

Table D4 Drained Infinite Slope Analysis Results for Sliding Failure in Mineral Soil - Rosspoint (Commonage)

(Parameters based on descriptions)

Chainage (m)	Slope β (deg)	Effective cohesion c' (kPa)	Bulk unit weight of Peat γ (kN/m^3)	Bulk unit weight of Mineral Soil γ (kN/m^3)	Unit weight of Water γ_w (kN/m^3)	Depth of Peat (m)	Thickness of Mineral Soil (m)	Friction Angle ϕ' (deg)	Factor of Safety for Load Condition					
									Condition (1)		Condition (2)			
							0% Water	50% Water	100% Water	0% Water	50% Water	100% Water		
87700	4.1	1.0	10.5	19.0	9.81	1.20	0.10	30	8.42	5.44	1.92	8.24	6.51	4.47
87690	2.3	1.0	10.5	19.0	9.81	1.8	0.10	30	14.75	9.05	2.67	14.58	10.79	6.55
87588	4.5	1.0	10.5	19.0	9.81	0.75	0.10	30	7.95	5.54	2.40	7.65	6.49	4.98
87504	4.7	1.0	10.5	19.0	9.81	0.25	0.10	30	8.19	7.05	4.39	7.36	7.02	6.22
87475	2.7	1.0	10.5	19.0	9.81	1.30	0.10	30	12.84	8.20	2.80	12.60	9.83	6.60
87384	3.1	1.0	10.5	19.0	9.81	3.00	0.10	30	10.90	6.36	1.51	10.84	7.39	3.70
87359	2.9	1.0	10.5	19.0	9.81	3.60	0.10	30	11.61	6.69	1.48	11.57	7.67	3.55
87329	1.1	1.0	10.5	19.0	9.81	3.50	0.10	30	30.65	17.68	3.94	30.53	20.33	9.52
87308	1.1	1.0	10.5	19.0	9.81	3.8	0.10	30	30.61	17.55	3.79	30.50	20.07	9.07
87293	0.2	1.0	10.5	19.0	9.81	3.5	0.10	30	155.40	89.63	19.98	154.77	103.05	48.28
87259	2.0	1.0	10.5	19.0	9.81	3.40	0.10	30	17.10	9.88	2.23	17.02	11.38	5.40
87289	1.2	1.0	10.5	19.0	9.81	3.40	0.10	30	27.21	15.72	3.55	27.09	18.11	8.59
87277	1.4	1.0	10.5	19.0	9.81	3.5	0.10	30	24.96	14.39	3.21	24.86	16.55	7.75
87219	1.0	1.0	10.5	19.0	9.81	3.7	0.10	30	32.11	18.45	4.03	31.99	21.13	9.66
87246	1.2	1.0	10.5	19.0	9.81	3.50	0.10	30	27.64	15.94	3.55	27.53	18.33	8.59
87213	1.8	1.0	10.5	19.0	9.81	3.90	0.10	30	19.11	10.94	2.34	19.04	12.48	5.58
87200	1.2	1.0	10.5	19.0	9.81	3.60	0.10	30	28.11	16.18	3.57	28.00	18.56	8.59
87189	1.6	1.0	10.5	19.0	9.81	2.90	0.10	30	21.34	12.48	3.00	21.22	14.53	7.37
87187	1.6	1.0	10.5	19.0	9.81	3.50	0.10	30	21.26	12.26	2.73	21.17	14.10	6.60
87174	1.6	1.0	10.5	19.0	9.81	3.35	0.10	30	21.06	12.19	2.76	20.97	14.05	6.71
87097	0.5	1.0	10.5	19.0	9.81	2.80	0.10	30	63.31	37.15	9.05	62.94	43.35	22.31

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									Condition (1)		Condition (2)			
							0% Water	50% Water	100% Water	0% Water	50% Water	100% Water		
87090	0.2	1.0	10.5	19.0	9.81	2.80	0.10	30	142.93	83.87	20.44	142.08	97.86	50.36
87074	0.1	1.0	10.5	19.0	9.81	3.60	0.10	30	285.64	164.41	36.26	284.53	188.66	87.31
87000	1.2	1.0	10.5	19.0	9.81	2.90	0.10	30	28.58	16.72	4.02	28.43	19.47	9.88
86898	1.5	1.0	10.5	19.0	9.81	1.20	0.10	30	23.65	15.28	5.40	23.16	18.31	12.57
86900	1.5	1.0	10.5	19.0	9.81	1.69	0.10	30	23.34	14.42	4.37	23.04	17.23	10.68
86778	2.3	1.0	10.5	19.0	9.81	2.30	0.10	30	14.69	8.78	2.33	14.58	10.36	5.76
86691	3.0	1.0	10.5	19.0	9.81	2.75	0.10	30	11.29	6.63	1.63	11.22	7.75	4.02
86606	2.2	1.0	10.5	19.0	9.81	2.25	0.10	30	15.52	9.29	2.48	15.39	10.98	6.15
86591	2.0	1.0	10.5	19.0	9.81	2.75	0.10	30	16.61	9.76	2.40	16.50	11.40	5.91
86587	1.8	1.0	10.5	19.0	9.81	2.4	0.10	30	18.57	11.05	2.87	18.43	13.01	7.12
86498	1.6	1.0	10.5	19.0	9.81	3.70	0.10	30	21.63	12.43	2.71	21.55	14.23	6.51
86451	1.4	1.0	10.5	19.0	9.81	4.25	0.10	30	23.19	13.21	2.74	23.13	14.98	6.44
86430	0.1	1.0	10.5	19.0	9.81	3.80	0.10	30	673.48	386.23	83.46	671.10	441.52	199.53
86316	1.0	1.0	10.5	19.0	9.81	3.90	0.10	30	33.66	19.27	4.12	33.54	21.99	9.82
86285	1.9	1.0	10.5	19.0	9.81	2.80	0.10	30	17.64	10.35	2.52	17.53	12.08	6.22
86219	1.6	1.0	10.5	19.0	9.81	3.4	0.10	30	21.50	12.43	2.80	21.41	14.31	6.79
86216	1.1	1.0	10.5	19.0	9.81	3.1	0.10	30	30.72	17.88	4.18	30.57	20.73	10.23
86200	1.6	1.0	10.5	19.0	9.81	3.48	0.10	30	21.49	12.40	2.77	21.40	14.26	6.70
86104	3.8	1.0	10.5	19.0	9.81	0.75	0.10	30	9.32	6.50	2.81	8.98	7.61	5.84
86095	4.4	1.0	10.5	19.0	9.81	1.1	0.10	30	7.94	5.20	1.91	7.75	6.21	4.37

Notes

- (1) Assuming a bulk unit weight of peat 10.5 (kN/m³)
 - (2) Assuming bulk unit weight of the mineral soil is 19 (kN/m³)
 - (3) Assuming failure surface is 0.1 (m) within the mineral soil
 - (4) Assuming a surcharge equivalent to fill depth of 1 and 1.0 (m)
 - (5) β angles are based on contours.
 - (6) ϕ' and c' are based on interpretation of soil descriptions.
 - (7) The % water refers to the height of the water table above the failure surface.
 - (8) 0% water represents no watertable whereas 100% water represents watertable at the surface.
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DRAWINGS

