

Section	Outfall No.	Easting	Northing	OF Start Chainage	OF End Chainage	Location Identifiers		Rainfall Parameters			Hydraulic Parameters										HAWRAT Results			HAWRAT Results (Cumulative Assessments)											
						Pond Chainage	Pond Number	Receiving Water/Course Name	AADT	Region	Rainfall Site	Greenfield Runoff (1:100)	Allowable Discharge (l/s)	Q95	Impermeable Road Area Drained (ha)	Permeable Area Draining to OF (ha)	Total Factored Area (ha)	Est. River width	Bed width	Manning's n	Side slope	Long. Slope	HAWRAT Step 1	HAWRAT Step 2 Tier 1	HAWRAT Step 2 Tier 2	HAWRAT Step 3	Treatment/Mitigation	HAWRAT Step 1	HAWRAT Step 2 Tier 1	HAWRAT Step 2 Tier 2	HAWRAT Step 3	Treatment/Mitigation			
Section A	DF 1	526047	650876	1000	1900	1100	1	Unnamed tributary of Robertstown River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	34.59	34.59	0.00089	1.800	3.906	5.71	2.39	2	0.08	0.39	0.0046	Fail	Copper: Fail Zinc: Pass Sediment: Fail	Copper: Fail Zinc: Pass Sediment: Fail	Pass	Single Wet Pond								
Section A	DF 2	526667	650148	1900	2700	2200	2	Unnamed tributary of Robertstown River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	11.81	11.81	0.00396	1.460	0.489	1.95	2.2	2	0.08	0.5	0.0089	Fail	Copper: Pass Zinc: Pass Sediment: Fail	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section A	DF 2a	526903	649606	2700	2900	3000	2a	Robertstown River	>10000; <50001	Colder Wet	Keighley (SAAR 1000 mm)	3.03	5.00	0.08874	0.377	0.124	0.50	8.13	5.4	0.08	0.83	0.004	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section A	DF 3	528565	649467	2900	4425	4350	3	Ahacronane River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	27.17	27.17	0.0629	2.580	1.903	4.48	2.4	2	0.08	1	0.008	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass		Pass	Wet ponds			
Section A	DF 4	528643	649335	4425	5525	4600	4	Ahacronane River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	7.77	7.77	0.0629	1.823	3.949	5.77	2.9	2.5	0.08	0.4	0.008	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section A	DF 5	531319	649264	5525	End	7250	5	Unnamed tributary of River Shannon	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	17.81	17.81	0.02818	4.052	9.173	13.23	1.5	0.5	0.08	2.5	0.007	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section B	DF 1	531818	649576	10000	10625	10375	1	Unnamed tributary of the River Shannon	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	2.08	5.00	0.03179	1.064	0.483	1.55	3.7	1.4	0.08	1.4375	0.0054	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section B	DF 2	532346	649711	10625	11350	10900	2	Unnamed tributary of the River Shannon	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	1.82	5.00	0.01772	0.886	0.464	1.35	4	2.1	0.08	0.8636	0.004	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section B	DF 3	532869	650231	11350	11925	11600	3	Unnamed tributary of the River Shannon	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	2.97	5.00	0.00203	1.404	0.800	2.20	4.65	0.8	0.08	2.14	0.004	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Fail	Pass	Single Wet Pond								
Section C	DF 1	531809	648553	20650	20950	20925	1	Ballycullean Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	1.12	5.00	0.0268	0.602	0.231	0.834	7.4	2.4	0.08	0.9259	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass	Pass	Pass	Wet ponds			
Section C	DF 2	531809	648553	20950	21650	21100	2	Ballycullean Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	2.50	5.00	0.02675	1.362	0.491	1.853	7.4	2.4	0.08	0.9259	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section C	DF 3	532802	648552	21650	24100	22200	3	Tributary of Ballycullean Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	7.52	7.52	0.0121	4.239	1.388	5.626	4.89	1.6	0.08	0.556	0.002	Fail	Copper: Pass Zinc: Pass Sediment: Fail	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section C	DF 4	534401	647044	24100	24400	24250	4	Tributary of River Deel	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	4.42	5.00	0.00048	0.548	0.182	0.729	5.86	1.35	0.08	0.8	0.0018182	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass		Pass	Wet ponds			
Section C	DF 5	534472	646762	24400	25125	24300	5	Doohyle Stream at Bullaun	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	4.42	5.00	0.04423	1.254	0.360	1.614	8.9	3	0.08	1.017	0.002	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond				Pass	Wet ponds			
