dimensions

Exceedance Level (m)	9.070
Depth (m)	1.016
Base Level (m)	8.054
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	6.186
Total Volume (m³)	467.436

Depth (m)	Area (m²)	Volume (m³)
0.000	468.771	0.000
0.516	652.464	287.976
0.517	856.163	288.728
1.016	1075.284	769.587

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	3308.40m - 13.006
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	54.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	62.325
Friction Scheme	Manning's n
n	0.01

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



ATT_13

Type : Tank

Dimensions

Exceedance Level (m)	5.800
Depth (m)	1.501
Base Level (m)	4.299
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	67
Average Slope (1:X)	-10.874
Total Volume (m³)	370.611

Depth (m)	Area (m²)	Volume (m³)
0.000	485.000	0.000
1.140	485.000	370.443
1.141	0.001	370.551

Inlets

Outlets

Outlet (1)

Outgoing Connection	56.000
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	40.854

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by:	Checked by:	Approved By:	
	MJC	MJC	DOB	
Report Details: Type: Connections Storm Phase: Phase 1_West Catchment			Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare	

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
45.002	37.040	Pipe	50.000		0.6	450	19.293	16.742
45.000	36.013	Pipe	100.009		0.6	225	20.713	18.617
48.001	12.310	Pipe	50.000		0.6	225	17.915	16.342
48.000	19.051	Pipe	50.002		0.6	225	18.467	16.723
45.006	6.061	Pipe	50.011		0.6	375	15.826	13.777
45.007	6.790	Pipe	49.997		0.6	375	15.660	13.656
45.005	43.647	Pipe	49.997		0.6	375	17.140	14.650
48.003	14.420	Pipe	50.070		0.6	225	17.028	15.222
48.004	6.202	Pipe	50.012		0.6	225	16.592	14.933
48.005	29.423	Pipe	100.000		0.6	300	16.409	13.669
48.007	7.014	Pipe	100.000		0.6	375	15.013	13.178
48.008	7.763	Pipe	100.000		0.6	450	14.749	13.033
50.001	13.465	Pipe	200.967		0.6	300	14.730	13.104
48.006	12.209	Pipe	100.000		0.6	375	15.412	13.300
49.000	58.651	Pipe	50.001		0.6	225	18.378	16.157
48.002	18.733	Pipe	49.995		0.6	225	17.521	15.672
50.000	43.593	Pipe	49.992		0.6	300	15.609	13.976
58.001	13.597	Pipe	50.006		0.6	225	15.534	13.354
58.005	26.261	Pipe	50.000		0.6	300	12.756	10.961
58.007	16.311	Pipe	200.000		0.6	450	11.320	8.446
58.006	17.839	Pipe	200.000		0.6	375	11.943	8.611
48.010	7.170	Pipe	200.000		0.6	450	13.989	12.231
45.010	6.962	Pipe	50.000		0.6	450	13.367	11.526
45.009	10.536	Pipe	50.000		0.6	450	13.906	11.737
48.011	17.966	Pipe	200.000		0.6	450	13.933	12.195
68.000	59.380	Pipe	50.000		0.6	225	13.773	11.905
51.000	34.881	Pipe	50.001		0.6	225	13.735	11.652
45.012	9.480	Pipe	50.000		0.6	450	11.757	9.718
51.002	6.525	Pipe	50.000		0.6	300	11.865	9.340
51.001	13.192	Pipe	50.000		0.6	300	12.379	10.879
52.000	53.342	Pipe	80.000		0.6	300	12.254	10.752
55.000	25.393	Pipe	50.005		0.6	225	9.882	8.303
57.001	22.567	Pipe	200.000		0.6	525	10.073	8.138
55.002	23.464	Pipe	49.997		0.6	225	8.728	7.501
55.001	14.712	Pipe	49.989		0.6	225	8.860	7.795
45.014	11.237	Pipe	100.000		0.6	525	10.549	8.487
45.017	6.388	Pipe	100.000		0.6	525	9.778	7.976
45.016	26.604	Pipe	100.000		0.6	525	10.151	8.242
55.004	21.551	Pipe	100.000		0.6	300	7.817	5.995
45.022	21.432	Pipe	200.299		0.6	450	6.369	4.744
45.021	4.885	Pipe	49.997		0.6	375	6.517	4.917
55.006	21.301	Pipe	100.003		0.6	300	6.896	5.107
45.020	23.909	Pipe	60.074		0.6	375	7.445	5.315
45.015	13.314	Pipe	100.000		0.6	525	10.367	8.375
55.005	14.800	Pipe	100.000		0.6	300	7.276	5.255
45.011	27.529	Pipe	50.000		0.6	450	13.025	10.269
45.013	40.116	Pipe	100.000		0.6	525	11.317	8.888
55.003	24.136	Pipe	100.000		0.6	300	8.435	6.236
57.000	94.157	Pipe	200.000		0.6	300	10.526	8.840
51.005	5.487	Pipe	300.000		0.6	450	9.129	7.038
51.004	63.728	Pipe	60.000		0.6	300	11.600	8.531
45.033	1.801	Pipe	300.217		0.6	375	7.454	3.838
45.032	8.886	Pipe	499.225		0.6	600	8.355	3.855
57.005	21.092	Pipe	500.000		0.6	450	8.742	5.368
45.031	15.795	Pipe	600.000		0.6	525	8.100	3.936
45.035	1.355	Pipe	123.173		0.6	375	5.000	3.587

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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45.030	22.161 Pipe	600.000	0.6	525	7.663	3.973
45.034	30.203 Pipe	123.781	0.6	375	6.853	3.832
45.028	31.501 Pipe	600.000	0.6	525	7.369	4.062
45.027	23.319 Pipe	600.000	0.6	525	6.615	4.101
45.029	21.563 Pipe	600.000	0.6	525	7.369	4.009
51.003	4.001 Pipe	50.000	0.6	300	11.708	9.210
51.006	35.598 Pipe	300.000	0.6	450	9.049	7.020
57.004	30.141 Pipe	500.000	0.6	450	9.253	5.428
45.001	43.890 Pipe	99.978	0.6	300	20.068	18.182
58.000	83.684 Pipe	49.999	0.6	225	17.165	15.777
45.008	45.598 Pipe	50.000	0.6	375	15.450	12.724
48.009	79.916 Pipe	200.000	0.6	450	14.655	12.631
68.001	43.346 Pipe	100.000	0.6	225	12.274	9.822
58.008	29.090 Pipe	200.000	0.6	525	10.819	8.283
45.023	36.026 Pipe	500.000	0.6	450	6.102	4.637
45.024	23.297 Pipe	0.000	0.6	450	5.500	4.299
58.004	36.814 Pipe	50.000	0.6	300	14.035	11.697
61.000	20.483 Pipe	60.000	0.6	225	16.500	15.000
61.001	24.940 Pipe	60.000	0.6	225	16.500	14.659
61.002	40.409 Pipe	60.000	0.6	225	16.300	14.243
63.001	34.447 Pipe	60.000	0.6	225	16.500	15.075
58.002	5.821 Pipe	50.000	0.6	300	15.060	12.275
58.003	23.076 Pipe	50.000	0.6	300	14.839	12.159
60.000	12.080 Pipe	60.000	0.6	225	16.500	15.075
60.001	45.174 Pipe	60.000	0.6	225	16.500	14.874
60.002	11.421 Pipe	60.000	0.6	225	15.500	13.781
46.000	22.366 Pipe	0.000	0.6	450	17.463	14.723
53.000	24.542 Pipe	0.000	0.6	525	9.070	6.229
69.000	11.655 Pipe	5.497	0.6	225	12.500	11.650
66.000	2.691 Pipe	2.433	0.6	225	14.500	13.650
64.000	3.702 Pipe	3.068	0.6	225	16.300	15.450
65.000	5.541 Pipe	4.592	0.6	225	16.300	15.450
63.000	4.621 Pipe	8.036	0.6	225	16.500	15.650
62.000	10.523 Pipe	10.614	0.6	225	16.500	15.650
67.000	18.061 Pipe	0.000	0.6	225	14.500	12.544
70.000	15.090 Pipe	0.000	0.6	525	9.660	7.175
47.000	18.056 Pipe	0.000	0.6	450	17.463	16.548
54.000	30.170 Pipe	0.000	0.6	525	9.070	8.054
45.025	2.520 Pipe	500.000	0.6	525	5.648	4.299
45.026	26.151 Pipe	589.182	0.6	525	5.664	4.146
45.018	2.844 Pipe	48.222	0.6	375	9.657	6.229
45.019	38.852 Pipe	45.425	0.6	375	9.531	6.170
57.002	2.119 Pipe	50.000	0.6	300	9.755	7.175
57.003	27.749 Pipe	50.000	0.6	300	9.723	7.133
59.000	1.617 Pipe	50.000	0.6	300	15.621	13.298
59.001	12.926 Pipe	50.000	0.6	300	15.557	13.266
61.003	1.771 Pipe	200.000	0.6	225	14.500	12.544
61.004	6.139 Pipe	200.000	0.6	225	14.461	12.535
45.003	1.889 Pipe	200.240	0.6	375	17.643	14.723
45.004	12.615 Pipe	197.109	0.6	375	17.583	14.714
56.000	17.578 Pipe	0.000	0.6	525	5.800	4.299

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)
45.002	17.643	16.001	All	
45.000	20.068	18.257	All	
48.001	17.521	16.096	All	
48.000	17.915	16.342	All	
45.006	15.660	13.656	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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Report Details: Type: Connections Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare		

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45.007	15.450	13.520	All	
45.005	15.826	13.777	All	
48.003	16.592	14.934	All	
48.004	16.409	14.809	All	
48.005	15.412	13.375	All	
48.007	14.749	13.108	All	
48.008	14.655	12.955	All	
50.001	14.655	13.037	All	
48.006	15.013	13.178	All	
49.000	16.409	14.984	All	
48.002	17.028	15.297	All	
50.000	14.730	13.104	All	
58.001	15.060	13.082	All	
58.005	11.943	10.436	All	
58.007	10.819	8.364	All	
58.006	11.320	8.522	All	
48.010	13.933	12.195	All	
45.010	13.025	11.387	All	
45.009	13.367	11.526	All	
48.011	13.906	12.105	All	
68.000	12.274	10.717	All	
51.000	12.379	10.954	All	
45.012	11.317	9.528	All	
51.002	11.708	9.210	All	
51.001	11.865	10.615	All	
52.000	11.708	10.085	All	
55.000	8.860	7.795	All	
57.001	9.755	8.025	All	
55.002	8.435	7.031	All	
55.001	8.728	7.501	All	
45.014	10.367	8.375	All	
45.017	9.657	7.912	All	
45.016	9.778	7.976	All	
55.004	7.276	5.779	All	
45.022	6.102	4.637	All	
45.021	6.369	4.819	All	
55.006	6.369	4.894	All	
45.020	6.517	4.917	All	
45.015	10.151	8.242	All	
55.005	6.896	5.107	All	
45.011	11.757	9.718	All	
45.013	10.549	8.487	All	
55.003	7.817	5.995	All	
57.000	10.073	8.369	All	
51.005	9.049	7.020	All	
51.004	9.129	7.469	All	
45.033	6.853	3.832	All	71.9
45.032	7.454	3.837	All	
57.005	8.355	5.326	All	
45.031	8.355	3.910	All	
45.035	4.500	3.576	All	
45.030	8.100	3.936	All	
45.034	5.000	3.588	All	
45.028	7.369	4.009	All	
45.027	7.369	4.062	All	
45.029	7.663	3.973	All	
51.003	11.600	9.130	All	
51.006	9.657	6.901	All	
57.004	8.742	5.368	All	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025		
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45.001	19.293	17.743	All	
58.000	15.534	14.104	All	
45.008	13.906	11.812	All	
48.009	13.989	12.231	All	
68.001	11.943	9.389	All	
58.008	10.073	8.138	All	
45.023	5.500	4.565	All	
45.024	5.648	4.299	All	
58.004	12.756	10.961	All	
61.000	16.500	14.659	All	
61.001	16.300	14.243	All	
61.002	14.500	13.570	All	
63.001	16.300	14.501	All	
58.002	14.839	12.159	All	
58.003	14.035	11.697	All	
60.000	16.500	14.874	All	
60.001	15.500	14.121	All	
60.002	14.839	13.591	All	
46.000	17.643	14.723	All	
53.000	9.657	6.229	All	
69.000	11.943	9.530	All	0.0
66.000	14.500	12.544	All	0.0
64.000	16.300	14.243	All	0.0
65.000	16.300	14.243	All	0.0
63.000	16.500	15.075	All	0.0
62.000	16.500	14.659	All	0.0
67.000	14.500	12.544	All	
70.000	9.755	7.175	All	
47.000	17.643	16.548	All	
54.000	9.657	8.054	All	
45.025	5.664	4.294	All	45.2
45.026	6.615	4.101	All	
45.018	9.531	6.170	All	16.4
45.019	7.445	5.315	All	
57.002	9.723	7.133	All	19.6
57.003	9.253	6.578	All	
59.000	15.557	13.266	All	27.3
59.001	15.060	13.007	All	
61.003	14.461	12.535	All	16.4
61.004	14.035	12.504	All	
45.003	17.583	14.714	All	43.6
45.004	17.140	14.650	All	
56.000	5.648	4.299	None	

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
37.49m - 10.004	SMH 26.040		Time of Concentration	0.004	80	0	80	0.003
49.77m - 1.031	SMH 24.120		Time of Concentration	0.005	95	0	95	0.005
57.12m - 19.001	SMH 31.010		Time of Concentration	0.006	80	0	80	0.005
59.75m - 15.000	SMH 30.000		Time of Concentration	0.006	10	0	10	0.001
61.16m - 13.001	SMH 28.010		Time of Concentration	0.006	10	0	10	0.001
72.58m - 15.002	SMH 30.020		Time of Concentration	0.007	95	0	95	0.007
72.68m - 16.016	SMH 31.120		Time of Concentration	0.007	95	0	95	0.007
73.40m - 1.044	SMH 24.270		Time of Concentration	0.007	95	0	95	0.007
74.13m - 15.004	SMH 30.040		Time of Concentration	0.007	95	0	95	0.007
75.34m - 15.000	SMH 30.000		Time of Concentration	0.008	95	0	95	0.007
82.29m - 16.008	SMH 32.000		Time of Concentration	0.008	80	0	80	0.007
83.53m - 13.001	SMH 28.010		Time of Concentration	0.008	95	0	95	0.008
100.70m - 16.011	SMH 31.060		Time of Concentration	0.010	95	0	95	0.010
100.73m - 16.012	SMH 31.070		Time of Concentration	0.010	95	0	95	0.010
101.23m - 16.016	SMH 31.120		Time of Concentration	0.010	10	0	10	0.001
116.09m - 15.002	SMH 30.020		Time of Concentration	0.012	95	0	95	0.011
123.18m - 15.004	SMH 30.040		Time of Concentration	0.012	95	0	95	0.012
123.39m - 15.003	SMH 30.030		Time of Concentration	0.012	95	0	95	0.012
123.67m - 15.003	SMH 30.030		Time of Concentration	0.012	95	0	95	0.012
124.31m - 15.004	SMH 30.040		Time of Concentration	0.012	95	0	95	0.012
124.95m - 1.025	SMH 24.060		Time of Concentration	0.012	80	0	80	0.010
132.82m - 15.004	SMH 30.040		Time of Concentration	0.013	95	0	95	0.013
133.05m - 1.027	SMH 24.080		Time of Concentration	0.013	95	0	95	0.013
134.23m - 1.032	SMH 24.130		Time of Concentration	0.013	95	0	95	0.013
135.78m - 1.045	SMH 24.280		Time of Concentration	0.014	95	0	95	0.013
135.94m - 16.017	SMH 31.130		Time of Concentration	0.014	95	0	95	0.013
136.31m - 1.047	SMH 24.300		Time of Concentration	0.014	95	0	95	0.013
137.91m - 10.011	SMH 25.070		Time of Concentration	0.014	80	0	80	0.011
142.88m - 13.001	SMH 28.010		Time of Concentration	0.014	80	0	80	0.011
150.21m - 15.001	SMH 30.010		Time of Concentration	0.015	95	0	95	0.014
150.22m - 10.005	SMH 25.010		Time of Concentration	0.015	95	0	95	0.014
150.27m - 1.037	SMH 24.180		Time of Concentration	0.015	95	0	95	0.014

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
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Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

150.27m - 1.037	SMH 24.180		Time of Concentration	0.015	95	0	95	0.014
152.24m - 10.001	SMH 26.010		Time of Concentration	0.015	10	0	10	0.002
154.81m - 1.033	SMH 24.140		Time of Concentration	0.015	95	0	95	0.015
155.28m - 10.009	SMH 25.050		Time of Concentration	0.016	95	0	95	0.015
156.24m - 13.004	SMH 28.040		Time of Concentration	0.016	10	0	10	0.002
156.25m - 15.001	SMH 30.010		Time of Concentration	0.016	95	0	95	0.015
157.83m - 15.001	SMH 30.010		Time of Concentration	0.016	10	0	10	0.002
159.93m - 1.032	SMH 24.130		Time of Concentration	0.016	95	0	95	0.015
160.51m - 1.034	SMH 24.150		Time of Concentration	0.016	95	0	95	0.015
160.85m - 10.001	SMH 26.010		Time of Concentration	0.016	80	0	80	0.013
161.89m - 13.004	SMH 28.040		Time of Concentration	0.016	95	0	95	0.015
163.26m - 1.035	SMH 24.160		Time of Concentration	0.016	95	0	95	0.016
163.28m - 13.001	SMH 28.010		Time of Concentration	0.016	95	0	95	0.016
163.28m - 13.004	SMH 28.040		Time of Concentration	0.016	95	0	95	0.016
163.29m - 13.004	SMH 28.040		Time of Concentration	0.016	95	0	95	0.016
163.29m - 13.004	SMH 28.040		Time of Concentration	0.016	95	0	95	0.016
167.45m - 20.001	SMH 36.010		Time of Concentration	0.017	10	0	10	0.002
169.41m - 1.030	SMH 24.110		Time of Concentration	0.017	10	0	10	0.002
169.92m - 1.028	SMH 24.090		Time of Concentration	0.017	80	0	80	0.014
170.22m - 15.002	SMH 30.020		Time of Concentration	0.017	10	0	10	0.002
172.86m - 15.005	SMH 30.050		Time of Concentration	0.017	95	0	95	0.016
173.52m - 15.002	SMH 30.020		Time of Concentration	0.017	95	0	95	0.016
176.50m - 12.001	SMH 27.010		Time of Concentration	0.018	80	0	80	0.014
181.19m - 10.010	SMH 25.060		Time of Concentration	0.018	80	0	80	0.014
182.82m - 1.030	SMH 24.110		Time of Concentration	0.018	95	0	95	0.017
187.60m - 1.047	SMH 24.300		Time of Concentration	0.019	10	0	10	0.002
188.89m - 1.033	SMH 24.140		Time of Concentration	0.019	80	0	80	0.015
193.25m - 15.003	SMH 30.030		Time of Concentration	0.019	95	0	95	0.018
193.68m - 1.029	SMH 24.100		Time of Concentration	0.019	80	0	80	0.015
193.93m - 10.007	SMH 25.030		Time of Concentration	0.019	80	0	80	0.016
198.95m - 1.044	SMH 24.270		Time of Concentration	0.020	95	0	95	0.019
199.09m - 16.016	SMH 31.120		Time of Concentration	0.020	95	0	95	0.019
201.53m - 1.028	SMH 24.090		Time of Concentration	0.020	95	0	95	0.019
207.33m - 15.005	SMH 30.050		Time of Concentration	0.021	10	0	10	0.002

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
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207.61m - 20.000	SMH 36.000		Time of Concentration	0.021	10	0	10	0.002
207.86m - 1.023	SMH 24.030		Time of Concentration	0.021	80	0	80	0.017
212.53m - 15.000	SMH 30.000		Time of Concentration	0.021	95	0	95	0.020
212.67m - 11.000	SMH 25.000		Time of Concentration	0.021	10	0	10	0.002
216.49m - 1.032	SMH 24.130		Time of Concentration	0.022	10	0	10	0.002
220.10m - 1.047	SMH 24.300		Time of Concentration	0.022	100	0	100	0.022
221.88m - 1.034	SMH 24.150		Time of Concentration	0.022	80	0	80	0.018
222.80m - 10.003	SMH 26.030		Time of Concentration	0.022	80	0	80	0.018
227.29m - 16.017	SMH 31.130		Time of Concentration	0.023	10	0	10	0.002
229.28m - 15.001	SMH 30.010		Time of Concentration	0.023	10	0	10	0.002
229.62m - 10.003	SMH 26.030		Time of Concentration	0.023	80	0	80	0.018
234.95m - 1.031	SMH 24.120		Time of Concentration	0.023	80	0	80	0.019
239.97m - 1.046	SMH 24.290		Time of Concentration	0.024	10	0	10	0.002
240.14m - 1.032	SMH 24.130		Time of Concentration	0.024	80	0	80	0.019
244.63m - 15.003	SMH 30.030		Time of Concentration	0.024	10	0	10	0.002
254.03m - 15.006	SMH 30.060		Time of Concentration	0.025	95	0	95	0.024
255.56m - 16.016	SMH 31.120		Time of Concentration	0.026	10	0	10	0.003
257.27m - 1.033	SMH 24.140		Time of Concentration	0.026	10	0	10	0.003
257.51m - 16.014	SMH 31.090		Time of Concentration	0.026	100	0	100	0.026
257.89m - 1.026	SMH 24.070		Time of Concentration	0.026	80	0	80	0.021
261.84m - 1.046	SMH 24.290		Time of Concentration	0.026	95	0	95	0.025
263.31m - 16.015	SMH 31.100		Time of Concentration	0.026	95	0	95	0.025
263.44m - 11.000	SMH 25.000		Time of Concentration	0.026	95	0	95	0.025
264.04m - 1.043	SMH 24.260		Time of Concentration	0.026	95	0	95	0.025
265.28m - 1.027	SMH 24.080		Time of Concentration	0.027	95	0	95	0.025
265.38m - 1.032	SMH 24.130		Time of Concentration	0.027	95	0	95	0.025
280.09m - 1.030	SMH 24.110		Time of Concentration	0.028	95	0	95	0.027
282.15m - 13.000	SMH 28.000		Time of Concentration	0.028	95	0	95	0.027
286.69m - 16.015	SMH 31.100		Time of Concentration	0.029	10	0	10	0.003
289.70m - 1.042	SMH 24.240		Time of Concentration	0.029	80	0	80	0.023
292.99m - 15.003	SMH 30.030		Time of Concentration	0.029	10	0	10	0.003
297.28m - 1.027	SMH 24.080		Time of Concentration	0.030	10	0	10	0.003
298.58m - 15.006	SMH 30.060		Time of Concentration	0.030	95	0	95	0.028
298.83m - 1.034	SMH 24.150		Time of Concentration	0.030	10	0	10	0.003