Section C	DF 6	534779	646159	25125	26700	25350	6	Unnamed tributary of the River Deel	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	22.1	22.1	0.001	1.931	1.714	3.645	1.9	0.3	0.08	2.6	0.006	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section C	DF 7	535729	649556	26700	27050	26800	7	Doohyle Stream at Craigeen	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	4.68	5.00	0.02604	0.443	0.329	0.772	5.6	3.3	0.08	0.575	0.002	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass		Pass	Wet ponds			
Section C	DF 8	535689	644611	27050	27650	27150	8	Doohyle Stream at Craigeen	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	7.80	7.80	0.02604	0.736	0.551	1.287	4.2	1.7	0.08	0.714	0.004	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section C	DF 9	536245	643567	27650	28200	28200	9	Doohyle Stream at Rosemount	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	7.34	7.34	0.02064	0.908	0.304	1.212	7.1	2.95	0.08	0.546	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section C	DF 10	536382	643416	28200	28600	28500	10	Doohyle Stream at Rosemount	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	5.23	5.23	0.02064	0.660	0.203	0.863	6.1	2.95	0.08	0.556	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass		Pass	Wet ponds			
Section C	DF 11	536371	643093	28600	29025	28800	11	Tributary of Doohyle Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	5.97	5.97	0.0015	0.747	0.238	0.984	8.94	2.7	0.08	0.952	0.0014	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section D	DF 1	536422	642723	29025	50275	29200	1	Tributary of Doohyle Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	11.6	11.60	0.00137	1.382	0.524	1.906	4.9	1.71	0.08	1.04	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Fail	Pass	Single Wet Pond	Fail	Fail		Pass	Wet ponds			
Section D	SR-OF1 (Rathkeale Jct)	536155	642551			0+600	SR-1	Tributary of Doohyle Stream	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	9.1	9.10	0.00137	1.048	0.459	1.508	4.9	1.71	0.08	1.04	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Fail	Pass	Single Wet Pond								
Section D	DF 2	537219	642558	50285	50675	50500	2	Unnamed (Flows into Doohyle Lough)	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	6	6.00	0.0027	0.837	0.155	0.99	5.3	2.4	0.08	1.43	0.001	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Pass		Pass	Wet ponds			
Section D	DF 3	537565	642778	50675	51950	51050	3	Unnamed (Flows into Doohyle Lough)	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	27.1	27.1	0.0048	3.111	1.353	4.46	5.85	2.2	0.08	1.20	0.0064	Fail	Copper: Pass Zinc: Pass Sediment: Fail	Copper: Pass Zinc: Pass Sediment: Fail	Pass	Single Wet Pond								
Section D	DF 4A & 4B	542250	644840	51950	54400	53800; 54200	4A & 4B	Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	94.8	94.8	0.14933	6.259	9.388	15.65	7.63	3.5	0.08	1.43	0.003	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section D	DF 4C	542250	644840	54400	55325	54275	4C	Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	69.9	69.9	0.14933	3.334	8.205	11.54	7.63	3.5	0.08	1.43	0.003	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond	Fail	Fail		Pass	Wet ponds			
Section D	DF 4D	542223	644740	55325	56575	55325	4D	Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	36.2	36.2	0.14933	3.3821	0.8878	4.2699	7.63	3.5	0.08	1.43	0.003	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond								
Section D	SR-OF3 (Croagh Link Rd)	541776	643818			56400	SR-3	Interceptor ditch & the Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	2.7	5	0.00028	0.296	0.144	0.44	1.3	0.3	0.08	1	0.005	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Fail	Pass	Single Wet Pond								
Section D	DF 5	542781	645540	56575	57725	57350	5	Unnamed tributary of Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	18.6	18.6	0.00025	2.493	0.579	3.07	4.25	1	0.08	2.1667	0.0037	Fail	Copper: Fail Zinc: Pass Sediment: Fail	Copper: Fail Zinc: Pass Sediment: Fail	Pass	Swale and Wet Pond	Fail	Fail		Pass	Wet ponds			
Section D	DF 6	543067	645882	57725	57975	59850	6	PED & Unnamed tributary of Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	3.9	5	0.00025	0.54	0.1	0.64	4.25	1	0.08	2.1667	0.0037	Fail	Copper: Fail Zinc: Pass Sediment: Fail	Copper: Fail Zinc: Pass Sediment: Fail	Pass	Single Wet Pond				Pass	Wet ponds			
Section D	DF 6A	543387	646046	57975	58150	N/A	6A (Online attenuation)	Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	2.7	5	0.14933	0.378	0.07	0.45	7.63	3.5	0.08	1.43	0.003	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Online Attenuation	Fail	Pass	Pass	Pass	Wet ponds			
Section D	DF 7	543348	646014	60050	60850	58225	7	Clonshire River	>10000; <50000	Colder Wet	Keighley (SAAR 1000 mm)	14.2	14.2	0.14933	1.800	0.540	2.34	7.63	3.5	0.08	1.43	0.003	Fail	Copper: Pass Zinc: Pass Sediment: Pass	Copper: Pass Zinc: Pass Sediment: Pass	Pass	Single Wet Pond				</				