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

299.25m - 15.000	SMH 30.000		Time of Concentration	0.030	10	0	10	0.003
303.09m - 13.000	SMH 28.000		Time of Concentration	0.030	10	0	10	0.003
305.72m - 1.024	SMH 24.050		Time of Concentration	0.031	95	0	95	0.029
307.07m - 15.006	SMH 30.060		Time of Concentration	0.031	10	0	10	0.003
308.20m - 16.010	SMH 31.050		Time of Concentration	0.031	80	0	80	0.025
309.13m - 1.027	SMH 24.080		Time of Concentration	0.031	10	0	10	0.003
309.48m - 15.004	SMH 30.040		Time of Concentration	0.031	10	0	10	0.003
310.65m - 1.043	SMH 24.260		Time of Concentration	0.031	10	0	10	0.003
311.40m - 15.002	SMH 30.020		Time of Concentration	0.031	10	0	10	0.003
311.47m - 10.002	SMH 26.020		Time of Concentration	0.031	10	0	10	0.003
313.70m - 13.006	SMH 28.060		Time of Concentration	0.031	10	0	10	0.003
316.40m - 1.045	SMH 24.280		Time of Concentration	0.032	10	0	10	0.003
319.64m - 10.009	SMH 25.050		Time of Concentration	0.032	95	0	95	0.030
319.66m - 10.009	SMH 25.050		Time of Concentration	0.032	95	0	95	0.030
321.04m - 10.009	SMH 25.050		Time of Concentration	0.032	95	0	95	0.030
321.32m - 12.000	SMH 27.000		Time of Concentration	0.032	95	0	95	0.031
321.53m - 11.000	SMH 25.000		Time of Concentration	0.032	95	0	95	0.031
321.58m - 16.011	SMH 31.060		Time of Concentration	0.032	80	0	80	0.026
322.04m - 13.000	SMH 28.000		Time of Concentration	0.032	95	0	95	0.031
324.66m - 1.035	SMH 24.160		Time of Concentration	0.032	10	0	10	0.003
324.77m - 11.000	SMH 25.000		Time of Concentration	0.032	100	0	100	0.032
329.21m - 12.000	SMH 27.000		Time of Concentration	0.033	10	0	10	0.003
330.78m - 15.001	SMH 30.010		Time of Concentration	0.033	80	0	80	0.026
331.45m - 12.000	SMH 27.000		Time of Concentration	0.033	95	0	95	0.031
332.42m - 10.001	SMH 26.010		Time of Concentration	0.033	95	0	95	0.032
335.52m - 13.004	SMH 28.040		Time of Concentration	0.034	10	0	10	0.003
336.68m - 10.000	SMH 26.000		Time of Concentration	0.034	95	0	95	0.032
340.85m - 1.040	SMH 24.220		Time of Concentration	0.034	80	0	80	0.027
344.59m - 15.004	SMH 30.040		Time of Concentration	0.034	10	0	10	0.003
345.40m - 1.024	SMH 24.050		Time of Concentration	0.035	10	0	10	0.003
351.59m - 11.000	SMH 25.000		Time of Concentration	0.035	10	0	10	0.004
361.04m - 1.023	SMH 24.030		Time of Concentration	0.036	95	0	95	0.034
364.02m - 10.005	SMH 25.010		Time of Concentration	0.036	10	0	10	0.004
368.34m - 10.000	SMH 26.000		Time of Concentration	0.037	10	0	10	0.004

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

369.26m - 16.017	SMH 31.130		Time of Concentration	0.037	100	0	100	0.037
369.44m - 16.012	SMH 31.070		Time of Concentration	0.037	80	0	80	0.030
373.37m - 10.005	SMH 25.010		Time of Concentration	0.037	95	0	95	0.035
377.67m - 1.030	SMH 24.110		Time of Concentration	0.038	10	0	10	0.004
380.34m - 1.024	SMH 24.050		Time of Concentration	0.038	10	0	10	0.004
381.15m - 1.045	SMH 24.280		Time of Concentration	0.038	100	0	100	0.038
384.11m - 11.000	SMH 25.000		Time of Concentration	0.038	10	0	10	0.004
394.38m - 16.013	SMH 31.080		Time of Concentration	0.039	80	0	80	0.032
396.19m - 21.000	SMH 37.000		Time of Concentration	0.040	95	0	95	0.038
396.97m - 1.046	SMH 24.290		Time of Concentration	0.040	100	0	100	0.040
397.37m - 21.000	SMH 37.000		Time of Concentration	0.040	95	0	95	0.038
402.59m - 1.044	SMH 24.270		Time of Concentration	0.040	10	0	10	0.004
406.33m - 10.011	SMH 25.070		Time of Concentration	0.041	30	0	30	0.012
410.61m - 20.001	SMH 36.010		Time of Concentration	0.041	95	0	95	0.039
438.02m - 15.005	SMH 30.050		Time of Concentration	0.044	10	0	10	0.004
440.30m - 1.032	SMH 24.130		Time of Concentration	0.044	10	0	10	0.004
457.02m - 15.006	SMH 30.060		Time of Concentration	0.046	80	0	80	0.037
474.05m - 1.043	SMH 24.260		Time of Concentration	0.047	100	0	100	0.047
474.24m - 20.001	SMH 36.010		Time of Concentration	0.047	80	0	80	0.038
478.67m - 14.000	SMH 29.000		Time of Concentration	0.048	100	0	100	0.048
489.20m - 1.035	SMH 24.160		Time of Concentration	0.049	80	0	80	0.039
495.35m - 10.000	SMH 26.000		Time of Concentration	0.050	80	0	80	0.040
500.53m - 16.015	SMH 31.100		Time of Concentration	0.050	100	0	100	0.050
501.61m - 15.000	SMH 30.000		Time of Concentration	0.050	80	0	80	0.040
512.51m - 20.000	SMH 36.000		Time of Concentration	0.051	95	0	95	0.049
516.74m - 1.022	SMH 24.020		Time of Concentration	0.052	80	0	80	0.041
519.34m - 15.004	SMH 30.040		Time of Concentration	0.052	80	0	80	0.042
523.85m - 10.005	SMH 25.010		Time of Concentration	0.052	80	0	80	0.042
524.90m - 10.008	SMH 25.040		Time of Concentration	0.052	30	0	30	0.016
525.92m - 1.040	SMH 24.220		Time of Concentration	0.053	10	0	10	0.005
532.31m - 13.004	SMH 28.040		Time of Concentration	0.053	10	0	10	0.005
550.78m - 1.037	SMH 24.180		Time of Concentration	0.055	80	0	80	0.044
553.12m - 15.002	SMH 30.020		Time of Concentration	0.055	80	0	80	0.044
559.38m - 16.016	SMH 31.120		Time of Concentration	0.056	100	0	100	0.056

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

576.82m - 10.009	SMH 25.050		Time of Concentration	0.058	10	0	10	0.006
588.20m - 13.000	SMH 28.000		Time of Concentration	0.059	10	0	10	0.006
600.14m - 14.000	SMH 29.000		Time of Concentration	0.060	10	0	10	0.006
602.29m - 1.044	SMH 24.270		Time of Concentration	0.060	100	0	100	0.060
625.25m - 13.006	SMH 28.060		Time of Concentration	0.063	80	0	80	0.050
625.68m - 13.000	SMH 28.000		Time of Concentration	0.063	80	0	80	0.050
646.04m - 1.032	SMH 24.130		Time of Concentration	0.065	80	0	80	0.052
653.72m - 9.004	SMH 24.010		Time of Concentration	0.065	80	0	80	0.052
670.33m - 14.000	SMH 29.000		Time of Concentration	0.067	80	0	80	0.054
697.68m - 15.003	SMH 30.030		Time of Concentration	0.070	80	0	80	0.056
709.57m - 1.030	SMH 24.110		Time of Concentration	0.071	80	0	80	0.057
806.16m - 12.000	SMH 27.000		Time of Concentration	0.081	80	0	80	0.064
808.49m - 16.009	SMH 31.020		Time of Concentration	0.081	80	0	80	0.065
825.97m - 15.005	SMH 30.050		Time of Concentration	0.083	80	0	80	0.066
833.90m - 12.000	SMH 27.000		Time of Concentration	0.083	10	0	10	0.008
875.60m - 21.000	SMH 37.000		Time of Concentration	0.088	10	0	10	0.009
888.67m - 1.027	SMH 24.080		Time of Concentration	0.089	80	0	80	0.071
891.27m - 13.004	SMH 28.040		Time of Concentration	0.089	80	0	80	0.071
899.15m - 9.003	SMH 24.000		Time of Concentration	0.091	80	0	80	0.073
904.43m - 10.009	SMH 25.050		Time of Concentration	0.090	10	0	10	0.009
1043.72m - 1.024	SMH 24.050		Time of Concentration	0.104	80	0	80	0.083
1046.87m - 11.000	SMH 25.000		Time of Concentration	0.105	80	0	80	0.084
1097.61m - 19.000	SMH 31.000		Time of Concentration	0.110	80	0	80	0.088
1134.49m - 20.000	SMH 36.000		Time of Concentration	0.113	80	0	80	0.091
1404.38m - 21.000	SMH 37.000		Time of Concentration	0.140	80	0	80	0.112
1471.72m - 10.009	SMH 25.050		Time of Concentration	0.147	80	0	80	0.118
1531.12m - 16.014	ATT_15		Time of Concentration	0.153	30	0	30	0.046
2239.86m - 1.022	POND_7		Time of Concentration	0.279	30	0	30	0.084
3308.40m - 13.006	POND_8		Time of Concentration	0.331	30	0	30	0.099
Catchment Area	SMH 33.000		Time of Concentration	0.083	80	0	80	0.066
Catchment Area (1)	SMH 33.010		Time of Concentration	0.115	80	0	80	0.092
Catchment Area (2)	SMH 33.010		Time of Concentration	0.006	80	0	80	0.005
Catchment Area (3)	BR_7		Time of Concentration	0.023	80	0	80	0.018
Catchment Area (4)	BR_8		Time of Concentration	0.035	80	0	80	0.028

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1		Date: 27/02/2025					
		Designed by: MJC	Checked by: MJC	Approved By: DOB			
Report Details: Type: Inflow Summary Storm Phase: Phase 1_West Catchment		Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare					

Catchment Area (5)	BR_8		Time of Concentration	0.040	30	0	30	0.012
Catchment Area (6)	BR_8		Time of Concentration	0.007	80	0	80	0.006
Catchment Area (7)	SMH 34.010		Time of Concentration	0.013	80	0	80	0.010
Catchment Area (8)	SMH 35.000		Time of Concentration	0.029	80	0	80	0.023
Catchment Area (9)	BR_10		Time of Concentration	0.036	80	0	80	0.029
Catchment Area (10)	SMH 34.020		Time of Concentration	0.023	80	0	80	0.018
Catchment Area (11)	SMH 34.020		Time of Concentration	0.058	30	0	30	0.017
Catchment Area (12)	BR_11		Time of Concentration	0.028	80	0	80	0.022
Catchment Area (13)	BR_9		Time of Concentration	0.048	80	0	80	0.039
Catchment Area (14)	SMH 34.000		Time of Concentration	0.055	95	0	95	0.052
Catchment Area (15)	SMH 35.000		Time of Concentration	0.043	95	0	95	0.041
Catchment Area (16)	BR_9		Time of Concentration	0.032	95	0	95	0.030
Catchment Area (17)	SMH 35.000		Time of Concentration	0.034	95	0	95	0.032
Catchment Area (18)	SMH 31.050		Time of Concentration	0.041	95	0	95	0.039
Catchment Area (19)	BR_12		Time of Concentration	0.029	95	0	95	0.027
Catchment Area (20)	BR_12		Time of Concentration	0.045	95	0	95	0.043
Catchment Area (21)	BR_12		Time of Concentration	0.051	80	0	80	0.041
Catchment Area (22)	SMH 36.000		Time of Concentration	0.045	100	0	100	0.045
Catchment Area (23)	ATT_14		Time of Concentration	0.079	30	0	30	0.024
Catchment Area (29)	POND_9		Time of Concentration	0.255	30	0	30	0.076
TOTAL		0.0		8.646				5.332

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Network Design Criteria Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Flow Options

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

Pipe Options

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

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Manhole Options

Apply Offset	☐
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Manhole Size Library

Default

Additional Sizing

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

Benching Requirements

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

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Title: Rainfall Analysis Criteria	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall		
100 Yr		Type: FSR
Region	Scotland And Ireland	
M5-60 (mm)	20.0	
Ratio R	0.273	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	20.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			& ASSOCIATES CONSULTING ENGINEERS



Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SMH 1.520	100 Yr: 100 years: +20 %: 2160 mins: Summer	3.261	2.020	2.275	0.255	107.9	0.000	0.000	107.9	8931.672	OK
SMH 1.510	100 Yr: 100 years: +20 %: 2160 mins: Summer	3.966	2.156	2.430	0.274	107.9	0.392	0.000	107.9	8931.672	OK
SMH 1.500	100 Yr: 100 years: +20 %: 720 mins: Winter	4.008	2.171	3.910	1.739	129.2	3.073	0.000	107.9	7040.430	Surcharged
SMH 22.160	100 Yr: 100 years: +20 %: 720 mins: Winter	4.812	2.327	3.919	1.592	26.3	2.278	0.000	26.2	753.102	Surcharged
SMH 22.150	100 Yr: 100 years: +20 %: 720 mins: Winter	4.925	2.374	3.919	1.545	26.2	2.211	0.000	26.1	749.952	Surcharged
SMH 22.140	100 Yr: 100 years: +20 %: 720 mins: Winter	4.986	2.432	3.920	1.487	22.8	2.129	0.000	22.7	688.630	Surcharged
SMH 22.130	100 Yr: 100 years: +20 %: 720 mins: Winter	5.027	2.471	3.919	1.449	21.5	2.073	0.000	21.4	662.838	Surcharged
SMH 22.120	100 Yr: 100 years: +20 %: 720 mins: Winter	5.077	2.512	3.920	1.408	21.3	2.015	0.000	21.1	655.991	Surcharged
SMH 22.110	100 Yr: 100 years: +20 %: 720 mins: Winter	5.169	2.579	3.920	1.341	19.2	1.919	0.000	19.1	617.771	Surcharged
SMH 22.100	100 Yr: 100 years: +20 %: 720 mins: Winter	5.257	2.809	3.921	1.112	16.9	1.258	0.000	16.5	566.652	Surcharged
SMH 22.090	100 Yr: 100 years: +20 %: 720 mins: Winter	5.416	2.910	3.922	1.012	15.0	1.145	0.000	14.9	530.066	Surcharged
SMH 22.080	100 Yr: 100 years: +20 %: 720 mins: Winter	5.532	2.977	3.923	0.946	15.0	1.070	0.000	15.0	530.088	Surcharged
SMH 22.060	100 Yr: 100 years: +20 %: 240 mins: Winter	5.618	3.019	4.900	1.881	64.8	2.691	0.000	15.9	560.082	Surcharged
SMH 23.000	100 Yr: 100 years: +20 %: 240 mins: Winter	6.050	4.525	4.901	0.376	5.8	0.538	0.000	5.8	33.165	Surcharged
SMH 22.050	100 Yr: 100 years: +20 %: 240 mins: Winter	5.830	3.103	4.901	1.798	57.3	2.573	0.000	56.9	329.277	Surcharged
SMH 22.040	100 Yr: 100 years: +20 %: 240 mins: Winter	5.743	3.974	4.902	0.928	46.6	1.328	0.000	46.6	267.336	Surcharged
SMH 22.030	100 Yr: 100 years: +20 %: 240 mins: Winter	5.806	4.083	4.902	0.820	43.0	1.173	0.000	43.0	247.023	Surcharged
SMH 22.020	100 Yr: 100 years: +20 %: 15 mins: Winter	5.855	4.188	4.992	0.804	126.1	1.151	0.000	115.8	69.596	Surcharged
SMH 22.010	100 Yr: 100 years: +20 %: 15 mins: Winter	5.912	4.343	5.148	0.805	103.8	1.151	0.000	91.7	53.594	Surcharged

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 22.000	100 Yr: 100 years: +20 %: 15 mins: Winter	5.973	4.473	5.245	0.772	72.1	1.105	0.000	59.5	33.303	Surcharged
SMH 1.490	100 Yr: 100 years: +20 %: 720 mins: Winter	4.780	2.281	3.919	1.638	129.8	2.894	0.000	129.2	6780.747	Surcharged
SMH 1.480	100 Yr: 100 years: +20 %: 720 mins: Winter	4.859	2.946	3.942	0.996	104.2	1.425	0.000	104.1	6023.966	Surcharged
SMH 1.470	100 Yr: 100 years: +20 %: 720 mins: Winter	4.937	3.098	3.964	0.866	103.9	1.240	0.000	103.9	6019.868	Surcharged
SMH 1.460	100 Yr: 100 years: +20 %: 720 mins: Winter	5.076	3.221	3.984	0.763	101.0	1.092	0.000	101.0	5969.515	Surcharged
SMH 1.450	100 Yr: 100 years: +20 %: 15 mins: Winter	5.092	3.376	4.012	0.637	228.2	0.911	0.000	222.5	187.828	Surcharged
SMH 1.440	100 Yr: 100 years: +20 %: 15 mins: Winter	5.174	3.515	4.085	0.570	207.3	0.816	0.000	202.4	176.909	Surcharged
SMH 1.430	100 Yr: 100 years: +20 %: 15 mins: Winter	5.542	3.680	4.160	0.480	209.9	0.688	0.000	205.1	176.900	Surcharged
SMH 1.420	100 Yr: 100 years: +20 %: 15 mins: Winter	5.788	3.720	4.231	0.511	175.1	0.731	0.000	171.4	160.280	Surcharged
SMH 21.020	100 Yr: 100 years: +20 %: 15 mins: Winter	5.862	4.194	4.450	0.256	76.4	0.367	0.000	73.9	39.213	OK
SMH 21.010	100 Yr: 100 years: +20 %: 15 mins: Winter	5.835	4.279	4.563	0.284	81.9	0.407	0.000	76.4	39.304	OK
SMH 21.000	100 Yr: 100 years: +20 %: 15 mins: Winter	5.977	4.477	4.690	0.213	63.6	0.304	0.000	60.4	29.380	OK
SMH 1.410	100 Yr: 100 years: +20 %: 15 mins: Winter	5.892	3.745	4.277	0.532	174.5	0.761	0.000	172.3	160.503	Surcharged
SMH 1.400	100 Yr: 100 years: +20 %: 15 mins: Winter	6.099	3.777	4.305	0.528	94.8	0.755	0.000	100.3	115.892	Surcharged
SMH 1.390	100 Yr: 100 years: +20 %: 15 mins: Winter	6.415	3.810	4.328	0.518	88.7	0.742	0.000	93.7	115.714	Surcharged
SMH 1.370	100 Yr: 100 years: +20 %: 1440 mins: Winter	6.570	3.826	6.347	2.521	114.0	4.454	0.000	90.6	8084.870	Surcharged
SMH 18.130	100 Yr: 100 years: +20 %: 30 mins: Winter	8.034	6.285	7.194	0.909	360.9	1.606	0.000	360.0	360.876	Surcharged
SMH 18.120	100 Yr: 100 years: +20 %: 30 mins: Winter	8.314	6.464	7.680	1.217	345.4	2.150	0.000	344.2	345.409	Surcharged
SMH 18.110	100 Yr: 100 years: +20 %: 30 mins: Winter	8.583	6.633	8.118	1.485	335.0	2.624	0.000	333.5	334.455	Surcharged
SMH 20.020	100 Yr: 100 years: +20 %: 30 mins: Winter	9.833	8.091	9.303	1.212	115.1	1.734	0.000	113.5	107.693	Surcharged
SMH 20.010	100 Yr: 100 years: +20 %: 15 mins: Winter	10.21 3	8.196	9.469	1.273	146.1	1.440	0.000	132.2	74.242	Surcharged
SMH 20.000	100 Yr: 100 years: +20 %: 15 mins: Winter	12.92 7	10.30 2	10.547	0.245	149.1	0.350	0.000	134.1	66.833	OK
SMH 18.100	100 Yr: 100 years: +20 %: 30 mins: Winter	9.490	7.250	9.123	1.873	336.7	2.680	0.000	335.0	334.295	Surcharged

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025				
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SMH 18.090	100 Yr: 100 years: +20 %: 30 mins: Winter	10.27 0	7.849	9.530	1.681	223.8	2.406	0.000	215.6	220.801	Surcharged
SMH 18.080	100 Yr: 100 years: +20 %: 30 mins: Winter	10.57 0	8.913	9.729	0.816	205.8	1.167	0.000	203.8	202.251	Surcharged
SMH 18.070	100 Yr: 100 years: +20 %: 15 mins: Winter	10.72 8	9.025	9.863	0.838	222.8	1.200	0.000	204.9	143.266	Surcharged
SMH 18.060	100 Yr: 100 years: +20 %: 30 mins: Winter	11.03 5	9.241	10.053	0.812	203.8	1.162	0.000	201.3	196.110	Surcharged
SMH 18.050	100 Yr: 100 years: +20 %: 30 mins: Winter	11.27 0	9.408	10.198	0.790	196.2	1.130	0.000	188.4	181.959	Surcharged
SMH 18.040	100 Yr: 100 years: +20 %: 15 mins: Winter	12.82 6	10.37 3	11.147	0.774	260.3	1.107	0.000	239.6	128.977	Surcharged
SMH 19.000	100 Yr: 100 years: +20 %: 15 mins: Summer	14.45 1	12.80 1	12.906	0.105	31.6	0.151	0.000	31.6	13.627	OK
SMH 18.030	100 Yr: 100 years: +20 %: 15 mins: Winter	13.75 9	11.63 3	12.427	0.794	165.0	1.137	0.000	144.5	78.330	Surcharged
SMH 18.020	100 Yr: 100 years: +20 %: 15 mins: Winter	13.86 8	12.32 8	12.509	0.182	43.6	0.260	0.000	42.5	21.927	OK
SMH 18.010	100 Yr: 100 years: +20 %: 15 mins: Winter	13.97 7	12.37 7	12.583	0.206	46.0	0.295	0.000	43.6	21.929	OK
SMH 18.000	100 Yr: 100 years: +20 %: 15 mins: Winter	14.63 0	12.69 7	12.876	0.179	47.5	0.203	0.000	46.0	21.915	OK
SMH 1.360	100 Yr: 100 years: +20 %: 1440 mins: Winter	7.404	3.897	6.352	2.455	114.2	4.338	0.000	113.4	7428.103	Surcharged
SMH 17.010	100 Yr: 100 years: +20 %: 15 mins: Summer	8.879	6.463	7.155	0.691	42.8	0.989	0.000	40.6	19.728	Surcharged
SMH 17.000	100 Yr: 100 years: +20 %: 15 mins: Winter	10.66 2	8.343	8.474	0.132	46.5	0.188	0.000	44.0	21.465	OK
SMH 1.340	100 Yr: 100 years: +20 %: 15 mins: Summer	7.377	4.435	6.967	2.532	881.9	4.474	0.000	120.1	532.472	Surcharged
SMH 1.330	100 Yr: 100 years: +20 %: 15 mins: Summer	7.799	4.574	7.367	2.793	815.2	4.936	0.000	816.9	507.367	Surcharged
SMH 16.030	100 Yr: 100 years: +20 %: 15 mins: Winter	7.836	5.506	7.512	2.006	115.8	2.871	0.000	112.7	63.779	Surcharged
SMH 16.020	100 Yr: 100 years: +20 %: 15 mins: Winter	8.255	6.180	7.805	1.625	110.4	2.325	0.000	104.3	57.996	Surcharged
SMH 16.010	100 Yr: 100 years: +20 %: 15 mins: Winter	8.500	6.246	7.856	1.610	63.1	2.304	0.000	57.0	32.519	Surcharged
SMH 16.000	100 Yr: 100 years: +20 %: 15 mins: Winter	8.938	7.240	8.078	0.838	55.2	1.199	0.000	48.5	25.598	Surcharged
SMH 1.320	100 Yr: 100 years: +20 %: 15 mins: Winter	7.836	4.587	7.460	2.873	793.4	5.077	0.000	790.1	523.099	Surcharged
SMH 15.010	100 Yr: 100 years: +20 %: 15 mins: Winter	10.46 8	9.005	9.287	0.282	54.2	0.403	0.000	49.9	29.712	Surcharged
SMH 15.000	100 Yr: 100 years: +20 %: 15 mins: Winter	11.00 0	9.500	10.075	0.575	61.8	0.822	0.000	51.5	28.441	Surcharged

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SMH 1.310	100 Yr: 100 years: +20 %: 15 mins: Winter	10.40 7	7.427	9.107	1.680	707.6	2.969	0.000	679.9	463.550	Surcharged
SMH 1.300	100 Yr: 100 years: +20 %: 15 mins: Winter	10.81 7	8.926	9.496	0.570	590.7	1.007	0.000	586.5	397.616	Surcharged
SMH 1.290	100 Yr: 100 years: +20 %: 15 mins: Winter	12.38 9	9.694	10.184	0.490	613.2	0.865	0.000	590.7	398.865	OK
SMH 14.030	100 Yr: 100 years: +20 %: 15 mins: Winter	14.08 5	11.90 2	12.317	0.415	188.0	0.594	0.000	157.0	90.262	Surcharged
SMH 14.020	100 Yr: 100 years: +20 %: 15 mins: Winter	14.59 8	12.18 9	12.438	0.249	111.9	0.356	0.000	105.6	52.413	OK
SMH 14.010	100 Yr: 100 years: +20 %: 15 mins: Winter	14.63 0	12.95 0	13.045	0.095	22.0	0.136	0.000	20.9	10.356	OK
SMH 14.000	100 Yr: 100 years: +20 %: 15 mins: Winter	15.55 3	13.16 5	13.248	0.083	17.6	0.118	0.000	17.2	8.153	OK
SMH 1.280	100 Yr: 100 years: +20 %: 15 mins: Winter	13.26 6	10.16 3	10.994	0.831	532.1	1.189	0.000	524.5	358.931	Surcharged
SMH 1.270	100 Yr: 100 years: +20 %: 15 mins: Winter	14.56 6	12.35 0	13.272	0.922	352.2	1.319	0.000	344.2	255.318	Surcharged
SMH 1.260	100 Yr: 100 years: +20 %: 15 mins: Winter	15.42 9	12.75 9	14.005	1.246	335.9	1.784	0.000	325.7	244.679	Surcharged
SMH 1.250	100 Yr: 100 years: +20 %: 15 mins: Winter	16.08 2	13.01 6	14.483	1.467	320.6	2.100	0.000	309.6	233.347	Surcharged
SMH 1.240	100 Yr: 100 years: +20 %: 15 mins: Winter	16.38 5	14.84 8	15.276	0.428	297.6	0.613	0.000	295.3	222.141	Surcharged
SMH 1.230	100 Yr: 100 years: +20 %: 15 mins: Winter	18.16 8	15.91 3	16.320	0.407	295.6	0.582	0.000	290.3	219.853	Surcharged
SMH 1.220	100 Yr: 100 years: +20 %: 15 mins: Winter	18.45 6	16.08 6	16.467	0.381	226.9	0.545	0.000	201.1	177.349	Surcharged
SMH 1.210	100 Yr: 100 years: +20 %: 15 mins: Winter	20.21 5	17.18 1	17.424	0.242	221.5	0.347	0.000	218.2	174.399	OK
SMH 1.200	100 Yr: 100 years: +20 %: 15 mins: Winter	20.50 9	17.46 3	17.668	0.206	132.0	0.294	0.000	130.8	133.629	OK
SMH 1.180	100 Yr: 100 years: +20 %: 600 mins: Winter	20.92 3	17.86 3	19.874	2.011	124.5	2.877	0.000	69.9	3360.575	Surcharged
SMH 13.060	100 Yr: 100 years: +20 %: 600 mins: Winter	21.14 5	19.18 1	19.992	0.811	19.7	1.160	0.000	10.0	456.671	Surcharged
SMH 13.050	100 Yr: 100 years: +20 %: 15 mins: Winter	22.20 3	19.73 1	20.069	0.338	138.0	0.382	0.000	128.5	71.121	OK
SMH 13.040	100 Yr: 100 years: +20 %: 15 mins: Winter	23.11 9	20.80 0	21.332	0.532	131.8	0.601	0.000	128.4	66.644	Surcharged
SMH 13.030	100 Yr: 100 years: +20 %: 15 mins: Winter	24.96 6	21.87 4	22.412	0.538	116.3	0.609	0.000	111.6	57.353	Surcharged
SMH 13.020	100 Yr: 100 years: +20 %: 15 mins: Winter	26.22 4	24.10 3	24.250	0.147	70.5	0.166	0.000	67.6	34.911	OK
SMH 13.000	100 Yr: 100 years: +20 %: 15 mins: Winter	27.66 9	25.90 7	26.079	0.172	67.9	0.247	0.000	63.5	31.347	OK

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SMH 13.010	100 Yr: 100 years: +20 %: 15 mins: Winter	26.46 2	24.29 5	24.448	0.153	63.5	0.219	0.000	62.7	31.344	OK
SMH 1.170	100 Yr: 100 years: +20 %: 600 mins: Winter	21.55 7	18.47 3	19.903	1.430	118.3	2.527	0.000	117.9	2670.027	Surcharged
SMH 1.160	100 Yr: 100 years: +20 %: 15 mins: Winter	22.16 5	19.90 3	20.927	1.024	341.1	1.809	0.000	343.8	291.346	Surcharged
SMH 10.080	100 Yr: 100 years: +20 %: 30 mins: Winter	23.76 2	21.37 7	21.558	0.181	46.2	0.205	0.000	44.9	88.752	OK
SMH 12.000	100 Yr: 100 years: +20 %: 15 mins: Winter	25.89 5	23.93 0	24.399	0.469	50.5	0.672	0.000	41.0	23.624	Surcharged
SMH 10.060	100 Yr: 100 years: +20 %: 15 mins: Winter	24.98 3	22.63 3	24.052	1.419	230.3	1.605	0.000	19.7	139.246	Surcharged
SMH 11.010	100 Yr: 100 years: +20 %: 15 mins: Winter	26.24 0	24.41 0	24.696	0.286	72.2	0.409	0.000	61.4	34.454	Surcharged
SMH 11.000	100 Yr: 100 years: +20 %: 15 mins: Winter	27.06 7	25.42 7	25.560	0.133	42.6	0.190	0.000	40.4	19.643	OK
SMH 10.050	100 Yr: 100 years: +20 %: 15 mins: Winter	25.54 8	23.54 5	24.181	0.636	155.4	0.910	0.000	148.6	87.957	Surcharged
SMH 10.040	100 Yr: 100 years: +20 %: 15 mins: Winter	25.85 0	23.72 3	24.266	0.543	85.4	0.778	0.000	78.9	46.236	Surcharged
SMH 10.030	100 Yr: 100 years: +20 %: 15 mins: Winter	27.79 6	24.91 2	25.114	0.202	86.1	0.289	0.000	79.9	43.623	OK
SMH 10.020	100 Yr: 100 years: +20 %: 15 mins: Winter	27.95 6	25.77 8	25.945	0.167	52.8	0.189	0.000	52.0	27.893	OK
SMH 10.000	100 Yr: 100 years: +20 %: 15 mins: Winter	28.93 2	27.05 0	27.265	0.215	60.5	0.308	0.000	53.1	27.910	OK
SMH 10.010	100 Yr: 100 years: +20 %: 15 mins: Winter	27.99 0	25.83 6	26.015	0.179	53.1	0.202	0.000	52.8	27.905	OK
SMH 1.150	100 Yr: 100 years: +20 %: 30 mins: Winter	22.51 5	20.02 9	21.501	1.472	343.4	2.601	0.000	341.8	457.524	Surcharged
SMH 1.140	100 Yr: 100 years: +20 %: 30 mins: Winter	23.69 0	20.51 7	22.669	2.152	302.5	3.802	0.000	299.9	369.314	Surcharged
SMH431.000	100 Yr: 100 years: +20 %: 30 mins: Winter	25.08 0	23.06 3	23.796	0.733	164.8	1.049	0.000	161.5	161.072	Surcharged
SMH 8.000	100 Yr: 100 years: +20 %: 15 mins: Winter	28.08 8	26.11 3	26.200	0.086	30.8	0.098	0.000	30.3	14.106	OK
SMH 8.010	100 Yr: 100 years: +20 %: 15 mins: Winter	26.28 4	24.56 4	25.242	0.678	94.8	0.970	0.000	80.5	50.570	Surcharged
SMH 9.040	100 Yr: 100 years: +20 %: 15 mins: Winter	26.99 8	25.38 4	25.667	0.284	70.6	0.406	0.000	59.5	32.245	Surcharged
SMH 9.030	100 Yr: 100 years: +20 %: 15 mins: Summer	27.44 9	25.71 0	25.835	0.124	41.3	0.141	0.000	41.1	18.514	OK
SMH 9.020	100 Yr: 100 years: +20 %: 15 mins: Winter	27.75 8	25.94 8	26.060	0.112	34.1	0.127	0.000	33.5	16.120	OK
SMH 9.010	100 Yr: 100 years: +20 %: 15 mins: Winter	28.16 0	26.24 5	26.356	0.111	34.7	0.126	0.000	34.1	16.125	OK

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SMH 9.000	100 Yr: 100 years: +20 %: 15 mins: Winter	28.46 6	26.47 3	26.521	0.048	8.5	0.054	0.000	8.3	3.912	OK
SMH351.00 0	100 Yr: 100 years: +20 %: 30 mins: Winter	25.67 7	23.39 7	23.993	0.596	139.4	0.853	0.000	135.9	135.284	Surcharged
SMH 6.040	100 Yr: 100 years: +20 %: 15 mins: Winter	25.88 1	23.53 3	24.220	0.687	62.2	0.777	0.000	62.9	33.608	Surcharged
SMH 6.030	100 Yr: 100 years: +20 %: 15 mins: Winter	26.14 3	23.70 5	24.439	0.734	66.0	0.830	0.000	59.3	32.242	Surcharged
SMH 6.010	100 Yr: 100 years: +20 %: 15 mins: Winter	26.78 4	24.72 8	24.806	0.078	16.4	0.088	0.000	15.8	7.656	OK
SMH 6.000	100 Yr: 100 years: +20 %: 15 mins: Winter	27.18 2	25.17 3	25.221	0.048	8.6	0.054	0.000	8.4	3.973	OK
SMH 6.020	100 Yr: 100 years: +20 %: 15 mins: Winter	26.48 0	24.46 5	24.629	0.164	56.0	0.185	0.000	54.9	27.111	OK
SMH 7.020	100 Yr: 100 years: +20 %: 15 mins: Winter	26.69 0	24.81 6	24.902	0.086	27.2	0.098	0.000	26.3	13.065	OK
SMH 7.010	100 Yr: 100 years: +20 %: 15 mins: Winter	28.38 2	26.13 9	26.223	0.084	28.1	0.095	0.000	27.2	13.090	OK
SMH 7.000	100 Yr: 100 years: +20 %: 15 mins: Winter	29.35 8	26.88 1	26.936	0.055	12.7	0.062	0.000	12.4	5.854	OK
SMH 1.130	100 Yr: 100 years: +20 %: 30 mins: Winter	24.46 4	22.36 3	23.450	1.087	256.2	1.920	0.000	252.7	324.246	Surcharged
SMH 1.120	100 Yr: 100 years: +20 %: 30 mins: Winter	24.48 9	22.48 0	23.521	1.041	82.2	1.489	0.000	79.4	149.517	Surcharged
SMH 1.110	100 Yr: 100 years: +20 %: 30 mins: Winter	25.97 7	22.74 1	23.824	1.083	85.0	1.550	0.000	82.2	150.789	Surcharged
SMH 5.040	100 Yr: 100 years: +20 %: 15 mins: Winter	26.93 8	25.02 9	25.360	0.331	123.0	0.374	0.000	113.7	63.611	Surcharged
SMH 5.030	100 Yr: 100 years: +20 %: 15 mins: Winter	27.65 9	25.31 3	25.724	0.412	121.2	0.466	0.000	114.1	59.504	Surcharged
SMH 5.020	100 Yr: 100 years: +20 %: 15 mins: Winter	28.12 6	26.27 0	26.506	0.236	96.2	0.267	0.000	91.1	45.685	OK
SMH 5.010	100 Yr: 100 years: +20 %: 15 mins: Winter	29.11 7	26.59 6	26.784	0.188	71.5	0.213	0.000	69.8	33.508	OK
SMH 5.000	100 Yr: 100 years: +20 %: 15 mins: Winter	29.78 4	28.27 1	28.363	0.092	34.2	0.104	0.000	33.1	15.768	OK
SMH 1.090	100 Yr: 100 years: +20 %: 15 mins: Summer	26.35 3	22.80 0	25.018	2.218	296.7	3.174	0.000	29.7	185.807	Surcharged
SMH 1.080	100 Yr: 100 years: +20 %: 15 mins: Winter	28.62 2	24.99 7	27.376	2.379	204.8	3.405	0.000	190.6	127.724	Surcharged
SMH 1.070	100 Yr: 100 years: +20 %: 15 mins: Winter	28.77 6	26.63 9	27.510	0.872	133.9	1.248	0.000	131.4	89.374	Surcharged
SMH 3.030	100 Yr: 100 years: +20 %: 15 mins: Winter	29.17 8	26.97 5	27.914	0.939	114.5	1.062	0.000	102.1	60.747	Surcharged
SMH 3.010	100 Yr: 100 years: +20 %: 15 mins: Winter	30.62 6	29.06 3	29.156	0.093	29.9	0.132	0.000	28.9	14.003	OK

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Report Details: Type: Junctions Summary Storm Phase: Phase 1_East Catchment				Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare							

SMH 3.000	100 Yr: 100 years: +20 %: 15 mins: Winter	31.27 0	29.79 1	29.881	0.090	30.4	0.129	0.000	29.9	14.013	OK
SMH 3.020	100 Yr: 100 years: +20 %: 15 mins: Winter	30.29 5	27.59 5	28.378	0.783	130.2	0.886	0.000	114.5	60.413	Surcharged
SMH 4.000	100 Yr: 100 years: +20 %: 15 mins: Winter	30.31 3	28.81 3	28.901	0.088	32.7	0.126	0.000	32.3	15.061	OK
SMH 1.060	100 Yr: 100 years: +20 %: 15 mins: Winter	29.14 5	26.94 5	27.813	0.868	148.2	1.242	0.000	133.9	89.440	Surcharged
SMH 1.050	100 Yr: 100 years: +20 %: 15 mins: Winter	29.54 8	27.84 7	28.004	0.157	39.3	0.177	0.000	36.8	24.547	OK
SMH 1.040	100 Yr: 100 years: +20 %: 15 mins: Winter	30.37 6	28.02 1	28.179	0.158	40.1	0.179	0.000	38.3	24.380	OK
SMH 2.010	100 Yr: 100 years: +20 %: 15 mins: Winter	30.80 1	28.32 4	29.225	0.901	69.5	1.019	0.000	66.4	33.692	Surcharged
SMH 2.000	100 Yr: 100 years: +20 %: 15 mins: Winter	33.65 1	31.67 6	31.826	0.150	73.5	0.169	0.000	69.5	33.899	OK
SMH 1.020	100 Yr: 100 years: +20 %: 15 mins: Winter	30.83 1	28.10 0	29.082	0.982	149.7	1.111	0.000	4.8	82.935	Surcharged
SMH 1.010	100 Yr: 100 years: +20 %: 15 mins: Winter	31.19 4	28.86 1	29.137	0.276	67.9	0.395	0.000	58.6	33.968	OK
SMH 1.000	100 Yr: 100 years: +20 %: 15 mins: Winter	32.38 4	28.96 5	29.275	0.310	63.4	0.443	0.000	57.8	29.289	Surcharged
SMH 1.350	100 Yr: 100 years: +20 %: 1440 mins: Winter	7.365	4.430	6.355	1.925	83.0	2.755	0.000	83.0	6097.070	Surcharged
SMH 1.380	100 Yr: 100 years: +20 %: 15 mins: Winter	6.533	3.822	4.340	0.518	82.5	0.741	0.000	86.6	113.508	Surcharged
SMH 22.070	100 Yr: 100 years: +20 %: 720 mins: Winter	5.607	3.010	3.923	0.913	15.0	1.033	0.000	15.0	530.106	Surcharged
SMH 1.190	100 Yr: 100 years: +20 %: 15 mins: Winter	20.88 0	17.81 6	17.948	0.132	69.9	0.188	0.000	69.9	105.569	OK
SMH 13.070	100 Yr: 100 years: +20 %: 600 mins: Winter	21.16 7	19.17 2	19.903	0.731	9.9	1.046	0.000	10.2	316.246	Surcharged
SMH 10.070	100 Yr: 100 years: +20 %: 60 mins: Winter	24.91 5	22.61 5	22.703	0.089	20.0	0.100	0.000	20.0	128.026	OK
SMH 1.100	100 Yr: 100 years: +20 %: 30 mins: Winter	26.29 6	22.79 0	23.832	1.042	35.4	1.179	0.000	41.2	97.188	Surcharged
SMH 1.030	100 Yr: 100 years: +20 %: 15 mins: Winter	30.78 5	28.09 1	28.180	0.089	4.8	0.101	0.000	4.9	7.424	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase 1_East Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			& ASSOCIATES CONSULTING ENGINEERS



Critical Storm Per Item: Rank By: Max. US Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
ATT_1	100 Yr: 100 years: +20 %: 480 mins: Winter	28.999	28.999	0.899	0.899	21.8	207.899	0.000	0.000	4.8	132.969	41.191	OK
ATT_2	100 Yr: 100 years: +20 %: 240 mins: Winter	24.072	24.072	1.272	1.272	69.4	326.678	0.000	0.000	24.8	278.669	17.000	OK
ATT_3	100 Yr: 100 years: +20 %: 240 mins: Winter	23.517	23.517	0.884	0.884	45.0	201.123	0.000	0.000	19.2	183.142	22.753	OK
ATT_5	100 Yr: 100 years: +20 %: 600 mins: Winter	19.874	19.874	2.011	2.011	31.9	336.987	0.000	0.000	31.7	311.263	0.273	OK
ATT_6	100 Yr: 100 years: +20 %: 600 mins: Winter	19.874	19.874	2.011	2.011	22.4	235.842	0.000	0.000	22.2	218.137	0.389	OK
ATT_7	100 Yr: 100 years: +20 %: 1440 mins: Winter	6.667	6.667	2.232	2.232	89.2	1746.761	0.000	0.000	52.7	1674.440	0.036	OK
ATT_9	100 Yr: 100 years: +20 %: 240 mins: Winter	4.900	4.900	1.881	1.881	52.3	214.991	0.000	0.000	17.3	186.474	0.307	OK
ATT_10	100 Yr: 100 years: +20 %: 720 mins: Winter	3.910	3.910	1.739	1.739	21.1	322.064	0.000	0.000	20.7	261.557	0.052	OK
BR_1	100 Yr: 100 years: +20 %: 2880 mins: Winter	29.412	29.374	0.102	0.064	0.3	11.907	0.000	0.000	0.1	12.214	91.293	OK
BR_2	100 Yr: 100 years: +20 %: 2160 mins: Winter	27.733	27.667	0.133	0.067	0.4	10.678	0.000	0.000	0.2	13.106	89.269	OK
BR_3	100 Yr: 100 years: +20 %: 15 mins: Summer	26.500	26.500	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000	100.000	OK
BR_4	100 Yr: 100 years: +20 %: 960 mins: Winter	25.087	25.047	0.102	0.062	0.2	3.232	0.000	0.000	0.1	3.370	91.530	OK
BR_5	100 Yr: 100 years: +20 %: 5760 mins: Winter	9.482	9.400	0.152	0.070	0.6	44.544	0.000	0.000	0.3	53.555	87.819	OK
BR_6	100 Yr: 100 years: +20 %: 8640 mins: Winter	7.447	7.394	0.119	0.066	0.3	40.250	0.000	0.000	0.2	47.360	90.085	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1		Date: 27/02/2025		 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS 	
		Designed by: MJC	Checked by: MJC		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase 1_East Catchment		Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

ATT_8	100 Yr: 100 years: +20 %: 1440 mins: Winter	6.347	6.347	2.521	2.521	31.8	659.83 9	0.000	0.000	31.8	634.306	0.053	OK
POND_1	100 Yr: 100 years: +20 %: 30 mins: Winter	30.076	30.076	0.136	0.136	20.5	10.756	0.000	0.000	11.1	15.696	77.185	OK
POND_2	100 Yr: 100 years: +20 %: 120 mins: Winter	24.937	24.937	0.112	0.112	11.7	19.005	0.000	0.000	6.8	28.573	95.539	OK
POND_3	100 Yr: 100 years: +20 %: 60 mins: Winter	24.372	24.372	0.099	0.099	12.1	12.482	0.000	0.000	5.1	13.495	82.051	OK
POND_4	100 Yr: 100 years: +20 %: 600 mins: Winter	19.874	19.874	0.371	0.371	16.3	37.659	0.000	0.000	10.4	48.217	52.634	OK
POND_5	100 Yr: 100 years: +20 %: 600 mins: Winter	19.874	19.874	0.371	0.371	14.5	39.358	0.000	0.000	10.7	50.558	52.750	OK
POND_6	100 Yr: 100 years: +20 %: 1440 mins: Winter	6.667	6.667	0.415	0.415	47.3	321.07 4	0.000	0.000	39.9	382.855	26.939	OK
ATT_4	100 Yr: 100 years: +20 %: 600 mins: Winter	19.992	19.992	0.811	0.811	19.7	186.32 9	0.000	0.000	13.2	176.677	29.014	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			



Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Outfall West	100 Yr: 100 years: +20 %: 30 mins: Winter	4.500	3.576	3.733	0.157	66.4	0.000	0.000	66.4	181.397	OK
SMH 24.340	100 Yr: 100 years: +20 %: 30 mins: Winter	5.000	3.587	3.776	0.189	66.1	0.270	0.000	66.4	181.397	OK
SMH 24.330	100 Yr: 100 years: +20 %: 30 mins: Winter	6.853	3.832	4.001	0.169	65.8	0.191	0.000	66.1	181.687	OK
SMH 24.320	100 Yr: 100 years: +20 %: 30 mins: Winter	7.454	3.837	5.561	1.724	68.3	1.950	0.000	65.8	182.759	Surcharged
SMH 31.130	100 Yr: 100 years: +20 %: 15 mins: Winter	8.742	5.368	5.601	0.234	80.8	0.264	0.000	76.0	56.119	OK
SMH 31.120	100 Yr: 100 years: +20 %: 15 mins: Winter	9.253	5.428	5.646	0.218	57.8	0.312	0.000	55.7	45.772	OK
SMH 31.100	100 Yr: 100 years: +20 %: 600 mins: Winter	9.755	7.175	8.545	1.370	75.6	1.961	0.000	18.0	1759.588	Surcharged
SMH 37.000	100 Yr: 100 years: +20 %: 15 mins: Winter	10.52 6	8.840	9.135	0.295	94.6	0.422	0.000	83.5	42.001	OK
SMH 31.090	100 Yr: 100 years: +20 %: 15 mins: Winter	10.07 3	8.138	8.662	0.525	378.3	0.751	0.000	362.2	231.885	OK
SMH 31.080	100 Yr: 100 years: +20 %: 15 mins: Winter	10.81 9	8.283	8.784	0.501	297.2	0.717	0.000	282.4	182.794	OK
SMH 31.070	100 Yr: 100 years: +20 %: 15 mins: Winter	11.32 0	8.446	9.001	0.555	285.7	0.794	0.000	282.0	175.965	Surcharged
SMH 36.010	100 Yr: 100 years: +20 %: 15 mins: Winter	12.27 4	9.822	11.284	1.462	110.4	2.091	0.000	100.4	58.745	Surcharged
SMH 36.000	100 Yr: 100 years: +20 %: 15 mins: Winter	13.77 3	11.90 5	12.505	0.600	89.8	0.859	0.000	72.6	40.921	Surcharged
SMH 31.060	100 Yr: 100 years: +20 %: 15 mins: Winter	11.94 3	8.611	9.461	0.850	270.0	1.216	0.000	266.9	167.808	Surcharged
SMH 31.050	100 Yr: 100 years: +20 %: 15 mins: Winter	12.75 6	10.96 1	11.353	0.392	172.0	0.561	0.000	152.7	101.575	Surcharged
SMH 31.010	100 Yr: 100 years: +20 %: 15 mins: Winter	15.53 4	13.35 4	13.484	0.130	40.4	0.186	0.000	39.4	20.495	OK
SMH 31.000	100 Yr: 100 years: +20 %: 15 mins: Winter	17.16 5	15.77 7	15.896	0.119	42.3	0.170	0.000	38.2	19.493	OK
SMH 31.020	100 Yr: 100 years: +20 %: 15 mins: Winter	15.06 0	12.27 5	12.481	0.206	73.3	0.233	0.000	72.4	36.314	OK
SMH 32.000	100 Yr: 100 years: +20 %: 15 mins: Winter	15.62 1	13.29 8	13.399	0.101	3.2	0.115	0.000	3.0	1.457	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025				
	Designed by: MJC	Checked by: MJC	Approved By: DOB		
Report Details: Type: Junctions Summary Storm Phase: Phase 1_West Catchment		Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 24.310	100 Yr: 100 years: +20 %: 30 mins: Winter	8.355	3.855	5.563	1.708	77.2	3.018	0.000	68.3	184.162	Surcharged
SMH 24.300	100 Yr: 100 years: +20 %: 30 mins: Winter	8.100	3.936	5.563	1.627	41.6	1.840	0.000	43.4	87.923	Surcharged
SMH 24.290	100 Yr: 100 years: +20 %: 30 mins: Winter	7.663	3.973	5.563	1.590	39.2	2.809	0.000	41.6	84.764	Surcharged
SMH 24.280	100 Yr: 100 years: +20 %: 30 mins: Winter	7.369	4.009	5.563	1.554	36.2	2.746	0.000	39.2	79.514	Surcharged
SMH 24.270	100 Yr: 100 years: +20 %: 30 mins: Winter	7.369	4.062	5.563	1.501	45.5	2.653	0.000	36.2	88.133	Surcharged
SMH 24.260	100 Yr: 100 years: +20 %: 30 mins: Winter	6.615	4.101	5.563	1.462	62.8	2.583	0.000	33.2	91.420	Surcharged
SMH 24.240	100 Yr: 100 years: +20 %: 360 mins: Winter	5.648	4.299	4.790	0.491	41.2	0.867	0.000	41.3	1005.229	OK
SMH 24.230	100 Yr: 100 years: +20 %: 15 mins: Winter	6.102	4.637	5.142	0.505	230.9	0.723	0.000	219.3	158.464	Surcharged
SMH 30.060	100 Yr: 100 years: +20 %: 15 mins: Winter	6.896	5.107	6.286	1.179	221.4	1.686	0.000	213.4	130.845	Surcharged
SMH 30.050	100 Yr: 100 years: +20 %: 15 mins: Winter	7.276	5.255	6.780	1.525	186.9	2.182	0.000	177.0	110.408	Surcharged
SMH 30.040	100 Yr: 100 years: +20 %: 15 mins: Winter	7.817	5.995	7.221	1.227	155.2	1.755	0.000	144.1	90.643	Surcharged
SMH 30.030	100 Yr: 100 years: +20 %: 15 mins: Winter	8.435	6.236	7.507	1.271	123.0	1.819	0.000	111.3	70.381	Surcharged
SMH 30.020	100 Yr: 100 years: +20 %: 15 mins: Winter	8.728	7.501	8.045	0.544	85.4	0.779	0.000	73.5	47.536	Surcharged
SMH 30.010	100 Yr: 100 years: +20 %: 15 mins: Winter	8.860	7.795	8.194	0.400	62.1	0.572	0.000	45.2	28.998	Surcharged
SMH 30.000	100 Yr: 100 years: +20 %: 15 mins: Winter	9.882	8.303	8.409	0.107	34.2	0.153	0.000	33.5	15.767	OK
SMH 24.220	100 Yr: 100 years: +20 %: 15 mins: Winter	6.369	4.744	5.305	0.561	235.6	0.802	0.000	230.9	159.810	Surcharged
SMH 24.210	100 Yr: 100 years: +20 %: 15 mins: Winter	6.517	4.917	5.304	0.388	15.1	0.555	0.000	22.1	22.067	Surcharged
SMH 24.200	100 Yr: 100 years: +20 %: 360 mins: Summer	7.445	5.315	5.377	0.062	14.8	0.089	0.000	14.8	522.781	OK
SMH 28.060	100 Yr: 100 years: +20 %: 15 mins: Winter	9.049	7.020	8.810	1.790	178.1	2.562	0.000	176.8	105.426	Surcharged
SMH 28.050	100 Yr: 100 years: +20 %: 15 mins: Winter	9.129	7.038	8.845	1.807	154.1	2.586	0.000	152.5	90.126	Surcharged
SMH 28.040	100 Yr: 100 years: +20 %: 15 mins: Winter	11.60 0	8.531	10.102	1.571	164.9	2.248	0.000	154.1	89.398	Surcharged
SMH 29.000	100 Yr: 100 years: +20 %: 15 mins: Winter	12.25 4	10.75 2	10.887	0.135	51.7	0.194	0.000	48.1	23.675	OK
SMH 28.030	100 Yr: 100 years: +20 %: 15 mins: Winter	11.70 8	9.210	10.175	0.966	106.5	1.382	0.000	95.8	57.594	Surcharged

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025				
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Report Details: Type: Junctions Summary Storm Phase: Phase 1_West Catchment		Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 28.020	100 Yr: 100 years: +20 %: 15 mins: Winter	11.86 5	9.340	10.211	0.871	69.2	1.246	0.000	58.4	33.728	Surcharged
SMH 28.010	100 Yr: 100 years: +20 %: 15 mins: Winter	12.37 9	10.87 9	11.036	0.157	70.6	0.225	0.000	69.2	33.728	OK
SMH 28.000	100 Yr: 100 years: +20 %: 15 mins: Winter	13.73 5	11.65 2	11.804	0.152	56.0	0.218	0.000	53.5	25.853	OK
SMH 24.180	100 Yr: 100 years: +20 %: 15 mins: Summer	9.657	6.229	8.688	2.459	722.2	4.345	0.000	15.2	458.892	Surcharged
SMH 24.170	100 Yr: 100 years: +20 %: 15 mins: Winter	9.778	7.976	8.916	0.940	559.4	1.345	0.000	558.6	379.090	Surcharged
SMH 24.160	100 Yr: 100 years: +20 %: 15 mins: Winter	10.15 1	8.242	9.441	1.199	564.7	1.715	0.000	559.4	379.140	Surcharged
SMH 24.150	100 Yr: 100 years: +20 %: 15 mins: Winter	10.36 7	8.375	9.759	1.384	545.2	1.981	0.000	536.8	366.144	Surcharged
SMH 24.140	100 Yr: 100 years: +20 %: 15 mins: Winter	10.54 9	8.487	10.042	1.555	540.3	2.225	0.000	527.9	358.218	Surcharged
SMH 24.130	100 Yr: 100 years: +20 %: 15 mins: Winter	11.31 7	8.888	10.675	1.787	544.7	2.557	0.000	524.7	351.247	Surcharged
SMH 24.120	100 Yr: 100 years: +20 %: 15 mins: Winter	11.75 7	9.718	11.107	1.389	501.4	1.988	0.000	481.8	322.317	Surcharged
SMH 24.110	100 Yr: 100 years: +20 %: 15 mins: Winter	13.02 5	10.26 9	11.919	1.650	499.0	2.362	0.000	490.0	317.037	Surcharged
SMH 24.100	100 Yr: 100 years: +20 %: 15 mins: Winter	13.36 7	11.52 6	12.244	0.718	464.7	1.027	0.000	447.9	293.521	Surcharged
SMH 25.070	100 Yr: 100 years: +20 %: 15 mins: Winter	13.93 3	12.19 5	12.886	0.691	305.9	0.989	0.000	297.4	198.888	Surcharged
SMH 25.060	100 Yr: 100 years: +20 %: 15 mins: Winter	13.98 9	12.23 1	13.034	0.803	304.3	1.149	0.000	294.7	193.787	Surcharged
SMH 27.010	100 Yr: 100 years: +20 %: 15 mins: Winter	14.73 0	13.10 4	13.859	0.755	72.3	1.080	0.000	55.9	33.877	Surcharged
SMH 27.000	100 Yr: 100 years: +20 %: 15 mins: Winter	15.60 9	13.97 6	14.111	0.135	66.5	0.193	0.000	65.5	30.588	OK
SMH 25.050	100 Yr: 100 years: +20 %: 15 mins: Winter	14.65 5	12.63 1	13.806	1.175	313.6	1.682	0.000	297.4	190.436	Surcharged
SMH 25.040	100 Yr: 100 years: +20 %: 15 mins: Winter	14.74 9	13.03 3	13.842	0.809	157.7	1.158	0.000	149.9	103.890	Surcharged
SMH 25.030	100 Yr: 100 years: +20 %: 15 mins: Winter	15.01 3	13.17 8	13.928	0.750	164.5	1.073	0.000	150.1	100.429	Surcharged
SMH 25.020	100 Yr: 100 years: +20 %: 15 mins: Winter	15.41 2	13.30 0	14.053	0.753	171.1	1.077	0.000	157.0	97.089	Surcharged
SMH 25.000	100 Yr: 100 years: +20 %: 15 mins: Winter	18.37 8	16.15 7	16.407	0.249	87.3	0.357	0.000	72.9	39.509	Surcharged
SMH 25.010	100 Yr: 100 years: +20 %: 15 mins: Winter	16.40 9	13.66 9	14.856	1.187	185.6	1.698	0.000	171.1	96.915	Surcharged
SMH 26.040	100 Yr: 100 years: +20 %: 15 mins: Winter	16.59 2	14.93 3	15.158	0.225	68.0	0.322	0.000	66.9	36.297	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			 DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 26.030	100 Yr: 100 years: +20 %: 15 mins: Winter	17.02 8	15.22 2	15.466	0.244	73.6	0.276	0.000	66.6	35.569	Surcharged
SMH 26.020	100 Yr: 100 years: +20 %: 15 mins: Winter	17.52 1	15.67 2	15.836	0.164	57.2	0.186	0.000	56.2	27.494	OK
SMH 26.010	100 Yr: 100 years: +20 %: 15 mins: Winter	17.91 5	16.34 2	16.510	0.168	57.7	0.241	0.000	55.7	26.948	OK
SMH 26.000	100 Yr: 100 years: +20 %: 15 mins: Winter	18.46 7	16.72 3	16.840	0.117	36.2	0.132	0.000	35.6	16.738	OK
SMH 24.090	100 Yr: 100 years: +20 %: 15 mins: Winter	13.90 6	11.73 7	12.643	0.906	473.9	1.025	0.000	457.3	290.151	Surcharged
SMH 24.080	100 Yr: 100 years: +20 %: 15 mins: Winter	15.45 0	12.72 4	12.928	0.204	162.7	0.292	0.000	160.7	83.292	OK
SMH 24.070	100 Yr: 100 years: +20 %: 15 mins: Winter	15.66 0	13.65 6	13.850	0.194	108.4	0.277	0.000	107.3	58.346	OK
SMH 24.060	100 Yr: 100 years: +20 %: 15 mins: Winter	15.82 6	13.77 7	13.974	0.197	100.7	0.282	0.000	98.5	53.811	OK
SMH 24.050	100 Yr: 100 years: +20 %: 15 mins: Winter	17.14 0	14.65 0	14.803	0.153	97.4	0.219	0.000	95.9	51.688	OK
SMH 24.030	100 Yr: 100 years: +20 %: 15 mins: Winter	17.64 3	14.72 3	15.641	0.918	98.3	1.313	0.000	39.9	56.062	Surcharged
SMH 24.010	100 Yr: 100 years: +20 %: 15 mins: Winter	20.06 8	18.18 2	18.339	0.157	58.0	0.178	0.000	54.3	27.775	OK
SMH 24.000	100 Yr: 100 years: +20 %: 15 mins: Winter	20.71 3	18.61 7	18.755	0.138	35.0	0.156	0.000	32.9	16.171	OK
SMH 24.020	100 Yr: 100 years: +20 %: 15 mins: Winter	19.29 3	16.74 2	16.867	0.125	74.2	0.142	0.000	71.2	36.948	OK
SMH 34.000	100 Yr: 100 years: +20 %: 15 mins: Winter	16.50 0	15.00 0	15.099	0.099	25.0	0.112	0.000	24.5	11.555	OK
SMH 34.010	100 Yr: 100 years: +20 %: 15 mins: Winter	16.50 0	14.65 9	14.760	0.102	29.4	0.115	0.000	28.1	14.011	OK
SMH 34.020	100 Yr: 100 years: +20 %: 15 mins: Winter	16.30 0	14.24 3	14.652	0.408	89.7	0.462	0.000	73.3	44.216	Surcharged
SMH 34.030	100 Yr: 100 years: +20 %: 240 mins: Winter	14.50 0	12.54 4	13.198	0.654	27.5	0.740	0.000	14.9	283.431	Surcharged
SMH 31.040	100 Yr: 100 years: +20 %: 15 mins: Winter	14.03 5	11.69 7	11.946	0.249	146.0	0.282	0.000	141.2	87.650	OK
SMH 35.000	100 Yr: 100 years: +20 %: 15 mins: Winter	16.50 0	15.07 5	15.217	0.142	46.2	0.161	0.000	44.4	21.848	OK
SMH 31.030	100 Yr: 100 years: +20 %: 15 mins: Winter	14.83 9	12.15 9	12.410	0.252	138.3	0.285	0.000	135.9	72.551	OK
SMH 33.020	100 Yr: 100 years: +20 %: 15 mins: Winter	15.50 0	13.78 1	14.028	0.247	66.1	0.279	0.000	65.8	36.280	Surcharged
SMH 33.010	100 Yr: 100 years: +20 %: 15 mins: Winter	16.50 0	14.87 4	15.115	0.242	78.8	0.273	0.000	66.1	36.289	Surcharged
SMH 33.000	100 Yr: 100 years: +20 %: 15 mins: Winter	16.50 0	15.07 5	15.188	0.113	32.0	0.128	0.000	32.2	14.769	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Junctions Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			

SMH 24.250	100 Yr: 100 years: +20 %: 30 mins: Winter	5.664	4.146	5.560	1.414	56.4	2.499	0.000	30.3	80.363	Surcharged
SMH 24.190	100 Yr: 100 years: +20 %: 15 mins: Summer	9.531	6.170	6.227	0.058	15.1	0.083	0.000	15.2	22.331	OK
SMH 31.110	100 Yr: 100 years: +20 %: 30 mins: Winter	9.723	7.133	7.203	0.070	18.0	0.079	0.000	18.0	59.318	OK
SMH 32.010	100 Yr: 100 years: +20 %: 15 mins: Winter	15.55 7	13.26 6	13.294	0.028	2.9	0.032	0.000	2.8	1.451	OK
SMH 34.040	100 Yr: 100 years: +20 %: 600 mins: Summer	14.46 1	12.53 5	12.645	0.109	15.0	0.124	0.000	15.0	260.350	OK
SMH 24.040	100 Yr: 100 years: +20 %: 15 mins: Winter	17.58 3	14.71 4	14.866	0.153	39.8	0.173	0.000	39.8	25.135	OK

Lands at Kilbride, Arklow, Co. Wicklow: Proposed Surface Water Phase 1	Date: 27/02/2025			
	Designed by: MJC	Checked by: MJC	Approved By: DOB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase 1_West Catchment	Donnachadh O'Brien & Associates: Unit 5C Elm House, Millennium Park, Naas Co. Kildare			& ASSOCIATES CONSULTING ENGINEERS



Critical Storm Per Item: Rank By: Max. US Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
ATT_11	100 Yr: 100 years: +20 %: 600 mins: Winter	14.877	14.877	0.154	0.154	12.1	115.793	0.000	0.000	3.6	80.542	86.526	OK
ATT_12	100 Yr: 100 years: +20 %: 960 mins: Winter	8.592	8.592	2.363	2.363	75.5	1235.486	0.000	0.000	13.6	407.538	0.037	OK
POND_9	100 Yr: 100 years: +20 %: 360 mins: Winter	4.794	4.794	0.495	0.495	70.8	256.378	0.000	0.000	38.5	899.613	53.724	OK
BR_8	100 Yr: 100 years: +20 %: 15 mins: Winter	16.154	16.154	0.754	0.754	21.7	9.973	0.000	0.000	0.3	0.179	93.849	OK
BR_9	100 Yr: 100 years: +20 %: 30 mins: Winter	16.416	16.416	0.816	0.816	22.6	19.697	0.000	0.000	3.5	6.026	54.743	OK
BR_10	100 Yr: 100 years: +20 %: 30 mins: Winter	16.215	16.215	0.815	0.815	9.4	8.008	0.000	0.000	1.4	2.249	75.385	OK
BR_11	100 Yr: 100 years: +20 %: 15 mins: Winter	14.362	14.362	0.762	0.762	10.7	4.857	0.000	0.000	0.5	0.374	91.700	OK
BR_7	100 Yr: 100 years: +20 %: 60 mins: Winter	16.450	16.450	0.850	0.850	4.6	5.693	0.000	0.000	1.1	4.831	63.767	OK
BR_12	100 Yr: 100 years: +20 %: 180 mins: Winter	12.525	12.525	1.175	1.175	14.3	48.078	3.814	0.000	3.3	43.834	12.853	OK
ATT_14	100 Yr: 100 years: +20 %: 240 mins: Winter	13.199	13.199	0.655	0.655	16.6	93.833	0.000	0.000	14.2	82.247	42.710	OK
ATT_15	100 Yr: 100 years: +20 %: 600 mins: Winter	8.545	8.545	1.370	1.370	60.3	758.564	0.000	0.000	17.6	540.509	10.218	OK
POND_7	100 Yr: 100 years: +20 %: 60 mins: Winter	16.665	16.665	0.117	0.117	21.0	17.586	0.000	0.000	13.0	27.172	77.112	OK
POND_8	100 Yr: 100 years: +20 %: 960 mins: Winter	8.592	8.592	0.538	0.538	47.5	306.873	0.000	0.000	12.1	331.719	34.350	OK
ATT_13	100 Yr: 100 years: +20 %: 360 mins: Winter	4.790	4.790	0.491	0.491	21.9	159.431	0.000	0.000	7.7	91.560	56.982	OK